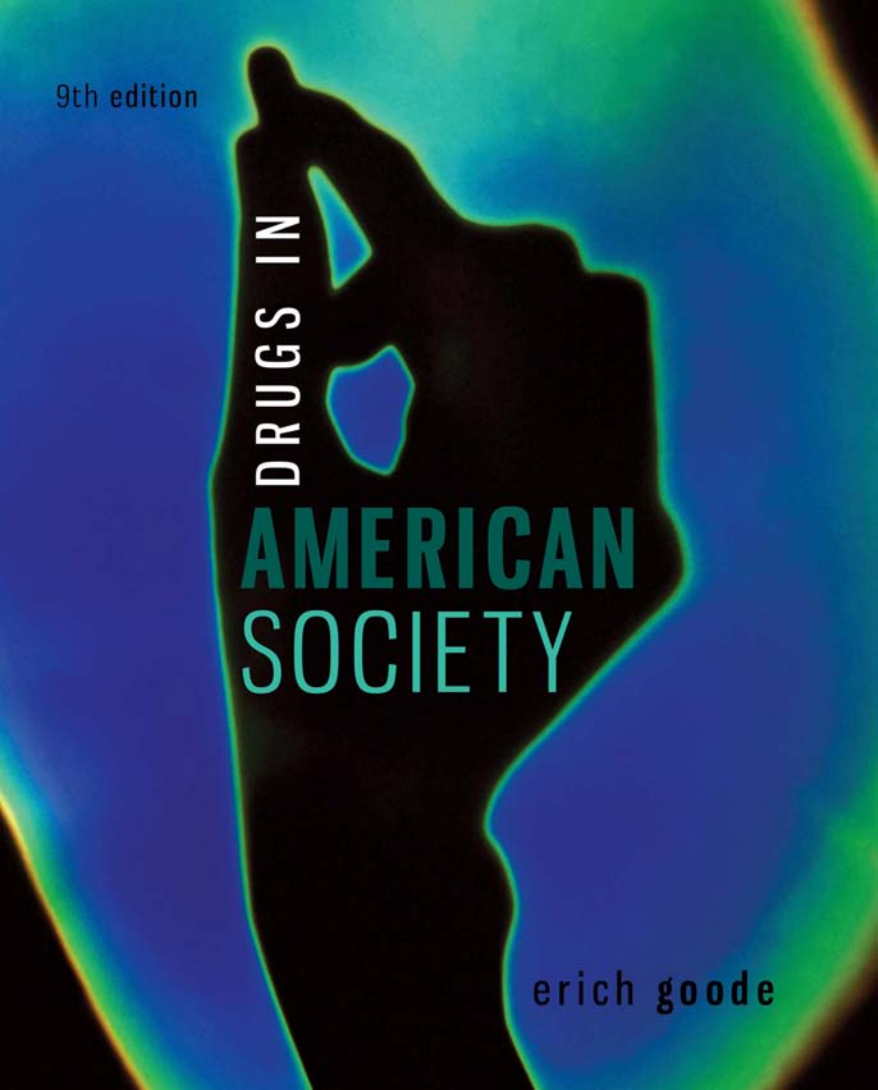


9th edition



DRUGS IN
AMERICAN
SOCIETY

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Ninth Edition

DRUGS IN AMERICAN SOCIETY

Erich Goode

Stony Brook University





DRUGS IN AMERICAN SOCIETY, NINTH EDITION

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(Basic Books, 1970), *Between Politics and Reason: The Drug Legalization Debate* (St. Martin's Press, 1997), *Justifiable Conduct: Self-Vindication in Memoir* (Temple University Press, 2013), *Deviant Behavior* (Pearson Prentice Hall, 10th edition, 2014), and *Moral Panics* (with Nachman Ben-Yehuda, Wiley-Blackwell, 2nd edition, 2009). He lives in New York City with his wife, Barbara Weinstein, a historian who teaches at New York University.

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PREFACE

The first edition of this book was published before most of the readers of this edition were born—indeed, even before some of their parents were born. For the most recent editions, I’ve interviewed users about their consumption of substances that didn’t even exist in 1972, and others who casually or compulsively use drugs that were virtually unknown at that date. The world today is a vastly different place than it was four decades ago and, more to the point, the current world of drug use and trafficking would be almost unrecognizable to a denizen of the early 1970s. To many of us now, the world back then seems almost alien, incomprehensible—archaic even; it was a landscape that was about to be hit by a series of social and political earthquakes.

In 1972, the United States was still waging a war in Vietnam that couldn’t be won and, when they completed their service, thousands of GIs lugged tons of heroin back to eager junkies in America. The Cold War with the Soviet Union was in full swing; Russia and its satellite countries cracked down mercilessly on drug dealing. Generalissimo Francisco Franco’s regime (Spain) likewise severely punished unconventionality in lifestyle, leftist politics, and the use and sale of illicit drugs. South Africa, an outsider nation boycotted by other countries, still practiced apartheid with an iron hand; the craniums of advocates of racial equality, radicals, and scruffy hippies who smoked pot made an acquaintance with police

billy-clubs, and, in many cases, the inside of prison cells. Nixon, father of the War on Drugs and an advocate of a “law and order” position on crime, seemed to be firmly ensconced in the presidency; an almost accidental conjunction of events—which we now refer to as “Watergate”—was about to rudely unseat him and temporarily derail that self-same war. Three separate police departments had just begun dismantling the French Connection—that heroin pipeline from Turkish poppy fields, through labs in Corsica, into the veins of American addicts—said dismantling ironically resulting in opening up a multitude of countries that supplied illicit drugs. Pol Pot, head of the Khmer Rouge, waged a war against his enemies, murdering more than a million of his own citizens in the process. Yugoslavia, an uneasy alliance among regions, was ruled by a dictator who, like the other despots, suppressed dissidence of every stripe. Personal computers were unknown, and the first email message had been sent just the year before.

Who knew that a tsunami of change was about to strike the globe? Authoritarian regimes that brooked no deviations from the law collapsed, morphing into democracies (or democracies *manqués*), which opened laissez-faire marketplaces to the hustle and bustle, the comings-and-goings, of capitalism, governments whose representatives technically criminalized drug trafficking, but inadvertently made it more possible—and likewise made prosecutions of drug dealings more difficult and facilitated communication and commerce and

the movement of vehicles and people across borders. The curtain opened wide onto a truly global age. Illicit drugs and other products—both legal and illegal—crossed borders as never before in human history.

Anyone attempting to chronicle these and other cognate changes and to elucidate and analyze the current state of affairs faces a daunting and challenging mission; I modestly set forth my effort in this edition. Drug use is an activity in which humans engage; it is socially patterned; it has important social consequences; drug users are looked upon, dealt with, judged, evaluated, and reacted to; and they, as well as their activity, are socially constructed in ways that demand investigation. Consequently, from the point of view of social theory—that is, devising general explanations of human behavior—the subject is very much in need of sociological consideration.

A study of drug use is also crucial from a policy standpoint. It is in fact, a life-or-death proposition. Drug abuse can kill. In addition, drug use, whether directly or indirectly, often spawns a swarming host of sub-lethal problems: disease, poor quality of life, enslavement to a chemical, lower academic and job performance, victimization by robbers, rapists, and all other manner of violent offenders, the fear by residents of a community for their safety, the fear of leaving their homes at night, and subversion of friendship, romantic, and family relations. In the United States alone, smoking claims over 400,000 victims a year—and gradually, in response to studies on the medical harms of smoking, year by year, smokers are giving up the deadly habit. While the consumption of alcohol kills some 85,000 Americans yearly, as a result of education and automobile and roadway innovations, alcohol-related highway deaths have been cut by two-thirds. The introduction of drug education curricula may have helped, so it's important to note that illicit drug use reached a peak in the 1970s—the decade of the publication of the first edition of this book—and has substantially moderated since then. Quite simply, systematic study of the causes and consequences of substance abuse can save lives.

Every edition of this book has represented an effort to teach students about the reality of drugs and drug use, as I interpret the available evidence. And in this effort, it is the evidence above all that guides my approach. Examining the facts and figures—statistics, if you will. Some students find scrutinizing statistics dull and sometimes confusing, but to me, a well-constructed table is informative—as well as a thing of beauty. Discussing the reality of drug use without having access to facts and figures—human behavior in its quantitative aspect—is like groping around in the dark.

But behind drug facts and figures, surveys and statistics, there is the human drama. People ingest drugs, for good or ill, and, as a result, they are dealt with by the rest of the members of the society, again, for good or ill. Real people's lives are affected in myriad ways by drug consumption and the enforcement of the drug laws, and the rest of us have to live with the consequences—or try to change the world so that these consequences are minimized or eliminated. The story of drug use, then, is the confluence of the hard, material facts of the consumption of psychoactive substances and the reactions to that consumption by the many actors in this drama, users and nonusers included. How we are all caught up in this confluence is the story I wish to tell in this book.

It's difficult to imagine a more fascinating topic: As a result of the interlock between the chemical structure of certain substances and human neurology, drug use alters the way we think, feel, and even act, and the way—how well, how poorly—our organs, including our brain, work; it influences the risks we take, what we attend to, our sense of empathy, whether we are caring or insensitive toward others, the workings of our imagination, our esthetic sense, our appetite, whether we are articulate or inarticulate, our degree of coordination, the state of our health, our likelihood of living or dying in the next year or two—or 50, 60, or 70. What a remarkable phenomenon! What a wondrous topic to study! What possibilities drug use research opens up! What a glorious time to be looking at the use of psychoactive substances! And

what discoveries lie ahead! I hope that this book conveys some of my enthusiasm for the subject.

ACKNOWLEDGMENTS

I owe a debt of gratitude to a multitude and diversity of people who helped me along the way to this edition's completion, as well as those who helped me put together earlier editions. I looked through the acknowledgments in past editions, and the list of the people who have helped me and to whom I am grateful is extremely long. Unfortunately, some of them are no longer with us, but my gratitude remains. All of them, taken together, include Patricia Adler, Paul Attewell, Stephan Barr, Nachman Ben-Yehuda, Gina Bisagni, Nancy Blaine, Zhanine Brooks, Jennifer Brown, Elox Axel Carlson, Paul Chalfant, Stephen Chappell, James Colliver, Stephanie Compos, Elizabeth Crane, Julie David, Dale Deutsch, Lisa Castelluzzo Dolan, Nancy Duckworth, Diane Eidelman, Kathryn Ann Farr, Laura Franz, Tricia Fuentes, John Fuller, John Galihier, Avram Goldstein, Lester Grinspoon, JoAnn Grundbaum, Maris Hearn, Clare Imholtz, James Inciardi, Eric Jensen, Bruce Johnson, Robert Keel, Paula Holtzman Kleinman, Jerome Koch, Marvin Krohn, Laura LaPiana, Henry Lesieur, Alfred Lindesmith, William McAuliffe, Charles McCaghy, David McCandlish, Jacqueline McFadden, Iona Man-Cheong, Arthur McBay, Patti Meyer, Judith Droitcour Miller, Ethan Nadelmann, Diane Reznikov, Marsha Rosenbaum, Terry Rosenberg, Alphonse Sallett, Mark Segal, Nathan Sevin, Linda Silber, Maura Strausberg, John Talbott, Al Woodward, and Joanna Yoon.

In addition, I owe a debt of gratitude to Alexia Cooper, Howard Snyder, and Joseph Mulakowangota for supplying me with the material which I adapted to create the table that appears in Chapter 2, on drug arrests.

I'd also like to thank my former students, especially those who have taken the courses I've taught that deal with drug use, from whom I have learned so much over the years. In addition, all the researchers who have studied drug use and

attempted to unravel its mysteries and contradictions receive my profoundest appreciation. I'd also like to thank the anonymous drug users and sellers who provide the illustrations and accounts that enliven this text, as well as the anonymous readers of an earlier version of this book, who have reminded me of my obligations as a writer, a communicator, and a teacher, to make its prose clear and its discussions comprehensive. Finally, I would like to thank the reviewers of this edition, who include Carl Maida, California State University, Northridge; William Price, North Country Community College; Robert Keel, University of Missouri–St. Louis; Michael Ostrowsky, Southern Utah University; and Michael Bisciglia, Southeastern Louisiana University.

What husband does not thank his wife? I owe a debt of gratitude to Barbara Weinstein, who held my body, soul, and spirit together while I revised and rewrote this book.

ONLINE INSTRUCTOR RESOURCES

The Online Learning Center to accompany *Drugs in American Society* offers a number of additional resources at www.mhhe.com/goode9e. Instructor can access to an Instructor's Manual, Testbank, and PowerPoint lecture slides. Please contact your McGraw-Hill Learning Consultant for access information.

NEW TO THIS EDITION

At the suggestion of some of the readers of the previous edition of this book, I radically reordered the chapters that appear in this volume. Several critics thought that the historical background of drug use and drug control should provide a background to the current picture, and so the previous Chapters 5 and 12 became Chapters 1 and 2; consequently, the former Chapters 1 and 2 became 4 and 3. Reconceptualizing the media's view of drug use as a perspective on the issue, I grouped the

former Chapter 3, now Chapter 5, with the pharmacological and the sociological approaches. Chapters 6 and 7, formerly 4 and 6, form a natural grouping of their own. I kept the remainder of the book more or less as it was. I moved the former Chapter 8, on prescription drugs, to Chapter 9 in this edition. This made sense with respect to arranging topics in order of degree of illegality, so that the progression moves from completely legal recreational drugs (alcohol and tobacco) to prescription drugs (completely legal if taken for medical and psychiatric ills, with a physician's prescription) to mostly illegal but semitolerated recreational drugs if possessed in small quantities, to completely illegal drugs. In Chapter 3, I added a section discussing PCP and ketamine, the dissociative anesthetics, and in Chapter 2, I added a section, entitled "The Legacy of the Nixon/Reagan

Years," that summarizes the drug laws as an outcome of contemporary politics. From the former Chapter 2 (now Chapter 3), I deleted the section on years of potential life lost (YPLL) as not directly relevant to pharmacology, and incorporated discussions of the concept into the text. From the former and present Chapter 10, I deleted the "Poison in a Glassine Envelope?" since it did not contribute directly to the chapter's main points. And everywhere relevant and appropriate, I have thoroughly updated the facts, figures, and illustrations in the text for this, the ninth edition of *Drugs in American Society*. I hope the changes I've made have succeeded in making this text smoother, more readable, more interesting, and more informative.

*Erich Goode—
Greenwich Village, New York City*



P A R T

I

A HISTORY OF DRUG USE AND DRUG CONTROL

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Did alcohol consumption increase during Prohibition? No; actually, it decreased—though when I ask this question in a true-false quiz, most of the students in my classes think otherwise. Is alcohol consumption in the United States at an all-time high? In fact, it is at a fairly low point compared with most other periods of history. Did drug

use increase during the 1980s? No, it decreased dramatically during that decade. Was LSD consumption at an all-time high during the 1960s? No, data show it was quite low during the first half of the 1960s; it rose only in the second half of that decade, and peaked (for high school seniors) in the 1990s. When someone spends a major part of a lifetime studying and writing about a topic, it's discouraging to discover that most people hold an inaccurate picture of what one is trying to understand and communicate. Aside from simple ignorance, there are psychological and cognitive reasons why people often reason about the world in mistaken and inaccurate ways. Many people have a difficult time thinking clearly and accurately about drug use. They exhibit so many sources of error in their thinking processes that it would require an entire library to discuss them all. Focusing specifically on claims the government makes, Matthew Robinson and Renee Scherlen, two Michigan State University scholars, published a book that says it all: *Lies, Damned Lies, and Drug War Statistics* (2007). Much of the public falls victim to these "lies."

Frequently, the media, politicians, social movement activists and advocates, and the general public make incorrect inferences about social phenomena as a result of a faulty understanding of empirical rates, patterns, and statistics. In Chapter 5, we look at how the media report the drug beat. And I discuss the mistaken views of the public, politicians, and movement activists pretty much throughout this book. Certain social constructions of the reality of drugs, as well as the actions based on them, have had undesirable—even disastrous—consequences, yet they have guided public opinion and drug policy for more than a century.

The public bases its notion of the frequency of behavior not on logic or systematic evidence but largely on "rules of thumb" that are both commonsensical and illusory. Cognitive psychologists, who study how people think and reason, refer to these rules of thumb as *judgmental heuristics*. They have located and documented several distinctly different sources of bias. For the sociologist of drug use and the criminologist, perhaps the most relevant of the judgmental heuristics that distort our reasoning ability is the *availability heuristic* (Kahneman, Slovic, and Tversky, 1982, pp. 163ff).

"Availability" is a mental process that mistakenly tells us that what sticks in our minds is more common than something that takes more effort to recall; people tend to exaggerate the frequency of phenomena that come readily to mind. Since things that do not easily pop into our heads tend to be quickly forgotten, most of us underestimate their frequency. Our minds work in almost precisely the opposite way from the way the world works. The mundane, the everyday, and the ordinary—what is usually very common—are taken for granted and so are conveniently forgotten, while the spectacular, the vivid, and the unusual, because they are so easily recalled, are frequently mistakenly thought of as more common than they actually are.

Vividness is an especially powerful factor in the availability heuristic: People tend to recall what's vivid and dramatic, and they usually mistakenly believe it to be more common than it actually is. For instance, as study after study has shown, people tend to overestimate the likelihood of dramatic, memorable events, such as a shark attack (versus drowning); contamination from a nuclear plant (versus natural radon contamination from the soil); interracial crime—crime that crosses racial categories (versus *intra*-racial crime, or crime in which the offender and the victim share the same race); murder (versus more ordinary causes of death, such as pneumonia); and drug overdoses (as opposed to chronic death due to tobacco- or alcohol-related causes). In each case, the principle is the same:

Events that are dramatic and vivid tend to stick in one's mind and thus be "available" for recall and, as a consequence, their frequency or likelihood of occurrence tends to be exaggerated. Whenever we think about vivid, dramatic phenomena such as drug use and crime, we should keep the availability heuristic in mind. Doing so will help keep our observations on track.

RATES AND PATTERNS OF DRUG USE: THE BASICS

Here are four crucial concepts or ideas essentially to understanding rates and patterns of drug use: overall prevalence rates, continuance or "loyalty" rates, consumption levels, and life-cycle rates. They provide baselines which allow us to compare use from one period of history to another.

Overall Prevalence Rates

It is important to distinguish between and among rates of different drugs and drug types. Many commentators discuss illicit drugs as if the use of each and every one were precisely equivalent. Different drugs attract users at substantially variable rates. The *prevalence rate*—the number and percentage of people in the population who use a given drug during a designated period—is crucial; we must never lose sight of the *size* of a given drug's user population. Hence, when the 2011 national household survey [National Survey on Drug Use and Health (NSDUH)] reported that 7.0 percent of the population had used marijuana at least once during the previous month, while 0.5 percent had done so for cocaine, these are *prevalence* rates for that month for these two drugs. We could measure prevalence rates by lifetime, past year, or past month (or 30-day) use.

Journalists have been known to exaggerate the shifts in drug use from one decade to another, claiming that a particular drug is the "drug of choice" during each period. Supposedly, LSD was *the* drug of the 1960s—the implication being that it was the most frequently used drug during that decade. The same was said of cocaine during the 1980s (the so-called "me" or *greed* decade). In 2008, *Newsweek* decided that prescription drugs were teenagers' "drug of choice." In 2012, the *New York Post* reported that Xanax was becoming the addict's "drug of choice." In 2013, *New York Magazine* disclosed that modafinil was Wall Street's "drug of choice." These declarations make good copy, but we have to verify them empirically; we need to distinguish between the drug that *commentators* say is typical, characteristic, or paradigmatic of a period and the drug that *evidence* says is actually used most frequently.

The first observation we could make about overall prevalence rates of drug use in America—one that hits us like an onrushing avalanche—is the huge difference in the prevalence of the use of *legal* versus *illegal* drugs. In 2011, only 22.5 million Americans age 12 and older, or 8.7 percent, were "current" users of any illicit drug—they took one or more illegal drugs one or more times in the 30 days prior to the survey. But in that same year, there were 133.4 million current users of alcohol and 68.2 million last-month users of cigarettes. Alcohol and cigarettes—the legal drugs—are used by *vastly* more people than all the illicit drugs added together. "Not among my crowd," a skeptic might say. "Who cares?" the empiricist would retort; "your crowd may be atypical. And besides, where's the evidence?"

Alcohol is by far the most popular of all psychoactive substances. This has been true for at least a century, is true now, and, in all likelihood, will remain true a century from now. Moreover, it is true globally as well. In 2011, half the American population age 12 or older (52%) took at least one alcoholic drink in the past month; 8 in 10 (roughly 80%) consumed alcohol one or more times during their lives. The sheer number and percentage of people who use alcohol means that this drug's entanglement in activities of all kinds, including criminal behavior, is likely to be considerable.

Of all *illicit* drugs, marijuana is the one used by the greatest number of people—and by a considerable margin. In 2011, 4 out of 10 Americans (42%) said that they had used marijuana at least once in their lives; roughly 1 in 9 (11.5%) had done so in the previous year; and about 1 in 14 (7%) had done so during the prior month. Cocaine, the illicit drug with the *next*-highest incidence rate, racked up figures of only 14, 1.5, and 0.5 percent, respectively. Marijuana is the illicit drug that attracts the largest number of users—by far. There is no close competitor. The majority of people who use an illicit drug, use marijuana; the number of instances of marijuana use is greater than the number for all other illegal drugs combined. This has been true for decades and, in all likelihood, it will remain true for decades to come.

However, it's also true that some of the drugs that are used by relatively few people generate an enormous volume of social and personal disruption, including a great deal of criminal behavior. Two such drugs are heroin and crack cocaine. In the NSDUH, heroin ranks last in lifetime popularity, having ever been used by only 1.6 percent of the population and, during the past month, by a minuscule 0.4 percent. Crack cocaine is also used by a very small proportion of respondents—3.2 percent ever, and 0.1 percent during the past month. If NSDUH had access to prison and homeless populations, and if we had a sure-fire way of obtaining completely honest answers, the heroin and cocaine figures would no doubt be substantially higher. But no matter what information we manage to obtain, compared with other drugs, some substances are used by relatively few people, yet have huge repercussions in terms of criminal activity and the criminal justice system—and heroin and crack are two such drugs. In any examination of drugs and crime, we have to make a sharp distinction between rates of use and social impact.

Continuance or “Loyalty” Rates

We've taken a brief look at the “loyalty” or continuance rates of different drugs; let's look at this phenomenon in a bit more detail. The number of people who have used a given drug is less important than the number and proportion that use it *regularly*. *Continuance rate* is one of the most important features of a drug's pattern of use. Drugs vary with respect to user “loyalty”: Users stick with some drugs longer than others. People tend to give some drugs up after experimental use; they tend to use others over a long period of time but episodically, sporadically, on a once-in-a-while basis, while they use a few more on a regular, even frequent, basis.

Of all drugs, licit and illicit, alcohol generates the strongest or greatest user loyalty. And of all *illegal* drugs, marijuana—the most frequently used and least associated with a “deviant” image—generates the strongest user loyalty. Of the many factors that determine a drug's continuance rate, perhaps the legal-illegal dimension is the most influential. As a general rule, *legal drugs have higher continuance rates than illegal drugs*. In spite

of some observers' claims, illegal drugs are not as easy to obtain as alcohol and cigarettes. There is a certain "hassle factor" involved in obtaining them; they are considerably more expensive, and obtaining them entails a risk of arrest. As a result of the hassle—coming up with the money, locating a dealer, and risking arrest—illegal drugs are much more likely to be given up or are used much more infrequently and sporadically than are legal drugs.

How are rates of drug use continuance measured? One way is to compare lifetime use with use in the past month. Picture a large circle representing all the people who have ever used a given drug, even once, during their lifetimes. Then picture within the large circle a smaller one that represents the number of people who have used that drug within the past month. If the smaller circle is a substantial proportion of the larger circle—if most of the people who ever used a given drug are still using it—then that drug generates a *high* continuance rate; its users are relatively loyal to it. On the other hand, if the inner circle is much smaller than the outer circle—if most of the people who ever used a given drug are no longer using it, or used it the last time a long time ago—then the drug's continuance rate is low, that is, its users are not very loyal to it.

Let's look at the actual loyalty or continuance rates (see Table 1-1). Of all "at least one time" users of alcohol, slightly less than two-thirds (63%) drank in the past month. Slightly more than a third of the people who smoked cigarettes once or more in their lives (35%) smoked them within the past month. Of the illegal drugs asked about in the 2011 NSDUH, marijuana—as we saw, considered the least "illicit," least deviant, and

TABLE 1-1 Continuance or "Loyalty" Rates, Selected Drugs 2011

	Month-to-Lifetime			Month-to-Year	
	Ever Used	Used in Past Year	Used in Past Month	Continuance Rate	Continuance Rate
Alcohol	82.2	66.2	51.8	.63	.78
Cigarettes	62.7	26.0	22.0	.35	.85
Marijuana	41.9	11.5	7.0	.17	.61
Cocaine	14.3	1.5	0.5	.03	.60
Pain Relievers	13.3	4.3	1.7	.13	.40
LSD	8.9	0.3	0.1	.01	.33
Tranquilizers	8.4	2.0	0.7	.08	.35
Ecstasy	5.7	0.9	0.2	.04	.22
Methamphetamine	4.6	0.4	0.2	.04	.50
Crack	3.2	0.2	0.1	.03	.33
Sedatives	2.9	0.2	0.1	.03	.50
PCP	2.4	0.0	0.0	**	**
OxyContin	2.3	0.6	0.2	.09	.33
Heroin	1.6	0.2	0.1	.06	.50

Note: Not all categories are mutually exclusive; some categories are included in others.

Source: National Household Survey on Drug Abuse: Detailed Tables, 2011, SAMHSA, 2012.

least criminal of the illegal drugs—generated a 17 percent continuance rate. (Keep in mind not only the drug but also the route of administration: Cigarettes and marijuana are smoked, while alcohol is taken orally.) In 2011, heroin and crack cocaine, the most serious and the least popular—although in principle the most dependency-producing—of the illegal drugs, manifested continuance rates of 3 and 6 percent, respectively. LSD, a drug that is characteristically used extremely sporadically, generated a continuance or loyalty rate of only 1 percent. This same pattern—the legal drugs displaying much higher continuance rates than illicit substances—prevails in the Netherlands (Sandwijk, Cohen, and Musterd, 1991, pp. 20–21, 25) and, as far as drug researchers are able to determine, everywhere else as well.

A somewhat different continuance rate can be obtained by comparing the use of a given drug in the past *year* with use in the past *month*. As measured by this particular indicator, the drug with the highest continuance rate is the nicotine in tobacco cigarettes; in the year 2011, 85 percent of all people who smoked during the past year also smoked during the past month. Measured this way, 78 percent of alcohol drinkers continued to take their drug of choice, as did 61 percent of marijuana users, and 60 percent of cocaine users. By this measure, among the illicit drugs, marijuana and cocaine attract more than half of their users on a monthly-to-yearly basis; they are the most regularly used of the illegal drugs. And while many more people drink alcohol than smoke tobacco, the people who *do* smoke cigarettes do so a great deal more often and more continuously and regularly than drinkers consume alcoholic beverages. The typical pattern of regular cigarette smoking is *chronic* use, whereas for current drinkers, the most typical pattern is *moderate* use.

For illicit drugs, “at least one time” lifetime users divide into quitters, sporadic or less-than-monthly, and monthly-or-more users. For most illicit drugs, daily use tends to be extremely atypical. But for alcohol, it is common, and for cigarettes, it is the rule among those who continue using. While *most* persons who try an illicit drug give it up after experimentation, a substantial minority continues using right up to the present time—but a minority nonetheless. Marijuana and cocaine are the only illicit substances a majority of whose last-year users continue use to the present—as we saw, 6 users in 10. But to repeat, for the legal drugs, a *majority* of last-year users have also taken the substance within the past 30 days. In short, *the more deviant, unacceptable, illicit, and illegal the drug, the more users discontinue its use, or use it sporadically; the more conventional, acceptable, licit, and legal the drug, the more users continue its use and take it regularly.*

Consumption Levels

Continuance rates lead us into another measure of use: *consumption levels*. A given drug may be widely used (prevalence rate) but not necessarily heavily used by those who take it (consumption level). During a particular year, there may be many casual, recreational users (prevalence rate) and very few heavy, chronic users (consumption levels). For instance, from the late 1970s to the early 1990s, prevalence rates for a number of illicit drugs (heroin and cocaine included) declined sharply but consumption levels remained high, because the number of heavy, chronic users remained fairly stable during this period of time, and most of the total quantity of drugs that is consumed is taken by the small minority of the very heaviest users. It is important to make this distinction because many

observers who comment on policy changes (such as legalization) confuse prevalence rates with consumption levels. As we'll see, legalization is more likely to influence consumption levels (the quantity of drugs consumed, mostly by the heaviest users) than prevalence rates (the number of individuals who use drugs).

Here's a good example of the difference between prevalence rates and consumption levels. In the United States, as we've seen, far more people drink alcohol than smoke tobacco cigarettes; the 30-day prevalence rate for alcohol is more than 15 percentage points higher than it is for cigarettes—52 versus 35 percent. But the *total consumption* of cigarettes is much higher than that of alcohol. More individual cigarettes (or “doses”) are consumed than alcoholic drinks. The U.S. Department of Agriculture estimates that during 2011, the 57 million smokers in the United States consumed slightly more than 300 billion cigarettes or “doses” (in Chapter 8, take a look at Table 8-9)—about 15 cigarettes a day per smoker. According to the NIAAA (National Institute on Alcohol Abuse and Alcoholism), in 2010, drinkers in the United States consumed 2.26 gallons of absolute alcohol, or about 290 ounces, per year for the population age 15 and older, or the equivalent of roughly 1.6 ounces of alcoholic beverage containing 45 percent alcohol per day—the equivalent of about two drinks per day per drinker. (Of course, if the drinker consumes wine or beer, the figures are correspondingly higher, since these drinks are less potent.) While alcohol is the drug that is consumed by far by the greatest *number of people*, tobacco (which contains nicotine) is the drug that is used the greatest *number of times*. But keep in mind, too, that cigarette consumption has *plummeted* since the 1960s, while alcohol consumption has wobbled up and down in this country for over two centuries, that is, since the government has kept records of its sales. We'll take a closer look at alcohol and tobacco consumption in more detail in Chapter 8.

Consider, too, the difference between cocaine and heroin in prevalence rates versus consumption levels. Cocaine is a widely used intoxicant; during 2011, according to the national household survey, 3.86 million Americans used cocaine. In contrast, 620,000 used heroin during that year. However, again, remember that the NSDUH does not include the homeless or the prison population. In 2001, a research organization, Abt Associates, in an attempt to get around the homeless and prison population problem, estimated 900,000 chronic heroin users for the United States. Either way, cocaine has significantly higher prevalence rates than heroin. But far more striking is the difference between the consumption levels of cocaine and those of heroin. In terms of the *total amount consumed*, according to the Abt Associate's report, *What America's Users Spend on Illegal Drugs*, cocaine is used *nineteen times* more than heroin—259 tons versus 13.3 tons. (Since drug use in the United States has moderated somewhat, these figures would reflect this change.) In sum, the regular cocaine user consumes a greater volume of his or her drug than the regular heroin user does, whose use is more sporadic and episodic. Hence, an understanding of total consumption levels is crucial to getting a sense of levels of drug use. *How much* of a given drug is used is not the same thing as *how many* people use it.

Life-Cycle Rates

From time to time, the media report that drug use has become uncharacteristically high among an age segment of the population not typically given to high rates of use. For example, we read or hear that drug use is “common,” “rampant,” or “epidemic” among

11- or 12-year-olds, among the middle-aged, or even among the elderly. If true, this would be news. Apparently, even when it is not true, it's news anyway.

In spite of slight variations, wrinkles, and wiggles in this picture, for at least four decades, drug use has been, and remains, relatively low among youths (ages 12–17), extremely high among young adults (ages 18–25), even lower in the older adult years (ages 26–34), and lower still after the age of 35. (Of course, drug abuse among the very young is far more problematic, harmful, and disruptive than it is among young adults and the middle-aged sectors of the population.) Practically no study has found a higher rate of recreational drug use among young adolescents than among older adolescents and young adults. In all likelihood, this will remain true for a number of decades to come. (An obvious exception: During the 1990s, older categories, for instance, the 26- to 34-year-old age group, had higher rates of lifetime drug use than slightly younger ones, such as the 18- to 25-year-old age group, simply because their *lifetime* rates reflected use when they were younger. But their *current* rates of use—use in the last year and month—remained significantly lower.) Drug use is an expression of lifestyle, and lifestyle is a reflection of age-related life-cycle patterns—and these life-cycle rates are not likely to change on a whim.

As we can see from Table 1-2, in 2011, only 3.3 percent of 12- and 13-year-olds had used at least one illicit drug—any illicit drug—during the previous month. This percentage rose fairly rapidly into the early, middle, and late teen years, reached a peak in the 18- to 20-year-old bracket (24%), and, with a couple of tiny wrinkles, declined year by year and decade by decade after that. About one in 7 or 8 people between the late twenties and early thirties (13%) and 8.5 percent age 35 and older used one or more illegal drugs during the month prior to the survey. Illegal drug use is *strongly* related to one's age or position in the life cycle. Drug use begins at a low point, rises in early adulthood, and declines fairly steeply after that. After the age of 35, drug use falls to a point less than half of what it was during the peak years, and after the age of 65, to less than to one-twentieth.

TABLE 1-2 Illicit Drug and Alcohol Consumption by Age, 2011

Use in Past Month							
Any Illicit Drug		Any Illicit Drug Other than Marijuana		Alcohol		Binge Alcohol Consumption	
Year	Month	Year	Month	Year	Month	Year	Month
12–13	7.1	3.3	5.5	2.3	7.7	2.5	1.1
14–15	18.7	9.2	10.5	4.1	26.3	11.3	5.7
16–17	30.2	17.2	14.4	5.8	47.8	25.3	15.0
18–20	38.7	23.8	18.3	7.4	66.5	46.8	31.2
21–25	32.9	19.9	16.8	6.7	83.9	69.7	45.4
26–34	21.4	12.9	11.0	4.8	79.2	63.8	35.7
35+	8.5	4.9	4.0	1.8	66.8	53.1	18.7

Source: Results from the 2011 National Survey on Drug Use and Health: National Findings, Detailed Tables, SAMHSA, 2012.

A somewhat different pattern prevails for alcohol consumption; there is a steep rise during and after the teenage years, but the decline after its peak year is extremely gradual—almost flat—until the fifties. As we see from Table 1-2, in 2011, alcohol use in the past year was 84 percent for 21- to 25-year-olds, 79 percent for 26- to 34-year-olds, and 67 percent for persons 35 and older. Alcohol consumption does not take a substantial downturn until the individual is past the age of 65. Unlike illicit drug use, which plummets in the older adult years, alcohol consumption is almost flat between its peak and later middle age, significantly (though modestly) declining only in the elderly years. However, *non-normative* or “deviant” drinking drops off more sharply as people age than moderate drinking, or drinking at all. As we see from Table 1-2, *binge* drinking (five or more drinks on three or more occasions) during the past month for the over-35 set is less than half of what it is for persons between the ages of 21 and 25 (19% versus 45%). Both using illicit drugs and heavy or binge drinking are unconventional, while, in most social circles, alcohol consumption is a conventional or normative activity.

As with continuance or loyalty rates, *licit* drug use tends to be spread more evenly throughout the life cycle; in contrast, *illicit* drug use tends to peak sharply in late adolescence and decline just as sharply into mature adulthood. It is entirely likely that the illegality of the currently illicit drugs operates as a strong disincentive to use, *especially* among mature adults. This pattern is causally related to a range of sociological forces, including the aging process itself, life-cycle involvements, the conventionality-unconventionality dimension, and the influence of generational cohorts.

TRENDS OVER TIME: AN INTRODUCTION

One of the most interesting issues a sociologist or criminologist addresses is *trends* in drug use over time. The media express this concern about trends when television news and newspaper headlines announce that drug use is “up” or “down” over the past year or decade, that it has “risen” or “declined.” What tells them that?

To make statements about changes in human behavior over time, we need data, and moreover, we need valid, reliable, and *systematic* data. “Systematic” means that the data were gathered in a planned fashion, that they represent an accurate, cross-sectional view of the phenomenon under study. If the data are truly systematic, we have confidence that what’s being described during a given year can be meaningfully compared with what’s being described during another year. What systematic, valid, and reliable evidence do we have that bears on the matter of changes in drug use over historical time?

ALCOHOL CONSUMPTION: 1790s–1919

Because the sale of alcohol was legal from colonial times to 1919—the year before Prohibition—historians have an excellent and uninterrupted historical record of trends over a stretch of several centuries. We know that alcohol *sales* are not exactly the same thing as alcohol *consumption*. That’s why researchers who investigate the matter refer to alcohol sales during a given period of time as “apparent” consumption. However, most experts feel that the discrepancy between sale and consumption is likely to be small and that, for all practical purposes, the sale of alcohol can be used to measure its consumption. In addition,

researchers feel that, today, in most locales, the total production—and therefore consumption—of homebrew, “moonshine,” or illegal, untaxed alcohol does not alter the picture a great deal. In any case, the total volume of unrecorded alcohol production (and, presumably, again, consumption) diminishes the closer we move toward the present time.

Alcohol consumption is measured in a variety of ways, and one major way is the *volume* of alcohol purchased. Volume is expressed in the total number of gallons of absolute alcohol consumed per person per year, usually tabulated in the population over the age of 12, or 14, or 15, depending on the researcher. Absolute alcohol refers to the volume of ethanol or “absolute” alcohol that is contained in a given alcoholic beverage. The alcohol a drink contains varies considerably from one beverage to another.

As we saw, beer contains about 5 percent alcohol, wine contains 13 percent, and distilled spirits such as whiskey, vodka, gin, and tequila contain 40–50 percent. Thus, if 100 ounces of each of these beverages were poured into a separate bucket, the one containing the beer would hold only 5 ounces of absolute alcohol, the one with the wine would hold 13 ounces of alcohol, and the one with the distilled spirit would hold about 40–50 ounces. Therefore, the sale of each of these beverages has to be converted into the total amount of alcohol each contains to make comparisons meaningful. For instance, the per capita consumption of 2 gallons of alcohol for the nation during a given year would represent drinking more than 40 gallons of beer, *or* 15 gallons of wine, *or* nearly 4.5 gallons of distilled spirits.

What can we say about alcohol consumption in the past? To put the matter plainly, during colonial times, drinking “constituted a central fact of . . . life.” Most people “drank often and abundantly” (Lender and Martin, 1987, p. 9). Beer and cider were common at mealtime, with children often partaking. Collective tasks, such as clearing a field, were usually accompanied by tapping a cask of brew, and farmers typically took a jug with them into the field each morning. Employers often gave their workers liquor on the job. Political candidates usually “treated” the voters to alcoholic beverages—including at polling places on election day. The Continental Army supplied its troops with a daily ration of 4 ounces of rum or whiskey. In short, drinking was extremely common in seventeenth- and eighteenth-century America—strikingly more so than it is today (Lender and Martin, 1987, pp. 2–3). Estimates put the per capita alcohol consumption for all Americans age 15 and older in 1790 (the year of the first U.S. Census) at 5.8 gallons of absolute alcohol per year, more than twice its current level (pp. 9–10, 20, 205).

As high as the consumption of alcohol was at the turn of the 1700s, it actually rose into the beginning of the 1800s—from 5.8 gallons in 1790 to 7.1 gallons in 1830. Moreover, over time, a high proportion of drinkers shifted from beer to wine to the vastly more potent distilled spirits, which, as we saw, were 40–50 percent alcohol. In 1790, 40 percent of the alcohol consumed in America was in the form of distilled spirits; by 1830, this figure climbed, to 60 percent. Not only were more people drinking in the late 1700s and the early 1800s, they were also drinking more potent beverages.

Said one observer in 1814, “the quantity of ardent spirits” consumed in the United States at that time “surpasses belief.” Drinking “had reached unparalleled levels.” The notion that alcohol “was necessary for health remained firmly fixed. It was common to down a glass of whiskey or other spirits before breakfast . . . instead of taking coffee or tea breaks.” Americans customarily took work breaks at 11 a.m. and 4 p.m. for a few pulls at the jug. “Even school children took their sip of whiskey, the morning and

afternoon glasses being considered ‘absolutely indispensable to man and boy.’” Distilled spirits “were a basic part of the diet—most people thought that whiskey was as essential as bread” (Lender and Martin, 1987, pp. 205, 246).

Records indicate that 1830 was the high point in the nation’s alcohol consumption; after that, drinking declined. The cause? The impact of the temperance movement. Actually, the seeds of temperance were planted nearly a half century before with the publication of Benjamin Rush’s treatise *An Inquiry into the Effects of Ardent Spirits on the Human Mind and Body* in 1784. At the time, Rush, a prominent physician, was something of a voice in the wilderness. He condemned not drinking per se but the heavy, uncontrolled consumption of distilled spirits. “Consumed in quantity over the years,” he wrote, distilled spirits “could destroy a person’s health and even cause death.” Rush was the first medical figure to argue that what we now refer to as alcoholism is a disease and an addiction.

Rush had friends who were influential in religious affairs and who heeded his call. The first local temperance society was founded in 1808 and in 1826, a national organization, the American Temperance Society, was founded. Like Rush, it preached the gospel of moderation rather than prohibition. It “helped organize local units, sent lecturers into the field, distributed literature (including Rush’s *Inquiry*), and served as a clearinghouse for movement information.” By 1830, more than 200 local anti-liquor chapters had formed, and temperance had become “a burgeoning national movement.” By the 1830s, the movement boasted more than 1.5 million members, and its efforts began to have a real-world impact.

Employers stopped supplying liquor on the job, politicians ceased “treating” their constituents with alcohol, and local taverns—notorious locales for heavy, uncontrolled drinking—were denied licenses (Lender and Martin, 1987, p. 68). As a result of these and other efforts, alcohol consumption in the United States plummeted between 1830 (7.1 gallons of alcohol per person per year) and 1840 (3.1 gallons). In 1867, the Prohibition Party was formed, which ran political candidates on an anti-liquor platform. Interestingly, many of the party’s planks were extremely progressive for their time; they included women’s rights, prison reform, and universal public education.

Rates of drinking between 1850 and the dawn of Prohibition fluctuated moderately on either side of 2 gallons per person per year for the population above the age of 15, reaching a low in the late 1870s (1871–1880, at 1.72 gallons), and a high in the late “oughts” (1906–1910, at 2.6 gallons). Between 1916 and 1919, alcohol consumption declined again, to below 2 gallons just prior to Prohibition (1.96), in large part because even before national alcohol prohibition took effect, roughly two-thirds of the American population lived in “dry” states, those with their own alcohol prohibition laws. Nationwide, between 1908 and 1917, over 100,000 licensed bars had been closed down.

ALCOHOL CONSUMPTION DURING PROHIBITION

In 1920, the Eighteenth Amendment to the Constitution, or Volstead Act, went into effect, making it illegal to manufacture or sell alcoholic beverages anywhere in the United States. Everyone agrees that enforcement of Prohibition was difficult and problematic. But what impact, if any, did Prohibition have? Did drinking rise, decline, or remain the same when it was prohibited? What other effects did it have?

What is your mental image of drinking during Prohibition? If you are like most people, chances are, you imagine that Americans drank *more* alcohol during Prohibition than when its sale was legal. I've distributed questionnaires asking the students in my classes whether they thought that alcohol consumption *increased* or *decreased* during Prohibition. The majority—the last time I asked this question, roughly 85 percent!—said they thought it increased. In the public imagination, making alcohol illegal actually stimulated its consumption.

Images of bathtub gin, silver hip flasks, speakeasies, out-of-the-way, hole-in-the-wall jazz night spots, gang warfare, night convoys of trucks crossing the border weighed down with heavy loads of Canadian whiskey—all are part of American historical lore. *Of course* the consumption of alcohol increased during Prohibition, most of us think. It makes a good story, doesn't it—dramatic and vivid? Imagining most Americans staying home and sipping Coca-Cola, root beer, or Dr. Pepper is just too boring for words.

The fact is, alcohol consumption *declined* during Prohibition—and by quite a bit. True, many Americans did drink alcohol—but how many? Saying that “many” Americans drank says nothing about the *number* or the *proportion*. It's a very vague and highly impressionistic statement. Compared with the decade or so before and after Prohibition, was the consumption of alcohol higher or lower? How much higher or lower? And how do we know?

Scholars estimate that alcohol consumption was more than twice as high in the decade or so before Prohibition as during (Lender and Martin, 1987, pp. 205–206). And in the years after Prohibition, it began at a low point—largely because it took a few years for most imbibers to get back into the habit of drinking—and climbed during the 1940s. The per capita consumption of absolute alcohol for all Americans age 15 and older plummeted from the years immediately before Prohibition (1916–1919—1.96 gallons), declined even further during Prohibition (1920–1930—0.90 gallon), and rose slowly in the year following Prohibition (1934—0.97 gallon), and again in the year after that (1935—1.20 gallons), increasing more substantially during the late thirties. By the forties (1942–1946), it stood at 2.06 gallons.

The consumption figures for the pre- and post-Prohibition eras are robust, “hard,” or incontrovertible data, based on the taxable sales of beer, wine, and distilled spirits. In contrast, consumption during the Prohibition years is based on *indirect* alcohol-related indicators such as rates of cirrhosis of the liver, hospital admissions for alcohol-related dementia, drunk driving citations, automobile fatalities, and arrests for drunk and disorderly conduct. For instance, the death rate from cirrhosis of the liver declined from the 1900 to 1919 era, when it was 12–17 per 100,000, to the 1920s and early 1930s, when it was 7–9 per 100,000 (Grant, Noble, and Malin, 1986). Epidemiologists regard cirrhosis as a very reliable measure of the percentage of heavy drinkers in the population.

Although the history of Prohibition is indeed very vivid and colorful, the available evidence does not point to an increase in drinking during that era. The picture is a great deal more mundane and less dramatic than hip flasks and jazz clubs, which existed but were not as common as the stereotype has it. Many Americans who drank *before* Prohibition stopped drinking *during* Prohibition, and *remained* abstemious; they did not take up drinking until several years afterwards. Boring as it may seem, Prohibition actually discouraged alcohol consumption.

REPEAL: ALCOHOL CONSUMPTION, 1933–PRESENT

As we saw, the first year of the repeal of the Eighteenth Amendment witnessed a slight increase in alcohol consumption, to just under a gallon per person age 15 and older—about half the pre-Prohibition level. The use of alcoholic beverages climbed throughout the 1930s and early 1940s; jumped significantly during the World War II years; and leveled off, with slight year-to-year fluctuations, until the late 1960s, when it began to rise again. As we'll see, during the second half of the 1960s, illicit drug use increased as well, suggesting that the use of legal and illegal psychoactive substances are related to one another.

Alcohol consumption reached a post-Prohibition peak somewhere between the late 1970s and the early 1980s (as it did for illicit drug use as well), and (except for a few one or two-year wrinkles) declined steadily throughout the 1980s and 1990s. Interestingly, as we'll find out in more detail momentarily, property crime victimization also reached a peak in the late 1970s and declined after that, and violent crime declined throughout the 1990s. It is entirely possible that in important ways, these three developments—the decline of alcohol consumption, illicit drug use, and criminal behavior, including property and violent crime, are interrelated. Just as interesting: After 1998 and into the twenty-first century, the consumption of alcohol began to inch upward. In 1998, Americans consumed 2.14 gallons of absolute alcohol. The per capita volume of purchased alcohol increased almost imperceptibly year by year, to 2.31 in 2007; but by 2010, it became clear that consumption had settled into a decade-and-a-half plateau—it stood at 2.26. In any case, the historical co-relationships between alcohol use and crime, and alcohol and illicit drug use, are well documented. I present per capita rates of alcohol consumption for selected years in Table 1-3.

DRUG USE TRENDS OVER TIME: 1960s–1979

Systematic surveys on illicit drug use were not conducted until the early 1970s. Statements about use before that time are, for the most part, based on guesses, anecdotes, information, and, as with alcohol consumption during Prohibition, indirect indicators and measures. So it makes a great deal of sense to begin our discussion of illicit drug use with the early 1970s—with two crucial qualifications.

The 1979 national household survey made use of *retrospective estimates*—projections backwards in time, based on the respondent's age and the age at which he or she began using one or more drugs—to estimate drug use patterns as far back as 1960 (Miller and Cisin, 1980). Hence, rates of drug use during the 1960–1971 era can be “reconstructed” from the 1979 national household survey data. Rates of drug use during 1972 and afterwards can be calculated from the data in household surveys that were conducted in the appropriate years.

The second qualification is that different agencies conducted the national drug use surveys until 1992, when SAMHSA (the Substance Abuse and Mental Health Services Administration) took over the job. In addition, in 1994, the national survey “improved” its procedures and, in that report, published in 1996, stated that its figures “are not comparable” to those in previous years and “should not be used for trends with pre-1994 data” (p. 26). While the SAMHSA researchers who conducted the 1994 national drug

TABLE 1-3 Apparent Per Capita Consumption of Absolute Alcohol, 1790–2010, Selected Years (population age 15 and older, 1790–1970, 14 and older, 1971–2010)

Selected Years	Gallons of Absolute Alcohol/Year, per Capita
1790	5.80
1830	7.10
1840	3.10
1850	2.10
1860	2.53
1870	2.07
1871–1880	1.72
1881–1890	1.99
1891–1895	2.23
1896–1900	2.06
1901–1905	2.39
1906–1910	2.60
1911–1915	2.56
1916–1919	1.96
1920–1930	0.90*
1934	0.97
1935	1.20
1936–1941	1.54
1942–1946	2.06
1951–1955	2.00
1961–1965	2.16
1966–1970	2.45
1975	2.69
1980	2.76
1985	2.62
1990	2.45
1995	2.23
2000	2.18
2005	2.23
2010	2.26

*No legal sales during Prohibition; this estimate is based on rates of cirrhosis of the liver, admissions to mental hospitals for alcohol-induced dementia, drunk driving citations, etc.

Sources: Lender and Martin, 1987, pp. 205–206; Nephew et al., 2003; LaValle and Yi, 2012.

use survey found it necessary to make this methodological qualification, authors who are in pursuit of sketching what drug use looked like in earlier eras do not have the luxury of ignoring the data from these earlier surveys, and must use them—keeping this caveat in mind—as rough estimates.

The dominant stereotype of the 1960s is that it was a decade of extremely high drug use. Nowadays, when we depict the 1960s, no representation is complete without

portrayals of long-haired young people smoking marijuana, “dropping acid,” wearing clothes with the appropriate psychedelic designs, and engaging in political demonstrations. In addition, aside from marijuana, LSD is often depicted as the drug of choice in the “psychedelic sixties.” The idea that LSD use was widespread during the 1960s is even enshrined in some drug textbooks. Say a neurobiologist and a neuropsychologist (without supplying any evidence), “LSD [use] appears to have peaked in 1967 and 1968, after which it tapered off” (Hart and Ksir, 2013, p. 325). All these “psychedelic sixties” elements tell a colorful story, they stick in the mind, and they seem to belong together—but they represent a clear example of the “availability heuristic,” a biased method of thinking (Tversky and Kahneman, 1982, pp. 163–178). They are stereotypical, but factually false.

The true story of drug use during the 1960s, according to 1979 the National Household Survey’s retrospective estimates, is quite different. In fact, LSD use remained at an extremely low level in 1960, rose slowly during the early to mid-1960s, and rose more rapidly in the late 1960s and the 1970s.

The 1960 estimates for lifetime use (a measure that obviously encompasses the largest number of users), for young adults (ages 18–25), the segment of the population that is most likely to use illicit drugs, are extremely low. In 1960, according to the 1979 national household survey’s retrospective estimates, only 4 percent of young adults age 18–25 had ever used marijuana, even once. By 1967, this had risen to 14 percent. For the “stronger” drugs—cocaine and the hallucinogens (the category including LSD)—these figures were much, much lower. In 1960, the “ever used” statistic was 1 percent for cocaine and 1 percent for the hallucinogens; by 1967, these figures had risen to 2 percent for cocaine, and 3 percent for the hallucinogens. These figures do not paint a picture consistent with high drug use during the 1960s. The available evidence suggests that the 1960s were psychedelic only for a very small proportion of the population (Miller and Cisin, 1980, pp. 13–18).

What *is* true, however, is that the 1960s initiated the modern era of drug use. In a significant sense, the decade provided the launching pad for the patterns of illicit drug use in today’s society. As we can see from Table 1-4, illicit drug use—as measured by lifetime use among young adults ages 18–25, for three representative drugs or drug types—rose significantly from the early to the late 1960s, *skyrocketed* from the late sixties to the mid-1970s, and continued to rise into the late 1970s. The 1967–1974 increase is especially dramatic and striking. It was the 1970s—and not the 1960s—in which the recreational use of illicit drugs was most widespread.

TABLE 1-4 Lifetime Use, Selected Drugs, Young Adults (18–25), 1960–1979
(1960 and 1967 figures based on retrospective estimates)

	1960	1967	1974	1979
Marijuana	4	14	53	68
Cocaine	1	2	13	28
Hallucinogens	1	3	17	25

Sources: Miller and Cisin, 1980, pp.13–18; Fishburne, Abelson, and Cisin, 1980, pp.26–32.

Triangulation and multiple confirmation—using different sources of information—give us confidence that an observation is likely to be true. Unfortunately, the Monitoring the Future (MTF) survey on high school seniors did not begin until 1975, so it can't confirm the national household survey's huge increase in drug use from the 1960s to the 1970s. But it does document that 1979 (or 1980, or 1981, depending on the specific drug or measure) was the high point in recreational drug use in the United States.

Attitudes and behavior are not always perfectly correlated with one another. Very often, what people *say* and what they *do* are very different. Nonetheless, if attitudes and behavior are in agreement with one another, the researcher feels more confident that the observed tendency is actually taking place. And according to the MFT study of high school seniors, trends in illicit drug use during the 1970s were paralleled by attitudes toward drug use during that period. Between the mid- and the late 1970s, when drug use *increased*, the percentage of high school seniors saying that drug use is harmful *decreased*—two observations that are consistent with each other. For instance, between 1975 and 1979, the percentage of high school seniors saying that taking LSD “once or twice” is harmful decreased from 49 to 42 percent. The comparable figures for cocaine were 43 percent and 32 percent.

The MFT survey also asked high school seniors about whether they “disapprove of people” 18 or older engaging in illicit drug use. For smoking marijuana “once or twice,” the percentage declined between 1975 (43%) and 1979 (34%). For nearly every drug category and level of use, the percentage of twelfth-graders disapproving of the consumption of the illicit substance declined.

In addition, over the course of the 1970s, trends in high school seniors' attitudes regarding the legality of the use of illicit drugs also became more relaxed, tolerant, and laissez-faire. Correspondingly, the proportion supporting the current criminalization of drugs shrank. Between 1975 and 1979, the percentage saying that marijuana use “should be a crime” declined from 31 to 24 percent. In these same years, rates of approval for legalizing the sale of marijuana to adults increased from a bit more than a third (37%) to a majority (53%). During the 1970s, attitudes toward illicit drug use—as measured by perception of harmfulness, degree of disapproval, and support for legalization—became increasingly tolerant.

The 1970s represented a kind of high point of tolerance toward drug use, an attitude that was translated into legal policy. During that decade, 12 states decriminalized the possession of small quantities of marijuana, indicating that legislators sensed a more accepting public attitude toward at least one illicit drug and implemented that sense into legal policy. (Since then, some states have *re*criminalized, while still others have *de*criminalized.) We will look at the criminalization and decriminalization of marijuana and the other currently illicit drugs in more detail in Chapter 16.

DRUG USE, 1980s–PRESENT

Two remarkable things happened in the world of drug use on its way to the twenty-first century: First, in the decade or so after its high point, which occurred roughly 1978–1980, drug use experienced a dramatic decline; and second, during the early 1990s, it looked very much as if it were on the rise once again.

Comparing the figures for illicit drug use for 1979 with those of 1991, the decline of the 1980s seems more than simply remarkable—it is almost astounding. In many ways, the 1970s represented the fulfillment of the hedonistic 1960s. By the end of the 1970s, America was using illicit drugs in unprecedented numbers. Among 18- to 25-year-olds, between 1960 and 1979, lifetime marijuana use shot up more than 15 times and the use of cocaine more than 25 times (see Table 1-4.) But the decline of the 1980s seemed to usher in the dawning of an age of moderation, a turnaround in use that can be compared with the sharp decline in alcohol consumption that overcame the country after 1830 (or, for that matter, during Prohibition). For the first time in many decades, we seemed to be doing something right.

But along came the 1990s, and everything seemed to change. The rise in illicit drug use during the last decade of the twentieth century seems surprising because the country seemed to have its drug use under control. Things were going right—but then suddenly, they weren't. The increase was problematic, troubling, very much in need of an explanation. But the rise of the first half of the 1990s was peculiar, because it was extremely selective, partial, and piecemeal.

Let's look at the 1979–1991 national household figures, as depicted in Table 1-5. In 1979, 17 percent of youths ages 12–17 said that they had used marijuana once or more in the past month; in 1991, only 4 percent had—a decline of four-fifths. In 1979, an almost astounding one-third of young adults ages 18–25 (35%) had used marijuana in the past 30 days; by 1991, this figure had been cut by two-thirds, to 13 percent. In 1979, an astonishing nearly one young adult in 10 had used cocaine in the past month (9%); by 1991, only one in 50 in this age category had done so (2%). For all drugs, for all age categories, and for all categories of use, the consumption of illicit drugs declined between the late 1970s and the early 1990s. Even the use of alcohol declined during this period. In 1979, over a third of youths had consumed an alcoholic beverage during the previous month (37%); in 1991, only a fifth (20%) had done so. For young adults, the comparable figures were 76 and 64 percent.

The drug use trends for high school seniors from 1979 to 1991, as documented by the MTF survey, were nearly as impressive as those the national household survey turned up. As we can see from Table 1-6, the use of any illegal drug during the past month declined from nearly 4 seniors in 10 in 1979 (39%) to only 16 percent in 1991. For marijuana, the decline was just as steep—from 37 to 14 percent. In 1991, only one-fourth

TABLE 1-5 Drug Use in America, 1974 to 2011: National Household Survey (past month only)

	Youths (12–17)					Young Adults (18–25)				
	1974	1979	1991	2005	2011	1974	1979	1991	2005	2011
Marijuana	12	17	4	7	8	25	35	13	17	19
Cocaine	1	1	*	1	*	3	9	2	3	1
Alcohol	34	37	20	17	13	69	76	64	61	61

Sources: Fishburne, Abelson, and Cisin, 1980, pp. 26–32; NIDA for 1991; SAMHSA for 2005 and 2011.

TABLE 1-6 30-Day Prevalence in Use of Selected Drugs, High School Seniors, Selected Years, 1975–2012

	1975	1979	1985	1991	1996	2002	2006	2012
Marijuana	27	37	26	14	22	22	18	23
Cocaine	2	6	7	1	2	2	3	1
Amphetamines	9	10	7	3	4	6	4	3
LSD	2	2	2	2	3	2	1	1
Any illicit drug	31	39	30	16	25	25	22	25
Alcohol	68	72	66	54	51	49	45	42
Cigarettes	37	31	30	28	34	27	22	20

Note: These drugs were selected because MTF's data present a continuous time line for them from 1975 to the present and because, year by year, their use was at least one-half of one percent.

Source: Monitoring the Future, relevant years.

as many high school seniors had used cocaine in the past month (1.4%) as had done so in 1979 (5.7%). Once again, even the use of alcohol had become more moderate during this period; monthly use declined by almost a fifth.

Many observers saw extremely good news in these figures. Although the country's drug use was still extremely high—rates and levels of drug use in the early 1990s was vastly higher than in the early 1960s—it seemed to be moving in the right direction. But the year 1991 represented another turning point in the country's drug use trends: After the early 1990s, a significant rise in illicit drug consumption was in the works.

The biggest increases in drug use after the early 1990s took place among the very young—segments of the population whose use began to be recorded for the first time in that year. In 1991, the MTF survey began to include eighth- and tenth-graders in its sample. And, for the first time, a substantial proportion of the students in those grades began using drugs. Initiation into the use of illicit substances was taking place at earlier and earlier ages. And these increases, as it turns out, were not only substantial but unprecedented.

Let's look at the 1991–2011 period in two chunks—between 1991 and 1996 and between 1996 and 2011. As we can see in Table 1-7, in 1991, 5.7 percent of eighth-graders and 11.6 percent of tenth-graders said that they had used any illicit drug during the past 30 days. By 1996, 14.6 percent of eighth-graders and 23.2 percent of tenth-graders had used marijuana in the previous 30 days. In the brief span of just five years between the early and the mid-1990s, recent or current illicit drug use had more than *doubled* among an extremely vulnerable adolescent segment of the population. (Correspondingly, among high school seniors, this figure had increased from 16.4 to 24.6 percent, a substantial increase—but much less than a doubling.) After the early 1990s, a disturbing trend in drug use among the young was in the works, and no one knew what to do about it.

Interestingly, most of this increase in illegal drug use involved marijuana alone. While the 1991–1996 eighth- and tenth-grade increases for illicit drugs *other than* marijuana represented substantially less than a doubling, those for marijuana were

TABLE 1-7 Trends in 30-Day Prevalence, Various Drugs, Selected Years, 1991–2012
Grades 8, 10, and 12 Combined

	1991	1996	2002	2006	2012
Marijuana	8.3	17.7	15.3	12.5	15.1
Cocaine	0.8	1.7	1.6	1.6	0.8
Amphetamines	3.0	4.5	4.4	3.0	2.5
LSD	1.3	2.1	0.7	0.5	0.5
Inhalants	3.2	3.9	2.7	2.7	1.7
Heroin	0.2	0.6	0.5	0.4	0.3
Any Illicit Drug	10.9	20.6	18.2	14.9	16.8
Any Illicit Drug Other Than Marijuana	5.4	8.4	7.7	6.4	5.2
Alcohol	39.8	38.8	33.3	31.0	25.5
Been Drunk	19.2	20.4	17.4	17.4	13.5
Cigarettes	20.7	28.3	17.7	14.4	10.6

Source: Johnston et al., 2013

substantially more than double. In 1991, 3.8 percent of eighth-graders and 5.5 percent of tenth-graders used any illicit drug other than marijuana during the past month; in 1996, these figures were 6.9 and 8.9 percent—again, less than double. But for marijuana specifically, in 1991, this was true of 3.2 percent of eighth-graders and 8.7 percent of tenth-graders, and in 1996, it was 11.3 and 20.4 percent, respectively. The bulk of the eighth- and tenth-grade increases in illicit drug use that took place during the 1990s came about as a result of expanded marijuana use.

However, as with nearly all the time trends we’ve examined so far, there is no unidirectional pattern. The expansion of drug use, especially of marijuana, that began to skyrocket during the early to mid-1990s fizzled out in the late 1990s and early twenty-first century. Between 1996 and 2011, illegal drug use among schoolchildren remained flat—indeed, even dipped slightly. In 1996, a fifth of the combined eighth-, tenth-, and twelfth-graders (20.6%) had used one or more illicit drugs in the past 30 days; in 2011, the figure was one-sixth (16.9%). Even for marijuana the percentage dropped slightly, from 17.7 to 15.1 percent. The young adolescent drug use “boom” that began in the early 1990s was incapable of sustaining itself; the explosion in adolescent drug use that some feared was taking place had fizzled out. While the percentage decline might seem small, it represents abstinence for half a million more schoolchildren whose counterparts five years before had been using one or more illegal drugs—encouraging news for public health experts.

There is a category of chemically and pharmacologically miscellaneous substances whose use was not systematically recorded that boomed in the twentieth century but declined into the twenty-first. In the short run, consumption of these substances grew from nearly zero to significant levels. In 1996, MTF began asking respondents about their use of MDMA (or Ecstasy) and Rohypnol, and 2000, GHB and ketamine were added to the list. These drugs began to be used with a fair degree of frequency among

teenagers and young adults in clubs and “raves” where all-night dancing to throbbing, hypnotic, techno music takes place. In 2001, among high school seniors, lifetime Ecstasy use was over one in 10 (11.7%), and the figure for use in the previous month was more than one in 40 (2.8%). But by 2012, Ecstasy’s lifetime use was 7.2 percent and past-month use had dropped to below 1 percent (0.9%), and researchers no longer questioned students about Rohypnol. Currently, the chance that schoolchildren are using club drugs remains negligible; except for Ecstasy, these drugs seem to have dropped off the map. After 2005, MTF’s tabulations did not include ketamine or GHB. Interestingly, the substance whose use declined most dramatically and most consistently during the previous decade and a half has been cigarettes; between 1996 and the date of the most recent MTF survey, cigarette use declined by more than 60 percent. Unlike the sporadic nature of the use of most of the drugs MTF asks about, cigarette smoking tends to be chronic and repetitive. And, in spite of the up-and-down trajectory of the consumption of nearly all of the substances studied by Monitoring the Future, cigarette smoking seems to be on a permanently downward spiral. Perhaps drug educators can take heart in the fact that they have succeeded in discouraging the use of the drug whose obliteration would represent humanity’s greatest public health achievement.

SUMMARY

When we examine prevalence rates—the percentage of the population that used specific drugs during a specific time period—whether during their lifetimes, the past year, or the past month—we see that the *legal* drugs (that is, alcohol and cigarettes) are used by many more people than the *illegal* drugs. According to the National Survey on Drug Use and Health (NSDUH), in 2011, while only 8.7 percent of the American public, 22.5 million people, used one or more illicit drugs at least once during the past month, for alcohol, this was true of 51.8 percent, or 133.4 million people, and for cigarettes, 22.1 percent, or 56.8 million people. Alcohol and cigarettes are used by *vastly* more people than is true of the illicit drugs. Heroin and crack cocaine are used monthly or more by a very small proportion of the population—considerably less than 1 percent. (Recall, however, that NSDUH cannot locate homeless people, whose use of heroin and crack are likely to be higher than that of people who live in households.) Nonetheless, a small number of people can commit a great deal of crime and cost the society an enormous amount of money in social services.

Consumption levels are important because, for some drugs, a small number of users consume a substantial quantity of a particular substance—and harm themselves and the society at large by doing so. For instance, though more people drink alcohol than smoke tobacco cigarettes, the minority who smoke consume more “doses” than the majority who drink. Most drinkers are moderate in their consumption; most smokers are chronic in their habit. Public health experts estimate that tobacco smoking kills many more people (440,000) than alcohol does (85,000).

Sociologists and criminologists of drug use are also interested in continuance or “loyalty” rates. Users tend to “stick with” legal drugs more than illicit drugs, which are more likely to be given up or used infrequently. If we compare lifetime with monthly

prevalence rates, drinkers are more loyal to alcohol than users are to any specific drug. On the other hand, if we compare yearly with monthly prevalence rates, tobacco cigarettes—which contain the drug nicotine—generate the highest user loyalty rate. Tobacco is actually used vastly *more often* than alcohol, since, on average, each of those 57 million smokers takes many more “doses” of their drug (nearly a billion cigarettes) per day, whereas consumers of alcohol average only two drinks per day—about 150 million daily “doses” of this drug.

Drugs tend to be used over the life cycle in specific and identifiable patterns. Illicit use is very low among 11- and 12-year-olds; it rises sharply into the mid- to late teens, reaches a peak at 19 or 20, and declines, at first slowly, then more sharply. Illicit drug use becomes fairly rare after the age of 35. Some observers believe that this pattern is related to rises and declines in criminal and deviant behavior (Gottfredson and Hirschi, 1990). In contrast, alcohol consumption plateaus at its peak then declines fairly slowly after the fifties and sixties.

Drug use trends over time are important to any understanding of historical and cultural changes. Alcohol consumption was extremely high in colonial, eighteenth-century, and early nineteenth-century America; in 1790, Americans drank a yearly average of 5.8 gallons per person above the age of 15; in 1830, this figure actually grew, reaching an all-time high of 7.1 gallons. But beginning early in the nineteenth century, the temperance movement began exerting an influence, and drinking declined after 1830, reaching an average of just over two gallons in the years before Prohibition. Between 1900 and 1919, alcohol consumption had begun to decline again as a result of state alcohol prohibitions. During Prohibition (1920–1933), according to indirect measures such as cirrhosis of the liver, drunk driving citations, and alcohol dementia mental hospital intakes, alcohol consumption declined sharply, to roughly half of its pre-Prohibition level, just under a gallon per person per year. After 1934, the first year of national legal alcohol distribution, it began to rise, from roughly 1 gallon to a post-Prohibition-level high of 2.8 gallons in 1978. After that year, it declined more or less yearly, to just a shade over two gallons per year (2.14 in 1998), but it rose again after that (to 2.26 in 2010); nonetheless, drinking is far more moderate today than it was during peak drinking periods of American history.

In the second half of the twentieth century, illicit drug use both reflected and departed from rates of alcohol consumption. Retrospective estimates indicate that illegal drug use was extremely low in the early 1960s, rose throughout that decade, and continued to rise in the 1970s, reaching a late twentieth-century high in 1979. During this decade, liberal, tolerant attitudes toward drug use grew as well. Trends in drug use were consistently down during the 1980s. But beginning in 1991, though adult rates were more or less stable, use among eighth-, tenth-, and twelfth-graders began to rise sharply, especially for marijuana. Although this rise stalled sometime between the mid-1990s and the present, an extremely high proportion of young adolescents now still use illegal drugs.

In addition, in the 1990s, a number of “club” drugs—Ecstasy, Rohypnol, GHB, and ketamine—were either introduced or revived and became at least modestly popular among young people. Since the late 1990s, however, the use of these drugs has declined—for Ecstasy, it has been cut in half; for the others, use has nearly vaporized.

ACCOUNTS: A History of Drug Use

After reading these accounts, think about the extent to which the historical time period influenced the extant drug subculture at the time, the experiences the users describe, and/or the social and legal controls society applied to the use and users of the drug during the period when they were taken. I would like to thank Marsha Rosenbaum for supplying me with the Ecstasy account.

Amphetamine Abuse (1967)

The universal, immediate reaction is that the amphetamine high is like nothing else. You fix up a shot. You dissolve it in water. You draw it up in the dropper. You put a belt or a tie around your arm. In the meantime, you're very excited, your heart's beating fast. 'Cause you know you're going to get happy in a couple of minutes. Then you give yourself a shot. The whole operation of giving yourself a shot is a very sexual sort of thing. It's like a very exhibitionist rite, you know. Okay, so you finally get the blood into the works, and you squeeze the stuff into your vein, and then you pull the needle out, and you go about cleaning out the works. Now, just about the time you get the works in the water, which is maybe five to ten seconds, ten seconds at the most, you get this *thing* coming up the back of your neck, this zing, when your skin starts to prickle, and it goes to your head and *explodes*, and then you get a huge smile on your face, and all of a sudden your mind has never been so awake in your life, and you start singing or start talking or something. Now, if you had a good shot, you get a hot feeling in the back of your throat. You cough, or have to breathe very deeply, because your heart is all of a sudden beating much faster, so you have to catch up with it. Now, if you had a really good shot, you can't walk. You're just sitting there—ssshhhh—the blood's all over your arm, you can't see very well or anything. That goes away in a few minutes. Now the *rush* is when it zooms into your head and floats your head. It's one of the nicest feelings on earth. It's beautiful.

And nothing—*nothing*—can hurt this big, wonderful thing. If you're really high, you couldn't care less about anything. But if you're not that high, you've got this little thing in the back of your mind which comes closer and closer: You realize that you haven't got any more. And that'll throw the whole thing. And before long, you're out on the street, looking for more.

So you get high. Your high is like—you build delusions in your head. You're really happy. If you're with anyone else, you talk an awful lot. You talk incessantly when you're high. You're incredibly active. You're also a little bit unaware of things, so you'll knock things over and not know it, but all the while, you think you've got control over everything. But if you take an awful lot, the reaction is just about the opposite. Your mind gets, just gets quiet, and you sit around dreaming.

Okay. Five people, let's say, have just shot. All right. Now then, there isn't just five people sitting around. There's five different little things going on. Someone's cleaning up the rug, rearranging the house a little bit. Someone is sitting down to write something in their book. Somebody else is babbling and someone else isn't listening. Someone is painting a picture. Someone else is being uptight because whoever it is that he wants to be concerned with is *high*, and not concerned with him. All right. So that's a good cross-section: Someone's unhappy, someone else is being an idiot, someone is having fun, and someone is just high. Everybody's exuberant for maybe an hour or so. Then you're high and things are okay. After three hours, after four hours, after five hours, depending on how much you've had, things ain't so okay, more and more, so that after six or seven hours, things are downright nasty. That's the time you go out and want more. There's a thing. There's a very simple physical principle. To get high you gotta come down. No question about it. And the *higher* you get, and the better your high is, the *worse* it's gonna be when you come down. With the exception of one funny little thing which you keep in the back of your mind. And that is, if

you stay high for long enough, you'll be able to sleep right through the comedown.

Now for the comedown. The amphetamine starts to go away. Wears off. You're still awake. And you can't get to sleep. You start to come down. And it's the worst feeling in the world. It's not as physical as heroin withdrawal, although if you've been using a lot of it for some time, you start to have convulsions and things like that just because, you know, your heart has been going so fast, and your body has been moving so fast, that when you stop, you are so worn out that your body just can't function. But it's not an actual physical withdrawal. It's a mental withdrawal, when all these illusions you've been having high come crashing down. It's like a celebration of disillusionment. All of a sudden, nothing in the world is right, nothing—absolutely nothing. Usually you just sit there with all your nerves burnt out, with your stomach shrunk, with your lips and your mouth too dry to be comfortable, so that you're always chewing, your eyeballs twitch, you're pretty nervous, but at the same time, you're too depressed and too nervous to do *anything*, you just sit there feeling miserable. It's the kind of thing where you wanna cry, but you can't usually cry. It's the kind of thing that the only relief you can see would be, like, really, really desperate crying. Sometimes you can cry, and you just go into some room and get underneath a pillow and cry. It's a good thing to do, but usually you can't do that, and so you just have to sit around and be the dregs. From people who have seen others when they're coming down, the normal reaction is that they look like they're dead, 'cause ' that's what you look like. Your extremities are deprived of blood. Your nose is freezing cold, your cock shrivels up, 'cause your blood can't reach out into the extremities. You chew a lot. You're constantly chewing, but you can't swallow very well. And because you haven't been eating or sleeping, everything is worse. Your skin is all spiny and prickly, nervous and hot and cold at the same time, cold sweating, things like that, but they're all from the nervous system, so they're, like half mental and half physical. You feel as if Genghis Khan had chained you to a pole for twelve hours.

Now if I had been using amphetamine for a long time, like, say four or five days straight, so you eat some food and then I went to sleep, the chances are, when I did sleep, I would sleep so soundly that I'd probably feel very good. It's a very good feeling when you wake up after all that time, because it's like, you drink a glass of water, and you get some food, you know, and you probably haven't eaten in the four or five days, so you eat some food, and you just love the food to death, and you feel quiet and your body's exhausted, you're just sort of out of it, you know. So you feel very good for a while, for that day maybe, not taking amphetamine. But then I would probably want to start taking it after a while, and the chances are if it was available, I would take it as soon as I got up. Probably because your life isn't as wonderful as it could be made to be. Usually it's a lot nicer to be high, you know.

But meanwhile, you have to live a certain way. You don't eat. You lose an incredible amount of weight. You become very thin, very gaunt. Vitamins are burnt out of you. Because of your metabolism, you become disinterested in sex, at least for the time being. And you get sick very easily. The common cold is deadly—it can kill you, you know, because of the condition your body is in. You're probably one-quarter as defensive against the conditions of nature. Like, when you're walking around in the streets in the wintertime, high, you don't know that you're being frozen to death. And you get colds. Like, I had a cold once for three months, and I deserved it. I just had to live with it. It could have wiped me out, you know, really easily.

When you stay awake for a couple of days, your mind isn't working very well, and you become paranoid very easily. Anything you want to be true and ugly, will be true and ugly. It develops into where you're hallucinating. People start coming out of trees and stuff. It's really horrible. You get batty after staying awake for a few days. Your mind is too tired. Once, at three o'clock in the morning, after staying awake for a couple of days on amphetamine—this was up in the country—I was riding down this really sharp hill on a bicycle. I was

hallucinating a lot that night, and I knew I was starting to get paranoid. ‘Cause it starts out with a little squiggle here, and a little squiggle there, off to the side of your vision, until you see a car down the street and there’s a policeman sitting in it with a gun aimed at you. Seriously, you *know*, you always know, this is just paranoia. But that doesn’t make any difference. The more you know it, the less difference it makes. You’re going to go up to that car and make sure it’s not a cop with a gun. But by the time you get to that car, you’ve got three or four more things you’re paranoid about. I was going down that hill on the bicycle, and I saw a couple of guys coming to knock that bicycle over, and that bicycle got knocked over, I was so sure there were people out there to do it. And I knew I was hallucinating all the time. But despite my knowledge, that bicycle got knocked over, and I landed all over the road. And I walked the bicycle the rest of the way home. And continued to see things. I was a *mess*.

A lot of people take amphetamine with little vacations. Because if you don’t stop for a while, you’re gonna do yourself in. Like, right now, I haven’t used amphetamine for a month or so. I go to work every day, and I get lots of sun, I eat a lot and everything, and I feel this great zing because I spend all my time not taking it. But I’m totally conscious of the fact that I’m not taking amphetamine. I’ll probably take it again before long.

Ecstasy (1988)

Q: Do you remember the first time you heard about it [MDMA]?

A: No, not clearly. Not directly. I have a vague memory of getting this description of a drug, the way that I describe it, a designer drug, that is not psychedelic and very, very light and enjoyable and great to do in a beautiful place . . .

Q: Do you remember the first trip?

A: I think so. I could be wrong, but what I remember of the first trip was one of the times [when we went on vacation] . . . It was a whole group of people, good people,

dear people. And we took it after breakfast and went down to the . . . creek. And you come to a place where there’s natural rocks at the waterside. And people don’t have to wear clothes there, so we just sort of hanged out on a rock facing the water. Oh, and it was beautiful! It is just incredibly beautiful and [we] took the stuff.

Q: So tell me about it.

A: I always get this little nervous thing. But once you come down to it, it was—there may have been ten or fifteen minutes where the drug effect was more than I would have wanted, where I felt a little bit like, “Which way do you go?” with it. And then after that, then I also felt confident because I was around people who were pretty well obviously interested in doing it . . . What I remember about that first trip was, first of all, just being so physically in tune . . . , where everything is so crystalline . . . , everything being made sharper . . . , visual, not hallucinogenic whatsoever, but contrasts are greater, getting in and out of the water . . . , on the rocks . . . I didn’t sit still . . . I would go from one group of people . . . and I’d sit and hug and talk to them. And I’d get in the water and swim to another group and get involved with them for a while and then take off and go to another one. I really flitted around like a butterfly . . . It was a perfect drug for that day.

Q: OK, and it was all very positive, and everything that you had been told kind of happened for you . . . I mean, do you remember what they told you to do, not to do, how it was gonna be?

A: Yeah. Yeah. [It] was definitely a . . . very comfortable, nice drug. And I remember a lovely situation . . .

Q: OK, and what about sensually? Any body things? Did you and [your husband] have sex while you were on it the first time?

A: Every time. Every time, yeah. It’s definitely a sensual drug. It didn’t make me erotic the way coke does. But that’s

also part of it. That's also the setting . . . It is a very sensuous drug for me, but it's not erotic. It doesn't make me want to have sex . . .

Q: What about the people that you were with? Did you feel that you were bonding with them? I mean, was your relationship with them different after you all did Ecstasy together?

A: No, but they were all very, very close friends.

Q: To begin with?

A: Yeah.

Q: All right, and so it didn't make any difference one way or the other. It was pretty much the same?

A: Yes.

Q: OK, some people talk about getting into subjects that are difficult . . .

A: I haven't. It would be interesting to try and do that, but I think that it just hasn't been that situational. When [my husband] and I have done Ecstasy, we haven't had issues that needed to be talked about.

Q: [Is] the M.O. [modus operandi, way of doing things] pretty much always the same?

A: It's always important to be away from the kids. That's real important . . . I feel like I want to reserve it somewhat, to make it special . . . [With taking Ecstasy], it just fits into my realm of playing, really playing, playing and not having the responsibility of taking care of my children.

Q: I mean, how often can that happen to a person like you?

A: Yeah, away from work, away from the kids . . .

Q: So it takes a considerable amount of planning.

A: True.

Q: And organization.

A: Mm . . . , hmmm.

Q: In order to really cut loose.

A: Mm hmmm. It has to be planned. It's always planned. It's never come out of the blue [for me] . . .

Q: And what about dosage? Is it always the same?

A: I don't know. It's what everybody gives me . . .

Q: OK, so basically, has MDMA made an impact on your life, positive, negative? Has it been an impact, or was it more like a gift every once in a while?

A: The latter.

Q: Yeah, no major significance.

A: Hmmm.

Q: All right. And how about, would you recommend it to other people?

A: Sure.

A: OK, I mean, you were talking about how you thought it would facilitate working through some stuff . . . So you must see some potential there, right?

Q: Oh, absolutely.

A: But you don't use it that way?

Q: No.

A: That's interesting, don't you think?

Q: I could use it that way. I mean, I just never—it never has happened.

Multiple Drug Use (1996)

I grew up in the perfect family. Dad came to every soccer game. When I stepped off the bus each day, Mom was always waiting for me with cookies and milk. I went to church every Sunday; I was in the Girl Scouts; I was an honor student. My friends were described as “a nice group of girls,” and everyone in town thought I was a sweet, innocent girl. Growing up, the person I was closest with was my grandmother. In 1988, she was diagnosed with cancer, and two years later, she was dead. I was devastated. My perfect world suddenly turned upside down.

The night my grandmother died, I met a guy named Rick. He was one of the “bad seeds” at my school. I was so angry at everyone (God, the doctors, my parents) for taking my grandmother away from me, I did the unthinkable: I got drunk, smoked pot, and had sex. It was truly a night of firsts for me. If she hadn't died, who knows, I'd probably

still be a Girl Scout and go to church every Sunday. Her death made me question the way I was living my life for the first time. After that night, I did a complete turn-around. No longer was I dressed in Gap jeans and J. Crew sweaters. I turned into one of those freak alternative people, dressed in strange clothes, hanging out with bad kids, and rejecting any and all authority figures.

I started smoking pot on a regular basis, every night, seven to ten times a week. I often smoked before, during, and after high school. I lived in a small town, so there's rarely something fun for us to do there. One night, my friends and I heard about a "rave" that was happening in our area. In case you don't know it, a "rave" is an all-night dance party with loud techno music on records by DJs from all over the world. At raves, you'll find certain types of drugs, mostly acid [LSD] and Ecstasy. You can go to a rave wearing anything from a chicken costume to jeans and a T-shirt, and the people there will welcome you with open arms. Raves are held at locations which change every week. We hopped into my car and headed upstate. Even though I didn't do any drugs that night, the experience changed the next four years of my life. I loved every minute of that party, and from then on, I began to go to raves every weekend.

I had to lie to my parents every weekend so that I could go. At the time, I was a sophomore in high school, and I had a very restrictive midnight curfew. Even though my parents noticed changes in who my friends were and the way I dressed, they trusted me and naively believed I wouldn't lie to them. Every weekend I told them I was sleeping at a different friend's house. One night at the parking lot behind where the party was being held, a friend gave me a hit of acid. That night, I danced as never before. On acid, I was able to actually *feel* the music flowing throughout my body. The music became a part of me. The visuals were so intense, it was amazing. I felt as if I had been blind my whole life; suddenly, I was able to see the world for the first time.

For the next year or so, I took acid a couple of times a month. It didn't seem to be much of a big deal. At the time, raves weren't about drugs, they were about dancing, music, peace, love, and

happiness. Drugs were just taken to bring the dancing, music, peace, love, and happiness to new heights. Some nights, I went to a rave, there would be acid there, and so I'd take it; other nights, there was no acid, and I had a great time anyway.

The summer of 1994, I went to a rave they called Camp Earth in Providence. It was a huge amusement park. I had been thinking about doing Ecstasy for a long time, but I was afraid of it. I had heard that the drug makes you love everything you see. It makes you feel good about yourself and it gives you a sense of self-esteem. I didn't believe it was possible for a drug to do these things. Besides, a hit of Ecstasy sold for \$25, and my job at Burger King didn't pay very well. But I decided to try it anyway and find out for myself, so I found a dealer who had some. She told me that "Brooklyn Bombs" were the best, so I bought one from her for \$25, and I took it. After a half-hour, all the friends I was taking it with were feeling the effects; I was the only one who still felt nothing. We decided to go on some of the park rides, so we headed for the Cannonball Express. The ride started. All of a sudden, I felt my hands start to tingle. I walked off that ride with a big, cheesy grin that I just couldn't wipe off my face. I never felt so good in my life. All my problems seemed to disappear in a matter of seconds.

I went inside the building to dance, and I didn't stop for the next five hours. I looked at my image in the mirror on the wall and realized that I was the most beautiful girl in the world. Normally, I have very little self-esteem; I even look at the mirror in disgust. But that night, I couldn't stop feeling how beautiful I was. The Brooklyn Bomb made me feel beautiful, popular, smart—GREAT! I loved Ecstasy because it didn't make you hallucinate. It doesn't even make you feel as if you're high on drugs. It just makes you feel great. After that night, Ecstasy became my drug of choice. One way or another, I was able to scrape together \$25 each week.

I told myself I would never do cocaine. Commercials on TV made it out to be really horrible. I really thought I would never do it. One night, I drove to Baltimore for a party they called the Emerald Forest. The guy who threw the party was able to rent a state park, so the party was being

held outdoors. I bought a hit of Ecstasy, but it didn't seem to be working. I began dancing near the DJ booth; suddenly, I felt a tremendous pain in my leg. My whole right leg had become paralyzed and I was frozen in midair. My friends saw there was something wrong with me and came over to help. They sat me on the ground and called a park ranger. He thought I should be taken to the emergency room; if anything was really wrong, he said, my parents had to be notified. If he did that, I'd be grounded; I definitely didn't want that. My friends told him not to worry, they had something to make the pain go away, and so he left. They gave me a "bump" [a hit] of coke. My pain went away, and suddenly my spirits felt lifted. In small amounts, coke doesn't make you feel screwed up, it just makes you feel good; it wakes you up and makes everything feel better. After I took it and felt better, I kept waiting for all the effects I had heard about to kick in, but they never did. I couldn't believe that there were so many anti-coke campaigns when the high doesn't really mess you up.

By this time, I was in my second year of community college. My relationship with my parents had deteriorated to the point where they kicked me out. They didn't accept that I wasn't their good little girl any more, and I didn't accept the fact that they just wanted the best for me. I had saved a couple thousand dollars. I moved in with a couple friends and we shared a two-bedroom apartment. The money didn't last very long, but I was working at two jobs to support myself. Since my pay was so low and the money was so tight, I ran some drugs for a dealer friend. He gave me six hits of Ecstasy for \$100, and I'd sell them for \$25 or \$30. One night, I sold 100 hits for him, and I made over \$1,000.

Living on my own was great, but I was completely without parental control. Nobody told me what to do. I went to raves Wednesday nights in Albany, Friday nights in Manhattan, and Saturdays wherever the biggest rave was being held. To do this without getting tired and sleepy, I began doing crystal. Crystal is speed—methamphetamine. It wakes you up and keeps you up for a long time. If I did a bump of crystal when the party started, 11 o'clock one night, I'd stay up until seven the next night.

My biggest problem was tolerance. One hit of Ecstasy was no longer enough. Neither was one bump of crystal. Some weekends I'd do six or eight different drugs. I even felt proud of how many drugs I was doing. My friends were all doing the same quantity of drugs. It almost turned into a contest; we tried to outdo one another. If Jim did one bag of crystal, I did two, then Sally would do three. Afterwards, we sat around and compared how many different drugs we had done.

Most people who end up doing a lot of drugs begin dropping out of society. They quit school or don't work. Not me. Deep down, all along, I knew that the things I was doing weren't really me, so I tried to hang onto the other areas of life which, I felt, were the real me. I went to all my classes. I was in the honors program and maintained a 3.25 GPA. I babysat after school. I worked in a video store, in Burger King, and a movie theater when I had the time. I liked to keep busy because I knew that if I had too much free time, I would start thinking about some of the things I had been doing a little too much.

At some point, I realized I'd have to get away from my circle of friends. I figured that if I moved away, I'd get a fresh start. My aunt and uncle own a clothing boutique in the Hamptons; because of their business, they had a lot of contact with gay men. It happens that, one day, they called and offered me a job in the store and a place to live. After I left home, my relationship with my parents improved considerably; we realized that we love each other but we just have different notions about how I ought to live my life. Before I lived in Southampton, I believed that gay men didn't really do drugs. I've never been more wrong in my life! Not only do they do drugs, they even give out free samples. I began doing a lot of coke. I frequented the clubs out there, and many nights, the customers gave me free coke.

A guy who worked for my aunt and uncle was really cute. He was into heroin, I was into coke; we were perfect for one another. Every day, we'd work all day, and at night, we'd go to Manhattan to cop drugs. We did this almost every day all summer. One day, he asked me if I wanted to try heroin.

He told me that he does four bags at a time, so I'd better do just one. I snorted a \$20 bag and collapsed onto the couch. For the next 24 hours, I threw up. Anytime I moved, I threw up. Whenever I talked, I threw up. If I did anything at all, I threw up. It was the most horrible experience of my entire life. I didn't feel any of the euphoria a lot of people talk about. All I felt was horrible.

After that, I pretty much stuck to coke. I really cut back on the amount I did, though; I only did it a couple of times a week. Then in the fall, I moved into the dorms at the university, once again believing that I had been given a chance to start all over again. But once again, I was wrong. The friends I made were doing drugs. For some reason, I always seemed to gravitate to a circle of friends who are doing drugs. I met a guy, Bill, who seemed perfect for me. He smoked pot once in a while; other than that, he really wasn't into drugs. One day, I got a bad cold; I couldn't seem to shake it. It eventually developed into bronchitis. I was determined to go to a really big rave that weekend. Bill tried to talk me out of it, but he was unsuccessful. We went to a club in the City, the Ritz. I did a couple bumps of crystal. Before long, I realized I had gotten sicker; my bronchitis had developed into pneumonia, and I had to be hospitalized. Lying on my hospital bed, I thought about how foolish I had been; my judgment was so messed up that, even though I was sick, I had to go out and party and do some crystal, which made me sicker. I swore I would never do drugs again. And I haven't.

I can't give you a one-sentence of why I did drugs. At first, it helped me escape the pain of losing my grandmother. Once you begin hanging out with people who do drugs, you change, your attitudes, your beliefs, your behavior all change. You start holding the same positive attitudes they have about drugs. And once you're done things you like doing, it's hard after that not to do it. I liked the way I felt when I was high, so I did it. And in a friend's apartment, with everyone bumping, doing something you've done before, and like, it's hard to "just say no." You just do it.

To be honest, I don't regret anything I've done. I consider these experiences another chapter in my book of life. I feel that my experiences have turned

me into a much more knowledgeable person. I feel I am able to have a better understanding of a great deal of life because I've been to some of the places I've been. I have a more critical capacity to evaluate many of the issues facing the society today as a result of how I lived until recently. I hear people talking about certain topics and think how fortunate I've been to have done what I've done.

I wonder if I was ever actually a drug addict. I was able to stop using when I decided that the time had come without having to go into a treatment program. I did cocaine to the point of everyday use, yet when I decided to call it quits, I was able to stop, no problem. Not once did I ever experience any form of withdrawal. There's no doubt in my mind that I was psychologically dependent on drugs. It had gotten to the point that I was dependent on drugs to create happiness for me.

I sincerely doubt that I will ever do drugs again. I am at a point in my life where I am happy without drugs, and happy with the way things have worked out for me. Bill has made that possible. Before, it was Ecstasy that made me feel beautiful; now it's Bill. A lot of the people I thought were my friends are long gone. I've gone straight, and they just disappeared. Once, I would have done anything for these people. I thought they were true friends. When I used to do acid, I felt as if the drug made me able to see the world in a better, clearer way. Now that I've stopped doing drugs, I feel the same way: Now I am able to see the world in a clearer way.

QUESTIONS

Can you find clues to when these accounts were written? What is your reaction to the drug use they depict? To the drugs and their users? To the two young men and the woman who describe their use of their drugs of choice? What do these accounts tell us about the historical context of using psychoactive substances? What's your guess about the trajectory of the lives of these drug abusers? Do you think that their fate differed from that of their non-using peers? How does drug use today differ from that of the sixties? How do past events influence current events?

A HISTORY OF DRUG CONTROL

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For the vast majority of human history, the consumption and distribution of psychoactive substances were regulated mostly by informal custom and personal predilection. True, the use of certain substances (like mandrake and henbane) was associated with unauthorized witchcraft and magic, and so, the authorities rooted out and punished practitioners of such uses of these drugs. In addition, when a new psychoactive drug first entered a society—for instance, in the very early 1500s, when tobacco hit the shores of Europe—steps were taken to control the use of the substance. And with the coming of Islam during the seventh century, devout Muslims punished purveyors and consumers of alcoholic beverages. However, for the most part, until about a century and a half ago, the legal authorities in societies around the world tended to

adopt a “live and let live” attitude toward most psychoactive substances. For our purposes, drug legislation dawns somewhere between the end of the nineteenth and the beginning of the twentieth century.

The history of drug use in America is marked by wild swings between legal and social tolerance on the one hand and repression on the other (Musto, 1991, 1999); this stretch of time can be summed up as follows:

- During the 1600s and 1700s, Americans drank substantial, even enormous, quantities of alcohol but consumed relatively few, and fairly modest levels of, natural psychoactive substances, and then, mostly as medicines. Lab-fabricated chemicals were fairly rare.
- In the 1800s, alcohol consumption declined and the social and legal control of alcohol tightened, but an explosion in the use of a range of other drugs, including a shift away from strictly natural to reconstituted—and more powerful—substances took place. During the first half of the nineteenth century, an accepting, laissez faire attitude toward consumption was the rule, with high levels of use, substantial public tolerance, virtually no antidrug laws, and an extensive system of distribution.
- The second half of the nineteenth century witnessed the beginnings of alcohol control (at the state level), and, beginning in 1875, drug control, with lower levels of tolerance and the passage of restrictive legislation. The first substance that was legally controlled was alcohol, and the second was opium.
- During the early twentieth century, drug legislation on a substantial scale was enacted, including national alcohol prohibition and the passage of the Harrison Act controlling narcotics and cocaine. The Supreme Court handed down decisions ruling that drug maintenance was illegal, which led to a huge rise in drug arrests and incarcerations and a decline in the use of narcotics. The media began depicting drug use and users in sensationalistic, exaggerated, and propagandistic terms. Much of the public began to reject the idea that drug addiction was a medical matter, along with correspondingly accepting the idea that illicit drug users were criminals and degenerates who should be arrested. Staunch antidrug attitudes and policies remained in place more or less until the 1960s.
- Between the late 1960s and the mid- to late 1970s, public opinion and public policy were more positive toward the treatment and rehabilitation of substance abusers, and became less favorable toward law enforcement as the sole solution to the drug problem. A majority of high school students favored marijuana legalization and did not believe that casual use of the drug was harmful. During this era, the federal and state governments implemented methadone maintenance treatment programs for heroin addicts, and a dozen states decriminalized small-quantity marijuana possession. Drug use rose during the mid-1960s and reached a twentieth-century pinnacle between the late 1970s and early 1980s; twentieth-century alcohol consumption peaked at just about the same time.
- After 1980–1982, once again, America’s drug attitudes, laws, and law enforcement stiffened. The use of illicit drugs, tobacco, and alcohol declined; the percentage of young people favoring the penalization of marijuana possession and use, and believing that the drug is harmful, rose; two states recriminalized marijuana. The federal government switched its priorities from treatment to law enforcement.

Marijuana and cocaine once again became a target of law enforcement. Many experts abandoned the belief that marijuana and cocaine were harmless drugs, and several Schedule II drugs were reclassified as Schedule I drugs. Laws or industry-imposed norms restricted the advertising of alcohol and cigarettes on television, and local and state laws that controlled where smoking could take place were enacted. Drug arrests and incarcerations sharply rose, reaching an all-time high. This era may be characterized as a period of a “War on Drugs.”

- Sometime during the late twentieth and the early twenty-first centuries, several modest developments pointed in the direction of a somewhat less punitive approach toward the consumption of psychoactive substances: More states decriminalized small-quantity marijuana possession, 18 states (and the District of Columbia) approved and licensed the use of marijuana for medical purposes, and the number of drug arrests declined, albeit very slightly; and, in an election, two states, Washington and Colorado, approved the legalization of marijuana. Interestingly, during this period, the use of several illicit drugs declined, the consumption of alcohol leveled off, and cigarette use continued on a glide-path toward encountering its destiny with near-oblivion, declining to levels not seen since the 1920s.

An exploration of the background of these massive fluctuations is essential to our understanding of the place of drug use in American society.

DRUG USE IN NINETEENTH-CENTURY AMERICA

Nineteenth-century America “could quite properly be described as a dope fiend’s paradise” (Brecher et al., 1972, p. 3). Psychoactive substances were freely available from a variety of different sources, and public consumption of these substances was immense—in all likelihood, on a per population basis, equaling or surpassing today’s volume of use. What stimulated such high levels of use a century or more ago? How did tolerance for drug taking emerge? And what brought about more restrictive attitudes and public policy? How did we get from a society in which no one was imprisoned on drug charges to one in which hundreds of thousands are? What does history have to teach us about changes in the drug laws?

Medical Drug Use

In order to understand the scope and nature of nineteenth-century drug use, it is important to keep in mind the extremely primitive state of the medical profession in past centuries. Opium’s painkilling property was discovered by the ancient Sumerians roughly 6,000 years ago, but during the intervening years, physicians did not typically have the drug at their disposal. Historically, surgery practiced without opium was savage, brutal, and horrifyingly painful. Limbs were sawed or hacked off, bodies were cut open, teeth were yanked out—and the patient, if still conscious, often screaming and held down by force, suffered indescribable agony. Before the twentieth century, a shockingly high proportion of surgical patients died on the operating table or soon after.

Under such primitive medical conditions, opium seemed quite literally a godsend. So important was opium in the healing arts that many prominent physicians declared it

to be the most useful medicine at the doctor's disposal. Oliver Wendell Holmes, Sr. (1809–1894), physician and father of the famous Supreme Court justice, stated that all the medicine available to nineteenth-century physicians “could be sunk to the bottom of the sea [and] it would be all the better for mankind”—with the single exception of opium, a medicine, he said, “which the Creator himself seems to prescribe.”

Before the twentieth century, treatment for most diseases was ineffective and, in a substantial percentage of cases, dangerous. It is entirely possible that prior to 1900, medical intervention was more likely to be harmful than beneficial, more likely to kill than to save. Physicians routinely applied bogus cures for diseases, such as drilling holes in the skull, purging (evacuation of the bowels with an enema), opening the patient's veins to let “bad” blood flow out of the body, applying leeches, and administering mercury (a poison). It was not until the 1850s that a Hungarian physician, Ignaz Semmelweis (1818–1865), discovered that infections could be communicated from one patient, through the medical staff, to another patient, or from cadavers to the hands of physicians, to patients. So ignorant were physicians at the time that doctors would dissect a diseased cadaver, then walk to the next room and deliver a baby without washing their hands—those same hands that had just cut up a rotting corpse. Semmelweis insisted that his attendants wash their hands, thereby sharply reducing the mortality rate of the women in his care who were giving birth. He designed an experiment testing his proposition, demonstrating that by washing their hands, medical staff could save the lives of women delivering children. Ridiculed for his discovery and driven out of the medical profession, Semmelweis became insane and died in a mental institution. It was only in the 1890s that his insight—one of the most important discoveries in the history of medicine—was universally recognized as valid.

It should come as no surprise, therefore, that in centuries past, opium was widely—and today, we would say indiscriminately—administered as a medical treatment. Prior to the twentieth century, the administration of opiates was one of the very few treatments capable of obliterating pain; in addition, it was one of the very few medical treatments that *seemed* to cure a variety of illnesses. Opium did not cure disease as much as mask its painful symptoms. Often, by the time the drug was withdrawn, the body had spontaneously cured itself. And sometimes, the patient was left with an additional medical problem: addiction.

Over-the-counter medications containing opium, morphine, marijuana, and cocaine were freely available in nineteenth-century America, without prescription, at low cost from physicians, traveling salesmen, drugstores and pharmacies, and general and grocery stores, and through the mail. Bearing names such as Mrs. Winslow's Soothing Syrup, Godfrey's Cordial, Scott's Emulsion, and McMunn's Elixir of Opium, patients took these quack cure-alls or panaceas for a bewildering array of conditions and illnesses, including flat feet, baldness, toothaches, the common cold, cancer, diarrhea, “female troubles,” rheumatism, and dysentery. So unregulated was the industry that dispensed these supposed medications that, prior to 1906, their manufacturers *did not even have to list the ingredients of these products*. Hence, patients who took an over the counter (OTC) patent medicine for their disease most likely didn't even know that they were taking a psychoactive, dependency-producing substance.

In addition, pure pharmaceuticals as well as opium, morphine, marijuana, and cocaine could be obtained by prescription from most physicians for a myriad of ailments. As an indication of how acceptable and widely available prescription drugs were, the

1897 edition of the Sears, Roebuck catalogue advertised hypodermic kits for sale, which included a syringe, needles, vials, and a carrying case.

In the last decade of the nineteenth century, legislators in a number of states passed laws that required patients taking drugs containing morphine or cocaine to first obtain a prescription from a physician. But these laws were ineffective because they were not enforced. Moreover, patients could obtain these drugs without prescription in adjoining states or seek out “dope doctors” who had purchased their supply of drugs by mail in states where such legal controls were lacking, thereupon dispensing them freely to their patients (Musto, 1999, pp. 8–9).

Cocaine-Based “Soft” Drinks

In addition to prescription drugs and numerous drug-based patent medicines, a wide variety of popular beverages (ironically, referred to as “soft” drinks) sold at the time contained one or more psychoactive substances, mainly cocaine. In 1863, a French chemist named Angelo Mariani marketed “Vin Mariani,” a drink composed of wine and an extract of coca. Billed as a “tonic,” a stimulant, and “a powerful nervous excitant,” this beverage was so popular that it received testimonials from numerous celebrity users, including an American president, two popes, several well-known writers, a very famous inventor, and at least one king. Mariani became a multimillionaire from its sale (Ashley, 1975, pp. 41–44).

The success of Mariani’s coca concoction spawned countless imitators. John Pemberton of Atlanta, a pharmacist and purveyor of a line of patent medicines, introduced his coca-based Peruvian Wine Cola—an “Ideal Nerve and Tonic Stimulant.” Critics agreed that the product was inferior to Vin Mariani (in 1886, Atlanta banned its manufacture), so the following year, Pemberton introduced Coca-Cola, a syrup containing caffeine and a mild extract of coca leaves.

In 1891, when Asa Candler, another pharmacist, bought the rights to Coca-Cola and took control of Pemberton’s company, the beverage skyrocketed to national success. Like Mariani’s product, the drink also generated a swarm of imitators, in fact, a total of 69 (Grinspoon and Bakalar, 1976, p. 28)—including Cafe-Cola, Afri-Cola, Kos-Kola, Kola-Ade, Celery-Cola, Koca-Nola, Rococola, Vani-Kola, and Koke (Spillane, 2000, p. 77). Coca-Bola, the most potent of the lot, contained an astounding 710 milligrams per ounce of cocaine (p. 84)! Early in the twentieth century, companies that manufactured these drinks were pressured to “decocainize” their products (Spillane, pp. 132, 134, 140; Ashley, 1975, p. 46; Brecher et al., 1972, pp. 270–271). The public and media furor over cocaine products in soft drinks was enormous—and ultimately influential. One W. A. Starnes, who ran a drug treatment clinic in Atlanta, declared that Coca-Cola “is doing more injury to the human race than all other drugs put together” (quoted in Spillane, 2000, p. 131). As a result of removing the cocaine from their beverages, the producers of nearly all these drinks eventually went out of business. By 1906, Coca-Cola had removed the cocaine but kept the non-cocaine ingredients of the coca leaf, paving the way to become the most popular commercial beverage in history.

Medical, Scientific, and Technological Innovations

In addition to the primitive state of nineteenth-century medicine and a live-and-let-live attitude toward the content of beverages and pseudo-medicines sold to the public,

a number of remarkable scientific, medical, and technological innovations took place during the 1800s that made psychoactive substances not only more available, but available in purer form, and via a much more efficient and effective route of administration. Prior to the nineteenth century, drugs were ingested in their milder, natural state. Morphine is considerably more potent than natural opium, from which it is extracted. And coca leaves contain only about 1 percent cocaine, while cocaine hydrochloride is roughly 90 percent pure cocaine. In addition, prior to the nineteenth century, the drugs that were ingested, and the forms in which they were ingested, placed a pharmacological limit on their potential for producing a dependency in humans. It is true that opium was addicting in its natural form. But heroin builds a dependency more quickly and more surely than opium, and during the first half of the nineteenth century, cocaine did not exist in its chemically pure form. By 1900, however, nearly all the innovations that currently make highly potent drugs available in a highly reinforcing form had taken place. Most notable were these:

- In 1804, morphine, a much more potent narcotic, was extracted from opium.
- Codeine, another derivative of opium, was synthesized in 1831.
- The hypodermic syringe, devised in Europe for the specific purpose of injecting morphine, was brought to the United States in 1856; by the early 1880s, “virtually every American physician possessed the instrument” (Courtwright, 1982, p. 46). The syringe enabled physicians to administer calibrated—and very potent—intravenous doses of morphine to their patients. (So unaware of the effect of drugs were physicians at the time that, initially, some believed that, unlike oral doses, injected drugs did not have addicting properties.) Hypodermic injection of morphine was used extensively during the Civil War (1861–1865).
- In 1859, cocaine was isolated from coca leaves, and in the 1880s, a German physician discovered that soldiers fortified with the drug were a great deal less likely to become tired. In 1884, a letter was published in a medical journal proclaiming cocaine to possess anesthetic properties, the drug almost instantly becoming, in many medical circles, “a miracle of modern science” (Spillane, 2000, pp. 7–24).
- In 1874, diacetylmorphine (heroin) was synthesized from morphine; in 1898, Bayer Laboratories marketed it commercially.

In sum, nineteenth-century America witnessed a virtual *explosion* of inventions, discoveries, and applications that practically guaranteed that the country would be awash in drugs. Specifically, these innovations assured that *more potent* forms of potentially harmful drugs would be available and used via a more potent route of administration.

Numbers of Addicts and Abusers

Given the free availability of so many addicting and dependency-producing substances in the nineteenth century, the United States housed an extremely large user and addict population. No national records were collected at the time, and even the very concept of drug dependence wasn’t clearly understood until well into the twentieth century. Estimates of the number of narcotic addicts ranged from a low of 100,000 (the estimate provided by the Federal Bureau of Narcotics) to a high of a million or more. The two most reliable estimates place the total at 250,000 (Musto, 1999, p. 5) and 313,000 (Courtwright, 1982, p. 9).

A century ago, three more or less distinct populations or social circles of narcotic users existed in the United States: (1) medical and pseudo-medical addicts, mostly white, middle-class, middle-aged women; (2) opium smokers, mostly Chinese immigrants; and (3) the criminal underworld and the less-than-respectable “sporting life” morphine addicts. The largest number of these three populations was made up of medical addicts. Two researchers estimate the number of habitués of cocaine-dependent persons at the turn of the century at 80,000 (MacCoun and Reuter, 2001, p. 194).

All such estimates are based partly on the importation of the drug in question and partly on physicians’ and hospital records. However, since the distribution and use of marijuana has always been much more informal and rarely tabulated in medical records, in all likelihood, we can never know the size of the marijuana-using segment of the population a century ago. We do have, however, fairly good estimates of the impact of state bans on the distribution of alcohol: Drinking alcohol sharply declined from the early to mid-1800s (roughly 7.10 gallons of absolute alcohol per person per year in 1830) to the late-1800s-to-early-1900s era (roughly 2 gallons per person per year).

Beginning late in the nineteenth century, a substantial number of lawmakers and reformers decided that local, state, and federal legislation was necessary to stem the tide of substance abuse that was presumably flooding the country. Their motives were complicated and irreducible to a single formula. Different reformers had different motives; even the same reformers were driven by mixed motives. And the motives that dominated the debate over the control of a particular drug were different from those that moved the sponsors of bills to control other drugs. No single explanation can account for the criminalization of psychoactive substances in the era beginning with the last quarter of the nineteenth century. It is facile and tempting to attribute reasons for the drug laws to motives of which one doesn’t approve, but the reality turns out to be a great deal more complex than critics would like. The drug laws that legislators enacted during this period emerged out of a cultural and political ferment that was composed of a mixture of conventional moralism, racism, the protection of economic and political interests, and the “social-workerly” impulse to prevent the weak and vulnerable from harming themselves, their loved ones, and other vulnerable, innocent members of the society.

THE MOVEMENT TO PROHIBIT ALCOHOL: 1784–1920

We’ll look in more detail at the impact of national alcohol prohibition in Chapter 8, but here we need to look at the forces and factors related to the government’s attempt to control drinking, which was part of a more general effort to curtail untoward behavior of all kinds. We know that, by today’s standards, eighteenth- and early nineteenth-century Americans drank truly *immense* quantities of alcohol. As we saw, in 1790, the year of the first U.S. Census, Americans consumed a per capita average of 5.8 gallons of absolute alcohol. By 1830, this had increased to an astonishing 7.1 gallons—or five drinks containing half an ounce each of pure alcohol *per day, per person*. Since this includes the entire population (age 15 and older), including teetotalers, a substantial segment of the population drank considerably more than the average.

Many observers recognized that uncontrolled drinking carried a heavy price and set out to control the consumption of alcohol in the United States. As we saw in Chapter 1, Dr. Benjamin Rush, prominent Philadelphia physician and signer of the Declaration of

Independence, wrote a pamphlet, *An Inquiry into the Effects of Ardent Spirits on the Human Mind and Body* (1784), which challenged the view that alcohol consumption was an unmixed blessing. Rush's targets were heavy rather than moderate drinking and "ardent spirits" (distilled alcoholic beverages) rather than wine and beer.

Rush urged his fellow citizens to "unite and beseech" their leaders to demand fewer taverns and heavier taxes on liquor (Lender and Martin, 1987, p. 38). Seeing the pulpit as a source of reform, he sent thousands of copies of his pamphlet to the general assembly of the Presbyterian Church for distribution. As a result of Rush's arguments, the church fathers became aware that excessive drink stimulated unchristian vices, and took up the cause of temperance. Other Protestant denominations soon followed; within three years, hundreds of anti-liquor organizations became active across the country. By the 1810s, temperance reform "constituted a burgeoning national movement" (p. 68).

During the 1820s and 1830s, clergymen debated the question of whether drinking in moderation was sufficient to control the sins of excessive alcohol consumption. Many began to argue that total abstinence rather than self-regulated temperance was necessary. In 1826, Lyman Beecher, a prominent Presbyterian minister, published his *Six Sermons on Intemperance*, which argued that total abstinence "was the only sure means of personal salvation and societal stability." Any drinking, Beecher claimed, was one step along the path of "irreclaimable" slavery to liquor. A Methodist report agreed. There is "no safe line of distinction between the *moderate* and the *immoderate* use of alcohol," the report argued. Moderate use is "almost . . . certain" to lead to immoderate use, it argued. The report's conclusion questioned "whether a man can indulge . . . at all and be considered temperate" (p. 69).

To judge by their results, these sermons and publications began to have an impact on American drinking patterns. As we've seen, employers stopped supplying their workers with liquor breaks; increasingly, farmers harvested their crops without bringing the communal jug to the field; railroad employers began firing workers who drank on the job; local governments refused to renew the licenses of rowdy, troublesome taverns and closed them down; the army no longer distributed liquor rations to its soldiers. By the 1840s, prohibition sentiment became so strong that the public and politicians supported state-wide alcohol bans. In 1846, Maine became the first state to outlaw the manufacture and sale of distilled spirits. By the mid-1850s, roughly one-third of the population lived in a state in which the sale of alcohol was prohibited. But the conflict over the abolition of slavery overshadowed the issue of prohibition, and a number of states repealed their "dry" laws. Still, the Civil War (1861–1865) did not resolve the issue of prohibition but merely delayed it.

For the prohibitionist, the urban saloon remained a symbol of the degeneracy brought on by drink. Its patrons were frequently immigrants, usually from Catholic countries or regions of Europe, some of whom did not agree with Anglo-Saxon Protestants that abstinence from sensuous pleasures was a virtue. Prostitution, gambling, and violence frequently accompanied the local barroom. Moreover, corrupt political bosses made the neighborhood tavern a meeting place and recruiting locale, which both encouraged their constituency to drink and involved them in undemocratic practices, such as stuffing ballot boxes and intimidating and assaulting their opponents (Lender and Martin, 1987, p. 104). The local saloon became the most important target of prohibitionist reformers, representing, as it did, the perfect example of what they were fighting against. The Anti-Saloon

League was organized in 1893, and by 1910, it had become a major political force to be reckoned with; its single purpose: national alcohol prohibition.

It is simplistic and misleading to regard the nineteenth-century prohibitionist as a hide-bound conservative, trying to stamp out a harmless vice, eliminating one of the working man's few worldly pleasures, a "meddling busybody, interested in forcing his [or her] own morals on others" (Becker, 1963, p. 148). Prohibitionist factions represented a most decidedly mixed bag. Motives that today we would recognize as both backward and progressive mingled, forming the prohibitionist impulse.

For one thing, most "dries"—who were supporters of Prohibition—harbored and expressed strong ethnic chauvinism. Opposition to the manufacture and sale of alcohol often went hand in hand with opposition to immigration because most immigrants came from "wet" cultures and strongly opposed prohibition. And anti-immigrant sentiment easily translated into hostility to Catholics and to the Irish, the Italians, and, during World War I, the Germans. Many prohibitionists harbored "nativist" (strongly pro-American) and xenophobic (anti-foreign) sentiments that seem racist today—and they did not hesitate to express them.

At the same time, the Women's Christian Temperance Union (WCTU), founded in 1874 and perhaps the most powerful late-nineteenth-century antiliquor lobby, supported women's rights, women's suffrage (the right to vote), world peace, and laws against statutory and forcible rape. The WCTU may very well have represented the entry of American women into the organized political process. The very fact that wives were called upon to control the drinking of their husbands reconfigured power relations between men and women, and may very well have been a first step in asserting women's rights and establishing women's liberation. In the short run, women were instrumental in establishing national alcohol prohibition; in the long run, it was women's interactions with men that eventually "domesticated" drinking to its current, more moderate form (Murdock, 1998).

During the first decade of the twentieth century, big business became involved in the prohibitionist cause in a major way. An anti-drinking stance was consistent with a disciplined and cooperative work force. Between 1911 and 1920, 41 states had passed workmen's compensation laws, which meant that employers had to compensate workers for industrial accidents. In 1914, the National Safety Council cited alcohol consumption as a cause of industrial accidents; "safety through sobriety" became the employer's watchword, adding to the chorus of prohibitionist voices (Cashman, 1981, p. 6; Rumbarger, 1989).

In January 1919, Congress ratified the Eighteenth Amendment to the Constitution, which called for the prohibition of the manufacture, sale, transportation, importation, and exportation of "intoxicating liquors" for "beverage purposes" within, into, and from the United States and its territories. A year later, the amendment went into effect. Referred to as the *Volstead Act*, the national prohibition act legally banned all beverages containing more than 0.5 percent alcohol. The act also empowered the federal government to enforce the law.

The passage of the Volstead Act represented the triumph of Protestants over Catholics, native-born Americans over immigrants, rural and small-town dwellers over urban residents, the South over the North, Anglo-Saxons over ethnics from southern and eastern Europe, farmers and the middle class over the working class, Republicans over (non-southern) Democrats (Gusfield, 1963). In effect, Prohibition represented the dying gasp

of a traditional way of life that was to be forever cast to the winds by the Great Depression (1929–1939) and beyond.

As we saw in Chapter 1, although Prohibition was widely ignored and circumvented, alcohol consumption did decline from 1920 to 1933. Nonetheless, enforcement created more problems than it solved; the decline in drinking was bought at a very high price. First, comparing the pre-Prohibition era to the 1920–1933 period, the national murder rate increased from 6.8 to 9.7 per 100,000 in the population. In addition, the opportunity to sell alcohol was enormously profitable to organized crime—in effect, Prohibition subsidized the criminal organizations that eventually developed into the organized drug gangs that were so successful until the breakup of the French Connection in the 1970s. All in all, Prohibition proved to be a *disastrous* experiment in legislative reform.

EARLY ANTI-OPIMUM LEGISLATION

With the exception of alcohol, the earliest drug legislation enacted in the United States was directed specifically at the use and distribution of opium. In one form or another, opium had been an essential ingredient in a wide variety of medications and nostrums. Dover's Powder, introduced commercially in England in 1709, contained an ounce of opium per bottle; it remained in use for roughly 200 years. Samuel Taylor Coleridge (1772–1834), author of the hallucinatory poem “Kublai Khan,” was addicted to laudanum, from his student days to the end of his life. Perhaps the most dramatic nineteenth-century drug memoir, Thomas De Quincey's *Confessions of an English Opium Eater* (1821), depicts how the author was ensnared by his medical use of laudanum into a lifetime of agony and despair. Edgar Allan Poe (1809–1849), author of many intense, dreamlike tales, wrote that he “had become a bounden slave in the trammels of opium” (Hodgson, 1999, p. 102); Poe, an alcoholic, died after an evening of overindulgence in alcohol. While nearly all pre-twentieth-century practicing physicians recognized the benefits of opium in medicine, most agreed that it had a negative side as well: Its use brought on a dangerous dependency. The turn-of-the-century debate over whether self-regulation among physicians was sufficient to control medical addiction, or legal controls were necessary, split the profession into two opposing factions.

However, the earliest drug laws were not aimed at medical addiction at all but were designed to stamp out the recreational use of opium—specifically opium smoking. Chinese immigrants began arriving in the United States in 1848, originally to work on the railroad, in mines, and in the gold fields. By the 1850s, substantial numbers of Chinese had arrived, and Chinatowns sprang up in San Francisco and other towns and cities in California and the Southwest. When jobs were plentiful, the Chinese were welcome, but an economic depression in 1875 made them less than welcome. One contemporary figure, Benjamin Brooks, who testified in 1877 on behalf of continued Chinese immigration, estimated that roughly 1 Chinese man out of 20 smoked opium, and 1 out of 100 was addicted to it (Courtwright, 1982, p. 69). Less sympathetic observers hugely exaggerated these figures (p. 70), and perhaps the perception was more important than the reality. Many whites felt threatened by the “alien” presence of the Chinese and their “Oriental” ways, and opium smoking by a small minority among them became a particular focus of contention among elements of the white majority who sought to exclude the Chinese from U.S. shores.

Before 1870, opium smoking had been confined to the Chinese immigrant community. With “little incentive to abandon old ways and adapt to the new culture,” the Chinese tended to band together with other Chinese and avoid whites on a social basis. Racism on the part of many, perhaps most, whites contributed to the mutual estrangement. “There was, however, one element of the white community willing to mix with the Chinese: the underworld. Operating beyond the bounds of respectability, gamblers, prostitutes, and assorted other criminals would have had fewer scruples about associating with Orientals and experimenting with their vices” (Courtwright, 1982, p. 71). In opium dens, men vastly outnumbered women, whites were relatively rare, and “respectable” white women were rarer still.

Nonetheless, some conservative members of the white community feared that opium smoking “had spread or was about to spread to the upper classes” (p.64), particularly young white women who had been seduced into “degenerate practices” by the “cunning Oriental.” Fear of interracial sex made such concern all the more shocking. San Francisco physician Winslow Anderson wrote of the “sickening sight of young girls . . . lying half-dressed on the floor or couches, smoking with their lovers. Men and women, Chinese and white people” he wrote indignantly, “mix in Chinatown smoking houses” (quoted in Courtwright, 1982, p. 78).

“Public outrage of this sort of behavior was soon translated into restrictive legislation” (p. 78). San Francisco passed the first anti-opium legislation in 1875; many other similar municipal laws soon followed. In 1881, California enacted a state statute penalizing anyone who operated or patronized an opium den (p. 79). And in 1882, the federal Chinese Exclusion Act banned the immigration of Chinese laborers for ten years. Both demographic and legal factors reduced opium smoking in the United States. As a result of restrictions on Chinese immigration, between 1890 and 1920, the Chinese population in the United States fell by nearly half, from 103,000 to 53,000. In 1909, the Smoking Opium Exclusion Act was passed, making access to the drug more difficult. And as a result of the law and its enforcement, a substantial number of whites drifted away from the practice—some of them, only to take up “new and more potent varieties” of addicting drugs (p. 86).

THE PURE FOOD AND DRUG ACT OF 1906

As we saw, during the nineteenth century, not only were ineffective patent medicines containing psychoactive drugs freely available, off the shelf, to anyone with the wherewithal to purchase them, but they did not even have to list their ingredients. In 1905, President Theodore Roosevelt called for a law to regulate interstate commerce in misbranded and adulterated foods, drinks, and drugs.

In 1905, *Collier's* magazine and the *Ladies Home Journal* ran articles attacking the bogus claims and misleading labels of patent medicines that contained cocaine, morphine, opium, and alcohol. In 1906, Upton Sinclair published a shocking, muckraking novel entitled *The Jungle*, which exposed the horrifically unsanitary and unhealthful conditions of the meat-packing industry. The public was outraged, and Congress was moved to pass the *Pure Food and Drug Act*, which prohibited interstate commerce in adulterated or misbranded food and drugs. The act created the Food and Drug Administration (FDA), which was empowered to oversee its provisions. From the beginning,

however, compliance has been more voluntary than enforced, with persuasion rather than punishment being the rule.

The Pure Food and Drug Act did not outlaw the sale of patent medicines that contained opiates and cocaine. Instead, the contents had to be listed on the product's label. But such labeling, along with media exposure, brought about a keener public awareness of the lack of curative powers of these so-called medications. The patent medicine industry soon suffered a steep decline in sales. In 1912, an amendment to the act outlawed false and fraudulent claims for the therapeutic powers of patent medicines. However, the government permitted enormous latitude to manufacturers, assuming their "good faith" in making clearly false claims. It was not until the 1960s that the federal government applied moderately strict standards to the safety and effectiveness of medications sold to the public. Still, the Pure Food and Drug Act was a pioneering piece of legislation, one that provided a model for countless laws that followed.

THE SHANGHAI COMMISSION AND THE HAGUE CONFERENCE

The Chinese government banned opium in 1729, but the British illegally smuggled the drug into the country from India. In 1839, increasingly distressed by the growing number of addicts, the emperor empowered Chinese authorities to seize and destroy a large shipment of opium in the city of Canton. In retaliation, a British expeditionary force attacked and defeated Chinese military forces; in the settlement that followed, the emperor was forced to pay \$18 million in compensation (equivalent to billions today), to cede Hong Kong to the British, and to open a half-dozen ports to British trade. In 1856, a minor incident served as an excuse for the British, now allied with the French, to sail into Peking and sack and burn the emperor's palace. Once again, the emperor was forced to pay compensation, and the opium trade was legalized. These two Opium Wars were deeply humiliating to the Chinese, both as a reminder of their humiliating subjugation to foreign powers and as the source of an unwanted social problem—opiate addiction. In effect, not only was the British government meddling in the internal affairs of a sovereign state, it was doing this to satisfy its own greed for profit. As the Chinese government saw the matter, Britain was forcing opium down the throats of the Chinese populace, thereby exacerbating the country's addiction problem.

By the early 1900s, the U.S. government was keenly aware of the enormous potential in trade with China. In addition, American missionaries in China made it plain that opium smoking was an evil that had to be eradicated if China was to be a productive trading partner. The United States had inherited the Philippines as a result of the Spanish-American War of 1898. To fight opium addiction there, authorities banned the drug in 1905 (for the Chinese living in the Philippines) and 1908 (for all residents of the Philippines). Their experience in that colony proved to be a major spur to apply similar prohibitions elsewhere. Humiliated by the mistreatment of Chinese immigrants in the United States, in 1905, Chinese merchants launched a boycott of American goods.

A year later, an American bishop, Charles Henry Brent, who was instrumental in the opium bans in the Philippines, persuaded President Theodore Roosevelt that an international treaty was necessary to placate Chinese interests. The International Opium Commission, usually referred to as the Shanghai Commission, convened representatives from 13 countries. Presided over by Dr. Hamilton Wright, "the father of American narcotic laws"

(Musto, 1999, p. 31), the American delegation presented evidence demonstrating the evils of narcotics, but the lack of national American drug bans “embarrassed the commission officials” (p. 33).

Following the Shanghai Commission, Wright drafted a bill that sought to control drug traffic “through federal powers of taxation. His bill would require every drug dealer to register, pay a small tax, and record all transactions” (p. 41). Introduced as the Foster bill, this “direct antecedent” of the Harrison Act was “designed to uncover all traffic in opiates, cocaine, chloral hydrate, and cannabis regardless of the minute quantities that might be involved” (p. 41). Although the bill did not ban the sale of drugs, its penalties for noncompliance with record-keeping were severe, presumably making “retail sales more troublesome than profitable” and thereby eliminating the drug trade altogether (p. 42). But in 1911, the bill was defeated in Congress as a consequence of extremely strong opposition from the pharmaceutical lobby, which found its provisions meddling, unnecessary, and very possibly damaging to sales (p. 48).

The International Conference on Opium, usually referred to as the Hague Conference, opened late in 1911. Representatives from 12 nations attended. Once again, the United States proved to be the most insistent that each country enact its own narcotics legislation, and again, representatives from the other countries proved to be reluctant or skeptical. And, once again, the American delegation found itself placed in the embarrassing position of urging narcotics legislation on other countries while not having any of its own. Several other countries had already enacted drug legislation; was it not hypocritical that the United States had not? “What assurances could be given that, having signed and ratified the Convention, the United States would enact implementing legislation?” a critic asked Wright.

The meetings at The Hague proved to be “one more instance in which enactment of exemplary domestic laws became necessary in order to avoid international embarrassment” (p. 51). The Hague Conference ended with less than unanimous agreement on the need for international drug laws. But what the conference did was to open the door to domestic narcotics legislation, which took the form of the Harrison Act, the source of all American drug laws. The Harrison Act was the single most important piece of drug legislation ever enacted in the United States.

THE HARRISON ACT OF 1914

In 1912, after the meetings in China and the Netherlands and the defeat of the Foster bill, Dr. Wright was resolved to draft a bill that would eliminate all nonmedical use of narcotics. Representative Francis Burton Harrison, a New York Democrat, agreed to shepherd Wright’s bill through Congress. However, the bill was not appreciably different from the defeated Foster bill of 1910 (Musto, 1999, p. 54). Moreover, a powerful coalition of forces opposed the bill—most notably Southerners, because they believed that any strong federal legislation challenged state’s rights, and the pharmaceutical lobby, because drug-gists believed the regulations to be inconsistent, complex, and unnecessary.

But at the time, the American Medical Association (AMA) approved of drug control. (By 1918, the AMA would change its tune.) And after the election of 1912, with Woodrow Wilson in the White House, the Democrats in control of both houses of Congress, and William Jennings Bryant, who approved of the bill, as secretary of state, the alignment

of political forces now favored the Harrison Act. With some tightening, simplification, and compromises, the pharmacists' lobby was won over, and on December 14, 1914, Congress passed the Harrison Narcotic Act. President Wilson signed it into law three days later. "Finally the American government had redeemed its international pledges; a federal law brought some control to the traffic in opiates and cocaine" (Musto, 1999, p. 61).

Contemporary observers argue that the passage of the bill was facilitated by an association in the majority public's mind between the recreational use of opiates and cocaine and stigmatized minorities. Medical use, already on the decline, was less than influential in the legislators' decision and, besides, everyone agreed that medicine had relied on a far-too-liberal—and dangerous—administration of opiates. Opium smoking had been indulged in by Chinese immigrants and underworld whites; morphine was used by criminals and prostitutes; and cocaine, whether rightly or wrongly, was associated in the minds of many Southerners with African Americans. "Cocaine was especially feared in the South by 1900 because of its euphoric and stimulating properties" (Musto, 1999, p. 6). Many southern whites believed that under the influence of cocaine, blacks would rape white women and attack white society (Ashley, 1975, pp. 66–71). Nonetheless, unlike the public furor and debate—and media attention—that attended the issue of alcohol prohibition during the 1900–1920 era (and the marijuana problem in the 1930s), the Harrison Act slipped through Congress virtually unnoticed. It was approved in a matter of minutes, and even *The New York Times* failed to note its passage (p. 66).

There was only one problem with the Harrison Act: The law was ambiguous. There was no agreement as to how to interpret it. Under its provisions, it was not even clear what was legal and what was illegal. On the surface, the Harrison Act was clear. Any and all dispensers of narcotics and cocaine had to be licensed physicians and were required to register with the government and pay a nominal tax. It was illegal to sell or dispense opium or opium derivatives and cocaine without first obtaining an order from the commissioner of revenue, and only medical professionals could register. Registered medical professionals were required to keep a record of the drugs they sold and to fill out prescriptions for the drugs they dispensed. Few questioned the legitimacy of keeping heroin, morphine, opium, and cocaine out of the hands of the recreational user. Everyone at the time agreed that physicians alone should be allowed to dispense prescriptions for narcotics. The sticking point was the maintenance of addicts on narcotics by physicians.

The Harrison Act stated that only the dispensation of narcotics "prescribed in good faith" was legal. According to the government's strict interpretation, this *excluded* the maintenance of addicts on narcotics. To many physicians, however, the prescription of narcotics for the purpose of maintenance constituted a legitimate "good-faith" medical use of drugs and, hence, was legal. Given the lack of clarity on the matter, it was up to the Supreme Court to interpret what the law meant. Less than a year after the passage of the Harrison Act, one Jin Fuey Moy, a Pittsburgh physician, was arrested for prescribing 1.8 grams (about one-sixteenth of an ounce) to an addict. A year later, the case was brought to the Supreme Court, which, in a 7–2 vote, *rejected* the government's case, arguing that, first, the provisions of the Harrison Act were not required by international treaty, and second, the phrase "prescribed in good faith" was impossibly vague. Many observers believed that the *Jin Fuey Moy* decision could completely emasculate the Harrison Act, making narcotics control all but impossible (Musto, 1999, p. 130).

In 1915, a San Antonio physician named Charles Doremus was arrested for dispensing 500 tablets of morphine to a known addict. In 1919, in a 5–4 decision, the Court upheld the constitutionality of the Harrison Act and convicted Dr. Doremus. In the same year, by the same margin, the Court also decided against Goldbaum, a pharmacist, and Webb, a physician, and in favor of the law, arguing that maintaining an addict “for the sake of continuing his accustomed use” is such a “plain perversion of meaning that no discussion is required” (p. 132).

By 1919, America had become a very different place from the country it was in 1914. The United States had fought in World War I, and narcotic addiction was “perceived as a threat to the national war effort” (p. 133). Congress had ratified Prohibition, which verified, for a time at least, that the federal government had the power to prohibit the distribution of psychoactive substances. And the country began to experience a growing fear of communism—the Russian Revolution took place in 1917, and fear of the same thing happening elsewhere radiated to representatives of governments throughout the Western world—which increasingly served to chill public dissent over and opposition to federal programs. “Indulgence in narcotics tended to weaken the nation and was associated with other un-American influences which would dissolve the bonds of society” (p. 134).

Beginning in 1918, nearly 50 narcotic maintenance clinics were set up around the country by local, state, and federal agencies. Paradoxically, these clinics proved to be the swan song of narcotic maintenance. The clinic in New York City registered 7,500 addicts before it was closed down in 1920. All of the remaining clinics totaled no more than 3,000 addict-patients. Though these clinics were never a major source of drugs, “they were nevertheless obstacles to the agents’ efforts to indict the major purveyors [of narcotics]: physicians, druggists, and peddlers” (p. 152). One after another, they were investigated by the Treasury Department’s Narcotic Division and closed down. The last one, located in Shreveport, Louisiana, was closed in 1923.

By the early to mid-1920s, it had become crystal clear that drug maintenance was doomed. Between 1914 and 1938, nearly 30,000 physicians were arrested for dispensing narcotics, and nearly 3,000 actually served jail or prison sentences. Eventually, the medical profession withdrew from the business of dispensing narcotics to addicts, and addicts, in turn, were forced to abstain or seek out an illicit drug supply. By the 1920s, narcotic addiction had become, by its very nature, a criminal offense. The Harrison Act had created a new class of addict-criminals.

The Impact of the Harrison Act: Did It Make Things Worse?

The history of U.S. drug laws, especially subsequent to the Harrison Act, is absolutely central to any mission attempting to understand the issue of the legal control of drug use. Many observers argue that the change in the addict’s legal status wrought by the Harrison Act produced our current, extremely serious, drug problem, and that the solution to the drug problem is to return to pre-Harrison drug *laissez faire*—a legalization or decriminalization of all drugs, including (or especially) the narcotics. Consider this: The majority of pre-Harrison Act addicts were medical addicts, mostly white, respectable, middle-class, middle-aged females, who harmed no one but themselves. But the majority of the post-Harrison Act addicts were predatory street criminals, increasingly inner city minority males, who lived by robbing and stealing.

Doesn't it make sense, some critics of drug prohibition argue, that the drug laws and their enforcement *caused* this unfortunate transformation? Isn't the disastrous impact of the Harrison Act and its legal descendants a clear lesson to us all? We should return to nineteenth-century laissez-faire legal policy, these critics argue, when drugs were freely available to all, and caused relatively few problems for society. A close scrutiny of the harmful impact of the Harrison Act, they say, teaches us a very clear lesson: We should legalize the currently illicit drugs. This conclusion has been reached by a substantial number of observers, most of them politically liberal, who have examined the history of the American drug laws, including Edwin Schur (1962), Alfred Lindesmith (1965), and Edwin Brecher and his colleagues at *Consumer Reports* (1972).

Not all observers are convinced that our drug laws had such disastrous effects. And not all agree that the laws and their enforcement were responsible for the transformation of the addict population from medical to criminal addicts. David Courtwright (1982), a historian, argues that this transformation did *not* take place between 1914 (the year the Harrison Act was passed) and 1924, when all the maintenance clinics had been closed and the courts had decided that maintenance was illegal, but a whole decade *earlier*, between 1895 and 1915, when the law had only begun to go into effect. Courtwright further asserts that the decline in the number of narcotic addicts in the United States came about *not* as a result of the passage and enforcement of the Harrison Act but through voluntary changes in medical practice.

Prior to 1900, "most addiction resulted from the activity of physicians; it was, to use a shorthand term, iatrogenic"—caused by medical intervention itself. "Doctors liberally dispensed opium and morphine to their patients," but, "as a wider range of effective therapies, improved sanitation, and improved medical education became available," Courtwright argues, the number of medical addicts diminished. "The net result was that opiate addiction, while declining relative to the population, also ceased to be concentrated in upper-class and middle-class white females and began to appear more frequently in lower-class urban males, often . . . members of the underworld" (Courtwright, 1982, pp. 2–3).

Courtwright assembled his evidence from surveys of physicians', pharmacists', and maintenance programs' records; military medical examinations; and the statistics on the importation of opiate drugs. His conclusion is that "the rate of opiate addiction in America increased throughout the nineteenth century from not more than 0.72 addicts per thousand persons prior to 1842 to a peak of 4.59 per thousand in the 1890s; thereafter the rate began a sustained decline. In round figures there were never more than 313,000 opiate addicts in America prior to 1914" (p. 9). If, as Courtwright argues, the addict population began to change *prior* to 1914—indeed, prior to 1900—the Harrison Act and its enforcement could not have been responsible for the change. Instead, he says, we have to look elsewhere for its causes. And Courtwright locates the transformation in two sources: The reason for the sharp decline in medical addicts—and, as a result, the number of addicts overall—can be traced to (1) improved, more sophisticated medical care and self-monitoring of the dispensation of opiates by physicians to their patients, and (2) an aging and, hence, dying addict population.

But the other side of the coin from the shrinking of the absolute size of the medical addict population was the growing *relative* size of the criminal addict population. Courtwright believes that the number of recreational addicts remained more or less stable—with year-to-year fluctuations—between early in the twentieth century until World War II,

when drug supply lines were cut off. But recreational addicts formed an increasingly greater *proportion* of all addicts because medical addicts declined in number after 1895. In addition, and just as important, the drug of choice among recreational addicts shifted from opium and morphine to heroin.

Heroin was synthesized from morphine in 1874, but it was not sold commercially until 1898, and then only as a cough suppressant. The number of medical or iatrogenic addicts generated by the reckless administration of heroin was small; most physicians recognized its addicting property extremely quickly. But news of its euphoric property leaked out early on, and within the first decade of the twentieth century, a substantial number of young, mainly white, criminally inclined males began using it recreationally. Roughly 90 percent of them lived in or within striking distance of New York City.

Initially, heroin was cheap. For some users, it substituted for opium, which had become scarce and expensive as a result of an effective federal ban on its importation. For others, it served as a substitute for cocaine, since the supply of this drug had dried up as a consequence of a series of pre-Harrison Act anti-cocaine state laws. And because heroin was extremely potent, it could be sniffed or snorted to excellent effect.

While morphine maintenance was being debated in the courts, illicit heroin was gradually spreading from New York City. For both addict and dealer, its appeal lay in its potency. Heroin could be diluted several times over and still remain potent. But the more diluted and less pure it became, the greater the tendency of addicts to switch from snorting to IV injection. In 1924, recognizing its threat to the country's youth, Congress passed a law banning domestic use of heroin, a bill that failed to curtail its use (p. 107). As an indication of the growing importance of heroin relative to morphine as a street drug during the 1920s and 1930s, consider the fact that in 1927, 4 pounds of morphine to every pound of heroin were seized by the federal government; by 1932, 3.4 pounds of heroin were seized for every pound of morphine; and by 1938, the ratio was 7.7 to one (pp. 108, 110).

By 1940, says Courtwright, "the heroin mainliner had emerged as the dominant underworld addict type" (p. 112). Compare this image with the respectable, middle-aged, middle-class female who made up most medical addicts at the end of the nineteenth century. The transformation of the addict population turns out to be the switching of one population for another rather than a literal "transformation" of the same population. The magnitude of this change "can be described by the etymology of a single word, *junkie*. During the 1920s, a number of New York City addicts supported themselves by picking through industrial dumps for scraps of copper, lead, zinc, and iron, which they collected in a wagon and then sold to a dealer. Junkie, in its original sense, literally meant *junk-man*" (p. 113). The mind reels at picturing nineteenth-century addicts—respectable, middle-aged ladies—pawing through a wretched pile of junk to support a drug habit. Within a single generation, then, the locus of addiction "shifted from the office and parlor to the desolate piles of urban debris" (p. 113).

THE MARIHUANA TAX ACT OF 1937

As we'll see in Chapter 10, marijuana's use stretches back thousands of years, and possibly as far as prehistoric times. In the United States, historical research suggests, the practice began along the U.S.–Mexican border among working- and lower-class Mexican immigrants, particularly migrant farmworkers. From there, in the 1920s and 1930s, it spread to

New Orleans, among some members of the African American working-class community, to the jazz world, and from there, to black and white jazz aficionados, and then, to bohemians, intellectuals, gamblers, prostitutes, and criminals. During the period when this diffusion was taking place, popular images of marijuana use were so unrealistic as to be amusing today. In the 1920s and 1930s, users were said to be “addicts,” and were thought to become violent, dangerous, and insane under its influence. In the decades that followed, during the 1940s and 1950s, the furor died down, only to erupt again in the 1960s, when the use of marijuana became extremely widespread. However, by this latter era, the image of the marijuana user had shifted from that of a violent, deranged psychopath to those of a hippie, a drop-out, a shiftless ne’er-do-well (Himmelstein, 1983, pp. 121-136).

Judging from comments in newspapers and by lawmakers in the 1920s and 1930s, members of the white majority were almost entirely critical of the “vicious weed.” An army botanist who observed Mexican railroad workers and prison inmates’ use of marijuana said that “under its baleful influence reckless men become bloodthirsty, trebly daring and dangerous to an uncontrollable degree.” Claimed an American consul stationed in Nogales, Arizona, a border town, the use of the drug “causes the smoker to become exceedingly pugnacious and to run amuck without discrimination” (Bonnie and Whitebread, 1974, p. 37). Lawmakers responded with legislation. By the early 1930s, practically every state west of the Mississippi River had passed anti-marijuana legislation, practically without publicity, debate, or opposition (pp. 39, 52).

This era, roughly 1914–1931, can be referred to as the “local” phase of marijuana prohibition (p. 51). During this stretch of time, a distinctly grassroots opposition to the drug developed that was rooted in anti-Mexican racism and an association of marijuana with ethnic minorities and otherwise “immoral” populations, such as, as we saw, criminals, prostitutes, longshoremen, gamblers, and jazz musicians. During this era, marijuana was regarded as an alien presence, an addictive narcotic no different from opium, and a stimulant to violence, lawlessness, and crime. Moreover, some feared that the marijuana habit would spread from society’s fringes and underworld to respectable whites, especially women and children (p. 52).

As early as 1915, lawmakers and law enforcement officers in the Southwest urged that marijuana be included in the Harrison Act. Interestingly, federal authorities rejected these appeals, believing that Washington “had its hands full with the enforcement of the Harrison and the Volstead Acts” (p. 55). In 1930, the Federal Bureau of Narcotics (FBN) was created, with Harry J. Anslinger, a former Prohibition agent, as its first commissioner. One of the first items on the Bureau’s agenda was to pass a Uniform State Narcotic Act, ensuring that the same drug laws were enacted across the United States. At first, marijuana was not on the FBN’s radar screen.

But Anslinger’s mind was changed sometime in 1934, thereby shifting efforts at marijuana prohibition into its “national” phase. During the mid- to late 1930s, the Bureau undertook a major, comprehensive media campaign, as well as lobbying in legislatures, to convince the public of the evil effects of the “killer weed.” Anslinger wielded anecdotes and stories about the drug’s supposed criminogenic and violence-inducing effects to convince voters and legislators that marijuana had to be criminalized. For instance, he widely publicized a letter the Bureau had received, published in the *Alamosa Daily Courier*, which described an attack by a Mexican-American presumably under the influence of marijuana on a young girl. It read: “I wish I could show you what a small

marijuana cigaret can do to one of our degenerate Spanish-speaking residents. That's why our problem is so great; the greatest percentage of our population is composed of Spanish-speaking persons, most of who[m] are low mentally, because of social and racial conditions" (Anslinger with Cooper, 1937, p. 101). Anslinger piled one fanciful tale on another, all with the same moral: Marijuana causes users to become violent. In his classic article, "Marihuana—Assassin of Youth," published in 1937, he describes a young man "walking along a downtown street after inhaling a marihuana cigarette." Suddenly, "for no reason, he decided that someone had threatened to kill him." Spotting an elderly man, a shoe-shiner, in the vicinity, he decided that he had found his would-be assassin. Rushing home, he got a gun and shot the man, killing him. "I thought someone was after me," the young man babbled. "That's the only reason I did it. I had never seen the old fellow before. Something just told me to kill him." Today we agree that Anslinger's documentary evidence for the drug's violence-inducing properties was anecdotal at best and bogus at worst—but at the time, it was taken very seriously.

The FBN "wanted to arouse public opinion against marihuana, and Commissioner Anslinger enlisted an army of public opinion makers and legislative pressure groups to accomplish this task" (Bonnie and Whitebread, 1974, p. 112). Anslinger's goal was the adoption of the Uniform State Narcotic Act, as well as marijuana legislation, in all states. But in spite of the Bureau's aggressive and sensationalistic campaign, public opinion was more apathetic than outraged (p. 117).

In 1935, two federal legislators representing New Mexico introduced bills to prohibit shipment of marijuana across state lines and into and out of the United States. In 1930, Anslinger had been opposed to bills attempting to criminalize interstate and international marijuana commerce, arguing that there was very little of it to prohibit. But interest in the bills encouraged Anslinger, and the FBN decided to hop on the anti-marijuana bandwagon. The Marihuana Tax Act became law in August 1937. It had three provisions: (1) "a requirement that all manufacturers, dealers, and practitioners register and pay a special occupational tax"; (2) "a requirement that all transactions be accomplished through use of written order forms"; and (3) "the imposition of a tax on all transfers in the amount of \$1/per ounce for transfer to registered persons and a prohibitive \$100/ounce for transfer to unregistered persons" (p. 124). Under the guise of a revenue measure, the federal government effectively banned all possession and sale of marijuana products. The Marihuana Tax Act was to remain federal law until 1970, with the passage of the Comprehensive Drug Abuse Prevention and Control Act.

THE NIXON/FORD ADMINISTRATION ENACTS THE CONTROLLED SUBSTANCES ACT

In 1970, Congress approved the Comprehensive Drug Abuse Prevention and Control Act. Typically referred to the Controlled Substances Act, this bill superseded and replaced all prior federal drug legislation. Though states could still enact their own legislation, in the case of conflicts between state and federal law, federal law, as always, had precedence over state law.

The Controlled Substances Act was originally designed to address drug research, rehabilitation, and education. For instance, it authorized substantially increased funding

for Public Health Services hospitals. It also authorized a two-year study by the National Commission on Marihuana and Drug Abuse, which published its findings in a multivolume report in 1972 and 1973. (In the interest of full disclosure, I served as a contributor to, and was one of the contractors of, the 1972 volumes.) The Commission was authorized to make recommendations about drug policy, and its recommendations, which appeared in *Marihuana: A Signal of Misunderstanding* and included the decriminalization of marijuana, were largely ignored by President Richard Nixon. In addition, the National Institute on Drug Abuse (NIDA) was authorized to become the federal government's primary agency for drug research, education, and prevention.

However, when the Controlled Substances Act was passed, it became clear that its priority lay mainly in enforcement, not in education, research, or rehabilitation. Most observers attribute this emphasis to the law-and-order climate that dominated both Congress and the Nixon administration in the early 1970s. One of the first orders of business of the Controlled Substances Act was to abolish the FBN, then an agency of the Treasury Department, and to switch its replacement, the Bureau of Narcotics and Dangerous Drugs (BNDD), to the Justice Department, a vastly more enforcement-oriented agency. The act increased the strength of the BNDD by 300 agents.

Perhaps the Controlled Substances Act's primary impact lay in establishing categories of "controlled substances" or a program of schedules. It establishes five "schedules" based on a drug's "potential for abuse" and its medical use (as determined by the federal government). Schedule I drugs have a "high potential for abuse" and, according to the Department of Health and Human Services (DHHS), have "no medical use" (even though some physicians, and some states, may disagree). These drugs are illegal under any and all conditions (except for extremely restricted experimental or research circumstances) and penalties for possession and distribution are imposed. Heroin, LSD, marijuana, Ecstasy (as of 1987), and (as of 2000) GHB are representative Schedule I controlled substances. For the manufacture or distribution of narcotics, such as heroin, the maximum penalty is a 15-year sentence; for non-narcotics manufacture and sale, the penalty is a 5-year sentence. Simple possession entails a 1-year sentence. Subsequent offenses, obviously, increase the penalty.

Schedule II substances are regarded as having a high potential for abuse but, according to the DHHS, do have some medical utility. Possession and distribution for illegal (nonmedical) possession, manufacture, and distribution are the same as for Schedule I drugs. Cocaine, methamphetamine, opium, morphine, methadone, and codeine are Schedule II drugs.

The DHHS regards Schedule III–V drugs as having medical utility and a low potential for abuse. And the penalties attached to their illicit possession, manufacture, and distribution, are likewise correspondingly lower. Examples of Schedule III drugs include some barbiturates, nonamphetamine stimulants, and narcotics such as Percodan and Darvon. Examples of Schedule IV drugs include Valium and other tranquilizers, and slow-acting barbiturates, like Phenobarbital. Schedule V drugs are regarded as having an extremely low potential for abuse.

One of the more fascinating stories about the history of the American drug laws and their enforcement concerns President Nixon's uneasy relationship with drug prohibition. A law-and-order politician with impeccable conservative credentials, Richard Nixon's position on drugs was expected to demonstrate a strong emphasis on enforcement

and repression. But Nixon was the only recent president whose record reflected a stronger domestic commitment to rehabilitation and treatment than to enforcement. As we might expect, the reasons are complex and revealing.

In the 1960s, two medical researchers, Vincent Dole, a specialist in metabolic diseases, and Marie Nyswander, a psychiatrist, began experimenting with stabilizing addicts on methadone, a long-acting narcotic. In 1965, a psychopharmacologist named Jerome Jaffe attended a lecture by Dr. Dole, was impressed with the results of Dole's research, and began administering methadone to his patients. In 1968, at the University of Chicago, Dr. Jaffe began the Illinois Drug Abuse Program (IDAP), a large-scale adoption of the methadone program. In June 1970, a White House policy advisor named Jeffrey Donfeld called Dr. Jaffe and asked to review IDAP. "Donfeld's visit . . . was to have profound consequences . . . for the nation's drug policy" (Massing, 1998, p. 96).

Elected president in 1968, Richard Nixon "felt a reflexive disgust for illegal drugs and the people who used them" (p.97). In a campaign speech in California, Nixon referred to narcotics as the "modern curse of the youth. . . . Just like the plagues and epidemics of former years," he said, drugs "are decimating a generation of Americans." If elected, Nixon pledged, he would triple the number of customs agents and work with source countries to eliminate drugs where they grow (p. 97). Just as Nixon took office, the District of Columbia experienced a sharp upturn in the crime rate. A presidential secretary's purse was snatched right outside the White House grounds (p. 99). Nixon was more determined than ever to quell crime in the district, and entrusted the job to Egil ("Bud") Krogh, considered the White House's "Mr. Fix-It."

At the time, a local methadone program was being run by Robert DuPont. Working with the D.C. Department of Corrections, Dr. DuPont conducted a study that revealed that 45 percent of the inmates of the district jails were heroin users, demonstrating an extremely strong link between drug use and crime. Suspecting that treatment might be the answer to the crime problem, Krogh sent Jeff Donfeld around the country, surveying the ongoing treatment programs, including Dr. Jaffe's IDAP. Donfeld's report to the White House dismissed all programs then in place, with the exception of one: IDAP. DuPont's experience and Donfeld's report convinced Krogh of methadone's feasibility. Jaffe and a government task force were asked to prepare separate position reports on drug treatment. The government's report, prepared by National Institute of Mental Health (NIMH) aides, underplayed the seriousness of the drug problem and expressed extreme skepticism about methadone maintenance. In contrast, Jaffe's report framed heroin addiction as a serious problem that demanded innovative solutions. Jaffe argued that addicts are resistant to treatment, and said that because methadone showed promise, the government should commit millions to the program to set up IDAP-type programs nationwide (pp. 104–105).

In April 1971, two congressmen, as members of a House Foreign Affairs Committee, visited Vietnam "to investigate reports of growing heroin addiction among U.S. troops there" (p. 107). Representative Robert Steele, the Republican, reported his findings to the White House. Not only were 10 to 15 percent of servicemen in Vietnam addicted to heroin, Steele said, but with the United States mustering out a thousand servicemen a day, many were returning to the States with their drug habits. If the spread of drugs among troops abroad continued, he stated, "the only solution" would be "to withdraw American servicemen from Southeast Asia" (p. 109). Steele's initial estimates were

inflated; between 4 and 5 percent of American soldiers stationed in Vietnam tested positive for narcotics. But the perception of huge numbers of GI addicts was an important impetus to immediate action—and a justification for treatment. After all, these men were not “street junkies”; they were “our boys,” risking their lives abroad for their country. And while a hard-liner on drug enforcement, President Nixon recognized that seizures, arrests, and incarcerations were not reducing the size of the addict population. Something else had to be done—and soon.

In June 1971, Nixon escorted Jaffe to a bipartisan meeting in the Cabinet Room of the White House and announced that he was creating the Special Action Office for Drug Abuse Prevention (SAODAP) with Jaffe as its director; \$155 million in new funds were being requested, with \$105 million of that being directed into treatment. Jaffe was caught completely by surprise. “And so, for the first time in U.S. history, a president had declared war on drugs. And Richard Nixon, the apostle of law and order, was going to make treatment his principal weapon” (p. 112). No other American president had decided to solve the drug problem by making a commitment to reducing the demand for drugs rather than the supply (p. 113).

In the meantime, Nixon remained committed to the policy of eradicating the drug supply. In the summer of 1972, the Turkish government agreed to ban all poppy production in exchange for \$35 million in American aid. The farmers who had previously grown the opium poppy would be encouraged to substitute other crops. In addition, in 1972, federal agents, in cooperation with the French and the New York City police, dismantled the so-called French connection, a major drug ring that stretched from Turkey and Lebanon, through Italy and southern France, into the United States. For a time, seizures were up and heroin supplies and drug overdoses were down; experts saw a heroin shortage in the eastern United States. Remarkably, the crime rate in East Coast cities declined correspondingly. (Unfortunately, the decline in the heroin supply proved to be short-lived; within a matter of months, Mexico and Southeast Asia, as well as Iran and Afghanistan, began to bring heroin into the country.) It seemed as if Nixon’s two-pronged attack on both demand and supply had borne fruit in the form of a diminished drug problem—along with a lower crime rate.

In fiscal 1973, federal spending on drug treatment and prevention totaled \$420 million—eight times the sum when Nixon took office; by the time he left office, this had reached \$600 million. And two-thirds of the federal budget was for treatment (the “demand” side). Only a third went into enforcement (the “supply” side). Given Nixon’s law-and-order orientation, this distribution was astonishing. By late 1972, the number of addicts in federal drug programs had reached 60,000, three times the October 1971 total (Massing, p. 123); by October 1973, methadone programs nationwide enrolled 80,000 addicts (Musto, 1999, p. 253).

But soon after President Nixon’s 1972 reelection, the storm clouds could be seen closing in. In January 1973, New York governor Nelson Rockefeller, considered a liberal Republican, unveiled a harsh, punitive, draconian set of drug laws that would eliminate plea bargains and parole and make the penalty for selling heroin stiffer than that for murder. Although severely criticized, Rockefeller’s proposals became law, and they represented the turning of the tide that had been flowing toward treatment and away from punishment. A poll indicated that in New York State, two-thirds of the respondents questioned favored the Rockefeller bill. Within months, Nixon asked his aides to draft a

similar punitive federal bill; its provisions, while not so harsh as those proposed in the Rockefeller bill, represented a stiffening of federal drug penalties. Jaffe's objections carried little weight with the president. In March 1973, The Heroin Trafficking Act was sent to Congress; two months later a federal "superagency," the Drug Enforcement Agency (DEA), was created.

Meanwhile, the methadone experiment seemed to be paying off; in cities where it was instituted, overdoses as well as the crime rate declined. But now, simple statistics were not enough. The public mood seemed to be swinging away from treatment and toward punishment; a new era in drug enforcement was about to unfold. Jaffe's Special Action Office was reduced, and, seeing the handwriting on the wall, in May 1973 Jaffe resigned. Jaffe's successor, Robert DuPont, oversaw the dismantling of SAODAP, whose offices had been close to the White House, and the creation of NIDA, the National Institute on Drug Abuse, which was located in the suburbs far from Washington, both physically with respect to distance and symbolically in terms of its diminished power.

An event seemingly unrelated to drug treatment and enforcement accidentally and most forcefully imposed itself into the picture. In June 17, 1972, five employees of the Committee to Reelect the President were apprehended breaking into and attempting to wiretap the offices of the Democratic National Committee in the Watergate office complex in Washington. A number of close presidential advisors and aides were forced to resign, and some, including Egil Krogh, served federal prison sentences. In August 1974, in exchange for a pardon, Richard Nixon resigned the presidency. Since Nixon's vice president, Spiro Agnew, had resigned in disgrace a year earlier as the result of an unrelated scandal, Minority Leader of the House, became president.

Ford had little interest in the drug problem and even less in drug treatment; interestingly, he was less concerned than Nixon was about both enforcing the drug laws and treating drug addicts. Federal support of treatment programs, including methadone maintenance, declined year by year during the Ford administration (1974–1977). For Ford, drug abuse had a low priority. Once again, almost by default, the federal budget reverted to enforcement. Still, in 1975, a surprisingly enlightened document issued from the White House, the *White Paper on Drug Abuse*. It stated that total elimination of drug abuse "is unlikely," but the government "can contain the problem and limit its adverse effects. . . . All drugs are not equally dangerous, and all drug use is not equally destructive." This position would be discarded within the decade. The enforcement-treatment imbalance began to assert itself. In 1976, the American government committed itself to a program of helping the Mexican government eliminate illicit poppy plants by paying millions to spray its fields. That same year, federal spending for drug enforcement caught up with the budget for treatment and prevention (Massing, 1998, p. 135). A tidal wave of drug incarcerations was about to begin.

THE BACKLASH GATHERS STRENGTH: THE CARTER YEARS

In 1976, Jimmy Carter was elected president of the United States. This seemed to be a positive sign for drug treatment, since Carter, regarded as left of center, supported a variety of humanitarian programs. But Carter's seeming promise was soon short-circuited, and on one front after another. His drug advisor, Peter Bourne, had worked with Jaffe and was strongly committed to treatment. In 1977, Carter asked Bourne for a position

statement on drugs; in it, Bourne came out strongly for marijuana decriminalization—a position Carter adopted in a statement that he sent to Congress.

At the time, the president seemed to be in the vanguard of public opinion. While a majority of the general population remained at least moderately opposed to marijuana decriminalization, Monitoring the Future (MTF) polls indicated that young Americans approved of it. Only 25 percent of 1976's high school seniors said that they would support the criminalization of marijuana; 29 percent said that use or possession should be a violation, like a parking ticket, and 33 percent said it should be "entirely legal." In 1973, Oregon decriminalized the possession of small quantities of marijuana; during the mid- to late 1970s, 12 states followed suit. Marijuana decriminalization seemed to be an idea whose time had come. Robert DuPont, the head of the National Institute on Drug Abuse (NIDA), agreed.

In 1976, an event took place that represented a turning point in drug law enforcement. While it did not cause the changes that followed, it reflected future developments with dead-on accuracy. A suburban Atlanta couple, Ron and Marsha Schuchard, both English instructors at nearby institutions of higher learning, had a 13-year-old daughter whose life seemed recently to have taken a turn for the worse. Normally cheerful and active, she had turned moody and sour, interested only in hanging out with her friends. They decided to throw a birthday party cookout for her. During the barbecue, the Schuchards noticed unusual behavior in their daughter's friends. One girl, red-eyed and disoriented, could barely dial the phone; a boy barged into the house without announcing himself. Cars full of teenagers showed up, shouting "Where's the party?" (Massing, 1998, p. 143). That night, peering out a second-floor window, the Schuchards noticed lights flickering in the bushes. At one o'clock in the morning, after all the kids had departed, the couple went outside with a flashlight and found empty cans of malt liquor, empty bottles of wine, and marijuana roaches and roach clips (p. 142). "We had a sense of something invading our families, of being taken over by a culture that was very dangerous, very menacing," said Mrs. Schuchard. She decided to act.

In 1977, after scouring the available literature and not finding much on marijuana's impact on teenagers, Marsha Schuchard fired off a letter to Dr. DuPont expressing her concern with the drug and the indifference of the medical fraternity toward the dangers it presented. DuPont was impressed. "The heart of the drug problem, he felt, was not heroin addiction, which affected a small, marginalized population, but pot smoking, which touched many families" (p. 145). Seemingly overnight, DuPont was converted to the cause of the parents Martha Schuchard spoke for—parents who felt that marijuana was harmful, especially to adolescents, and should not be decriminalized, indeed, should become the central target of drug legislation and enforcement. Along with a neighbor, Marsha Schuchard formed Families in Action, dedicated to fighting teenage drug abuse. This organization spawned many others like it, and during the 1980s and 1990s, the pro-parent, antidrug movement became the most powerful nongovernment force in existence influencing drug policy.

In 1978, Carter's drug advisor Peter Bourne wrote an illegal prescription for a White House staff member. The bearer of the prescription was caught, and the story made front-page headlines in *The Washington Post*: "Carter Aide Signed Fake Quaalude Prescription." Bourne was suspended, pending the results of an investigation. Meanwhile, rumors began to spread that Bourne, who believed (and still believes) cocaine to be

harmless, was present at a party, sponsored by the National Organization for the Reform of the Marijuana Laws (NORML), a marijuana legalization lobby, at which cocaine was used. The head of NORML, Keith Stroup, was asked about the rumor and Stroup, angry at Bourne for supporting the spraying of Mexican marijuana fields, said that he would not deny the story. The story broke, and Bourne was asked for his resignation.

“The departure of Peter Bourne [from Carter’s administration] would mark a watershed in U.S. drug policy. . . . Bourne had remained an adherent of the Jaffe code, with its belief in the primacy of hard-core drug use [as the central issue in the drug problem] and the government’s responsibility to treat it. Though battered, the public-health model had remained largely intact on his watch” (p. 149). With Bourne’s demise, “zero tolerance” became the government’s mantra, drug treatment was given low priority, and recreational marijuana use became the government’s central drug problem.

To recap: The brief stretch of time roughly from the mid- to late 1960s to the late 1970s was an era of comparative tolerance for drug use. Use shot up sharply between 1965 and 1979. Although the number of arrests also increased during this period, the likelihood of incarceration, especially for mere possession of small quantities and particularly for a marijuana offense, was extremely low. Moreover, the drug enforcement community was poorly funded, and dollars for treatment outstripped those for law enforcement. At the time, cocaine, whose use was just beginning to take off, was barely on law enforcement’s radar. And during this era, the methadone maintenance program was born, became institutionalized, and received generous federal funding. As we saw, a dozen states decriminalized marijuana (later, some *re*criminalized the drug). Teenagers thought that marijuana was fairly harmless—as did many experts—and most supported liberalizing the pot laws. Public interest in and concern over the drug problem was fairly low. All of this was to change in very short order. In fact, 1980 can be considered a watershed; after that, in the world of drug use in the United States, nothing was ever the same again.

THE REAGAN YEARS

A sharp and dramatic rise in incarceration for drug offenses began in 1980; it dawned with the election of Ronald Reagan as president of the United States. As we saw, rates of drug use peaked in the late 1970s and began declining during the 1980s—at the very time (1980–1990) when drug arrests increased by 70 percent. Of course, the historical developments that produced the contemporary laws and their enforcement were already percolating as early as the Ford years (1974–1977)—for instance, in the form of cutbacks in federal spending for drug treatment and the reversal of President Nixon’s two- or three-to-one, treatment-to-enforcement spending ratio. And certainly during the Carter years (1977–1981), events were unfolding that helped usher in a more repressive era—for instance, the birth of the parents’ anti-marijuana movement and the germ of the idea of zero tolerance for illicit drug use. Zero tolerance was pushed, ironically, by Robert DuPont—the man who had once advocated marijuana decriminalization. But it was during the Reagan administration (1981–1989) that the “War on Drugs,” originally launched by Richard Nixon, was rejuvenated with special vigor. And it was during the Reagan years that the outlines and foundation of the current drug policy were shaped and laid down. But whereas Nixon’s War on Drugs stressed treatment, Reagan overwhelmingly

emphasized enforcement. And it is enforcement that has remained the centerpiece of American policy toward illicit drugs. Hence, any story on the contemporary “drugs as crime” issue begins in earnest with the Reagan era.

In 1980, Ronald Reagan, a staunch conservative, defeated Jimmy Carter in the presidential election. In 1981, Carlton Turner, a chemist of psychoactive plants, was appointed White House drug advisor. Turner’s views on drugs were extremely conservative. He rejected the distinctions both between “hard” and “soft” drugs, and between “hard-core” and “recreational” users. For Turner, all drugs were equally dangerous, and any and all levels of drug involvement were likewise equally dangerous (Massing, 1998, p. 160).

Moreover, Turner rejected the very morality of treatment, believing that it sent a message that it was “all right” to abuse drugs, then get bailed out by being treated—courtesy of the federal government. He believed that the government should get out of the drug “business” altogether—except for law enforcement. President Reagan seemed to agree; in the first fiscal year of Reagan’s administration, taking inflation into account, federal spending on drug treatment had shrunk to one-fourth of what it had been in 1974. “Rather than deal with inner-city addicts, the government was now going to get on with its really important business: stopping teenage pot use” (Massing, 1998, p. 161). Carlton Turner needed an advocate.

Shortly after Turner took office, Nancy Reagan, the First Lady, attended the wedding of Prince Charles and Lady Diana. Traveling with “four hat boxes, twenty dresses, a hairdresser, a photographer, sixteen security agents, [and two] official chaperones,” the trip “had been a public relations disaster” (p. 161). The press attacked her extravagance with a vengeance; she was dubbed “Queen Nancy.” On the same day that she ordered over \$200,000 worth of china for the White House table, the Agriculture Department announced that for the purpose of government-supported school lunches for the poor, catsup would be defined as a vegetable. Mrs. Reagan was in hot public relations water, and she needed to adopt a cause to give her a compassionate image with the public. At a meeting in the White House, Carlton Turner suggested the issue of drug abuse, pushing his, and the anti-pot parents’ lobby, position. “Nancy was won over” (p. 162).

Early in 1982, the First Lady made a speech in Florida stressing the pro-parent, antidrug theme. She was an instant hit. Throughout 1983 and 1984, Mrs. Reagan continued to crisscross the country giving antidrug speeches. At a meeting in an elementary school in Oakland, Mrs. Reagan and the rest of the audience, consisting of both adults and schoolchildren, watched a NIDA-produced film in which a child was asked what he would do if he were offered drugs. “I’d say no,” he replied on camera. “The phrase had been coined by the Advertising Council for a NIDA campaign the previous year, but no one had paid much attention. Now Mrs. Reagan picked up on it” (p. 174). Shortly thereafter, a club was formed to keep schoolchildren off drugs: the Just Say No Club. Early in 1985, several of the Oakland schoolchildren plus a television child star were invited to a White House antidrug event; there, the phrase “Just say no” was repeated. It caught on, gaining national attention, and Mrs. Reagan’s campaign suddenly shifted into warp speed. A fawning cover story published in *Time* magazine (January 14, 1985) expressed “new respect” for the First Lady. CBS, once critical of Mrs. Reagan’s lavish expenditures and insensitivity to human suffering, gushed with admiration over her recent adoption of a worthy, humanitarian cause. “Just Say No was on its way to becoming the most remembered phrase of the Reagan presidency” (Massing, 1998, p. 174).

Meanwhile, the federal drug treatment budget had shrunk to one-fifth of what it was in 1973, holding the value of the dollar constant. Only 20 cents of the government's drug dollar was being spent on the demand side—on treatment; 80 cents went to the supply side, that is, on enforcement (p. 180). From Nixon to Ford to Reagan, drug enforcement had supplanted treatment as the federal government's number one priority.

It is interesting that the crack epidemic exploded during the administration of Ronald Reagan, the country's most conservative, antidrug president. Five weeks after the meeting that launched Nancy Reagan's catchy slogan, on November 29, 1985, *The New York Times* ran a page one headline that read: "A New Purified Form of Cocaine Causes Alarm as Abuse Increases." But public attention to crack abuse did not reach hysterical proportions until two events took place that virtually seized the country by the throat.

Len Bias, University of Maryland basketball star and number one pick in the NBA draft, had just signed a long-term contract with the Boston Celtics. On the night of June 19, 1986, Bias, partying with friends, took some cocaine. The next morning, he was found in a dorm room, dead of a heart seizure, brought on, the police said, by an overdose of cocaine. A week later, Don Rogers, who played for the Cleveland Browns, a National Football League (NFL) team, also died of a cocaine overdose. The death of Bias was especially earth-shattering. "Prior to June 19, drugs had been a second-tier issue in Washington; after it, people wanted to talk about little else" (p. 182). A moral panic was launched.

In June, New York City mayor Ed Koch proposed the death penalty for any dealer convicted of possessing one kilogram (2.2 pounds) of heroin or cocaine. Two months later, New York governor Mario Cuomo called for a life sentence for anyone convicted of selling three vials of crack—at that time, roughly \$50 worth of the drug. The drug problem preoccupied politicians and lawmakers at all levels of government, all "scrambling to put their imprint on the issue" (Fuerbringer, 1986). In a series of speeches delivered between June and September, 1986, President Reagan called for a "nationwide crusade against drugs, a sustained, relentless effort to rid America of this scourge." He called for legislation totaling \$2 billion in federal monies to fight the problem.

In September 1986, the House of Representatives approved a package of drug enforcement, stiffer federal sentences, and penalties against drug-producing nations that refused to cooperate in eradication programs. Called the Anti-Drug Abuse Act of 1986, this legislation introduced mandatory minimum sentences for cocaine possession. The most remarkable aspect of this bill was the 100-to-1 discrepancy between the volume of powder versus crack cocaine necessary to draw a 5- to 40-year sentence. The penalty was the same for simple possession of five grams of crack as for 500 grams (just over a pound) of powder cocaine. Two years later, Congress approved the Anti-Drug Abuse Act of 1988, which called for the death penalty for major traffickers. The act also called for penalties for drug money laundering and asset forfeiture in cases involving drug dealing. The language of the bill is as interesting as its penalties: The phrases "hard and soft drugs" and "recreational use" should not be used, the bill stated, because "all illicit drugs are harmful" and "no drug use is recreational" (Musto, 1999, p. 278).

Public opinion agreed with the passage of harsher, stiffer laws. During the debate over Reagan's 1986 drug bill, Claude Pepper, a Florida member of the House of Representatives, said cynically: "Right now, you could put an amendment through to hang, draw, and quarter" drug dealers. "That's what happens when you get an emotional issue

TABLE 2-1 Total Drug-Related Arrests in the United States, 1980–2011

	Number of Arrests	Arrest Rates (per 100,000)
1980	580,900	255.65
1990	1,089,500	436.46
2000	1,579,566	559.81
2006	1,889,810	633.36
2007	1,841,182	611.22
2008	1,702,537	559.87
2009	1,663,582	542.29
2010	1,638,846	529.80
2011	1,531,251	491.43

Source: Adapted from Howard N. Snyder and Joseph Mulako-Wangota, “Arrest in the United States, 1980–2011: *Arrest Data Analysis Tool*” (Washington, DC: Bureau of Justice Statistics). Accessed July 1, 2013 at www.bjs.gov. I would like to thank Alexia Cooper, Bureau of Justice Statistics statistician, for supplying me with the tabular material from which I assembled this table.

like this,” he added (Kerr, 1986). In April 1986, only 2 percent of Americans named drug abuse as the nation’s number one problem. In August, this had grown to 13 percent. The figure continued to grow until September 1989, when a whopping 64 percent of the respondents in a *New York Times*/CBS News poll named drugs as the most important issue facing the country at that time. This is probably the most intense preoccupation by the American public on any issue in polling history. Although the prominent place of drugs as the country’s most serious problem declined after 1989, the importance of the issue lingered for a long time, and the priority of enforcement over treatment likewise has never diminished.

As we see in Table 2-1, between 1980 and 1990, the number of arrests on drug charges in the United States increased by over half a million, and the arrest rate increased by 70 percent. During the 2000–2006 period, the number of drug-related arrests increased to a peak of just shy of 1.9 million, and the rate of such arrests increased as well, to a similar peak of 633.36. The number of arrests during the 1980–2006 period represents a *tripling*, an astounding increase. But from 2006 to the latest available year, 2011, the police made roughly 300,000 fewer arrests, and the rate declined by 120 per 100,000. Clearly, the nationwide fervor to apprehend drug offenders has diminished during the past half-dozen years, and, barring unforeseeable developments, a reasonable prognosticator, in all likelihood, should expect this trend to continue.

THE LEGACY OF THE NIXON/REAGAN YEARS

Presidents do not control state laws or their enforcement—and most of what happens in drug enforcement takes place at the state rather than the federal level. Nonetheless, the president wields enormous symbolic power, and influences the national mood on the drug issue. President Nixon launched the War on Drugs, and, after a lag of two administrations, Reagan revived it. But Nixon’s drug budget in 1969 was \$65 million

(in then-current dollars), and Reagan's was \$1.65 billion. By 2000, Clinton's administration was spending \$17.9 billion a year on the drug war. Certainly the substantial rise in drug arrests (and total arrests more generally) as well as incarcerations during the 1980s was buoyed by Reagan's enthusiastic, even aggressive, antidrug stance. Consider the fact that between 1980 and 1990, the number of prisoners incarcerated in state penal institutions increased by *more than seven and one-half times*. In 1980, drug offenders made up 19 percent of all federal prisoners; in 1990, this figure increased to over half—53 percent. As we just saw, increases in arrests after this period were substantial, though not quite as gargantuan. Clearly, the punitive approach to drug offenses that took hold during the decade of the 1980s reached a kind of pinnacle during the first half of this century's first decade, then subsided after that. Today, the "lock 'em up and throw away the key" mentality has abated, and may continue to do so in the years to come.

The public and legislative antidrug mood of the country was firmly in place when President Reagan left office in 1989. George H. W. Bush was elected to the presidency, and continued Reagan's emphasis on the War on Drugs. Bill Clinton, a moderately liberal but pragmatic Democrat, was elected president in 1992 and reelected in 1996. Some observers expected him to temper drug law enforcement, increase federal funding for treatment, and perhaps even push for the decriminalization of marijuana. (Clinton admitted to having tried marijuana in his youth, but, he claimed, he "didn't inhale.") But under his administration, federal spending to control drug abuse increased more than tenfold from \$1.5 billion in 1989 to \$17.9 billion in 2000, and drug arrests grew by a quarter of a million. In 2000, the total number of persons arrested for drug violations in the United States stood at over a million and a half. The second administration of George W. Bush (2001–2009) and the two terms of Barack Obama (who took office in 2009) have moved the political climate in a somewhat less punitive and a more compassionate and treatment-oriented direction. But much of this change stems from state governments rather than the executive, legislative, or judicial branches of the federal government. Hence, as we've seen, an increase in the number of states that have approved medical marijuana (it's now 18 states, plus D.C.), represents one sign that a more enlightened approach to drug policy is in the works. But progress is likely to be slow, and at the federal level, the possession and sale of marijuana even for medical purposes remains illegal. The same is true of the decriminalization of small quantities of cannabis—decriminalized now in 14 states, though still illegal at the federal level. In contrast, the number of clients enrolled in methadone maintenance programs nationwide seems frozen in place. Nonetheless, the combination of legislative ferment and public concern that was generated in the second half of the 1980s translated into a period of zero tolerance for drug law enforcement and incarceration numbers that that has morphed into a slightly more compassionate and less punitive approach to drug enforcement and treatment. The criticism of a government budgetary allocation that hugely favors enforcement over treatment is widespread and vocal, but perhaps drug war rhetoric attracts more public approval than do appeals to therapy, which often seems to conservatives like soft-hearted and ineffectual flim-flam. It is relevant that over the past decade—through the George Bush and the Obama administrations (that is, from 2001 to the present)—the year-by-year number of admissions to drug treatment programs (as tabulated by TEDS, the Treatment Episode Data Set) is virtually flat, but if alcohol is taken out of the picture, the number has declined slightly. And while the number and proportion of inmates incarcerated for

drug offenses in *state* prisons declined after 2000, they decreased in *federal* prisons only in percentage, yet increased (by almost 10,000) in absolute number. What we see is a kind of checkerboard pattern, more punitive in some respects and in some jurisdictions, and less so in others. And meanwhile, though the War on Drugs continues, certain indicators tell us that, into the 2000s, we are not fighting it with quite as much vigor as in the past.

SUMMARY

Understanding the historical context of drug use is essential to get a clear picture of today's patterns of drug use. Especially crucial to that picture is an understanding of drug control during the past century or more, since the drug laws and their enforcement influence use.

Nineteenth-century America has been described as a “dope fiend’s paradise,” because for nearly its entire sweep, the distribution of psychoactive substances was unregulated and uncontrolled. Anyone could purchase and use nearly any drug at a wide range of establishments in a wide range of forms. Medicine at that time, primitive and ineffective, relied heavily on administering painkilling drugs. Over-the-counter patent medicines frequently contained opium, morphine, and cocaine, and dozens of so-called “soft” drinks contained significant quantities of cocaine. In addition, numerous drugs were available as purchasable products from a variety of sources, including grocery and general stores, pharmacies, and, by order, catalogues. Historians estimate the number of addicts late in the nineteenth century at a figure, on a per-capita basis, as high as or possibly higher than it is today.

To collapse a century or more of the history of drug use into a couple of paragraphs, two discoveries radically transformed the nature of drug consumption around the globe. The first took place mainly in the nineteenth century and the second, mainly in the twentieth.

The first discovery was the process of extracting chemical psychoactive agents from natural raw materials, for instance, morphine (1804), codeine (1831), and heroin (1874) from the opium poppy, and cocaine from coca leaves (1859). And the second was the discovery of entirely synthetic psychoactive chemicals, for instance, barbiturates, amphetamines, and chlordiazepoxide, the last of these, a sedative that has spawned dozens of brand name products.

What the development of semisynthetic and synthetic drugs has done for modern medicine has been to permit administering standard, easily calibrated doses of drugs to patients. What it has done for recreational drug use has been to produce and make available very nearly pure and therefore, relative to their natural state, extremely potent forms of drugs. Now, psychoactive substances can produce stronger, more reinforcing effects, and cause far more harmful effects as well.

It is important to emphasize that natural agents can be extremely potent, dangerous, and dependency producing. For example, alcohol is a chemical naturally found in fermented fruit; the distillation process, which produces drinks that are 50 or more percent pure alcohol, is simple and straightforward. The addictive property of opium has been known for hundreds, even thousands, of years. And the natural product, leaf tobacco, if

smoked, is just as dangerous as it was centuries ago. However, what the processes of chemical extraction and synthesis have done for recreational drug use is to deliver extremely high-potency and far more dangerous and more reinforcing substances into the hands and bloodstreams of consumers. Death by overdose from opium is practically unknown; indeed, it is an extremely rarely used drug in the United States. But, dose-for-dose, death by overdose as a result of using heroin is more common than for any other drug, and the opiates or narcotics cause or are associated with the greatest absolute number of deaths. Dependency on cocaine is widespread; in contrast, the use of the coca leaf, roughly 1 percent cocaine, barely qualifies as a chemical dependency. As a general rule, natural psychoactive agents are less potent and hence less dangerous than purer semisynthetic and synthetic substances. In addition, entirely laboratory-produced drugs require little space, and their production is not dependent on the vagaries of climate, harvest, or season; they can be produced virtually anywhere, at any time. And lastly, the production of synthetic drugs is driven more or less by the marketplace (and, where it is effective, law enforcement). In a sense, then, technology has freed the illicit drug market from the usual time and place constraints that prevail in the buying and selling of natural products. With the necessary chemicals and the requisite know-how, all drug dealers need to run a successful business is customers (and corruptible officials and law enforcement agents) and they can be found virtually anywhere.

In colonial, eighteenth-century, and early nineteenth-century America, the consumption of alcohol was more than three times higher than it is today. Early in the nineteenth century, the temperance movement began to target the free and easy consumption of alcohol. The social history of the regulation of alcohol is mixed with altruism, nativism, ethnic chauvinism, racism and xenophobia, feminism, and self-righteous moralism; big business also played a role. Though strong evidence suggests that alcohol consumption declined during Prohibition, that decline was bought at a very high cost—an increase in the murder rate with the consequent increase in murder-related deaths; huge profits and an increase in power and influence for organized crime; disrespect for the law; and consuming of toxic alcohol substitutes. Most Americans were happy to see the end of Prohibition. But the temperance movement had spawned the effort to control a wide range of psychoactive substances, and once this ball began rolling, there seemed to be no way of stopping it.

Except for alcohol, the first drug to be regulated by law in the United States was opium. Today, historians agree that the earliest local anti-opium laws were motivated by anti-Chinese prejudice.

The Pure Food and Drug Act (1906) sought to protect consumers from fraud. Although it did not outlaw any drug per se, it moved against misbranded and adulterated foods, drinks, and drugs. It was instrumental in bringing about the downfall of the drug-saturated patent medicine industry, and provided a model for later antidrug legislation.

Federal antinarcotics legislation began with two meetings, the Shanghai Commission and the Hague Conference. The United States engineered the meetings partly to curry trade favor with the Chinese, who wanted to control their addiction problem, and partly because missionaries in China and the Philippines pressured the government to deal with the problem. U.S. representatives at these meetings were embarrassed by the fact that the United States was attempting to regulate the distribution of narcotics in other countries while it had no federal drug legislation of its own; using this wedge issue, activists

influenced legislators to consider antinarcotics legislation. Interest groups on both sides of the debate had reasons for supporting or opposing the law, but compromises resulted in the Harrison Act of 1914.

The Harrison Act was ambiguous, however; it did not so much outlaw narcotics (and cocaine) as require that sellers and purchasers of these drugs record and register their transactions and pay a tax. It was up to the Supreme Court, in a series of decisions from 1916 to the early 1920s, to *interpret* the Harrison Act as outlawing the distribution of narcotics to addicts, even by physicians for maintenance purposes. Clinics set up to dispense narcotics to addicts were all closed down by 1923. Narcotic addiction, once seen as an unfortunate illness, came to be treated as a crime. All opium, heroin, and morphine addicts were *by definition* criminals. Tens of thousands of physicians caught dispensing narcotics were arrested, and several thousand were imprisoned. Quickly, doctors abandoned their addict-patients.

Two schools of thought exist concerning the Harrison Act. Some observers believe that the act made matters worse by criminalizing addiction and creating a criminal class of junkies. They propose that addiction be treated as a medical problem, that narcotics be legalized, controlled, and dispensed to junkies. But recent historical evidence calls this view into question. By the middle of the last decade of the nineteenth century, some two decades before the Harrison Act, addiction had been declining as a result of improvements in medical care and more careful monitoring by physicians of the drug use of their patients. But in the two decades before the Harrison Act, as the number of medical addicts was declining, the number of criminal addicts was already growing. Because of its euphoriant properties, the use of heroin specifically, marketed in 1898, was growing alarmingly again, well before the Harrison Act was passed or took effect. Rather than creating a class of criminal addicts, the act took note of the fact that criminals used narcotics, especially heroin. What was happening all along was that, due to extralegal developments, the addict population was drastically changing its composition.

The federal Marihuana Tax Act was passed in 1937. It was the culmination of more than two decades of control and regulation that began in the Southwest at the local level. Most historians believe that anti-marijuana legislation had its origin in anti-Mexican prejudice. In the early 1930s, Harry Anslinger, commissioner of the federal Bureau of Narcotics, initially opposed a federal marijuana law, but public and political opinion on the matter had by 1935 changed his mind. Under the guise of a revenue measure, largely modeled after the Harrison Act, the federal government effectively banned the possession and sale of marijuana products. The Marihuana Tax Act remained in effect until the passage of the Comprehensive Drug Abuse Prevention and Control Act, usually referred to as the Controlled Substances Act, which was passed in 1970.

The Controlled Substances Act superseded and replaced all federal drug legislation; it remains in effect to this day. State laws differ from federal law, but in principle, federal law takes precedence over state law. It was the Controlled Substances Act that authorized drug research, education, and treatment. But its principal arm lay in enforcement. The law created categories of “schedules” based on their supposed potential for abuse and medical utility. Schedule I drugs (marijuana, heroin, Ecstasy, methamphetamine, LSD, and GHB), according to the law, have “no medical utility,” even if individual physicians decide otherwise. In effect, the law usurps expertise from the medical

profession. Schedule II drugs (morphine, most amphetamines, cocaine) have medical utility but a high potential for abuse.

In spite of the fact that Richard Nixon (who was president from 1969 to 1974) was a conservative on matters of law and order, he was also influential in allocating federal expenditures to drug treatment rather than enforcement. He was the political force behind the federal commitment to the methadone maintenance program. But when Nixon had to resign the presidency, the federal emphasis on treatment was doomed.

Nixon's replacement, Gerald Ford, was indifferent to the drug issue, and Jimmy Carter, elected in 1976, found out that a liberal policy on drugs was politically dangerous. Liberal policies and attitudes that had developed in the 1970s, along with higher rates of use, soon fizzled out. The "parent's movement," a staunchly anti-marijuana organization, was born in 1976 with the discovery by an Atlanta couple, that their daughter and her young teenage friends smoked pot. And in 1978, Carter's drug advisor, Peter Bourne, was discovered to have written a bogus prescription for Quaalude (methaqualone) and, later, charged with having attended a party at which cocaine was present. The resignation of Bourne and, two years later, the election of Ronald Reagan as president (he was president from 1981–1989) marked a watershed in the history of drug use and control in the United States. Beginning in the 1970s, the country moved from adopting a relatively tolerant, treatment-oriented approach to one in which "zero tolerance" became the watchword. Enforcement has remained the centerpiece of government drug policy for a quarter century. By 1985, the federal budget for treatment had shrunk 80 percent, holding the value of the dollar constant. In that same year, only 20 percent of the federal drug dollar was being spent on treatment; 80 percent went for enforcement. The election of a liberal-centrist president, Bill Clinton, in 1992 did not alter the picture; nor did his reelection in 1996; nor has the administration of Barack Obama (elected in 2008), likewise a moderately liberal president. During the past quarter-century, drug arrests tripled and the allocation of the federal dollar to law enforcement increased 10 times. In 2011, the number of drug arrests stood at slightly more than 1.5 million, though during the course of the past decade, the number of drug-related arrests and incarcerations has inched down, unevenly, very slightly. It is possible that the persistently high rate of arrest and incarceration—more than half of current federal prisoners and almost a fifth of state prisoners were imprisoned on drug offenses—has led to declines in drug use into the twenty-first century, if only because the sector of the population most inclined to abuse drugs is behind bars. The nation's punitive approach toward drug use remains more or less in place, although it has softened somewhat in recent years.

ACCOUNTS: A History of Drug Control

This chapter discusses how drug control impacts drug use and the society as a whole; the accounts that follow narrate drug use in particular eras. How do you think drug control policies influenced the lives of users?

Heroin Abuse (1971)

I'll . . . talk about what happened to me in the heroin scene I was in. It may be typical, but I don't really think it is. It started for me in the summer of 1968. There are no intricate sociological

or psychological explanations needed for my involvement. . . . I didn't even think twice about the dangers or morality of turning on to heroin. . . . At the time, all of us were deeply involved in the underground post-high school drug subculture in an affluent suburban community. . . . Most of the primary group was in college, and ranged from eighteen to around twenty-one years of age. . . . I didn't know much more about heroin at the time than the average ignorant law-enforcement officer, and I think I shared at least partially the conventional negative stereotype of the junkie—not putting heroin down completely because of my own drug orientation, but saying things like, “I can't see myself *injecting* something into my body,” or “I'm afraid of needles,” and so on. As long as all the others felt the same way, this was not considered a cowardly position. Anyway, around the beginning of July, I took my hash-filled body away on a trip with my family, returning three weeks later.

When I got back, my boyfriend, Edward . . . , said he had shot heroin . . . Heroin was not only accepted, it was cool. . . . I was taken over to the house of a friend who had recently dived head first into heroin without a backward glance, after a youth of similar experiences with alcohol. . . . I went to his house, and he cooked up shots for Edward, himself, and me. I've since been told that we were either very brave or very foolish to put ourselves in his hands like that, and since it was only my first shot, I know it wasn't bravery. Eddie got his shot first. His previous experience had been very pleasant, a mild, warm feeling, and probably a pretty weak shot. This one was not so weak. . . . [Then] our friend . . . gave me my shot.

The needle went in quickly, with one light tap and no pain. That boy gave me a better injection than I've had from doctors! I watched, fascinated, as he squeezed the clear solution out of the dropper and then gave me a “boot”—letting blood run back into the dropper and then shooting it back into my arm. I doubt there was any greater physiological effect as a result of booting, but it prolonged the shot. My “doctor” enjoyed booting so much that he often did it as many as ten or more times on each shot, but that night I said a couple would be plenty, thanks.

I've had better and more powerful rushes than the one I got that first night, but maybe I don't remember it as the best because I didn't know what to expect. . . . And so it began. I am extremely fortunate for the many circumstances which intervened to keep me from setting off on the junkie trait right from the start. There were almost as many circumstances militating in just that direction. . . . Soon, heroin became the only thing [in my life] to look forward to. The weekend became synonymous with “getting off.” Eddie was living with me at the time, and his psychological need for the escape and deadening of pain which heroin provided was the major reason for our continuing use. I can't say what my individual reaction to heroin would have been [without Eddie's taking the initiative], because I was simply following his lead. The winter was long and cold, Eddie was depressed constantly, only occasionally holding a job. Heroin was the only warm spot in the week. We were careful to avoid shooting up more than four days in a row because we knew that addiction would destroy all of the great “therapeutic” value which we attributed to heroin. Also, we just couldn't afford it. . . .

Eddie and I continued shooting up until April 1969 without getting a habit. We were always aware of how much we were doing and marked an “X” on the calendar for each shot. While we managed to avoid physical dependence, psychologically we were hooked good. We turned to heroin whenever we were depressed, or when we wanted to reward ourselves. Because of its capacity for alleviating tension and depression, because it enabled us both to overcome our anxiety in social interactions, and because it seemed to fill up the holes in our empty lives (something we couldn't do for each other), heroin acquired a great deal of power [over us]. I think this psychological addiction is far more enduring and resistant to cure than any physiological addiction, and it is for this reason why addicts will usually relapse. It took a near-fatal overdose for Eddie (and three days of waiting to hear if he was alive or dead for me) to make us realize where we were at. Death was a price we were not willing to pay, even for all the benefits we thought we had

been receiving. We went completely straight, not even smoking grass, for three months. . . .

It was not until later in June, just before we were about to split on a camping trip . . . , that we began dropping in on our [heroin-using] friends again to say good-bye. Naturally we were offered hash and grass . . . , and we accepted. But the memory of the O.D. was too clear for us to be tempted by the smack they were doing, and we told them we were off [heroin] for good. . . . The power that heroin had over us, however, did not dissipate. We returned from our camping trip only to experience a massive post-vacation let-down. We were home. The trip had only changed our lives for a little while. School didn't start for another month, and same with Eddie's new job. . . . To make matters worse, our friends had developed real, honest-to-goodness habits over the summer and now when we went to see them there wasn't any grass or hash. All they were interested in was heroin and morphine, a new discovery they had made. I guess it was inevitable, wasn't it? The brush with death had been so long ago, and if we just had a little bit . . . and we *had* to try that morphine . . . and we'll only do it till school and the job start . . . and we *deserve* some fun before getting back to the rat race . . . , and God am I bored. . . .

We began to shoot more dope than ever before. This time no "X" marks went on the calendar, though we still tried to control it and avoid getting hooked. We did, but it was harder now because everyone else was hooked. . . . I was shooting several times a week, sometimes daily for four or five days, waiting for school to begin. I really liked morphine, which was much cheaper than heroin and seemed to give a better rush. . . . The quality of the morphine was much more consistent than that of heroin. . . . I still wasn't addicted, not physically anyway, but something else was beginning to happen. I began to get nauseous after I shot up, not immediately. . . . , but much later, sometimes as much as several hours. . . . It was a weird kind of sickness, too, because I didn't even mind throwing up. . . .

It got to the point where I wasn't even enjoying my shots that much because I would already be

feeling nauseous before the needle was in my arm. . . . The rush coming on top of that just made me feel worse. Eddie was displaying similar sensitivity which also seemed to be getting progressively more pronounced. We didn't like what was happening. We were spending good money for a bag of dope and then getting sick from it! We might as well have been buying bottles of Ipecac, that stuff that makes you throw up. Who needs that? Friction was also springing up between us. Getting sick made Eddie afraid that he would O.D. again, so he would say, no more dope. But as soon as he became depressed, which was often, I would sooner or later suggest getting some. In the past this had always worked, at least for a while. But now it didn't help any more. It only made us both sick as well as depressed, and made Eddie's fears of overdosing return. Then he would turn on me and condemn me for suggesting it. He felt that since he was so unable to resist, I should be the strong one and keep us off dope. When he began to realize that I was pretty weak myself, he really got scared.

Finally, just a day or two before school was to start, we reached the turning point. . . . I decided to treat myself to a really big shot. . . . I got what I wanted: a super rush. But then it went beyond my control and fell back on the bed . . . , my eyes wide open. Eddie was slapping me, trying to get me to talk, do anything! But I couldn't move my lips and I just lay there, mouth hanging open, eyes staring, hearing him and not being able to answer. I couldn't believe what was happening to me. . . . Eddie . . . just kept shaking me until at last I had become able to speak. We were both *really* scared—we had never been that stoned before and we thought we might die. I had always prided myself on being about to control myself on drugs. . . . But not that night. . . . We went outside and staggered up and down the driveway . . . , retching and hanging onto each other like a couple of drunks. Somehow, I made coffee but we couldn't drink it. We put ice cubes on our faces and wrists, trying to keep ourselves from passing out. . . .

Somehow, we came out of it. But the real hell was just beginning. We began to argue violently, blaming each other. Eddie said he would leave me

if I ever got dope again. . . . I realized that many of Eddie's accusations were true, and many of my proud illusions were false. I continued to retch my insides out halfway through the next day. . . . in a state of total self-disgust. I never wanted to see another needle again. That afternoon, I called the mental health clinic and asked for psychiatric help.

So, you say to yourself, after all *that*, she finally got off drugs. Well, yes . . . , for another three months. . . . I continued smoking marijuana every day, but only when I was alone. . . . Eddie and I . . . didn't see our friends for months. Then Eddie lost his job just before Christmas, and there we were again. It was winter again. The exuberance and gaiety of the holiday season seemed mocking and artificial. Like all good Americans, we made holiday visits to our friends, and what were they doing? You know. . . . We got on the merry-go-round again, only the music wasn't quite the way we remembered it. The expense was still a problem, and the hassles involved in copping had seemed to increase until they were almost intolerable. Luckily, it was no longer feeling good enough to us to make it worth waiting hours for, like our junkie friends did, or to risk getting busted for, as many were.

Even worse, we discovered that when a person becomes a junkie, he often ceases to be a person. There was so much ugliness, lying, cheating, and stealing, even among guys who were supposed to be the best of friends, that we finally decided it wasn't worth it. At least the power of the group was broken, but what about that other power? It drove us to the city, looking for a better connection. It almost turned out to be Eddie's connection to the Great Beyond, because after shooting only a relatively small amount of heroin, IT HAPPENED AGAIN. An overdose isn't pretty, especially if it's someone who you don't want to die. And all the poor guy wanted was just a little relief, a little time out from misery. A friend and I managed to bring him out of the coma without sending him to the hospital, but it was many minutes before he could breathe on his own. I knew it was the end of heroin for Eddie, because he wouldn't come back a third time. He knew it too, and was glad it had happened to let him know where heroin was at for him.

And what about me? As soon as I got Eddie home and in bed, I shot one of the two remaining bags we had. Insane? Probably, but I could tell from the rush I got (weak) and the time I stayed high (short) that heroin had lost its immense power over me, too. I shot the last bag with the same results. It simply wasn't worth it. The hassle to get it, the money it costs, the risk of dying—which in Eddie's case was now almost a certainty—it's all not worth some weak little sensation in your head and a high that lasts ten minutes. Maybe those last two bags were just extra-weak, maybe it would have been different with good dope, but I chose to think not. The weakness of the dope served perfectly to point up the absurdity of trying to fool oneself.

You see, for a lot of people, it *is* worth the tremendous price because of the power to do magic, even if, in my case, the magic ceased to happen long ago. There's only the memory, and the hope to get it back again like it was. For me, other things like my plans for graduate school and my growing self-awareness have helped me to start filling in a lot of the empty holes in my life that heroin only appeared to fill. I still think about it [heroin], especially when things are going badly for me. But then I think of how much I would be gambling for ten minutes of an uneasy peace which is no peace at all. I finally have something to lose! That makes all the difference in the world. When I think about the reward I've promised myself for graduation, right now I'd rather go out for a good dinner than shoot a bag of heroin. And even if I ever do shoot again, I don't think heroin will ever exert the power over me that it once did.

Multiple Drug Use (2003)

About a year ago, my younger brother threw a party at the house where we and our parents were on vacation. That day, my parents, who happen to ride motorcycles, went out to a motorcycle rally. My brother invited a friend of his whom we nicknamed "Horse." He's big and strong, 20 years old, and he uses his size to get what he wants. The absence of my parents allowed my brother, Horse,

and me to have the house for ourselves for the day. My parents had bought lots of beer for us so by the time breakfast was over, at 10 in the morning, we started drinking. We also had a large supply of liquor which enabled us to mix drinks and do shots of various flavors. By noon, my brother called me upstairs to smoke marijuana with him and Horse. I decided to join them because I was curious. After I got high, I became paranoid, which happens to some people when they smoke marijuana, and I climbed into a wardrobe for no apparent reason.

This experience, however, did not deter me from joining my brother and Horse when they chopped up some “E” [Ecstasy] pills they brought with them. So that each person got the right amount, my brother and Horse chopped the pills into a fine powder on a mirror using a razor blade. We did it in the kitchen, which is the first room you enter from the outside. At about two in the afternoon, we were very tired so we went to the bedroom for a nap, expecting our parents to come home late at night. At 4:30, I heard a noise from downstairs and remembered that the E was still on the kitchen table, chopped up into lines on a mirror with a razor blade still on it.

I knew that if my parents saw the lines, they’d think we were doing cocaine, which to them would be much worse than if they had found a pile of marijuana. My first reaction was to jump off the top bunk of the bunk-bed, run out of the room, and run down the stairs to the kitchen. When I got there, I saw my mother stepping into the house with an armful of trinkets from the motorcycle rally. I instantly realized that if I didn’t do something there would be big trouble. Without stopping, I ran square into my mother, knocking her with great force back into the porch area. Angrily, she yelled, “What the hell’s going on?” I jumped back in the house and covered the mirror with my arm and replied, “Nothing’s going on—I was just startled when the porch door slammed.” Still angry, my mother reentered the house, putting her bags down on a counter. “I don’t know what’s going on here,” she said, “but I want it stopped.” I moved a cutting board that was resting on the table onto the mirror and took them down to the basement for proper

hiding and disposed of the evidence. We only lost about a pill and a half, or the equivalent of \$30 in street value. Small price to pay for not getting caught.

The next night, the three of us went into the resort village where our family vacations to walk around the strip of shops and flirt with girls. Stopping along the way, I picked up a pint and a half-pint of Southern Comfort and two bottles of Coke. After we finished the liquor, we walked around, coming upon another liquor store. We decided to buy another bottle. This time, we went to a small park and Horse drank from a bottle wrapped in a brown paper bag. Two police officers walked up to us and began questioning us. Drunk and very scared, I cooperated with the police. They asked for my license, which had expired. I told them that I had just renewed it and the new one hadn’t yet arrived in the mail. I showed them the interim license the DMV had given me, but they took that as punishment for drinking so that I couldn’t buy any more liquor.

As a result of my experiences with Horse, I became friendly with his group of friends. A couple of weekends ago, Horse, my brother, and I went to a “rave,” a party where the main purpose is doing various drugs at the same time. The party was being held at “Chef’s” house. Chef is so named because of the way that “K” (short for ketamine) is prepared. Ketamine is an animal tranquilizer that is used by veterinarians. Ketamine is prepared by heating it until it solidifies, then it’s scraped off the surface with a knife. The result is a fine powder that allows the user to sniff it into one or both nostrils. The person who obtained the K is called “Chemist,” who is known for having many different kinds of drugs readily available. At the party most of the people were also taking E pills and K at the same time. Horse took E and K within 10 minutes of each other. E does not take effect right away—there is usually a 30 to 40 minute waiting period. Depending on the dose, if it’s snorted, K takes effect right away and lasts about 30 to 45 minutes. The effect of K is simply detachment. The user feels as if he is weightless. Everything that happens, like walking, is extremely smooth. This feeling of

detachment begins to intensify and eventually, the user feels that nothing is real. Everything takes place in a dreamlike state. The two major drawbacks of K are the “K drip” and the “K hole.” The K drip is post-nasal drip. The K hole occurs when one drinks a lot before snorting K, or does too much K, at which point, the brain shuts down all functions except the operation of life-sustaining organs. This can last for hours, putting the user into a comatose state.

Once E takes effect, it can last for three or four hours. The effect it has is similar to euphoria. K and E do not mix. At this party, Horse started to “bug out.” Bugging out is when reality no longer seems feasible. While bugging out, the user does things he or she would not ordinarily do, like yelling and screaming gibberish. It seems that partying, drinking, and smoking marijuana are the main pastimes of this group at the party. Colleen, one of the girls who was present, told me about a rave that took place the previous weekend. Colleen was disgusted by the use of drugs at that party. Chef had done too much K and fell into a K hole. After Chef recovered, he went right back to the K and cooked up more to snort. Several people there tried to stop him before he did extensive damage to his body, but to no avail. I felt sick and decided to go home and sleep it off, but the rest of the group there partied and drank into the early hours of the morning.

The next night, my brother and I ran into Horse and two girls. We hung out for a while, sitting in a car on a dead-end street, drinking and smoking. Horse rolled some blunts [large marijuana joints] and polished off a bottle of liquor I had gotten him. Then he drank another. After he had finished the second bottle, he asked me to get him a 40 [a 40-ounce bottle of beer]. His speech was slurred and he became very aggressive. I told him he didn’t need another drink, so he punched me in the chest. He recognized through his drunken haze that I meant business and so he apologized. But he kept begging me about the 40. We took off, and whenever my brother stopped the car, Horse got out so that he could walk to a 7Eleven and steal a 40. At one light, we had to stop, so Horse jumped out of the car and I grabbed him by the collar, but he

wrestled free and ran off, but came back and jumped in the car when the light turned green. Finally, my brother told me to get a 40. I bought a 22-ounce bottle of beer instead, figuring he wouldn’t know the difference. After I handed him the beer, he became more docile. He never figured it out. At some point, he said he felt cold and tried to put on his jacket. While he was struggling to do this, he knocked the head of my cigarette onto the seat of my brother’s car. Then Horse began to pass out. The beer slipped from his hands and spilled all over the floor. My brother got very angry and pulled the car over to the side of the road so the beer would stop spilling. We finally dropped Horse off at his house. This experience taught me that Horse will drink just about anything just because it’s there.

There is an entire subsociety that thrives on mischief and deviant activities. Most of these actions are done under the noses of their parents. That an entire subsociety exists just out of reach of parents seems hard to believe. One would think that if a person has good parents growing up they will be good kids and obey the law. When asked if their parents would allow them to use drugs, each member of this group I asked said “No.” Even though these kids are aware of the bad effects drugs have on them, they continue to use. It all comes back to having a good time. It doesn’t matter if one of them gets sick or has to show up at work the next day, they still partake in the huge party atmosphere.

QUESTIONS

After reading these accounts, do you have the feeling that you could identify the era from which they came? Do they reflect their specific historical eras of drug control? What’s the connection between drug control and drug use? What recommendations would you make to the government about drug policy, based on what the users did and went through and how they narrate their experiences? How exactly does drug control shape the subsociety in which users live and the society in general? After reading these accounts, do you feel any different about the historical impact of the drug laws?



P A R T

II

THREE PERSPECTIVES ON DRUG USE

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THE PHARMACOLOGICAL PERSPECTIVE

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A branch of philosophy called “phenomenology,” argues that the study of the nature of being (its *essential* or objective reality) can be distinguished from an investigation of consciousness, apperception, or *construction* of the reality of the world. We can approach everything and anything in the material or ideational world, indeed, any reality, concept, or phenomenon we can imagine—and that includes drugs—from the same two perspectives.

Understood essentialistically, drugs are substances that the observer attributes with material or physical properties and/or effects. The distinction is *not* that essentialism is what’s true, while

constructionism is what is falsely *thought* to be true. The essentialist definition of drugs points to a real-world quality that (presumably) resides *within* or is *intrinsic to* substances that are referred to by the term *drugs*. If a substance possesses that internal or intrinsic quality, it is a drug; if such a quality is lacking, it is not a drug. The quality resides within, rather than being external to, outside of, or imposed upon, that substance. To the essentialist, this quality can (supposedly) be determined as a result of investigation, evidence, the reasoning process—in short, hard, empirical, scientific, essentialistic investigation. So, the essentialist would say that the quality of “drugness” is defined by a substance’s real-world, material, or physical characteristics, such as its chemical structure or its effects—what it *does* to living organisms.

In contrast, understood from a constructionist perspective, drugs are defined subjectively—what they are *thought* to be, how the public, the law, law enforcement, the media, and politicians *regard* them. From a constructionist perspective, the defining quality of drugs stems not from what’s inside or intrinsic to substances, but by what’s *external* to them, what’s imposed on them by the society. To the constructionist, “drugness” is imposed on substances by how they are seen, judged, legislated against, reacted to, represented, or thought about. So, for example, constructionism says a drug is defined by what the law dictates it is or what people believe it to be—not what it does to the human body.

Both the essentialist and the constructionist perspectives are important in the world of drugs, but the relevance of each perspective emerges specifically within certain contexts. Here, I adopt the perspective of the natural scientist and look at drugs as physical substances with material or real-world effects, as having an objectivistic or essentialist reality. Independent of how psychoactive substances are thought about and viewed by the society in which they are used, they are chemical agents with specific actions that have to be understood. It is the mission of this chapter to understand the pharmacological action of psychoactive drugs. This means that in Chapter 3, the essentialist perspective will be central.

As we’ve seen, the drugs in which sociologists and criminologists are interested are chemical substances that have mind-altering or psychoactive properties. To us, as students of drug use, what makes drugs interesting and distinctive is their capacity to influence moods, emotions, and intellectual processes. This is the case because it is the psychoactivity of certain chemical substances that gives them their popular appeal, that impels substantial numbers of the members of the society to experiment with and use them. It is precisely this appeal that initiates the chain of events that leads to their scrutiny by social scientists.

People who take a drug typically experience psychic effects, enjoy the experience, and tell others about what they experienced. Neophytes—persons who have never ingested a given drug—hear descriptions of a drug’s effects from friends and acquaintances who have used the drug. Most of these descriptions are positive. “It’s great—you gotta try it” is such a common theme in such descriptions that it is something of a cliché. And most of these descriptions are inspired by a drug’s pharmacological action: how its chemical structure interacts with the central nervous system. It is the effects that users enjoy that (along with other facts such as availability and individual motivation) prompt their use, which, in turn, influences or causes behavior *associated* with their use. Drug effects are absolutely central to drug use. Hence, drug effects are likewise central to why societies attempt to control access to psychoactive substances.

But psychoactivity is not the only effect of psychoactive substances. In the material world, we rarely get something for nothing, and psychoactivity always comes accompanied by a host of other effects as well. At a certain dosage, taken over a sufficiently extended time, psychoactive drugs produce significant side effects. Some chemical substances are capable of producing a powerful dependence in users. Others exhibit extreme toxicity—when using them, the person who takes them may experience a drug “overdose.” Still others produce medical damage; they kill body tissue by damaging the lungs, the liver, the brain, and/or the hormonal system. Damaging side effects of psychoactive substances are important and interesting to the researcher because they suggest one reason (among others) why societies attempt to control access to and the use of drugs.

Psychoactive drugs are interesting for a variety of reasons, including their potential impact on human behavior and society’s attempt to control them. The psychoactive appeal of drugs leads to their potential for widespread use, which, in turn, leads to the possibility of widespread harm or problematic behavior, which further results in some members of the society deciding that legal controls over their distribution and use are necessary. Hence, societies raise the question: Is this drug harmful to users? When the answer seems to be in the affirmative, the next question becomes: How can we limit and control the use of this drug? The objectivistic or essentialist and the constructionist or subjective dimensions are intertwined—although always imperfectly.

The second reason why we have to understand the psychopharmacology of drugs—the study of the impact of drugs on the mind—is that the action of some drugs *conduces* users to engage in certain actions. (Conduce means to “lead or contribute” to something.) For instance, to the sociologist and the criminologist, one extremely interesting effect of certain drugs is that they make violent or criminal actions more likely. If a drug lowers inhibitions, certain behaviors that would normally be unthinkable to the user become acceptable under the influence. Alcohol, a drug that is strongly intertwined with violent and criminal behavior, plays precisely such a disinhibiting role. And if a drug is physically addicting or dependency producing *and it is illegal—and hence, relatively expensive*—it may not be possible to pay for a steady supply without resorting to a life of crime. To the sociologist, whether and to what extent drugs influence the enactment of unacceptable and/or criminal behavior is interesting and worth investigating.

By itself, the pharmacology of drugs does not cause the drug laws to materialize out of thin air. Nor is pharmacology the only factor in drug-related behavior. What people do under the influence, again, is partly a consequence of a society’s cultural and legal structure—the social and legal norms spelling out and sanctioning appropriate and inappropriate behavior. Still, what a drug does to the neurochemistry of the human brain—and hence, the body—is relevant to the social scientist’s interests: human behavior and, along with other factors, legal controls. Thus, we need to begin by discussing drugs as psychopharmacological substances.

DRUG ACTION VERSUS DRUG EFFECT

In order to understand what drugs do to the brain and the body, it is necessary to distinguish between a drug *action* and a drug *effect*.

A drug action is specific and takes place at the molecular level. Drugs are chemicals that interact with the body’s neurochemical system; the outcome of this interaction is

what is a drug's "action." As we'll see, drugs act in certain ways on receptor sites located at nerve endings. These actions are measurable and take place, with some variation, in laboratory animals as well as humans. Indeed, they even take place in tissue that has been removed from an organism's body.

Drug effects are nonspecific and more highly variable, and result from more than a given dose of a particular drug. For instance, by its very nature, alcohol *always* binds to a receptor site, located in the cerebellum, that controls coordination (a drug action), and as a result, the consumption of a stipulated quantity of alcohol *usually* produces ataxia or discoordination in users (a drug effect). A drug action is a molecular product of chemistry, while a drug effect is a nonspecific product of chemistry interacting with the organism, plus personal characteristics and social environment. An action that takes place in the body—again, a biophysical reaction, as predictable as mixing two chemicals in the lab—often, although not always, results in human responses or behavior that we refer to as a drug effect.

Drugs have one or more actions because their chemistry interacts in specific ways with the biochemistry of the nervous system. The nerve cells, called neurons, send electrical impulses or signals from one part of the body to another. When neurons send signals, they release chemicals that are conducted from one site or locus to another. These chemicals, called neurotransmitters, act as chemical messengers. Neurotransmitters, when accompanying drugs that are conveyed to the brain, influence such absolutely crucial functions as emotion, mood, pleasure, sexuality, appetite, anger, waking and sleeping, and depression. The body has many neurotransmitters. In effect, neurotransmitters may be regarded as endogenous drugs—chemical substances, produced internally by the body, that influence the workings of the brain and powerfully influence behavior.

At the end of each neuron are receptors; between the receptor of one neuron and the receptor of the one next to it is a microscopic space called a synapse. Neurotransmitters are released into this space and travel toward the receptor of the next neuron. The receptors of specific neurons are able to detect and react toward only certain neurotransmitters; the neurotransmitters "fit into" a specific receptor in a distinctive and unique fashion, much as a key fits into a lock. Some keys (certain drugs) will not "fit"—and hence, not act upon—certain locks (receptor sites of specific areas of the nervous system), but will pass by the site without exerting an effect. When neurons recognize or fit into specific neurotransmitters, they translate their signals into a certain neurological action. They bind or attach to a receptor, causing a current or signal to flow from one neuron to another, across the synapse between them. Once binding is achieved, the signal goes to a certain location in the brain and from there, to an organ, in effect, telling it what to do (for instance, to speed up or slow down). All organic functions in the body—including those that regulate emotion, coordination, and cognition—are controlled by this system of electrical impulses that are activated by these chemical reactions in the nervous system.

When introduced into the body, drugs *mimic* or *block* the neurotransmitters used to communicate with one another (Goldstein, 2001, p. 20). Drugs, including those that are taken for the purpose of getting high, "hijack," or take over, certain functions of neurotransmitters. Psychoactive drugs overpower the usual communication processes that involve vital functions—such as hunger, pleasure, fatigue, anger, and sexual arousal—by sending their own chemicals to the appropriate sites or blocking them by

fitting their chemicals into receptor sites and short-circuiting certain chemical reactions. In this way, under the influence of one or more psychoactive drugs, our usual capacity, for example, to feel pleasure, is stimulated many times over; when we would normally feel hungry or tired, that sensation is blocked; in situations when our neurological pathways would usually communicate no (or at least modulated) irritation, a flood of anger overtakes us.

The sites in the brain that control certain organs are rich in receptors into which specific drugs “fit,” as I said, much like a key in a lock. These same sites may lack receptors for other drugs. When a drug passes through the brain, a given drug (the “key”) will be attracted to and will bind to a specific site in the brain (the “lock”), which controls a certain function or organ. Hence, the drug will act on that organ. Another drug, which lacks the chemical configuration to fit into the lock, will not bind to that site and will pass it by, not acting on the organ that site controls.

For example, heroin enters the body, breaks down into morphine, and flows toward and then acts on receptors in the brain that control breathing and heartbeat rate. Because morphine has an affinity for and fits into those sites, the drug hijacks the usual neurotransmitters that control and affect these functions. As a consequence, a sufficiently large dose of heroin can shut down breathing and heartbeat, and cause death by overdose.

In contrast, the chemical keys of THC (tetrahydrocannabinol, the major psychoactive chemical in marijuana) do not fit into and hence do not bind with—and consequently do not act on—the receptor sites in the brain that control breathing and heartbeat rate. Because of its chemistry, marijuana does not powerfully act on breathing and heartbeat rate the way that heroin does, so it is almost impossible to die of a marijuana overdose. In contrast, two areas of the brain, the hippocampus and the cerebral cortex—which control thinking and short-term memory—are rich in receptors to which THC provides the chemical key. When THC approaches these sites, it is attracted to them, binds to them, and acts on them. Therefore, sufficient doses of marijuana can diminish the user’s short-term memory and disorganize his or her thinking processes. In addition, there is a dense binding of THC to the cerebellum and basal ganglia, which control movement and coordination.

The relationship between a specific drug and a given receptor site is not absolute. Just as a poorly made key may open a lock with a certain amount of jiggling, a drug that fits poorly into a receptor site may produce an action, but more weakly than a better-fitting drug does. Drugs with the best fit in a given receptor will be more potent and will produce a greater effect than those with a less-than-perfect fit. Methamphetamine, a stimulant, is more potent than amphetamines, to which it is closely related. Thus, it elicits a greater response in the relevant organs. But the affinity of a receptor for chemicals with a specific configuration is a matter of degree. Some receptors have a high affinity or “specificity” for a certain drug molecule; for others, a lower affinity; and for still others, none at all.

A FEW BASIC PHARMACOLOGICAL CONCEPTS

In this section, we look at four basic, crucial pharmacological concepts you should understand to have a good idea of how drugs work. These concepts are the acute-chronic distinction, the ED/LD ratio, drug tolerance, and drug fate.

The Acute-Chronic Distinction

“Acute” effects are the short-term effects of a drug, those that take place within the period of its administration and during the immediate aftermath of a single episode of use. Motor discoordination is an acute effect of downing four mixed drinks, each containing an ounce of an alcoholic beverage. Getting high after smoking crack or snorting four lines of cocaine, likewise, would be an acute effect of administering one of these substances. So is dying of an overdose after an intravenous injection of a massive dose of heroin. These are effects that occur *during* or *immediately after* taking one or more drugs; they are “acute” effects.

In contrast, “chronic” effects are *long-term* effects, those that occur after the continued use of one or more drugs. Developing cirrhosis of the liver after 30 years of compulsive drinking, lung cancer after decades of two-pack-a-day cigarette smoking, or brain damage after a period of methamphetamine dependence are all chronic effects from which users can suffer. Some chronic effects are a direct consequence of the long-term action of the drug itself. Heavy, frequent use of alcohol damages the liver as well as most other organs of the body; the heavy, frequent use of nicotine damages the lungs as well as most other organs of the body. These are *direct* effects of the *chronic* use of certain drugs.

Then there are the *indirect effects* of taking the drug. These effects are caused not by the action of the drug itself but by the circumstances of use—for instance, using contaminated needles or leading an unhealthful lifestyle. By itself, heroin does not cause AIDS, but using shared needles that are contaminated by HIV, a common practice among addicts, does cause AIDS. Distinguishing between direct effects and indirect consequences of drug taking is crucial because that has extremely important policy implications, as we’ll see in Chapters 15 and 16.

The ED/LD Ratio

ED stands for “effective dose.” Also known as “active dose,” this refers to the dose of a given drug that is required to produce a given effect. More specifically, since all organisms vary in their receptivity to the effects of drugs, ED is represented with respect to the *percentage* of a given population (including humans, as well as animals such as mice, rats, and beagles) among which the dose in question produces the specific effect. ED50 says that the drug in question produces a given effect for 50 percent of the stipulated population; ED100 refers to the same effect for 100 percent of the population.

For instance, if we stipulate the ED50 for morphine in humans for a reduction in pain among a population of postoperative patients, we are spelling out the dose of morphine that is required to achieve a painkilling effect for half the patients tested. We can do this for any drug, any specific effect, any percentage, in any population. Obviously, for different effects or functions, the ED will differ. For instance, alcohol will slow down reaction time in humans at lower doses (at a lower ED50) than the dose at which it produces motor discoordination or ataxia. And obviously, larger organisms require larger doses to produce a given effect—humans versus mice, for instance. Doses are often expressed per kilogram of body weight.

LD refers to the lethal dose, the quantity of a given drug that is required to kill a stipulated population. LD refers to a drug’s toxicity. More specifically, the ED/LD ratio

measures its toxicity—how much of a danger to life and limb its use represents to organisms that ingest it. The ED/LD ratio—the *size* of the difference or the gap between ED and LD—is its *safety margin* or *therapeutic margin*.

The larger the ratio between a dose that has a given effect and a dose that is lethal, the safer the drug; the smaller the ratio, the more dangerous it is. For a drug to be considered safe, its ED/LD ratio should be *much* higher than 1:1. The closer a drug's ED/LD is to 1:1, the more dangerous it is. If a drug were to have an ED/LD ratio of exactly 1:1, this would mean that to achieve a given effect (for instance, getting high), everyone that ingested it would end up dead—an extremely *dangerous* drug indeed! But if this ratio is on the order of 1:1,000,000, it is an extremely *safe* drug. Most drugs are somewhere between 1:1 (the most dangerous conceivable drug) and 1:1,000,000 (an extremely safe and nearly totally nontoxic drug).

Realistically, a drug that has a safety or therapeutic margin of 1:10 or so is an extremely unsafe drug. If the quantity that can kill a user is only 10 times greater than the quantity that causes the desired effect, a very substantial number of users who take it will end up dead. On the other hand, a drug with an ED/LD ratio or safety margin on the order of 1:1,000 is extremely safe; that is, it will be very difficult for a user to die of an overdose of this drug.

Drugs vary enormously with respect to their safety, or therapeutic, margin. Heroin is a remarkably unsafe drug; the dose that causes death in a substantial proportion of users is only 10 to 15 times higher than the dose at which a substantial proportion of humans achieve a given effect—and obviously here, getting high is the effect in which we are interested. Since illicit heroin is highly variable in purity and potency, it is not terribly difficult to die of a heroin overdose. As we'll see, considering the relatively small number of heroin users, heroin makes a remarkably substantial contribution to the nation's overdose statistics.

One reason for this is the affinity of the receptor sites in the brain that control breathing and heartbeat rate for the chemical structure of morphine, which is the substance heroin breaks down into after entering the body. In contrast, as we have seen, marijuana has a remarkably high safety margin. It is extremely difficult, if not virtually impossible, to die of an overdose of marijuana because its ED/LD ratio is so enormous. As Arthur McBay, a research toxicologist, professor of pharmacy at the University of North Carolina at Chapel Hill, and former Chief Medical Examiner of the state of North Carolina, testified in a court case before the Supreme Court of Nevada, “a person would have to consume 1,500 pounds [of marijuana] in 15 minutes to get a lethal dose” (personal communication). Of course, drugs have effects other than their capacity to kill in an acute episode of use. No one dies of a nicotine overdose (although if the quantity of nicotine in one cigar were injected IV, it would be lethal), but the *chronic* effects of tobacco are devastating.

Drug Tolerance

Tolerance means that the repeated administration of a drug produces diminishing effects. Over time, the body requires a larger dose to achieve the same effect.

Pharmacological tolerance refers to the fact that the neurons become increasingly insensitive to a given drug, and so that drug becomes decreasingly effective. For instance, as a general rule, drug users must increase the dose of their drug of choice to get high.

The flip side of this is the fact that as habituation rises along with tolerance, the lethal quantity of a given drug rises as well. It requires much more of a given drug to kill a habituated or long-term user than it does to kill a neophyte or inexperienced user.

Cross-tolerance refers to the fact that the same principle of diminishing effects that takes place for a given drug also applies to another drug within the same type. For example, tolerance to LSD will also produce tolerance to psilocybin, a related psychedelic substance. Similarly, tolerance to heroin will also produce tolerance to morphine, another narcotic.

Behavioral tolerance reflects how an experienced user learns to compensate for the effects of a given drug and hence, a given dose of the drug has a decreasing impact on his or her behavior. For instance, experienced drinkers claim that they can drive as well under the influence as normally. This is false, but what *is* true is that they can drive better under the influence than an inexperienced drinker can. Over time, as a result of trial and error, they have inadvertently trained themselves to “handle” or compensate for the effects of alcohol in such a way that these effects are not nearly as disorienting as they are to the novice drinker. Still, at a certain level of intoxication, alcohol is disorienting to *all* drinkers.

Drug Fate

Drugs are metabolized or broken down in the body in different ways. As we’ve seen, once it enters the body, heroin breaks down into morphine. If you were to examine the body of a deceased person who had taken heroin, you would not be able to determine whether he or she had taken heroin or morphine, since the former converts into the latter. The same is true of crack cocaine and powder cocaine; in the body, both convert to the same chemical. The body acts on a number of drugs and converts them into metabolites—the chemical byproducts of drugs. Even if the original drug is no longer present, the presence of *metabolites* tells a toxicologist which drugs were taken.

Drugs are also excreted or eliminated from the body in specific ways: through the breath, through the pores, in urine, or in feces. Different drugs are excreted from the body at different rates. Pharmacologists refer to the half-life of drugs, which is the length of time it takes to eliminate half of a given dose of a given drug from the body. Some drugs are eliminated very quickly, whereas others require a much longer period of time to be eliminated. Of all widely used drugs, marijuana is excreted most slowly; it has the longest half-life. THC has a special affinity for fatty tissue; it is stored in fat cells for long periods of time. THC itself has a half-life of 20 hours, and its metabolites, about 50 hours; complete elimination may take as long as three weeks. All other things being equal, drug tests are more likely to detect slowly metabolized drugs than drugs that are eliminated more swiftly. Whereas a week after use, a marijuana smoker could test positive, a cocaine user would test negative, simply because metabolites of THC linger in the body much longer than traces of cocaine.

FACTORS THAT INFLUENCE DRUG ACTION

In order to exert a mind-altering or psychoactive effect, drugs must enter and act on the central nervous system (CNS)—the brain and the spinal column. As I have said, most substances we call drugs are not psychoactive, and even psychoactive drugs exert many

actions in addition to psychoactivity. In order to exert an action on the brain, a drug must enter the bloodstream and cross the blood-brain barrier. The body's entire volume of blood circulates roughly once a minute. Hence, when a drug enters the body, it circulates rapidly and evenly. At least four major factors influence the action of drugs: route of administration; dose; potency and purity; and drug mixing.

Route of Administration

Drugs may be ingested in a variety of ways. Pharmacologists refer to a method of taking a drug as a route of administration. Some routes of administration introduce drugs into the body in an extremely rapid and efficient manner. Injecting directly into the vein a liquid solution into which a drug has been mixed is called intravenous (IV) administration. Obviously, only a drug that actually dissolves in water can be injected in this way. IV administration is one of the most effective means of administering drugs. Injecting a drug under the skin—subcutaneously—or directly into a muscle—intramuscularly—rather than into a vein are much slower and more inefficient routes of administration. Oral administration, such as drinking a liquid (like alcohol) or swallowing a pill, is a much slower and more inefficient method of ingestion. This is because if taken orally, a drug must pass through the stomach and be absorbed from there or even farther down, through the small intestine, all of which takes a long time. Drugs can also be administered via a dermal patch, absorbed through a rectal or vaginal suppository, or placed directly on mucous membranes such as the eye, the gums, or under the tongue or elsewhere inside the mouth.

Smoking is the most rapid and efficient route of administering a psychoactive drug. A substance will produce the quickest, strongest reaction when smoked. This is the case because the air sacs of the lungs are densely surrounded by capillaries; as a result, drugs move rapidly from the lungs into the bloodstream and from there they “swamp” the brain.

The difference between IV administration and smoking is that when a drug that is injected into a vein enters the heart, the blood that carries it to the heart is diluted with blood that does not contain the drug. In contrast, blood that travels from the lungs through the capillaries to the brain is completely undiluted and enters the brain at full strength (Goldstein, 2001, p. 19). Hence, if heroin or crack cocaine is injected IV, the high, felt as a “rush” or “flash,” will take hold in 12–14 seconds. If these drugs are smoked, the rush will take place in 6–8 seconds.

The factor of route of administration is a crucial factor because a focus on it and it alone may confuse observers into thinking that drugs taken in different ways are actually different drugs. For instance, federal law mandates much harsher criminal penalties for crack cocaine than for powder cocaine possession: A five-year prison sentence was once mandated for the possession of 5 grams of crack and 500 grams of powder cocaine. (In 2010, Obama signed the Fair Sentencing Law into effect, which recalibrated the weight to reflect a more moderate 18-to-1 ratio.) The justification for a discrepancy is that crack is a more dangerous and addicting drug than powder cocaine. In fact, crack and powder cocaine are very nearly the same drug, taken via different routes of administration. Crack is more dangerous and addicting—it has different “effects” from powder cocaine—specifically because it is taken in a more efficient, effective, and reinforcing fashion. Because powder cocaine combusts at a higher temperature than crack, it is more difficult

to smoke, but smoking it would produce a similar effect to that of crack cocaine. As a result of the way it is used, practically speaking, crack cocaine *is* more reinforcing, and hence, more dependency-producing, than powder cocaine. Consequently, the legal distinction is not *totally* absurd.

To summarize, crack both *is* and *is not* a different drug from powder cocaine. It is different in that, when taken via the usual route of administration, it is extremely pleasurable, and therefore, very likely to result in abuse and dependence. But it *is not* different in the sense that the active ingredient in crack and powder cocaine are chemically identical, and both break down into the same chemical in the body. The world of drugs is not a simple either-or, black-or-white phenomenon.

Route of administration influences the effects a drug has. The same drug will have different effects according to the manner in which it is taken. In addition, because of their physical form, some drugs cannot be taken by certain methods.

For example, marijuana is not soluble in water and so cannot be injected IV into the bloodstream. In some societies, marijuana is brewed in tea; its effects are much milder, more muted, and less intense than if it is smoked. In the United States, it is mainly smoked. The fact that a small proportion of marijuana users become dependent on it indicates that the drug has an extremely low *potential* for dependence, because the method by which most users take it is highly reinforcing. As for alcohol, because it is only used orally, its effects tend to be considerably less powerful and less instantaneous than if it were taken in more reinforcing ways. As a result, most people who drink do not become dependent on alcohol. The leaves of the coca plant contain roughly 1 percent cocaine; chewed, the effects are very different from the effect of snorting powder cocaine, which, in turn, are very different from smoking crack. Some gases (amyl nitrite, for instance) are too volatile, too unstable to be taken in any manner other than by inhalation. Cocaine and heroin are smoked, administered intravenously, and sniffed or snorted intranasally, or into the nostril. Each means of taking these drugs will produce a different set of effects—although they are recognizably “cocaine” or “heroin” effects.

Dose

A discussion of drug effects is meaningless without considering the factor of dose. At minuscule dosage levels, a normally potent drug would exert no discernible effects. And massive doses of a normally weak or safe drug will have overwhelming, even fatal, effects. Heroin, a drug that can shut down the body’s heartbeat and breathing mechanisms, can be extremely safe if taken in a dose as minuscule as several micrograms, which will exert no recognizable effect at all. Aspirin, a safe drug taken by millions of people every day with no harmful effects whatsoever, can cause death if taken in a sufficiently large dose. As we know, it is almost impossible to die of a marijuana overdose, yet if several kilograms of the drug were forcibly shoved down someone’s throat, the dose could conceivably be fatal. In sum, the issue of dose is inevitably intertwined with drug effects.

The issue of the customary dose at which a drug is taken by users is crucial here. Drug effects are most meaningful at the dosage levels users customarily take. And doses on the street are more meaningful than doses in the laboratory. For each drug, traditions that dictate the appropriate dose for users to take have evolved and vary from one society

to another. In addition, the availability of drugs influences the doses in which users take them. During a period of abundance, when an illicit drug is not only readily available but inexpensive as well, users will take it at higher doses; during a “drought,” when the drug is expensive and difficult to obtain, each dose users take will tend to be lower. It is possible that when a drug is studied in the laboratory, the doses administered are not realistic in that the drug may not be used at that dosage level in real life.

Drugs generally exhibit what pharmacologists refer to as a dose-response curve. Each drug exhibits a characteristic dose-response curve *for each effect*. As a general rule, the higher the dose, the greater or more extreme the effect. For all drugs, there are doses at which a given effect does not occur at all. Plotted on a graph, at the lower end (low doses), the dose-response curve will be almost flat, rising very slowly. As the dose increases and the drug’s effects begin to kick in, there will be a kind of “takeoff” point, where the dose-response curve rises very rapidly. Then, for most drugs and for most effects, at even higher doses, the dose-response curve will flatten out again, after which a higher dosage does not produce more extreme effects. With alcohol, for instance, the range of doses between one drop and roughly half an ounce will produce no discernible effect in most adults. This is the nearly flat part of the dose-response curve. Then, for most adults, after a half-ounce, the effects of the drug start to kick in, and the imbibor begins to feel intoxicated. Most effects begin to flatten out at a certain point, although with alcohol, death by overdose occurs at extremely high doses. To know a drug’s effect, it is absolutely necessary to consider the dosage taken.

Potency and Purity

Potency is defined as the quantity of a drug it takes to produce a given action or effect; the lower the quantity that produces a given effect, the greater the potency of the drug. Drugs vary in potency between and among themselves. LSD is vastly more potent than psilocybin, a related psychedelic. In addition, the same drug will be variable in potency from one batch to another. For instance, “ditch weed” marijuana, which grows by the side of the road, will usually have an extremely low level of potency, containing less than 1 percent THC, the drug’s active ingredient. Other batches of marijuana that are cultivated to achieve maximum effect will contain 10 percent or more THC. Alcoholic beverages, likewise, are variable in potency; beer is about 4–5 percent alcohol, table wines are roughly 13 percent, and distilled spirits such as gin, vodka, whisky, and tequila are 40–50 percent alcohol. (Technically speaking, the alcohol itself is not variable in potency; it is alcoholic *beverages* that vary with respect to the percentage of alcohol they contain.) Hence, drinking the same quantity of each beverage will produce different effects because of the factor of potency.

Purity refers to the fact that batches containing the same drug will vary as to the percentage of the drug they contain. Two users, for example, may each ingest the same quantity of a substance sold on the street as heroin—two packets containing 100 milligrams of something that is sold as “heroin.” But one packet may be only 10 percent pure, containing roughly 10 milligrams of actual heroin and 90 milligrams of adulterants, such as quinine, lactose, or milk sugar, which are not psychoactive. The second packet may also contain 100 milligrams of a substance that is referred to as heroin—but 50 milligrams of actual heroin and 50 milligrams of adulterants. The second user is

getting five times as much heroin as the first, even though they both purchased packets of the same size. This is because some illicit drugs are “hit,” “cut,” or “stepped on” with cheap, nonactive fillers so that dealers can increase their profits. Heroin is much more potent today (the average potency is roughly 57% if from South America, 40% if from Mexico) than it was 30 years ago, when the average potency of street heroin was 3–5 percent. Purity is a major consideration when thinking about drug effects.

Drug Mixing

Drug mixing is also a crucial factor in considering the effects of drugs because it is extremely common in the world of use, and it plays a major role in the variability of what drugs do to the mind and bodies of users. Many users who take one drug also take one or more other drugs simultaneously. Roughly two-thirds of all persons who die of a drug overdose are found with more than one drug in their bodies. A street drug called a “speedball” contains cocaine and heroin, or methamphetamine and heroin. Alcohol is frequently imbibed at the same time marijuana is smoked; people who take “downers” such as barbiturates, methaqualone, or tranquilizers often drink as well.

Drug mixing is extremely important to consider because drugs can *interact* in important ways when they are taken together. Some drugs have antagonistic effects with each other, meaning the effect of one drug nullifies or cancels out the effect of another. For instance, Antabuse not only blocks the effects of alcohol but makes the drinker violently ill when alcohol is ingested. For antagonistic drugs, one plus one equals zero.

Other drug combinations produce *additive* effects. For example, one aspirin plus one Tylenol will have the same effect as two aspirin, or two Tylenol, taken separately. Additive effects can be depicted by the formula one plus one equals two.

Some drugs have synergistic effects when taken in combination. “Synergy” refers to the multiplier effect, whereby the effect of one drug plus the effect of another equals more than twice as much of either, taken alone. We can represent synergy by the formula one plus one equals four. For example, alcohol and barbiturates are synergistic with each other. If you were to ingest a half-quart of vodka plus ten 10-milligram capsules of the barbiturate Seconal, you would be much more likely to die of a lethal overdose than if you ingested a full quart of vodka *or* twenty 10-milligram capsules of Seconal. This is because alcohol and barbiturates interact with each other to produce a more powerful synergistic, or multiplier, effect in combination than they produce by themselves. Synergy is especially important because drugs are more likely to be mixed today than was true in the past, and synergy produces not only more powerful but more dangerous effects, such as death by overdose.

DRUG DEPENDENCE

The Classic Addiction Model

Until the 1970s, the model of drug dependence that dominated the field of drug studies was the “classic” drug addiction model. In this model, an “addicting” drug is defined by the appearance of specific withdrawal symptoms. If an organism takes a sufficient quantity of a given drug over a sufficiently long period, and then use is discontinued, withdrawal symptoms appear. These symptoms include chills, fever, gooseflesh, diarrhea,

muscular twitching, spasms, nausea, vomiting, cramps, and bodily aches and pains, especially in the joints. These effects are pharmacological, not psychological; they can be reproduced in laboratory animals and in patients who do not even know they have been administered an addicting drug.

The classic addiction model recognizes the existence of cross-dependence. When the addict becomes physically dependent on a given drug and is withdrawn from it, painful withdrawal symptoms appear. These symptoms can be alleviated by the administration of a dose of the drug. But more than that, administration of any drug that is cross-dependent with the addicting drug—that is, any drug in that same *category* of drugs, will alleviate withdrawal. For example, withdrawal from heroin can be alleviated by the administration of morphine, since both are narcotics. Heroin and morphine are cross-dependent with one another. Withdrawal from alcohol can be alleviated by taking a barbiturate drug, since they are both sedatives. Cross-dependence applies only to drugs that produce a classic addiction.

Not all psychoactive drugs are addictive in the classic sense of the word. The narcotics, including heroin and morphine, are addicting, as are alcohol, the barbiturates, and the other depressants. However, no withdrawal symptoms even remotely like those spelled out by the classic model appear with the discontinuation of cocaine, marijuana, or LSD. What we see instead is more psychological discomfort than physical manifestations of genuine withdrawal symptoms. Since some observers have theorized that the avoidance of withdrawal symptoms explains the continued use of narcotic drugs (Lindesmith, 1968), the puzzle that once confronted researchers was why such a high proportion of users took *nonaddicting* drugs on a chronic, abusive basis. Behavioral dependence—engaging in continued, compulsive, chronic use to the point where that use becomes a threat to what one once valued, including life and limb—is not the same thing as physical dependence, or the pharmacological capacity of a drug to cause withdrawal symptoms. Drugs that do not produce a physical dependency (that is, they are not “addictive”) *often* produce a behavioral dependence. But cocaine (a nonaddicting drug) is more likely to produce behavioral dependence than alcohol (an addicting drug). In contrast, *most* drinkers are *not* alcoholics—but the same rule applies to cocaine: Most users do not become dependent. Physical addiction is only one of several pieces of the dependency puzzle.

Animal experiments with cocaine (described in the following paragraphs) indicated that this supposedly nonaddicting drug—at least, with respect to the classic model—is taken as chronically and as abusively as heroin is taken by addicts. How could an addictive drug like heroin and a supposedly nonaddictive drug such as cocaine produce similar patterns of use and abuse? If addiction, the product of a pharmacologically induced craving, culminating in the avoidance of withdrawal symptoms at almost all cost, is the principal explanation for compulsive use, how is this possible? The fact is, the classic model of physical addiction as an explanation for continued, compulsive use is wrong.

These animal experiments have verified cocaine’s capacity to generate compulsive patterns of abuse. Rats, mice, and monkeys that were rigged up to self-administer a drug by pressing a bar worked very hard to receive cocaine, pressing the bar thousands of times to receive a single dose. When the animals were withdrawn from the drug they had self-administered, they continued to press the bar without receiving the drug for a

much longer period of time for cocaine than for heroin, which is an addicting drug. And when the animals were given the choice between cocaine and food, they self-administered cocaine in preference to food—even to the point of death by starvation (Johanson, 1984; Clouet, Asghar, and Brown, 1988).

Remarkably, most animals who take cocaine end up taking it uncontrollably, even to the point of killing themselves; animals who take heroin take it more reasonably and controllably, typically keeping themselves alive and healthy in the process. Animals that self-administer cocaine *ad libitum*—at will, as much or as little as they choose—exhibit an erratic pattern of use, with periods of bingeing alternating with periods of abstinence; do not maintain their pretest weight; cease grooming behavior; and maintain poor physical health. In contrast, when laboratory animals self-administer heroin *ad libitum*, they develop a stable pattern of use, maintain their pretest weight, continue grooming behavior, and, for the most part, remain in good health. In one experiment, after 30 days, 90 percent of the mice that had self-administered cocaine *ad libitum* were dead (Bozarth and Wise, 1985). Most psychopharmacologists argued that cocaine is the most reinforcing—though not the most classically “addicting”—drug known to humanity.

But humans are not laboratory animals, and laboratory conditions are not the same as real life. Laboratory experiments do give us the broad outline of how drug effects can be understood; they establish the inherent pharmacological properties of drugs. Just how people take them may be a different matter; laboratory experiments, however, do give us an important clue to what a drug’s potential is.

The Dependence/Reinforcement Model

What such experiments show is that the classic conception of addiction does *not* explain most continued use of drugs. An altogether different mechanism is at work here, and most contemporary researchers believe that positive reinforcement, or the pleasure that organisms derive from taking a drug, is the driving force in generating continued, compulsive, abusive drug use. A drug does not have to be addicting in the classic sense of the term—generating physical withdrawal symptoms—to produce a dependency in users, whether animal or human. So irrelevant has physical dependence become to the way most specialists view continued, compulsive abuse that they now prefer the term *dependence* to *addiction*. Typically, little or no distinction is now made between the physical dependence that a drug like heroin produces and the psychic dependence that cocaine and amphetamine produce. Heroin generates a physical dependence or “addiction” (withdrawal symptoms appear when chronic use is discontinued) *and* a psychic dependence (highly reinforcing upon administration). The original meaning of addiction has been buried.

Using a highly reinforcing drug alters the chemistry of the brain such that the neurons “remember” having been reinforced, having once been administered a jolt or rush of an intensely pleasurable stimulus. Events in the current milieu of former users may remind them of the sensations they experienced at one time, and such stimuli will produce actual physical sensations in their bodies. For instance, watching a smoker light up will result in the firing of neurons in a former smoker’s central nervous system, which generates a craving for cigarettes. Former cocaine users watching a film in which actors

snort a white powder up their noses will experience sensations in the brain that cause their sinuses to tighten up and nostrils to dilate, and they will involuntarily begin sniffing—a biochemical reminder of their experiences in days gone by. Many former users of cigarettes, cocaine, and heroin report that these sensations never go away. The less reinforcing drugs are less likely to produce such reactions.

Not all or even most human users of even the most pleasurable or reinforcing of drugs will become dependent on them. *Most* users of cocaine do not become cocaine “addicts.” Compulsive drug taking is caused as much by the characteristics of the user as by the characteristics of the drug being used. But a drug’s capacity to deliver a reinforcing jolt of pleasure is perhaps the most important factor in generating a dependence on it. The more reinforcing a drug is, the stronger the desire to repeat the experience, and the greater the sacrifices one will make to continue doing so. Because of this shift from the “classic” model, based on withdrawal symptoms, to the more contemporary “dependence” model, based on reinforcement, most researchers today have abandoned the term (or at least the original concept), *addiction*. Reinforcement helps explain continued, compulsive use—“behavioral dependence”—better than addiction does, but a literal physical addiction nonetheless *does* produce clear-cut withdrawal symptoms, though it does *not* explain all—or even most—continued, compulsive use.

Substances vary in their potential for causing dependence, with cocaine ranking at the top, methamphetamine and amphetamines next, heroin in a slightly lower category, and the other drugs trailing substantially behind these three. The potential for dependence is closely related to and is probably caused by how *reinforcing* each drug is, how intense the pleasure each delivers to the user. The more reinforcing the drug, the higher is its potential for dependence. Consequently, substances vary with respect to their *immediate sensual appeal* (Grinspoon and Bakalar, 1976, pp. 191–194). This is closely related to the capacity to generate pleasure. More precisely, it means the capacity to generate intense pleasure *without the intervention of learning or other cognitive processes*. Some drugs deliver a jolt of intense, orgasmlike pleasure, much like a flash of electricity to the brain.

In contrast, the pleasure that other drugs deliver is more subtle, as much mental as physical, more cultivated, less immediate and intense. For the most part, one has to *learn* to enjoy marijuana; the same is true of alcohol, LSD, and nicotine. These are drugs that animals don’t like to take initially and have to be taught to self-administer. The pleasure of many activities, much like that of drinking alcohol, has to be cultivated, including the pleasure of reading classic books, appreciating fine art, and eating caviar. The pleasure these activities generate is great, even intense, but people must *learn* to appreciate them. In contrast, cocaine requires no such learning process. When human subjects are experimentally administered cocaine and amphetamine without knowing what they are taking, they usually enjoy them the first time and want to take them again. This is what “immediate sensual appeal” means. Drugs with this quality are highly reinforcing and have a high dependence potential.

Humans vary with respect to their degree of susceptibility or vulnerability to becoming dependent on a chemical substance. The variation from one person to another is vastly greater than from one representative of the same animal species to another. There is an especially enormous variation from one person to another with respect to their

initial experience with a given drug. Says physician David Smith (Gonzales, 1984, p. 114):

Some people will take the drug—any drug—and not get addicted [or dependent]. Others will take it once and be inexorably drawn to it. The drug is the same; the people are different. . . . Interestingly, the person who is addicted to cocaine responds very differently the very first time he [or she] uses it [from the person who uses it but does not become dependent]. Later, he'll [or she'll] use terms that are qualitatively different from those that others use to describe the experience of taking cocaine the first time: "This is the greatest thing that's ever happened to me," or words to that effect.

The pharmacological properties of a given drug are not the *only* factor that explains its continued, compulsive ingestion, but they are a *major* reason for chemical dependence and must be kept in mind when discussing the abuse of psychoactive drugs.

A CLASSIFICATION OF DRUGS AND THEIR EFFECTS

Our two paramount interests in this book are the relationship between the use of psychoactive substances and human behavior, especially crime and the criminalization of drug distribution. Does one follow the other and if so, why? Many of the drugs that are interesting to the psychiatrist—for instance, antidepressants or antipsychotics—are not of concern to criminologists. Here, we're mainly interested in *psychoactive, recreational* drugs—those that are taken for pleasure, for the purpose of getting high. Do certain kinds of drug-induced behaviors cause societies to define psychoactive substances as social problems and seek to shut down their distribution in order to substantially limit their use? (See Table 3-1.)

Stimulants

The drugs that excite or stimulate the central nervous system (CNS) are called stimulants. Stimulants produce arousal, alertness, an elevation in mood, even excitation. They also inhibit fatigue and lethargy, and stimulate physical activity. For our purposes, cocaine and amphetamine (along with methamphetamine) are the most important stimulants.

Pharmacologist Avram Goldstein refers to the use of cocaine and the amphetamines as "the wild addictions" (1994, p. 155). The immediate subjective effects of these two stimulants are euphoria and a sense of self-confidence and well-being. As we just saw, administering cocaine and the amphetamines is extremely reinforcing; as we saw, they possess what pharmacologists call "immediate sensuous appeal" (Grinspoon and Bakalar, 1976, pp. 191–194). Taking them generates the impulse to use regularly, regardless of the obstacles, pain, or cost. In popular or lay terms, they are pleasurable.

It should come as no surprise that these two drugs are widely used for recreational purposes, that is, for getting high. Most experimenters and even episodic users can overcome the impulse to become dependent on cocaine and amphetamines; they have other things to do with their lives than to devote all their time to self-indulgence. But the seductive pleasure principle is always present, always exerting an effect, and a minority of experimenters—perhaps one in ten—will escalate to more serious use and many of them, eventually to abuse.

TABLE 3-1 A Classification of Psychoactive Drugs, with Representative Examples**Sedative-hypnotics/General Depressants**

alcohol (ethyl alcohol, or ethanol)

barbiturates: Nembutal, Tuinal, Amytal, Seconal, phenobarbital, pentobarbital

benzodiazepines (Librium, Valium, Xanax, Halcion, Ativan)

miscellaneous sedatives: meprobamate (Miltown, Equanil); methaqualone (Quaalude, Mandrax, Sopor);
GHB (gamma-hydroxybutyrate), or Rohypnol

Antidepressants or Mood Elevators

Prozac, Elavil, Zoloft, Sinequan, Tofranil, Paxil

Antipsychotic Agents

phenothiazines: Thorazine, Stelazine, Mellaril, Haldol

Hallucinogens/Psychedelics

LSD ("acid"), mescaline ("mesc"), psilocybin ("shrooms")

Narcotics

opiates (opium and its derivatives): opium, morphine, heroin, codeine

opioids (synthetic narcotics): methadone, oxycodone (OxyContin), Darvon, Percodan, fentanyl, Dilaudid,
Demerol, hydrocodone, buprenorphine

Stimulants

cocaine ("coke"), crack cocaine

amphetamine (Adderall, Benzedrine, Dexedrine, "speed")

methamphetamine (Methedrine, Desoxyn, "meth," "crank," "crystal," "ice")

Ritalin (methylphenidate)

caffeine

Disassociative Anesthetics

PCP (Sernyl, Sernylan, "angel dust")

ketamine ("K," "special K," "super K")

Nicotine**Drugs Not Easily Classifiable in a General Category**

marijuana

MDMA (Ecstasy, "XTC," "E," "X")

Stimulants speed up signals passing through the CNS. They activate organs and functions of the body, heighten arousal, increase overall behavioral activity, and suppress fatigue. In low doses, stimulants can heighten the body's sensitivity to stimuli and increase concentration and focus, and improve mental and physical performance. At higher doses, however, many of these functions seem to go haywire. Behavior becomes unfocused, hypersensitivity translates into paranoia, and mental and intellectual performance becomes uncontrollable, ineffective, counterproductive, and compulsively repetitive.

Because the stimulants are highly pleasurable, they often lead to compulsive use and abuse which, in turn, not infrequently cause medical complications, including death. Hence, we would expect that societies everywhere have instituted legal controls on the distribution and use of the stimulants. These legal controls cause stimulants to become expensive, hence, profitable to sell, which means enormous criminal enterprises are based on the sale of cocaine and amphetamines. In addition, since both drugs activate bodily processes, we are led to ask what their role is in influencing or causing violent, problematic, “deviant,” and criminal behavior. Cocaine and amphetamines interpenetrate with crime in important ways.

Sedative-Hypnotics

General depressants or sedative-hypnotics have effects that are more or less the opposite of those of the stimulants. They inhibit and slow down signals passing through the CNS, affecting a wide range of bodily functions. At low to moderate doses, they induce relaxation and an inhibition of anxiety. At higher doses, they induce relaxation and reduce anxiety. At even higher doses, they produce (or potentiate) drowsiness and eventually sleep. Alcohol (known to pharmacologists as ethyl alcohol or *ethanol*) is a general depressant or sedative, as are methaqualone (once sold commercially as Quaalude); barbiturates, such as Seconal, and GHB (gamma-hydroxybutyrate), a once-semipopular “club drug”; and anti-anxiety agents (mostly benzodiazepines), including Valium, Halcion, Xanax, clonazepam, Dalmane, Rohypnol, and lorazepam. At a sufficiently high dosage, all general depressants or sedative-hypnotics produce a high or intoxication, all produce a physical addiction or dependency, and all can cause death by overdose. PCP, once sold under the trade name of Sernyl as an animal anesthetic and tranquilizer, has complex and contradictory effects because it produces “disassociation” (a feeling of being detached from reality) and, sometimes, hallucinations. It is frequently (but, in my opinion, erroneously) classified as a hallucinogen. Ketamine (“special K”) is closely related to PCP but with a somewhat weaker disassociative effect.

All general depressants, alcohol included, slow down, retard, or *obtund* many functions of the body, especially the CNS; organs become more sluggish, slower to respond to stimuli. If the dose is too high, the body’s organs will shut down altogether, and death will result. The depressants also disorganize and impair the brain’s ability to process and use information, and so they impair many perceptual, cognitive, and motor skills needed for coordination and decision making.

At a sufficiently high dose, all the sedatives produce mental clouding and motor discoordination. This is especially relevant for alcohol, the most widely used of the sedatives. According to the National Highway Safety Administration, in the United States in 2010, about 10,200 people died as a result of alcohol-related highway accidents (31% of all highway fatalities were alcohol-related), a substantial decline since 1982, when 26,000 died in alcohol-related roadway accidents and 60 percent of all deaths on the road were alcohol related. This decline came about in spite of the fact that Americans drive twice as many miles as they did three decades ago. At low doses, users of the sedatives feel a mild euphoria, a diminution of anxiety, fear, and tension, a corresponding increase in self-confidence, and, usually, what is called a “release of inhibitions.” Fear of engaging in risky activities generally diminishes, an effect that can be observed

in laboratory animals as well as humans. Ingestion of higher doses of a number of the sedatives, including alcohol and the barbiturates, often results in paranoia, distrust, heightened anxiety, belligerence—even hostility.

Of all drugs, worldwide, alcohol is by far the one that is most likely to be implicated in violent crimes. The empirical evidence linking alcohol to violent behavior is overwhelming. More individuals who commit violent offenses are under the influence of alcohol than is true for any other single drug. For this reason, any examination of drugs and crime cannot possibly omit the role of alcohol in potentiating, influencing, or facilitating criminal, especially violent, behavior.

The role of sedatives, especially alcohol, is crucial to any investigation of human behavior, including—and perhaps especially—drugs *and* crime. Possibly the effects of alcohol, GHB, barbiturates, PCP, and ketamine *conduce to* criminal behavior. Barbiturates are illegal for nonmedical use, and the other sedatives, apart from alcohol, are not legally available in the United States. Hence, the issue of the criminalization of drugs, or drugs *as* crime, is crucial for the sedatives as well.

Narcotics

Narcotics have a specific action in which psychopharmacologists are very interested: They act to depress or inhibit a particular function—the perception of pain. Referred to as painkillers or analgesics, the major representative of this category is the narcotics. Narcotics are the most efficient and effective of all painkillers and are essential in the practice of medicine. However, at a sufficiently high dosage, narcotics also produce mental clouding, a euphoric high, or intoxication. In addition, narcotics have, as we have seen, a fairly narrow safety margin. They are physically addicting and can produce death by overdose. The opiates are the natural derivatives of opium: morphine, heroin, and codeine. The opioids are the entirely synthetic narcotics with effects very similar to the opiates: methadone, Demerol (meperidine), Dilaudid, OxyContin, and fentanyl. Many scholars and researchers use the terms *opiates* and *opioids* interchangeably.

The painkilling property of the narcotics makes them of interest to the physician. But their narrow safety margin, their euphoria inducing, and their addicting properties make them of interest to any social scientist. The narrow safety margin of narcotics tells us that they are dangerous drugs. Compared with other drugs, they are highly likely, on a dose-for-dose basis, to lead to death by overdose. Their euphoria-inducing and addicting properties tell us that many users are likely to be motivated to take them on a compulsive basis. Societies are likely to control or criminalize such behavior (“drugs *as* crime”) and, combined with their illegality, such behavior is likely, in turn, to produce or conduce to criminal acts (“drugs *and* crime”). Sociologists and criminologists are very interested in the narcotics.

Hallucinogens/Psychedelics

Hallucinogens have effects on the CNS that are not easily classified in terms of stimulation or depression; they occupy their own territory. The hallucinogens include LSD, mescaline (a naturally occurring chemical found in the peyote cactus), psilocybin (the naturally occurring chemical found in the mushroom of the same name), and the extremely

short-acting DMT (dimethyltryptamine). The last of these seems to have had a cultural renaissance—partly because of the rediscovery that it occurs in nature, both in the plant ayahuasca (or yagé), which some South American tribes use, and endogenously, in minute quantities, in animals, including humans; and partly because a recent film, *DMT: The Spirit Molecule* (2010), gave the drug some cachet. Drug texts often mention other substances, such as MDMA (Ecstasy) and PCP, as hallucinogens (for instance, Hanson, Venturelli, and Fleckenstein, 2012; Hart and Ksir, 2013), but these drugs have none of the major subjective effects of LSD, psilocybin, and mescaline, and hence, are not true hallucinogens. The hallucinogens stimulate a range of psychic effects: eidetic imagery (vivid closed-eye visual imagery), synesthesia (the mixing or translation of one sense into another—for instance, “seeing” sound), subjective exaggeration, the “eureka” experience (the ordinary becoming the extraordinary), emotional lability (extreme mood shifts, from ecstatic to depressive), a sense of timelessness, sensory overload (a bombardment of the senses), and striking alterations of visual stimuli. We’ll look at the subjective effects of LSD in Chapter 10.

Most of the harms attributed to the psychedelics in the 1960s—hallucinations, psychotic episodes, psychosis, suicidal behavior, violence, and genetic damage most prominent among them—turn out to have little or no factual foundation. Perhaps the most remarkable fact about the hallucinogens is that they are hardly ever abused. By that I mean that they are used episodically, sporadically, and infrequently; very few users take them frequently, chronically, or compulsively. As we saw in Table 1-1, LSD’s month-to-lifetime continuance rate is the lowest of all the well-known drugs or drug types. Hardly any users take hallucinogens frequently or regularly. In the universe of “at least one time” users, for all drugs, LSD is among the *least* likely to have been taken within the past 30 days. This is almost certainly because LSD and the psychedelics are not reinforcing in the usual sense of the word. (If permitted to take them at will, laboratory animals do not repeat their use of LSD.) The enjoyment of taking them is an extremely cultivated taste. In addition, aside from their illicit sale, the hallucinogens are very unlikely to be implicated in criminal behavior. On the other hand, LSD’s impact on human emotion, cognition, and behavior is spectacular, so profound and disruptive to everyday life that it is rarely used on a compulsive basis. And the legal controls imposed on the distribution of LSD are interesting sociological and criminological topics in themselves.

Marijuana/Cannabis

What is referred to as “marijuana” is the dried buds and flowers (now, increasingly less commonly, the leaves) of the cannabis plant; its Latin name is *Cannabis sativa*. Hashish is the dried resin of the cannabis plant and is usually more potent than marijuana. The main psychoactive ingredient of marijuana is THC (trans-delta-9-tetrahydrocannabinol). Marijuana varies enormously in THC content, from less than 1 percent to more than 10 percent. Many specially tended, home-grown hydroponic plants (those that are grown in water rather than soil) contain buds that are well over 10 percent THC. Hashish, which is much less readily available in the United States than marijuana preparations, usually contains 10–15 percent THC.

At different times, observers have classified marijuana as a stimulant, a depressant, a psychedelic and a hallucinogen—even a narcotic. Actually, it is none of these. Although

marijuana does produce sedation in users, this is not regarded by most pharmacologists as its central effect. A few users have reported psychedelic-like effects, but this is rare. Today, marijuana is regarded as occupying its own unique category. Marijuana is not cross-tolerant with any of the psychedelics, which means that it belongs in a category by itself.

In spite of the fact that marijuana is smoked—an extremely efficient and effective route of administration—the effects of marijuana are not powerfully reinforcing, nor does the drug have a high potential for producing a strong dependence. Some research on laboratory animals supposedly indicates that marijuana may be a “harder” drug than was previously thought, that withdrawal-like symptoms appear when the drug is discontinued (Swann, 1995; Tanda, Pontieri, and DiChiara, 1997; Tsou, Patrick, and Walker, 1995). However, the fact that the vast majority of human users take the drug in moderation, do not become dependent, and do not experience withdrawal symptoms when they stop probably suggests that these studies may not be sufficiently lifelike for researchers to draw conclusion from them about the abuse or dependence potential of marijuana.

Marijuana, like alcohol, is used extremely frequently among people who violate the law. Studies show that arrested offenders are more likely to test positive for marijuana than for any other illicit drug, with the partial exception (depending on the city and the sex of the arrestee) of cocaine. (We’ll look at ADAM II, the study that generates this finding, in Chapter 6.) Unlike alcohol, however, it is not clear what marijuana’s role is in the commission of crimes. Marijuana is much less likely to be associated with violent behavior than alcohol. And, since it does not produce the same kind of compulsive drug taking as heroin and crack cocaine, it is not as likely to be as closely implicated in money-making crimes. But to the interested sociologist, the enormous distribution of marijuana, an illegal substance used currently—within the past month—by 18.1 million Americans, 7 percent of the population age 12 and older, is fascinating. And the marijuana industry—very likely, America’s number one agricultural crop—makes the drug a fit and worthy subject of inquiry for the inquisitive criminologist. In addition, the *criminalization*—and the attempted *decriminalization*—of marijuana are as interesting to the sociologist and criminologist as for any other drug or drug type.

Ecstasy

MDMA—“XTC,” “E,” or Ecstasy—is often classified as a hallucinogen (Hart and Ksir, 2013, Chapter 14; Hanson, Venturelli, and Fleckenstein, 2012, Chapter 12). But as I just said, it possesses none of the major properties of LSD and the other psychedelics, such as spectacular alterations of visual stimuli, synesthesia, or eidetic imagery. As with marijuana, it seems reasonable to classify Ecstasy as belonging to its own category. Some observers argue that the fact that MDMA induces an extremely strong feeling of closeness with others suggests that it is an “empathogen”—an agent that induces empathy: a sense of trust, openness, peacefulness, and serenity. MDMA is also regarded as a “noetic-inducing” drug—it causes the user to feel a sense that he or she is experiencing the world afresh, as if for the first time. Like LSD, Ecstasy is rarely used on a compulsive basis. And the drug is not associated with criminal behavior. However, critics of the drug argue that, in animal experiments, continued use of Ecstasy produces a permanent depletion of serotonin, a crucial neurotransmitter that regulates emotion, mood, cognition, sex, and sleep. If this effect took place in humans, Ecstasy could be an extremely dangerous

drug. During the 1990s, the use of Ecstasy grew faster than that of any other major drug, but use since 2000 has declined significantly. In 1985, possession and sale of Ecstasy became illegal at the federal level.

Disassociative Anesthetics: PCP and Ketamine

Many pharmacologists classify PCP (and, by implication, its milder but related cousin, ketamine) as a hallucinogen because of its capacity to induce hallucinations. I believe this to be a mistake because these drugs are vastly more different than they are similar. The florid bursts of vivid color and the synesthesia that people who ingest LSD and the other psychedelics and hallucinogens see and experience are completely absent with PCP and ketamine. Moreover, PCP and ketamine principally cause a physical disassociation from one's surroundings and anesthesia, which are utterly foreign to the psychedelics. Virtually no one who has taken both drugs would make this mistake. More properly, we should regard both PCP and ketamine as *disassociative anesthetics* because their principal and most important effects on users are their feeling of numbness and sensing that they are alienated or removed from their surroundings.

For most users and for most episodes of use, the effects of PCP and ketamine are sensed as intoxicating, pleasurable, and euphoric; ketamine's effects are generally experienced more rapidly and less intensely, but of a similar nature. Other effects include a sense of unreality, timelessness, weightlessness, and disorientation. Perhaps of all drugs, according to both the American Psychiatric Association and NIDA (the National Institute on Drug Abuse), PCP is most likely to induce panic attacks or a psychosis-like or schizoid state that includes fear and paranoia, as well as delusions. Likewise, also perhaps more than for any other drug, erratic, unpredictable, seemingly bizarre behavior—such as jumping from heights or running into moving traffic—sometimes accompanies the high.

Medical scientists developed PCP in the late 1950s as an injectable anesthetic—for which it was effective—but quickly discovered its multiple undesirable side effects. In the late 1960s, the drug, called “angel dust,” had escaped from labs and medical settings on the street and was used recreationally in crystalline form, sprinkled on parsley; and smoked. Even when its administration was restricted to animals, dealers and users stole batches to sell for recreational purposes; by the mid-1980s, PCP was banned even from veterinary medicine. Today, it is a Schedule II drug; today, nearly all illicit PCP is manufactured illegally, in clandestine labs. Even polydrug users have discovered the harmful effects of PCP; according to Monitoring the Future, the annual prevalence figure for high school seniors dropped between 1979 and 2012 from 7 to 1 percent.

SUMMARY

Drugs are both physical substances with measurable effects, and symbols—socially and legally constructed entities that society thinks about and reacts to, and talks and writes about in certain ways. Pharmacologists study the molecular action of drugs on organisms, and psychopharmacologists study how a drug's chemistry interacts with the body's neurology, and hence its brain and spinal column—its mental processes. Many of these actions translate into the real-world “effects” we observe when people take drugs. Much of the most innovative and influential research on drug use is being conducted at the

molecular and neurochemical level. Drugs can be thought of, in conjunction with substances called neurotransmitters, as a “key” that unlocks a site in the brain (a “lock”) that causes a chemical reaction to take place. Neurotransmitters—which are in effect endogenous drugs—regulate countless functions, from the molecular level through the brain to the relevant organs of the body. These functions include hunger, emotion, pleasure (sexual pleasure included), fatigue, and anger. Drugs mimic or block the usual chemical reactions caused by neurotransmitters and either prevent certain functions from taking place or exaggerate those that usually take place. Many of these chemical reactions produce behavior in which we, as sociologists and criminologists, are interested, with addiction or behavioral dependence foremost among them.

Understanding drug use requires a grasp of the acute-chronic distinction, the ED/LD ratio, drug tolerance, and drug fate or disposition. In addition, four factors that influence drug effects are crucial: route of administration, dose, potency/purity, and drug mixing.

Some drug effects (acute) occur within the span of a single episode of use, under the influence—for instance, the marijuana smoker’s high, the heroin addict’s overdose, the LSD user’s dilated pupils. Other drug effects (chronic) take place over an extended period of time—the cigarette smoker’s cancer, the alcoholic’s damaged liver, the methamphetamine addict’s damaged brain. The acute-chronic distinction is crucial to any student and researcher of drug use.

Before the 1970s, the dominant perspective or model toward drug dependence was the classic “addiction” model. Certain drugs (such as the narcotics, alcohol, and barbiturates), if consumed in moderate to heavy quantities over a period of time, produce what came to be known as an abstinence or withdrawal syndrome. And if their use is abruptly discontinued, the user undergoes a painful reaction, including nausea, vomiting, muscular twitching, gooseflesh, chills, aches and pains, and the like. The avoidance of withdrawal was thought to be the primary motive of addicts for continued, compulsive use. But the results of laboratory experiments with animals demonstrated that cocaine, a drug that does not produce these classic withdrawal symptoms, generates a far more powerful pattern of continued, compulsive use than heroin, a drug that does. Psychologists eventually realized that psychological reinforcement is a more adequate explanation for abusive, compulsive drug use addiction. Some drugs (cocaine and methamphetamine) produce a strong, orgasmlike “rush” that generates in some users a behavioral pattern we call dependence. Not all (or even most) users develop such a pattern, so understanding why some do and some don’t is a central mission of drug researchers.

Drugs may be looked at with respect to the dosage at which certain effects take place. The “effective dose” (ED) is the dosage at which a certain relevant effect occurs (among a specific percentage, usually 50 percent, of a designated population) which is of interest to a given researcher or observer. To the marijuana smoker, the relevant ED is the amount that causes a high or intoxication. To the physician, the relevant ED is the dose of morphine, Percodan, or Darvon that is necessary to alleviate pain in patients with a certain level or degree of pain.

In contrast, “lethal dose” (LD) is the dosage that produces death in a percentage of a designated population. Most drug-related acute deaths occur as a result of the shutting down or inhibiting of signals from the brain commanding breathing and/or heartbeat. Some drugs have an affinity for specific sites in the brain that control these functions. Fifty percent of humans will die if they have four-tenths of one percent (0.4%) of the

volume of alcohol in their bloodstream; 100 percent will die if their blood contains more than 0.8 percent alcohol, by volume. Hence, for alcohol, the LD50 is 0.4 percent blood-alcohol concentration, and the LD100 is 0.8 percent.

Drugs differ with respect to the ratio or gap between ED and LD. For some drugs (barbiturates and heroin are excellent candidates here), it takes only 10 times as much to kill an organism (LD) as it does to produce a given effect, such as intoxication or sedation (ED). For these drugs, the ED/LD ratio is 1:10, narrow enough to cause a very substantial number of deaths by overdose. For other drugs, such as marijuana, the ED/LD is enormous, almost incalculable. Hence, hardly anyone dies of an “overdose” of marijuana. (But marijuana, through its principal psychoactive ingredient THC, does influence other functions of the body, such as coordination and cognition.) Hence, our twin concepts, ED and LD, as well as their relationship *for specific drugs*, is central to any social scientist’s understanding of how and why drugs are used as well as with what consequences.

Drug tolerance is a crucial pharmacological concept because, over time, with most drugs, to achieve the same effect, a user needs to take an increasing dose. Addicts take a quantity of heroin that would kill a nonuser; their bodies have become habituated to the drug. *Behavioral tolerance* refers to the fact that users are able to comport themselves under the influence in a way that minimizes the negative effects of the drug. Some drinkers say they can drive as well under the influence as normally. This is not true, but they *are* able to drive better than an inexperienced drinker who is under the influence.

Drugs break down in different ways; some course through and exit the body fairly quickly, while others are more slowly metabolized by and eliminated from the body. Heroin is a rapidly metabolized drug and evidences no buildup over time, while marijuana is slowly metabolized and tends to store over time in fatty tissue. The *fate* of drugs is an important feature of recreationally used substances, and may have crucial consequences.

Aside from the chemical features and actions of drugs themselves, of the many thousands of factors that influence drug effects, four stand out as crucial for us, as students of the intersection between drugs and human behavior.

Route of administration is central to any understanding of drug use and drug effects. How drugs are taken influences what they do. “How” refers to techniques of use—for our purposes, mainly smoking, injecting, sniffing (snorting), and swallowing. The same drug may be taken in different ways and have very different effects. (Not different “actions,” but different effects.) In the Andean region of South America, indigenous residents chew coca leaves (containing 1% cocaine); such a route of administration produces effects vastly milder than smoking crack, also a cocaine product. Both routes entail “taking” cocaine, but they produce such different effects that it is difficult to think of both as entailing the use of the same drug. Both smoking and intravenous (IV) administration of drugs are very swift, efficient, and effective routes through which to take psychoactive substances. Snorting and oral administration are vastly less efficient and produce slower and less intense “highs.”

Dose is central to the enterprise of understanding drug use. While pharmacologists study drug effects in a laboratory setting, social scientists look at the impact of drug use in naturalistic settings. What’s more important here is the dose characteristically taken, not the potential effect of a drug in an artificial context. In all societies, norms and rules regulate the use of drugs and the amount that is regarded as acceptable to use. Most consumers of alcohol do not become high or intoxicated when they drink because they

usually consume modest amounts, but if their dose were to increase drastically, they would become not only intoxicated but seriously debilitated as well. To know the effects of drugs in real-life situations, it is necessary to know the customarily taken doses.

Potency and purity are central to drug taking and its impact. In the 1980s, heroin was available, illegally, on the street at a purity of roughly 3–5 percent heroin. This means that most of what addicts were taking was inert, nonactive fillers. Today, heroin is available on the street at a purity of 40–50 percent. This means that users are taking nearly 10 times more heroin per packet than they did two or three decades ago. Different batches of marijuana will contain varying percentages of THC, the drug’s psychoactive ingredient, from less than 1 percent THC for wild marijuana growing in roadside ditches to more than 10 percent THC for hydroponic or sinsemilla cannabis. Batches of greater potency will produce more extreme effects, or the same effects at lower doses.

Lastly, drug mixing influences drug effects. Increasingly, different drugs are used together, with many users enjoying the effects of two or more drugs simultaneously. For instance, a “speedball,” a concoction taken on the street, is a mixture of heroin and cocaine or methamphetamine. Most drug episodes that result in trips to the hospital and, even more seriously, death by overdose, are a consequence of taking two or more drugs at the same time. Hence, the pharmacological interaction of the drugs users actually take is crucial. The effects of some drugs, when taken together, are additive. With other drugs, taken together, the effect is synergistic—they multiply one another; their effect, together, is greater than twice as much as each single drug, taken alone. Alcohol and barbiturates are the classic example here.

Drugs are classified in different ways. For our purposes, psychoactive effects fall into the following categories: general depressants, or sedative-hypnotics, which have a generalized inhibiting effect on all or most organs and functions of the body; narcotics, which dull the mind’s perception of pain; stimulants, or substances that speed up signals passing through the central nervous system; hallucinogens or psychedelics, which generate profound alterations in the perception of sensory stimuli. Sedative-hypnotics include alcohol, GHB, barbiturates, methaqualone, and the tranquilizers, including Rohypnol and Valium. The “disassociative anesthetics” PCP and ketamine (“special K”) have sedative-like properties. Narcotics include opium and its derivatives—morphine, heroin, and codeine—as well as the many synthetic potent analgesics, such as methadone, oxycodone, Darvon, Dilaudid, Percodan, and fentanyl. The stimulants are made up mainly of powder cocaine and crack cocaine, amphetamines, and methamphetamine, a chemical relative of amphetamine. Marijuana and Ecstasy do not seem to easily fall into any broader class of drugs and, hence, occupy separate and independent categories.

ACCOUNT: Three Perspectives on Drug Use

Jordan, the author of this account, was an undergraduate in his mid-20s. He describes the psychologically problematic use of multiple drugs.

While I was working on my car, a man sporting dreadlocks came up to me and began talking.

We became good friends. I asked him if he had a weed connection. He said he needed to talk to his friends. A few days later he came over to my apartment with a couple of his friends. They hung out for a while and offered me some weed. We passed the bowl around and had a nice time talking.

His friends told me that they didn't usually have weed but that they could get crack for me any time. The next night I bought \$100 worth of crack. I sat in my apartment and smoked it all by myself. It was an amazing experience. I felt whole again. The crack lasted for several hours. I had incense burning, music playing, and I was really happy to be all by myself with my crack. The only weird thing about that night was that I kept peeking out the window every few seconds. For some reason I felt that someone was watching me. It was like I was paranoid or something. . . . All I really wanted to do was smoke crack and work on my car. My credit card bills were mounting, but I continued to make the minimum payments with what little money I had left. Eventually I ended up buying merchandise with my credit cards just so I could sell it to buy crack. I started becoming more and more paranoid, so I bought a .45 caliber Beretta handgun with a night scope and a laser built into the barrel. I even bought a box of hollow-point bullets. I practiced loading and unloading the gun. I had become extremely paranoid, so I bought a pit bull to protect me and to keep me company. His name was "Chunks." He was a great dog, but he ate practically everything I owned.

I remember one night smoking \$300 worth of crack all by myself. I started around 6:00 PM and by 9:00 the next morning I was still smoking crack. I was afraid I was going to die, so I flushed the little bit that was left down the toilet. I just sat there on my bathroom floor listening to music waiting to see if I was going to die. Three hours later, while Maria [my girlfriend] was on her lunch break, she called and asked to be picked up from school. My lips were completely burnt from the hot crack pipe, and I couldn't talk because my throat was burnt from inhaling the hot gas from the crack all night long. I told her what had happened. She took care of me and kept bringing me cold beer until I fell asleep.

At this point I was no longer a nice person. I felt invincible. Anyone who got in my way was immediately run over. I was constantly fighting with Maria, my parents, and with Maria's family. Her father hated me and I hated him. One time

Maria got in a fight with her mom and asked me to come pick her up. When I arrived, the police pulled in behind me and surrounded my car. Maria's mom had told them that I had a gun and that I was going to hurt someone. Fortunately I had removed the gun from the car just prior to going over to her house. The police threw me up against the car and searched me. They asked to search the car and I gave them permission, because at the time I had nothing to hide. Maria's mom kept telling the police that I had a gun, so I responded, "The constitution gives me the right to bear arms, bitch." Eventually the police let me go, but I was really angry and I wanted revenge. . . . I hated her father so much that I wouldn't talk to him.

My rent was three months behind, I owed \$60,000 to American Express, and I was flat broke. . . . I sold my television to the crack dealer and managed to scrounge together a few thousand dollars. . . . I threw Chunks onto the passenger seat, and we headed south [to Miami, to visit my brother]. . . . [Several days later, my brother and I] were walking down the strip, we ran into a friend of mine from home. He invited us back to his friend's house to hang out. We smoked some weed, and then everyone including my brother took XTC [Ecstasy, MDMA]. I really wanted to do it, but for some reason XTC really scared me, so I didn't do it that night. Everyone decided to go out to the beach, but I wasn't really in the mood, so I stayed at the apartment building. I met a family who lived down the hall, and decided to hang out with them. They had seven little kids and lived in roach-infested, two-bedroom apartment. They fed me dinner, and we drank a few beers together. I was talking to the father, and he asked me if I had ever done cocaine. I said yes, and he said he could get us some. He asked if I wanted crack or powder. I told him crack. I gave him \$50, and he returned with a bag. We went into the bathroom, and he pulled out a thin copper pipe. I had never smoked crack out of a pipe like this, but it really intensified the delivery. We continued smoking for several hours, and then I crashed on their couch. . . .

My brother dragged me outside for some fresh air, but my mind had snapped, like a bone breaking

in half. My brother thought it had something to do with the... crack I had smoked the night before, but nothing he did seemed to help. He even brought me a shot of liquor thinking it might help bring me down, but it didn't help. He then decided maybe I just needed something to eat, so he carried me to the car and drove me to the Ale House. We walked inside, and I started to feel better, but I was still really confused. The hostess seated us at a bench, and then we ordered some wings and soft drinks. We had just started to eat our wings when I looked over my brother's shoulder, and an evil-looking man was staring at me as if he were going to devour me. It was the Devil. I grabbed my brother's hand and told him the Devil was sitting behind him and we had to get out of the restaurant. He told me to calm down, but I couldn't. My brother looked over at the hostess and told her we had to leave and asked if she could wrap up our wings. Before he could finish what he was saying, the hostess looked at me with an evil smile and said, "You're leaving so soon?" I glanced back over my brother's shoulder, and the Devil was still sitting there with an evil grin on his face, staring me down.

I ran out of the restaurant, pushing everyone out of my way. I jumped in the car and waited for my brother, but he wasn't returning. My mind was racing, and I thought the Devil had taken my brother. I ran back into the restaurant, and as I opened the door, he came out. I was so relieved to see him. We jumped in the car, and my brother frantically called everyone, telling them that something was seriously wrong with me.... [Later that night,] I fell asleep, but I was having terrible nightmares. When I woke up, I was ranting and raving about Nostradamus and that I had to save the world. I continued to rant uncontrollably for several days, and eventually my brother couldn't take it anymore. We were driving to his house, and he started screaming at me. . . . I . . . asked him to get out of the car. He got out, and I drove back to his house. Ten minutes later he showed up and he was steaming mad. He started kicking the car and telling me to get out and that he was going to kick my ass. I was really scared, but I got out of the car and asked him to calm down. He punched me in my

stomach and tried to hit me over the head with a metal lantern. We rolled around on the ground for several minutes before I was able to get the upper hand. I had him on the ground, and I was kicking him in his stomach. He pretended to be hurt, so I stopped kicking him. I jumped in my car and tried to leave, but as I was starting the car, he jumped up and started kicking the car again. I frantically locked the doors, and took off. . . .

I continued to have terrible nightmares about the world coming to an end. . . . I didn't want to be left alone, but I had no choice. . . . I went outside to get some fresh air, but I couldn't escape my thoughts. As I paced around the pool, I kept looking up at the sky frantically. The house was in the flight path of the airport, and I felt that the airplanes were going to crash into the house. I also kept having visions of nuclear bombs going off and the world coming to an end. I couldn't handle being outside, so I went inside and turned on the television. As I was changing the channels, I realized that the people in the programs were talking directly to me. I thought it was God, but I couldn't figure out how He could talk to me through the television set. It was as if he knew personal things about my life, and was able to say just the right things to frighten the hell out of me. I ran outside and jumped in my car.

The rest of that day I raced around Orlando trying to find my sanity. I started following white cars and running from black cars. At this point, I had truly lost my mind. . . . I kept trying to drive south, but every time I saw a black car I turned off the road. I continued to drive in circles for hours. I remember finally seeing signs to Miami, but I couldn't get on the highway, because the wind was howling, and the birds were swirling around against the dark gray sky. I thought it was God telling me that there was going to be a tornado and I shouldn't get on the plane. [A friend] called my brother, and they decided I needed to go to the hospital. I agreed, so my brother came over. . . . and he drove me to the emergency room.

This was not just any emergency room. These patients looked as if they were headed for hell. Every face was filled with pure evil. And everyone

had serious wounds. While sitting there, I felt this was . . . a place for God to judge me. I wanted to show God I was a good person, and I didn't belong in hell, so I went around helping the patients. I put a blanket on a guy sitting in a wheel chair and held a baby because it wouldn't stop crying. I was willing to do anything to show God I didn't belong in hell. Just then a doctor came out, and told me they didn't have room for me at this hospital. When he looked up from his clipboard, I freaked out. It was the Devil, the exact same man who was sitting behind my brother in the Ale House, but this time, he didn't have such a sinister look. He looked sophisticated and godlike, whatever that might mean. He said I would need to go to another hospital because they had more room there. The three of us got in the car and drove to the other hospital. On the way there, I was elated because I felt God was not going to kill me. We arrived at the hospital and walked into the waiting room. That's when I freaked out again.

Friday the Thirteenth was playing on the television. I told my brother that there was no way I was going into that hospital. He convinced me to relax and reminded me I needed help. I went up to the desk to sign in. . . . A few minutes later they called my name. The three of us walked back to a room, and I sat on the hospital bed. They handed me a "Living Will" and asked me to sign it. I told them I needed to read it over. A few minutes later, the nurse asked my brother and Iris to leave the room. They left, and I sat there with this paper trying to figure out if I was going to sign it. I thought that it was God asking me if I wanted to live or die. I couldn't sign the form and I started to freak out because I thought these people were going to execute me.

After several minutes of contemplating, I burst out of the room, ran through the lobby, and out the front door of the hospital. I ran for about a mile, when I finally reached a payphone. I dialed 911, and told the police these crazy people in the hospital were trying to kill me. He instructed me to wait at the phone until the police arrived. Within a few seconds, there was a helicopter swirling over my head, with a spot light pointed at me. Simultaneously, the police surrounded me, and told me to lie down on the ground, and a bunch of men in white coats showed up. I told the police those were the men who were trying to kill me. The police told me . . . I needed to go with the men in the white coats. I told the police officer I was going to hit him in his face so he could take me to jail, because I was afraid the people in the hospital were going to kill me. He handcuffed me and drove me back to the hospital. They placed me in a wheel chair, and rolled me up a long ramp into the psychiatric ward of the hospital.

QUESTIONS

How typical is this case? Which basic principles discussed in this chapter do this man's experiences illustrate? After reading this chapter, what would you have predicted about the effects on him of the drugs he took? Are the consequences of taking drugs described here simply a product of those drugs' pharmacological properties? Or is something else at work? Do other users experience the same effects using the same drugs? Why do you think this person had such problematic drug experiences? What can we learn from this account?

THE SOCIOLOGIST LOOKS AT DRUG USE

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Jason has a habit: He smokes marijuana every day. He loves getting high, but he's never going to get busted because he can pick up his weed at a

local medical dispensary. He claims he has a back condition, and his doctor gives him a prescription to prove it. Jason loves the medical marijuana law in his state. Bill used to be a heroin addict, an outlaw, and a criminal. Now he's a methadone addict—and a respectable citizen. William snorts meth that he buys from a dealer down the road; he's been busted half a dozen times, but that doesn't stop him. Carol, a college student, takes pills to cram for exams; Robin smokes crack on weekends for recreation. Do these people have something meaningful in common?

In the 2012 election, Colorado and Washington voters legalized the possession of small quantities of cannabis (or marijuana) for recreational purposes; they became the first states in the nation to do so. Half of the states have either licensed medical marijuana or decriminalized the drug's small-quantity possession, even for recreational purposes, but only in these two can residents grow cannabis or legally purchase cannabis in stores. Public officials have raised health concerns about what legalization would mean with respect to upturns in use and drug dependence, and also whether such upturns would result in rises in cancer rates, brain damage, and automobile accidents; the supporters of legalization don't think these things are going to happen.

In Appalachian states, lawmakers enact bills to limit the legal sale of decongestants, which contain pseudoephedrine, a vital ingredient of methamphetamine, an illicit drug which is cooked up illegally and widely used to get high.

In Washington, D.C., federal drug regulators call for putting pictures of sick and dying lung cancer patients on packets of cigarettes to warn smokers what could happen to them.

On the Mexican side of the border, the drug wars pile up tens of thousands of bodies—dealers, distributors, street-level sellers, couriers or “mules,” buyers, innocent victims—while on the other side of the border, San Diego, El Paso, and Mesa, Arizona, remain among the safest cities in America.

In Atlanta, the CDC—the Centers for Disease Control—releases a report that reveals that during the past 20 years, nationwide, the percentage of American high school students who drink and drive has declined by half.

In Greenwich Village, New York, municipal plans to close a particular intersection to cars and open a pedestrian mall raise a hue and cry from a neighborhood task force, whose members claim that the plaza will encourage “drunken hooligans to congregate” there.

In Connecticut, a priest is indicted by a grand jury for running a cross-country drug ring and laundering the profits through an adult sex toy and video shop he owned.

Jan and Terry share a nightly bottle of Chardonnay during dinner. Both enjoy the slightly fuzzy feeling that comes over them after consuming two glasses of wine. They purchase the wine at a local liquor store located in a shopping mall a dozen blocks from their house. They are not breaking the law when they purchase, possess, or drink their alcoholic beverage. Neither engages in criminal behavior of any kind, nor has either been arrested.

James is an alcoholic. When drunk, he becomes belligerent. He has been in dozens of fistfights and has twice been arrested for assault, once for hitting his girlfriend. He has also totaled two cars and been arrested once for burglary.

Sally snorts “ice,” or recrystallized methamphetamine. She admits to being addicted to the drug. Unemployed, she sells her body and shoplifts from department stores to pay for her habit.

Sam is a physician who considers himself a “controlled” user of prescription-strength narcotics. He never injects the drug, uses it only for pleasure, relaxation, and recreation, confines his use to weekends, rarely uses it more than once in a given day, and never uses up the supply of narcotics he keeps on hand.

Veronica, 17, a high school senior, takes Ecstasy (MDMA) several times a month at “raves,” parties, and concerts with her friends. She enjoys the feeling of empathy or emotional closeness with others when she takes the drug. Her parents do not know about her use, and she pays for the drug by working at a part-time job. Her schoolwork seems to be unaffected by her use, and she plans on attending college in the fall. She regards her use of “E” as “no big deal.”

We might think that drug use is confined to the present or recent past, that all these people are uniquely modern creatures, sharing a practice never experienced by our ancestors. This is not the case at all. Human drug use is ancient, predating the fashioning of metal. Archaeologists have found the leaves of the coca plant, which contain cocaine, in graves dating back prior to the cultivation of corn. Researchers have unearthed caches of peyote “buttons,” cut from the peyote cactus and collected into piles that were carbon-dated to 4,000 years ago. Paleontologists believe that humans cultivated the cannabis or marijuana plant and the opium poppy contemporaneously with the rise of agriculture over 10,000 years ago. The discovery and consumption of alcohol is equally as old. Anthropologists argue that many cave drawings feature optical patterns that correspond to visions induced by psychoactive mushrooms and plants. If true, this would place early human drug use at tens of thousands of years ago. It’s likely that animals used drugs even before humans did, which throws the initial use of mind-active drugs back into the distant, indecipherable mists of time.

WHAT IS A DRUG?

Ask a dozen people for their definition of the word “drug.” I’ve done it and some of the answers I got were far too broad to be useful (“a chemical”), while others were too narrow—and wrong (“an addicting substance”). In addition, some of these answers dwelled exclusively on the effects of substances (“drugs get you high”) while others focused on their social or legal status (“drugs are against the law”). The question, “What is a drug?” cannot be answered strictly objectively (from a substance’s pharmacological properties alone) or strictly subjectively (the way a substance is seen, thought of, reacted to, and defined in a society). Each is necessary to define “drugness”—that is, what a drug “is.”

Drugs is a concept that is defined both *materially*, with respect to drugs’ essential or physically real properties, and *socially*, a construct that is both in our minds—in the way we picture or represent the world—and in institutions we have built to deal with certain substances. Drugs can be defined by what they *are* and *do*—in a real-world biochemical and pharmacological sense—as well as what they are *thought* to do, including how the law defines them and the way they are depicted in the media, how they are socially constructed and conceptualized. The first definition delineates the “objective,” or essentialist, reality of drugs and the second definition delineates the “subjective,” or constructionist, reality of drugs. As we’ve seen, every phenomenon that has ever existed—including drugs—can be looked at through the lens of these two definitions or perspectives.

Definitions may be more—or less—useful according to a specific setting or context. For drugs, three relevant drug contexts come to mind: medical utility, illegality, and psychoactivity. The “medical utility” definition regards a drug as a substance used by physicians to treat the body or mind; the “illegality” definition regards as a drug any substance whose possession and sale are against the law; and the “psychoactivity” definition regards a drug as a substance that influences the workings of the brain or mind, that has an impact on cognitive and emotional processes. If we use one definition, certain implications unfold that may—or may not—be fruitful within a different setting. But if we use another definition, different implications appear that could be useful or counterproductive, again, depending on what we wish to achieve. Even though both are tools, we don’t use a hammer to saw wood or a saw to hammer a nail. Definitions, like tools, are useful only according to their context—what we want to use them for.

Medical Utility

A drug can be defined as a *substance that is used to treat or heal the body or mind*. According to this definition, physicians administer drugs to persons who are sick, disordered, or abnormal to return them to a state of normalcy or “ordinariness,” to *remove* that which is pathological, abnormal, unnatural (the disease or medical condition) or “out of the ordinary.” Can we define a drug by the criterion of medical utility? For instance, given that heroin is not approved for medical use in the United States, does our medical definition exclude heroin? Does it mean that heroin is *not* a drug? Well, if we were to follow that definition alone, yes, it does dictate that, in the United States, we may not regard heroin as a drug. And is penicillin a drug? Yes, if we were to adopt a strictly medical criterion as defining what a drug is, *of course* penicillin is a drug; it is used to treat bacterial infection. But is penicillin used illegally on the street? No, because it does not produce a “high” or intoxication. In the context of illicit use, penicillin is *not* a drug.

The medical definition contains both an objective (essentialist) and a subjective (constructionist) element. For a drug to be used medically, we assume that it *does* something to the body—it acts as a healing agent. This is its objective reality. But in addition, a drug has to be *recognized* as therapeutically useful by physicians, and physicians in a given society may not adopt it as medicine even if it works as a therapeutic agent. Controversy may exist with respect to whether some drugs are medically useful. For instance, as of this writing, marijuana is recognized and legitimated as medicine in 18 states but not the other 32, and it is not so recognized by the federal government. Heroin maintenance programs are legal in much of Western Europe—Switzerland, the Netherlands, Denmark, and Germany—but not in the United States. Same substance, objectively speaking; different legal and social construction. This is the subjective reality—the “socially constructed” side of the medical definition, or how drugs are defined, how the medical profession regards or *defines* substances.

Hence, the same substance can be defined *as* a drug and *not* as a drug—depending on the context. Within the context of medical therapy, the definition of a drug as medicine is useful. *Outside* that context, it is less useful. However, it’s also true, as we’ll see, that a medical definition may *determine* a substance’s legal status; if it is *not* recognized as medicine by the government, this makes its possession and sale a crime. Since most of the drug use we’ll be looking at in this book is recreational—users engage in it for

the purpose of getting high, for the effects themselves—the medical definition of drugs is not quite as useful to us in our quest to understand the causes, consequences, and implications of drug use.

Illegality

Another possible definition of a drug is determined by a substance's *legal* status—whether the possession and sale of a given substance are legal or illegal. According to this definition, the law and law enforcement define what a drug is. If the possession and sale of a substance are against the law, likely to generate criminal punishment, then that substance is a drug. The legal status of drugs is a *socially constructed* definition: When a drug law is enacted, a category of illegal substances is created. Societies vary with respect to their drug laws. The same substance may be legal (and therefore not a drug according to the definition of illegality) in one jurisdiction and illegal (and therefore a drug) in another. Same substance, different status with respect to “drug-ness.” In addition, drug laws change over time; substances move from being legal to being illegal, and vice versa. Presumably, the possession and sale of certain drugs result from their physical or material properties: They are *considered* harmful because, presumably, they *are* harmful and are, as a consequence, prohibited by law. Though the legal definition of what drugs are is a social construct, it is a social construct that is hypothetically based on their physical (or essentialist) properties.

But here, as in the medical world, controversy is the rule. For instance, some marijuana users proclaim, “Marijuana’s not a drug—it’s a gentle, natural herb! How can you outlaw nature?” But, as we saw, the possession of marijuana (or cannabis) is *legal* in 2 states (Colorado and Washington); decriminalized for small-quantity possession in 6 states (Nebraska, Minnesota, Ohio, New York, North Carolina, and Mississippi); legal only *as medicine* in 8 states (Hawaii, Montana, Arizona, New Mexico, Michigan, Delaware, New Jersey, and Vermont); *both* decriminalized *and* approved as medicine in 8 states (Alaska, California, Nevada, Oregon, Connecticut, Rhode Island, Massachusetts, and Maine); and *completely illegal* in 26 states. The social and legal construction of cannabis is topsy-turvy with respect to both historical time and jurisdiction or geography. “It’s a matter of definition” seems to be the watchword of marijuana. And to top it all off, the possession and sale of cannabis is strictly illegal with respect to *federal* law.

In contrast, according to the definition based on a substance's legal status, alcohol is not a drug, since its sale is authorized and controlled by the state, and nearly anyone above the age of 21 may possess it. (Its sale to under-21-year-olds is, of course, illegal.) Hence, if someone who uses a definition based on a substance's criminal status refers to the drug problem, it is clear that alcohol is *not* part of the drug problem, since its possession and sale are not illegal to adults. The definition based on illegality uses a kind of double standard when it comes to psychoactivity: Certain substances that influence the mind are included, while others are excluded. To the federal government, the “drug problem” includes *only* the recreational use and abuse of illicit substances—not alcohol—or the unauthorized (and therefore illegal) use of prescription pills.

A definition of a drug based on criminality is woefully inadequate if we wish to examine the full range of the use of psychoactive substances—why they are used and

with what consequences. Why is this so? Because the “illegality” definition, based on a drug’s legal status, excludes alcohol, a psychoactive substance with an extremely *strong* connection with both the use of illicit drugs and behaviors that illicit drugs cause or are correlated with. Alcohol consumption can never be neatly separated from the use of illegal drugs, because the same people who engage in the latter activity also engage in the former. It is not enough to say, well, yes, but they also drink milk, because consumers of alcohol are *much more* likely to use and abuse illegal drugs than persons who do not use alcohol. Alcohol tends to be used in addition to—not instead of—illegal drugs. *And* people who commit crimes are *much more* likely to drink than people who do not engage in criminal behavior—but people in these two categories don’t consume milk at substantially different rates.

The criminalization of certain substances is a central topic when thinking about the issue of drug use. The fact that a given substance is illegal—regardless of its effects—determines the sorts of lives users and sellers lead. A consumer of alcohol may be using a psychoactive substance, but that fact alone does not make him or her a potential target of law enforcement. The same cannot be said for the consumers of illicit substances.

In short, illegality *overlaps*, but is not *coterminous* with, the possession, sale, and use of psychoactive substances.

Psychoactivity

Pharmacology is the study of the effects of drugs on biological organisms; the scientists who study the effects of drugs are called pharmacologists; and psychopharmacology is the study of the effect of drugs specifically on the brain, that is, on the mind. One way of defining a drug is *any substance that is psychoactive, that has a significant effect on the mind*. To the pharmacologist, psychoactivity is an extremely important property of chemical substances. A psychoactive substance is one that affects the workings of the central nervous system (the brain and the spinal column) and thus influences thinking, mood, feeling, sensation, perception, emotion—and, as a consequence, behavior as well. The psychopharmacological definition—what a drug does to the brain, and therefore the mind—is a definition that is based *entirely* on the materially real or essential properties of substances. According to this definition, some substances (such as LSD) are drugs because they influence mood, emotion, and cognitive processes. In contrast, other substances (such as penicillin) are not drugs because they are not psychoactive. By the definition of psychoactivity, which opens the door to *recreational* use, a drug serves a purpose exactly opposite to that focused on in the medical definition. Medically, drugs are used to return the body or mind to a state of normalcy, ordinariness, or *stasis*. In contrast, from the perspective of psychoactivity, drugs are used to take the mind *out of* a state of normalcy, or ordinariness, into a state that the ancient Greeks referred to as *extasis*—ecstasy. This condition may be very mild (such as puffing on a cigarette or sipping a cup of coffee) or very powerful (swallowing a tab of LSD or smoking crack cocaine). But in principle, the functions of medical and recreational drugs, as implied by their respective definitions, are very different—almost the opposite of each other.

Different types of drugs have different sorts of effects, and we’ll be looking at some of these effects in later chapters. But whenever a substance influences how the brain

works, pharmacologists refer to it as psychoactive. In addition, to any social scientist, including the criminologist, psychoactive drugs are interesting because they influence human behavior, including drug-taking behavior. Why do people take drugs? Because they make users feel good. Why are they illegal? Because all drug taking entails a measure of risk; the good judgment of users may be impaired, they may like the effects too much and become drug dependent, and they may take so much that medical consequences ensue—even death. As a consequence of their effects, societies all over the world have decided that the possession and sale of certain substances should be illegal. This will be a central theme that runs throughout this book.

According to the psychoactivity definition, any substance, regardless of its legal or medical status, that significantly and pharmacologically alters the workings of the brain, is a drug. Any substance that does not is not a drug.

All substances that are taken recreationally are psychoactive. This is *why* they are taken: so that the user can get high, *because* of their effect on his or her mind. Users seek the effects that constitute the psychoactivity of certain chemical substances. For most users, the effects of particular drugs are felt as pleasurable, and it is this pleasure state that they wish to achieve when taking the drug. Drug researchers refer to drugs that are taken primarily for their effects—for the purpose of getting “high”—as *recreational drugs*. But with all drugs, pleasure is a “package deal,” and some of the contents of the package may be undesirable to all concerned, user and nonuser alike.

To repeat: Is alcohol a drug? According to the definition of psychoactivity, *of course* alcohol is a drug! Alcohol is psychoactive. It has effects on the brain; it influences mood, emotion, feeling, and cognitive processes. In addition, it influences human behavior. Coordination diminishes under the influence; human speech is impaired at low to moderate doses of alcohol; inhibitions are lowered and behavior that is unlikely to be attempted under most circumstances is all too often seized upon with great enthusiasm. Yes, most emphatically, pharmacologically, alcohol *is* a drug! Pharmacologically speaking, alcohol is a drug *in exactly the same way* that illicit substances such as cocaine and marijuana are. *Objectively*, it is no different from the controlled substances that can get the possessor and seller arrested.

Defining Drugs: A Summary

For the purposes of the discussion in this book, two definitions, based on entirely different criteria, define what drugs are: psychoactivity and illegality. The first is based entirely on an essentialist or (presumably) materially real property, while the second is partly a socially constructed property and partly a consequence of the effects of certain substances. To the sociologist and criminologist interested in real-life or “street” behavior, a third definition of what a drug is, the *medical* definition, is far less useful. The fact that penicillin is used as a medicine is not interesting or relevant to the work of the criminologist or the sociologist studying recreational drug use. Some substances are defined as drugs according to one of our two relevant definitions (psychoactivity and illegality) but not the other; many substances are drugs according to both of these criteria. And a few medications, such as morphine, are drugs according to *all three* of our definitions: it is psychoactive; it is illegal if used for recreational purposes; and it is used by physicians to treat pain.

DRUG USE AND DRUG ABUSE

What makes drugs interesting to the researcher, the sociologist, the criminologist, the legislator and politician, the law enforcement officer, the journalist, and the general public is the fact that they are used and that their use has crucial consequences for the user and the society at large. The fact that use is the be-all and end-all of the drug equation raises the issue of the distinction between *use* and *abuse*. “Use” is the more generic or general category. Drug use is simply the act of ingesting a given substance or set of substances in any quantity with any frequency over any period of time; it covers the entire spectrum of consumption. “Abuse” is a specific subset or type of use. But how exactly should abuse be defined?

Some experts argue that abuse is the use of a psychoactive substance outside a medical context. Hence, according to this definition, smoking one marijuana joint a month—or a year—for the purpose of getting high would qualify as drug abuse. This definition adopts a legalistic or criminal criterion for what a drug is, thereby excluding alcohol. Thus, since alcohol is not a drug, drinking a quart of whiskey a day is not drug abuse. (It is the abuse of alcohol, true, but it is not *drug* abuse.) It is not clear what such a definition seeks to achieve, aside from confirming that the drug laws are fair and just by demarcating “bad” substances (drugs) from “good” substances (nondrugs, such as alcohol and tobacco). For the purposes of this book, such a definition confuses the issues we wish to make clear.

The problem is that *abuse* is a very inexact and loaded term. It cannot be pinned down with scientific exactitude—yet it *suggests* scientific exactitude; it is a matter of degree. Here, I’ll use the word “abuse” as a purposely inexact term to refer to the level of use of a given drug at which harm is at least moderately likely.

Snorting two lines of powder cocaine once a month is statistically unlikely to cause harm of any kind to the user; smoking two grams of crack cocaine every day is almost certainly harmful. Drinking a glass of wine at dinner causes harm to practically no one; drinking a quart of vodka a day will harm almost anyone. Exactly where we should draw the line between ordinary use and abuse cannot be determined with any precision. However, higher levels of use are more likely to cause harm and are thus more likely to qualify as abuse than lower levels of use. The term *abuse* should be avoided except at levels of use that are, by their very nature, likely to be harmful, and hence, abusive. Of course, any activity at any level carries a certain measure of risk of physical and mental harm; this includes driving a car, flying on an airplane, taking a shower—and consuming psychoactive substances. But some activities carry a very high likelihood of significant harm, while for others, that likelihood is low. Here, we’ll regard “abuse” as drug use that carries a *higher* rather than a *lower* likelihood of harm.

TYPES OF DRUG USE

Dimensions of Drug Use: An Introduction

At least two dimensions distinguish the many varieties of drug use: legal status and the goal or purpose of use. With respect to legal status, the possession and sale or distribution (or “transfer”) of some drugs are criminal acts: They are against the law; they are crimes. If you are apprehended possessing, buying, or selling certain controlled

substances, you may be arrested; if convicted, you may be sent to jail or prison. For example, heroin and LSD may not be possessed or purchased by anyone for any purpose (except for government-approved medical or scientific research). On the other hand, it is legal to sell, purchase, and possess certain drugs. Any nonincarcerated person above a certain age may legally buy alcoholic beverages in the United States. A number of psychoactive substances may be found in a wide range of legally purchasable products, including nicotine (in cigarettes and other tobacco products), caffeine (in coffee, tea, cola, and chocolate), and various substances in over-the-counter remedies (aspirin, Tylenol, Sominex, Allerest, and so on). In addition, many drugs are legal if taken for a medical purpose with a physician's prescription, but those same drugs are illegal if taken without a prescription, especially if used for recreational purposes. And, as we've seen, in principle, the possession of small quantities of cannabis is legal, even for recreational purposes, in a number of states of the United States.

With respect to the second dimension of drug use—goal or purpose—it would be a mistake to assume that all drugs are used for the same purpose by everyone. The same drug will be used for a variety of reasons by different users, and even the same person will use the same drug for different reasons at different times and in different situations. All drugs have multiple effects. Some users will seek one effect from a given drug, while others might take it for another. For example, in low to moderate doses, stimulants produce mental alertness. Thus, many thousands of individuals who need to stay awake for many hours at a stretch use stimulants to offset drowsiness and fatigue. These include long-haul truck drivers, students cramming for exams, and medical professionals on multi-hour rounds. Here, we have instances of illegal *instrumental use*: Users are taking the drug not because they enjoy the effects they experience when they take it, but to more effectively achieve a goal of which most members of the society approve: working at a job, pursuing an education, or advancing a career. Although the *goal* is approved, the *means* by which it is attained are considered unacceptable to most Americans. On the other hand, if one were to take that same drug, amphetamine, for the purpose of euphoria or getting high, one would be engaged in illegal recreational drug use.

Calling an activity recreational does not imply that it is harmless. Many recreational activities are dangerous: racing motorcycles, hang gliding, flying ultralights, mountain and rock climbing, skydiving, even skiing. However, the term does imply that the activity is considered enjoyable by some. Recreational drug use is taking a chemical substance to receive the pleasurable effects the drug generates in users—in short, *to get high*. The effects are sought not as *a means to an end* (as they are with instrumental use), but as *an end in themselves* (to enjoy the effects).

There are crucial differences among the effects of different drugs, both in quality or kind and in intensity or degree. Some drugs take you up, some take you down, and some take you in an altogether different direction. The effects of some drugs are relatively mild in the doses typically taken, and for most activities, the user can cope with the everyday world more or less normally—for instance, smoking one joint of medium-potency marijuana. The effects of other drugs are far more intense, even in fairly low doses, and the user must withdraw from the demands of the everyday world while under the influence or suffer the consequences. We cannot equate drinking two glasses of wine at dinner with an intense eight-hour LSD “trip” or a one- or two-minute “rush” that seizes the crack cocaine smoker. But all these activities—smoking cannabis, drinking

wine, taking LSD, smoking crack—represent taking a chemical substance *for the effects themselves*, for the pleasure or euphoria the user experiences.

Combining these two dimensions—legal status and goal—yields four quite different types of drug use: (1) legal instrumental use, (2) illegal instrumental use, (3) legal recreational use, and (4) illegal recreational use. The combination of these two dimensions is schematically represented below:

Goal	Legal Status	
	Legal	Illegal
<i>Instrumental</i>	Taking Ambien via prescription to sleep	Using amphetamine to study all night
<i>Recreational</i>	Drinking alcohol to feel pleasant	Taking LSD to get high

Each of these types of drug use will attract different users whose patterns and frequencies of use contrast significantly. Consequently, it is necessary to devote a separate discussion to each one.

Legal Instrumental Use

There are two principal forms of legal instrumental drug use—over-the-counter and pharmaceutical. Over-the-counter (OTC) drugs can be purchased directly by the public, off the shelf, without a physician's prescription. Examples of OTC drugs include aspirin, Tylenol, Sominex, and Allerest. The Consumer Healthcare Products Association lists the retail sales of OTC drugs in 2011 at \$17.4 billion. These drugs are not strongly psychoactive—or psychoactive at all—and are rarely if ever used for the purpose of getting high. There is one partial exception to this rule: Ephedrine and pseudoephedrine are used, illegally, to manufacture a decidedly psychoactive drug: methamphetamine. We'll look at this seductive, dangerous drug in Chapter 11, on stimulants.

For the most part, OTC drugs are fairly safe if used instrumentally, and they do not normally represent a threat to human life. But no chemically active substance can be completely safe, and deaths have been known to occur with these proprietary products. Through a program called the Drug Awareness Warning Network (DAWN), the federal government collects information on hospital emergencies and deaths by drug overdose. I discuss the DAWN data collection program in Chapter 6, on research methods. Each year, nationwide, medical examiners determine that acetaminophen (its most popular brand name is Tylenol) has contributed to tens of thousands of nonlethal hospital emergencies; in addition, it directly or indirectly causes several hundred deaths. Hence, acetaminophen is far from harmless. But *millions* of doses of this OTC drug are taken every day. In relation to their total use, the toxicity of the OTC drugs is *extremely* low, and they need not be considered in detail in this book.

Prescription drugs are manufactured, bought, sold, and used legally, for medical purposes. They are prescribed by physicians to patients for the alleviation or cure of physical or psychiatric ailments, and the prescriptions are filled and sold at licensed pharmacies. In the United States, licensed physicians, physician assistants, advanced practice registered nurses, dentists, veterinarians, podiatrists, and chiropractors are legally permitted to write prescriptions for some, most, or all pharmaceuticals, and

over a quarter of a million pharmacists working at 56,000 locations are legally permitted to fill them and sell the prescribed drug. According to the trade journal *Pharmacy Times*, a significant proportion of the prescriptions written in the United States are for the nation's most commonly prescribed or "popular" 200 drugs, a topic we'll look at in Chapter 9.

Pharmaceutical trade journals track the sales of prescription drugs on a year-by-year basis. Roughly 80 percent of the drugs sold by prescription are not psychoactive—they do not influence the workings of the mind. At the same time, pharmaceutical drugs—those that are taken legally, via prescription, for medical and psychiatric problems—are a major source of psychoactive drug use. In addition, the effects of some psychoactive pharmaceuticals (mainly antipsychotics and antidepressants) are not experienced as pleasurable and, hence, are never, or almost never, used for recreational purposes. Still, in absolute terms, illegally diverted or manufactured prescription drugs represent a major source of illicit recreational drug use in America.

However, one reason prescription drug use could be interesting to us is that, *if* a drug is psychoactive and *if* its effects are experienced as pleasurable, it rarely remains permanently exclusively confined to the context of approved medical usage. Heroin, cocaine, morphine, barbiturates, amphetamines—all these widely used psychoactive drugs were originally isolated, extracted, or synthesized, then marketed, for medical purposes, and all eventually "escaped" into the world of recreational street usage. Many psychoactive drugs were initially sold over the counter; ultimately, they came to be used on the street for the purpose of getting high. In order to cut down on their recreational use, authorities made legal access to them restricted via prescription. In addition, for hundreds or even thousands of years, many of the psychoactive plants of the world—marijuana, coca, and psychedelic mushrooms and cacti—have been used for both healing and euphoria, often within a religious context. Hence, it is misleading to think that medical and recreational uses occupy totally distinct worlds. Many drugs that are used in both worlds are identical, and the major motive for use in each of these two worlds—taking drugs to feel better—is the same. Though in principle, the licit medical and the illicit recreational worlds of drug use are distinct, in practice, they overlap.

Even today, in a number of instances, the legal instrumental use of drugs is controversial. At the federal level, possession and sale of marijuana for therapeutic purposes is completely illegal. But, as we saw, in 18 states plus the District of Columbia, physicians can legally (by state law) advise patients that smoking marijuana may treat their ailments; plus, in two states, they are completely legal. Yet, even in these 18 states, in which physicians and patients cannot be prosecuted by state law, they can (theoretically) be arrested and imprisoned by *federal* authorities. Clearly, the therapeutic status of marijuana remains controversial. And definitions of what's legal or illegal, and instrumental or recreational, shift somewhat from one year to the next. For example, methaqualone, once a legal prescription drug, is now completely banned. Heroin, effective and once used as an analgesic in the United States, is never used today for this purpose. Moreover, a drug's medical status varies not only over time but also from one jurisdiction to another. Drug definitions are not immutable or set in stone—not universal, or essentialist realities—but are constructed at a certain time, in a specific location, by a given group or social circle of observers. Some definitions are nearly universal and have remained the

same for a century, but may change in the future, others have redefined drugs as legal or illegal, as the case may be.

Legal Recreational Use

Legal recreational drug use refers to the use of alcohol, tobacco, and caffeine products. In each case, a psychoactive substance is consumed in part to achieve a specific mental or psychic state. Not every instance of the use of these drugs is purely for pleasure or euphoria. Nevertheless, these drugs are consumed to attain a desired psychic state. Many—probably most—cigarette smokers are driven by a compulsive craving at least as much as by the pleasure achieved by inhaling a psychoactive drug; still, these two dimensions are not mutually exclusive. If smokers do not achieve a true high—it’s more like a “low-key” high—at least they achieve a psychic state that is more pleasurable to them than the state abstinence affords.

Most individuals who engage in a form of behavior have mixed motives for doing so, and subeuphoric pleasure cannot be discounted as a major reason for why most people use alcohol and tobacco. What is important about legal recreational drug use is not that it is identical to illegal recreational drug use (it is not—there are interesting differences between them) but that there are some interesting parallels and continuities that must be explored. Moreover, pleasure must not be viewed as an either-or proposition but as a continuum.

Currently, the Substance Abuse and Mental Health Services Administration (SAMHSA) sponsors a survey, referred to as the National Survey on Drug Use and Health (NSDUH), of a nationally representative sample of American households. The survey asks respondents questions about the drug use, legal and illegal, of everyone age 12 and older living in the households it contacts. I’ll describe this survey in more detail in Chapter 6. In the most recent survey (conducted in 2011), half of the sample (51.8%), or about 133.4 million people, said that they had drunk alcohol once or more during the month prior to the survey, and therefore SAMHSA defined them as “current” users. Among young adults aged 21 to 25, over four out of ten (45%) said that they had engaged in binge drinking—five or more drinks—on one occasion at least once in the past 30 days. And slightly under a quarter of the total population age 12 or older (57 million, or 22%) had smoked cigarettes at least once in the past month—in fact, most of these are daily smokers—and, by definition, can be considered “current” or at least monthly users of cigarettes. However, the bright side is that during the past decade, cigarette smoking declined, both among the population at large and specifically among 12- to 17-year-olds, by roughly a third.

The extent of legal recreational drug use, then, is immense. (One qualification: the purchase of alcohol by anyone under the age of 21, and of tobacco products by anyone under 18, is illegal.) Excepting caffeine, the most popular legal recreational drug is alcohol, which, as we saw, is used regularly or currently by a majority of the American population. Even the second most commonly consumed legal recreational drug (again, excepting caffeine products), tobacco, is used by more individuals *than are all illegal recreational drugs combined*. Of all drugs, tobacco, in the form of cigarettes, *is used most frequently*, even more than alcohol. In the United States, smokers use their drug of choice on average 15 times a day—they smoke just under a pack a day—whereas the

majority of drinkers of alcohol do not use alcohol that much during an entire week. Alcohol is used by the population, taken as a whole—including alcoholics, moderate drinkers, and abstainers—roughly once a day. Consequently, alcohol and tobacco are such important drugs of use that I devote Chapter 8 to them.

Illegal Instrumental Use

Illegal instrumental use includes taking drugs without a prescription for some instrumental purpose of which society approves, such as driving a truck, studying for an exam, working at an all-night job, falling asleep, achieving athletic excellence, or calming feelings of anxiety so as to cope with the events of one's day. People who purchase drugs illegally, without a physician's prescription, typically do not think of themselves as "real" drug users. They do not (primarily at least) seek the intoxication or high associated with ingesting the drug, but rather aim to achieve a goal of which conventional members of society approve. These users regard their behavior as merely technically illegal, and therefore not really criminal in nature and completely nondeviant. They do not make a sharp distinction between the use of legal, OTC drugs and the use of pharmaceuticals without a prescription. Both types of drug use have the same purpose: to achieve a mental, psychic, or physical state to facilitate the accomplishment of a socially approved goal. These drug users are half right: Most Americans would approve of their goal but disapprove of the means they have chosen to attain it. And because they approve of the goal, most Americans would not condemn illegal instrumental use as strongly as they would drug use for the primary or exclusive purpose of achieving euphoria or intoxication. Again, instrumental use highlights the continuities among different kinds of drug use, while pointing out their differences as well.

Illegal Recreational Use

The federal government invests millions of dollars a year in research funds to determine the extent of illicit drug use in the United States. It sponsors two major annual surveys that ask members of nationally representative samples, consisting of tens of thousands of respondents, questions about their consumption of illegal (and legal) psychoactive substances. According to the most recent available survey, in 2011, nearly half of Americans (47%), or 117 million, had at least tried one or more illegal drugs during their lives; 1 out of 7 (14%), or 35.5 million, had done so during the prior year; and 1 out of 13 (just under 9%), an estimated 22.5 million people, had done so in the 30 days prior to the survey (SAMHSA, 2012). The illegal recreational drug use of school-age children and young adults is even more impressive. In 2012, for students in all grades combined (eighth, tenth, and twelfth), roughly a third (34%) had taken one or more illicit drugs once or more during their lifetimes—a 9 percent decline from the peak year of 1997 (43%). Just under half of high school seniors (49%) had taken an illicit drug once or more in their lifetimes; 4 in 10 (40%) had done so during the previous year; and a quarter (25%) had done so during the previous month. For *eighth* graders, these figures were 19, 13, and 8 percent, respectively (Johnston et al., 2013)—for the most part, an increase of several percentage points over just four years before. In addition, the government sponsors ADAM II, the Advance Drug Abuse Monitoring Program, which regularly drug-tests

arrestees. In sum, a great many people are using drugs not only casually but regularly, and we have very good data which uncovers the whats, whys and wherefores of these statistics.

THREE ERAS OF DRUG USE

The Natural Era

Human drug use has undergone several dramatic changes since its prehistoric origins. The first era of drug taking began in the corridors of prehistory when our ancestors ingested plants that contain psychoactive ingredients, such as marijuana, coca leaves, psychedelic mushrooms, peyote, and opium, as well as the alcohol that issues from fermented fruit. We can refer to this stretch of time as the “natural” era of drug consumption. In ancient and tribal societies, the use of mind-altering drugs tended to take place either in a religious and ceremonial context or as medicine. Opium smoking, a major exception to this rule, probably began as a medical remedy but for centuries has also been for the purpose of recreation—that is, getting high. In all likelihood, the dominant motive for the consumption of alcohol has always been recreational. However, a major portion of that recreational use was linked to collective and ceremonial goals. The Dionysian cult of ancient Greece was oriented toward drinking oneself into an ecstatic frenzy, dancing to music, engaging in orgiastic sex, and ripping apart and eating the bodies of sacrificial animals.

The natural era included at least one innovation that yielded psychoactive substances considerably more potent than their natural plant form: the distillation of alcoholic beverages. Wine is only 13–14 percent alcohol, but distillation—boiling fermented liquids then recovering their more alcohol-potent vapors—produces drinks, such as gin, vodka, brandy, and whiskey, which have much higher alcohol contents (roughly 40–50%). Scholars place this innovation at roughly 800 C.E., in the Arabian Peninsula; several centuries later, the practice of distillation reached the shores of Europe, where it was more fully exploited. Higher-potency drinks can get the consumer intoxicated more quickly, with a lower volume of beverage.

The Transformative Era

The second or “transformative” era began at the dawning of the nineteenth century with discoveries and innovations that produced substances that are more potent than natural plant products. The key to the transformative era is that a *new* substance is created from a natural plant product by means of a chemical extraction. The 1800s generated a dozen or so innovations and discoveries that vastly increased the potency of the drugs found in nature. In a sense, scientists used chemicals to *improve* on nature. For instance, in 1804, morphine, a potent narcotic, was extracted from opium, a natural plant product. In 1831, codeine was synthesized from opium. In 1859, cocaine was isolated from coca leaves, a natural product containing roughly 1 percent cocaine, thereby producing a substance that was 90 times as potent. In 1874, diacetylmorphine (heroin) was synthesized from morphine. In addition, inventions and innovations delivered these more potent substances into the body by means of new routes of administration or ways of taking drugs. For instance, in 1853, the hypodermic syringe was devised; three years later, it was brought

to the United States. Physicians used it to administer calibrated—and very potent—intravenous (IV) doses of morphine; later, addicts did so as well.

Nineteenth-century America witnessed an *explosion* of inventions, discoveries, and applications that virtually guaranteed that the country would be awash in drugs—and, moreover, drugs vastly more potent than their natural progenitors. An IV administration of morphine, heroin, or cocaine can reach and activate the pleasure centers of the brain considerably more quickly and vastly more effectively and more efficiently, and consequently can generate a physical and psychological dependency more readily, than can the natural forms of the drug, which are less efficiently and effectively administered.

The Synthetic Era

The third or “synthetic” era dawned early in the twentieth century, when scientists began to create drugs entirely from chemicals not found in nature. Scientists synthesized the first barbiturate drug, Barbitol, in 1903, and over time continued to isolate different barbiturate compounds with slightly different pharmacological effects—for instance, Luminal (1912), Amytal (1923), and Nembutal (1930). In all, scientists created some 2,500 barbiturate compounds in their labs. In the late 1920s, scientists synthesized amphetamines, which are potent stimulants. These early chemicals were developed by scientists seeking to discover some medical or therapeutic benefit from these synthetic compounds. This effort spawned what has been called the “pharmacological revolution”: the development of synthetic chemicals used in the treatment of mental illness. In the 1950s, psychiatrists administered the first of the many antipsychotics, Thorazine, to mental patients; today, nearly all schizophrenics and clinically depressed patients take or are administered one or more chemicals to treat their mental disorders.

What is most interesting about the synthetic era and the pharmacological revolution it spawned is that not only are these drugs psychoactive, many also produce effects that recreational users enjoy and seek. A number of the psychotherapeutic drugs “escaped” into the street, to be used for recreation—for the purpose of getting high. LSD, first synthesized in 1938 and whose effects were discovered in 1943, was initially studied as a possible cure for schizophrenia. PCP, or phencyclidine, synthesized in the 1950s, was first used as an anesthetic and animal tranquilizer. In the early days of the recreational use of psychotherapeutic drugs—mainly barbiturates, tranquilizers, and amphetamines—young people stole a few pills from their parents; faked symptoms of psychic distress, convincing their physicians to write prescriptions; or located and paid unethical doctors to give them prescriptions for bogus ailments. Later, illicit labs sprang up to manufacture the chemicals that went into these drugs, and distributors sold them to a clientele interested more or less exclusively in taking those drugs to get high. Even today, the recreational use of the synthetic psychotherapeutic drugs rivals that of drugs whose recreational use stretches back much farther in time. In the latest government survey, conducted in 2011, nearly five times as many people had illegally used a prescription drug for nonmedical purposes, mainly to get high, during the previous month (2.4%, or 6 million) than had used cocaine, the second most common illicit recreational drug (0.5%, or 1.4 million). The synthetic era, spawned by the search for psychotherapeutics, is crucial for our understanding of the use of psychoactive drugs for recreational purposes.

Sociological Changes

Superimposed on the technological changes that delivered more potent drugs into the hands of users are sociocultural and economic changes that radically transformed the world of drug use. Of such changes, perhaps two stand out as most influential: the availability to the young of a disposable income, and globalization.

Using drugs in a market economy for recreational purposes presupposes a source of discretionary, disposable income, or access to or the largesse of someone who has such an income. In economies in which the young have no such income, the segment of the population typically most likely to use drugs recreationally is denied access to them and hence is unlikely to use or is capable of using only under nonroutine circumstances, such as illegally generating an income (for instance, prostitution). Hence, in tribal, agrarian, and early industrial societies, adults, not adolescents, were most likely to use drugs recreationally. However, beginning with the mid-twentieth century, income in the hands of the young increased enormously and, as a result, their capacity to spend that income on any and all recreational activities, including drugs, has increased as well. Consequently, over the past half-century or so, the center of gravity in drug use has shifted from young adulthood to late adolescence.

Globalization—the expansion of the international economic network, drawing many previously local and national markets into a single worldwide economy—has influenced drug use by revolutionizing the drug trade. The degree to which drugs are distributed on an international basis varies from substance to substance. Still, a certain proportion of the distribution of all drugs depends on interconnections that reach across national borders. Beginning in 1972 with the dismantling of the so-called French Connection, which previously had supplied 80 percent of the heroin sold in the United States, the number of source countries, the variety of routes through which drugs have traveled, and the number of national and ethnic groups involved in the trafficking of drugs have virtually exploded. Since the 1970s, the drug trade has been transformed from a cottage industry with a small number of country-to-country linkages into a global enterprise with multiple, international linkages, whose profits are greater than those of three-quarters of the national economies of the world. The movement of persons, goods, and information across national boundaries constitutes a literal superhighway for traffickers to transport drugs from the source to the user. In addition to an economy that is increasingly globalized, and hence increasingly favorable to the worldwide distribution of drugs, the past half-century has experienced a globalization of information, travel, and the media, all of which have facilitated drug use and distribution.

DRUG USE IN THE TWENTY-FIRST CENTURY

The drug situation in the first few years of the twenty-first century can be summed up in the following generalizations, which will form much of the core of this book.

- With respect to death and disease, tobacco and alcohol remain the country's number one and number two drug problems, together killing more than half a million people in the U.S. annually. In comparison, illicit drugs, or the illicit use of prescription drugs, cause or are associated with fewer than 30,000 deaths annually.

- Drugs vary enormously with respect to their capacity to cause acute (immediate or short-term) medical complications, including death by overdose. On a dose-for-dose basis, heroin is probably the most harmful in this respect, but it is less often used than cocaine and alcohol, which also appear extremely frequently in the nation's overdose statistics.
- Drugs also vary enormously in generating or being associated with acute, problematic behavioral changes, such as discoordination, violence, and poor impulse control. Alcohol, barbiturates, cocaine, the amphetamines, and PCP are heavily implicated here, while tobacco ranks low in this respect.
- The National Drug Threat Assessment for 2011 estimates that the availability of cocaine in the United States has decreased by nearly half during the past five or six years, which has resulted in significantly diminished cocaine abuse; the number of individuals initiated into cocaine use decreased to its lowest level since 1973.
- Abusive use of cocaine and heroin is most likely to be concentrated in the inner cities, mainly among racial and ethnic minorities; however, the artificial narcotics, including oxycodone, fentanyl, hydrocodone, buprenorphine and the like, tend to be used in more rural areas.
- Marijuana is by far the most commonly used illicit substance. There are roughly as many episodes of marijuana use as of all the other illegal drugs combined. In addition, the chronic, abusive use of marijuana is more common than for the two harder drugs, but it is associated with far less crime and vastly fewer psychological and medical pathologies.
- The use of several “club” drugs introduced in the past two decades, most notably Ecstasy, ketamine, Rohypnol, and GHB, has become widespread, but so far, it has not rivaled that of the older, more entrenched illicit substances. Since 2000, the percentage of eighth-, tenth-, and twelfth-graders using Ecstasy and the other club drugs has significantly declined.
- Monitoring the Future indicates that past month use of methamphetamine in 2012 for eighth-, tenth-, and twelfth-graders is less than half of what it was in 1999, the first year the survey began asking questions about meth. On the other hand, the data presented by the National Drug Threat Assessment's 2011 report indicates that the number of domestic and Mexican labs making meth has increased over the past four or five years, lab seizures have increased, the drug's price has decreased, its purity has increased, and use has increased. NSDUH's data indicate *past year initiates* into first-time meth use for 2011 (133,000) are substantially below the figure for 2004 (318,000), but higher than for 2010 (107,000).
- As we saw, drugs vary with respect to how “loyal” their users are to them. As a general rule, users tend to continue using the legal drugs—alcohol and tobacco—strikingly more than is true of the illegal drugs. Among the latter, marijuana, the most “legal” of the illegal drugs, manifests the highest continuance rate. LSD and PCP tend to be drugs of episodic, sporadic use.
- Alcohol is the only drug that a *majority* of “at least one time” lifetime users have taken during the past month. The nicotine in tobacco cigarettes is the only drug that over 8 out of 10 of “at least one time” past-year users have taken during the past month. For *all* illicit drugs, the vast majority of users either discontinue taking them after experimenting with them, or take them on a noncompulsive, recreational basis.

- According to a report published by the Cato Institute, a libertarian, free-market think tank, in 2010, the federal government spent roughly \$15.6 billion annually on fighting the drug war, roughly two-thirds of that on law enforcement, and the state and local governments spend a total of about \$25.7 billion, in roughly the same proportion (Miron and Wadlock, 2010).
- The country's rate of incarceration generally and for drug offenses specifically is the highest in the world. In 2011, the United States housed 1.6 million offenders in prison (with a sentence of at least a year and a day), exclusive of jails (which mostly hold inmates for court disposition). Roughly half of federal and a fifth of state inmates are drug offenders. African Americans are disproportionately on the receiving end of these sentences. At the federal level (about 10% of all inmates), sentences for drug offenses are only slightly more than a year shy of those for violent offenses.
- The literature on drug courts and drug treatment demonstrates that these forms of intervention are more effective than incarceration for nonviolent drug offenders. Indeed, for every dollar spent by not imprisoning but treating select drug offenders, the taxpayer receives three or four dollars back in savings to the community.

PRESCRIPTION DRUG USE

The ostensible reason governments control drugs is to ensure that the smallest possible number of people are harmed by their unauthorized use. But there's a second reason as well: Powerful business entities (for instance, pharmaceutical companies) lobby the government to enact or block legislation in order to protect their corporate interests and intellectual property, in which they have invested billions to develop their products. And one of the ways that governments control drugs is to require medical prescriptions for their purchase and distribution. To obtain a prescription, a patient must present certain symptoms to a licensed medical professional, usually a physician, who renders a diagnosis, typically of an ailment or a pathology, for which a given medication provides some relief, control, or cure.

As we have seen, the purpose for using recreational drugs is exactly the opposite of that of the pharmaceuticals. Recreational drug users take psychoactive substances so that they can reach a state of “*extasis*” or “extra-normality”—achieving a high or “out of mind” experience; in contrast, presumably, physicians and psychiatrists prescribe pharmaceuticals so that their patients can be taken out of their pathological or “abnormal” condition and *attain* a state of normalcy. Physicians do not write prescriptions for the purpose of altering that normal state of mind in order to attain a different state of mind. Indeed, as a general rule, the greater the departure from what is considered a “normal” state of mind a substance causes, the greater the controls that governments apply to the distribution of said substance. And the less medical utility physicians can find in a drug's use, the more this deviation will influence the government to control the drug. In addition, the greater the medical damage that a drug is seen to cause, the more tightly controlled its distribution will be.

Schedule I Drugs

The government deems *Schedule I drugs* as having “no medical utility” and a “high potential for abuse.” These drugs are completely illegal regardless of the purpose for

which they are used—very rarely, a very small number of researchers are granted exemptions for scientific research—and penalties for their possession and distribution are severe. The federal law calls for a 15-year sentence for the manufacture or distribution of narcotics, a 5-year sentence for manufacture and distribution of non-narcotics, and a 1-year sentence for simple possession; most of the state laws are similar. By federal law, marijuana, heroin, Ecstasy (MDMA), LSD, mescaline, peyote, psilocybin, methaqualone, and THC (the psychoactive ingredient in marijuana) are Schedule I drugs. As we've seen, during the past decade, 18 states have authorized the medical sale of marijuana, and in 14, law enforcement does not arrest for simply small-quantity possession. (The two categories overlap.) In addition, we know that in the 2012 election, two states, Colorado and Washington, legalized the possession and sale of marijuana. Under federal law, however, the distribution and possession of cannabis remains illegal.

The Schedule I drugs encompass the majority of the substances discussed in this book. They are the substances that the government has placed under the tightest controls, the use of which is mainly or exclusively recreational. Uses such as expanding one's mind, exploring the inner workings of the mind, getting high to intensify sensuous experiences, enjoying sex more, living life to the fullest, communicating with one's life partner, or simply having fun do not typically qualify. The government as well as the majority of the medical profession regard all of these purposes as illegitimate, as forms of abuse, as "mere" recreation, and the government considers "mere" recreation as a form of abuse. The only drug authorized for recreational purposes that can get the user high is alcohol.

Schedule II Drugs

Schedule II drugs are those that the law deems as having some medical utility and a high potential for abuse. "Potential for abuse" refers to the fact that these substances can produce intoxication or a "high," and hence, in the absence of controls, users want to take them recreationally. Physicians and psychiatrists prescribe certain psychotherapeutic prescription drugs for what is legally regarded as legitimate medical use. Examples of Schedule II drugs that are analgesics or painkillers include morphine, codeine, fentanyl, and oxycodone (one brand name: OxyContin). Methadone is used in regimens involving narcotic maintenance. Physicians once used cocaine as a local anesthetic for surgery on delicate organs, such as the eye. Amphetamines are prescribed for narcolepsy and, occasionally, short-term weight loss; in spite of its widespread illicit distribution, methamphetamine retains its Schedule II classification. Veterinarians have administered ketamine as an animal tranquilizer and anesthetic; it's difficult to imagine medical uses to which PCP, a drug similar in its effects but much stronger than ketamine, is currently put. The penalties for the unauthorized distribution of Schedule II drugs are similar to those for Schedule I drugs.

Like the Schedule I drugs, most Schedule II are capable of getting the user high—of generating that "exstasis" sensation, taking the user out of the "normal" state of mind into a mental place that some find intensely enjoyable. Most users don't enjoy the experience, or find it unsettling, or don't want to go through the hassle of obtaining a substance that is illegal, and they stop using it after experimenting with it. Some enjoy the experience and continue taking the drug. A small proportion want to take the drug over

and over; their excessive use poses medical problems for the user and often requires medical intervention. As we saw in Chapter 2, historically, when reports of a substantial number of cases of abusive use receive publicity and seem to authorities to pose a threat to public health, the government steps in and attempts to control the drug's distribution, usually in the form of requiring medical prescriptions authorizing its use.

Schedules III to V Drugs

Two major categories of psychotherapeutics include the antipsychotics (the drugs used to treat schizophrenia and bipolar disorders) and the antidepressants (drugs used to alleviate depression and elevate mood). Their effects on non-disordered individuals are not pleasurable or enjoyable, and hence, they are not used as recreational drugs. Antipsychotic medications include Haldol, Thorazine, Risperdal, and Seroquel. Antidepressants, such as Zoloft, Prozac, Pristiq, and Effexor, are likewise not used recreationally and pose little or no likelihood of abuse. Hence, most are classified as Schedule IV drugs; there is virtually no illicit market for them. This generalization does not apply, however, to the sedatives and tranquilizers (such as GHB, Rohypnol, and Valium), which are used recreationally on a widespread basis. And it most certainly does not apply to any of the stimulants, such as Adderall and Ritalin, which are also used therapeutically—and recreationally.

SUMMARY

Drug use exists both as a material or essentialist reality and as a constructed or conceptual reality. Drugs are chemicals, and have materially real effects on the bodies and minds of real people who ingest drugs. But drugs are also phenomena that are talked about, thought about, reported on, reacted to, and enshrined into law. Any investigation of drug use must simultaneously walk along these two paths: the essentialistic or objective, and the constructionist or subjective.

This means that when someone drinks a certain quantity of alcohol, intoxication and discoordination are an inevitable, measurable product of the interaction between the substance, alcohol, and a human body—a biological organism. But it also means that alcohol, a drug, is depicted in the media a certain way, is thought about by the population at large a certain way, is taught and learned about a certain way in the educational institutions, and is handled by the law and law enforcement a certain way.

Drugs are substances with effects, and these effects are objective, essentialist, or intrinsic properties. In this book, the effects of substances on the workings of the mind are paramount. Drug effects manifest themselves in material or real-world consequences—a reality that transcends social construction, propaganda, myth, law, and image. But drugs are also substances that are seen, defined, judged, conceptualized, and legally and socially constructed in certain ways. Indeed, the way that substances are defined may influence the effects those substances have. This is one of the beauties of our subject, and it is a theme that runs throughout this book. The twin tracks along which we run, so seemingly separate, are inextricably intertwined.

Drug abuse is a term that many critical observers have employed both objectively and pejoratively. As an objective term, “abuse” refers to drug consumption that is harmful and/or risky to users and persons who come into contact with users. This can be

measured by specific, concrete, material indicators. In contrast, as a pejorative term, it argues that only illegal substances can be drugs, and hence only the use—*any* use—of illegal substances can be drug abuse. This means that slugging down a quart of vodka a day is *not* drug abuse while smoking one marijuana cigarette a week *is*. This makes no sociological sense, although it may be useful for propaganda purposes. The term “drug use,” however, seems to be a more neutral term, referring to any consumption of a psychoactive substance. What seems to make more sense is to define drug “abuse” as the use of a psychoactive substance that is likely to cause physical or mental harm to the user.

Drug use can be divided into distinctly different although overlapping types based on two dimensions: the recreational-instrumental and the legal-illegal. Some types of drug use are pursued for the purpose of getting high (recreational), and others to achieve a state that facilitates the attainment of a goal of which society approves (instrumental). Most people identify drug use only with the illegal recreational pattern. However, illegal use can also be instrumental (taking a stimulant at night to cram for an exam), and legal use can be recreational (drinking a glass of wine at meals) or instrumental (taking Ambien to ease anxiety and get to sleep). Each type has its characteristic patterns and extent of use, its own cast of users, and its own networks of distribution.

The history of psychoactive drug use, which stretches back into prehistory, can be roughly divided into three eras. The first can be called the “natural” era, during which the drugs that humans consumed derived from natural substances, such as plants (cannabis, opium, psychedelic mushrooms) and fruits and starchy vegetables (which give off liquid that becomes fermented, thereby producing alcohol). This era encompassed the eighth-century innovation of distillation, which produced more potent alcoholic beverages—specifically distilled spirits—by boiling off and then recovering the more alcohol-rich vapors of naturally occurring alcoholic substances.

The nineteenth century represented the “transformative” era, during which scores of innovations transformed botanical products that occur in nature into new psychoactive substances. These substances were not only new but vastly more potent than the botanical forms from which they were derived; they contained a higher concentration of the psychoactive drug. Opium, a natural substance, was transformed into morphine (1804), codeine (1831), and heroin (1874), and cocaine was synthesized from coca leaves (1859). In addition, inventions, including the hypodermic syringe, delivered these substances into the human body more efficiently and effectively.

With the dawn of the twentieth century, innovations in chemistry permitted the synthesis of artificial substances that had not previously existed in a state of nature. Barbiturates were the first of such substances; amphetamines followed soon after. Subsequently, modern chemistry produced countless compounds, including “designer drugs,” that alter the workings of the brain, dozens of which are used recreationally: Ecstasy (MDMA), PCP (Serynil), meth, ketamine, and Rorhphnol, and GHB, to list just a few.

In addition to technological innovations that revolutionized the world of drug use, several social and economic changes have produced momentous changes. Two are especially noteworthy: the earning and accumulation of a disposable income by adolescents, that segment of the population likeliest to use drugs recreationally; and globalization, or the development of a worldwide network in communications, transportation, trade, and the flow of income—and hence, the distribution of drugs.

ACCOUNT: The Sociology of Drug Use

The Instrumental Use of Cocaine

The respondent, Paige, works as a hair stylist; the interview was conducted in 2010. “P” indicates the interviewee; “E” indicates me, the interviewer.

- P:** The first time I did coke, I was in a club in London, and I had already taken Ecstasy. Somebody gave me a bag of coke, and it was in a Zip-Loc bag, and he gave me a note to roll it with and a credit card [to chop it into lines]. I had never done coke before, I wasn't sure of how much to do, so I sort of took it in relation to how big the bag was, and I did three or four big, fat, massive lines of it. After snorting it, I was completely unable to speak.
- E:** Where were the lines of coke?
- P:** On the toilet. On the lid of the tank of the toilet.
- E:** You mean laid out.
- P:** Laid out. And I then just sat for the rest of the night unable to speak. It was not a very good experience. So I decided I probably wouldn't do it again.
- E:** Why did this gentleman give you a bag of coke?
- P:** Well, he wasn't the usual type of man you would find in a club like that. I think he was quite wealthy, he wasn't the typical clubber. This was a gay club, and he was straight. I had initially been to that club with my boyfriend—straight people often go to gay clubs as they are a lot of fun. This gentleman approached me probably because I was one of the very few women in the club and I think he quite liked me, and so after some conversation asked me if I would like to do some coke. After I did it, as I said, I was unable to speak [because it was so strong] and because I became a bit paranoid because I was talking with this guy and I was afraid my boyfriend might return. Coke can heighten your feelings and

make you very paranoid, and so after a while I left with my friends. And then I did it one other time in London. And that was bizarre as well. So I went to a toilet. And there was this person I sort of knew, and I did a line of coke with her. And she started to get very loose-mouthed. She told me she was once a man. It was quite a shock. It was quite bizarre because I was thrown off by her confession, not by doing the coke itself. I remember that experience of doing coke so well as my second coke experience because of her, him, whatever it was. The confession about this woman I had known having been born a man. Those were my first two experiences with coke, and I didn't touch it till after I came to New York. The fact is, doing coke wasn't the sort of experience with drugs as I liked to do because in those days, I liked to do Ecstasy.

When I got to New York, I decided that everybody did it here. I was new to New York, and I was newly single, and I was exposed to every single scenario that was going on here then. Then I started working in a private dungeon as a dominatrix. At first, I did it completely sober—I didn't touch any drugs or alcohol at all. And then one day, I had this special client. I had been in there an hour already and he just kept talking about all kinds of bizarre, weird things, and I found it really hard to deal with, so I left the session for a break, and I said to one of the other girls, I feel as if I need a drink. . . . She was doing coke and she asked if I did coke, so I went back in with the guy and did a line and things got a lot easier for me from there. Without the coke, with the guy talking dirty and talking about all kinds of weird stuff, and for me, that was difficult to handle sober. After that [i.e., under the influence of cocaine], I found it so easy working in The Dungeon.

The time flew by and I stopped clock-watching. So then, when there were some of the clients who came into the club who were into coke, I would do it with them because it just made things a whole lot easier. . . . I led a secret double life for a couple of years.

E: And when you were involved in these sessions, would you use coke?

P: It would depend on the time of day. During the daytime shift, there were guys who were just slotting in a 15-minute or an hour session within their working day. So there were no drugs involved. The guy really knew what he wanted, in and out. But in the evenings, more drugs were involved. I would say that most of the time, at night, drugs were involved.

E: Were drugs other than cocaine involved?

P: Not usually. But let me say that I used drugs more recreationally with my friends than I did at work, in The Dungeon. I liked to go to clubs and parties, and when I did, I did Ecstasy, not coke. I only used coke while working in the club, if the client was also doing coke and it required working multiple hours. Otherwise I preferred not to. The only benefit was that the guys doing coke usually booked multiple hours and therefore I made more money.

E: What were your clients like?

P: In the times when I saw guys outside The Dungeon, they were big shots, very respectable businessmen, guys with a lot of money.

E: How much would you make in a session?

P: Then, a Dungeon session costs about \$150 an hour which was split 50/50 with the house. Certain things might be more, such as asphyxiation (since there's some risk involved) or an enema (which is unpleasant for the woman)—then the session might cost \$200, which again is split 50/50. There were tips on top of that, too, ranging from \$10 to \$100, depending on how generous the client felt. Outside The Dungeon, we

were able to charge \$200 an hour and sometimes \$300.

E: Is The Dungeon located in London or New York?

P: It was in midtown Manhattan.

E: Is it still operating?

P: I actually went looking for it a while ago. It was in a plain, disheveled, nondescript building in midtown Manhattan. Third floor. A plain-looking door. You would never have known what exactly was in that building. It was shared with a lot of other offices. I don't even know what they did. The entire building has since disappeared.

E: How did you get recruited into it?

P: I was staying in London with these two gay guys who were trying to persuade me to move to New York and be their roommates. I just ended up leaving my life in London and staying in New York. It wasn't planned. But I knew when I moved to New York, I would have to start paying rent. I had very little money and no working visa, so I started looking for a job, but I knew I'd have to work in something off the books, even illicit. I initially thought about waitressing, so I went to all the usual places, like restaurants. I got scared because I kept hearing all these stories of immigration officials checking up on illegal aliens working at restaurants. All the money I had brought with me had run out. So I started looking through *The Village Voice*, and I saw an advert that said, "Role Playing, Earn \$\$\$, No Sex or Nudity Required." I knew a little bit about S&M. Just from life, you know. In clubs I had gone to, the people were dressed in all these outfits, and they have DJs and music, and you go and look at all the weird and wonderful sights. They're social places, and I did go to a number of them. That's why I had this fabulous wardrobe of outfits and I knew a little about them. But I really had no idea what the real deal was.

QUESTIONS

Do you see a basic difference here between the illegal instrumental use and the illegal recreational use of cocaine? Do you see a difference between the legal instrumental use of a psychoactive prescription drug (obtaining a prescription from a physician for a medical or psychiatric condition) and using the same controlled drug instrumentally, but without benefit of a prescription? Do you take Paige at her word, that she never really enjoyed the use of cocaine or used it at all off the job? Would it make a difference to you if that were true? Is

Paige's instrumental use of a specific psychoactive drug (cocaine) as separate and distinct from her recreational use (of Ecstasy) as she claims? Does Paige's case help you to conceptualize the distinction between instrumental and recreational use? Do you believe her when she says that she needed coke not only because her clients expected it but also because it enabled her to engage in some of the distasteful activities her former job demanded? Does the fact that she now works at a satisfying, legitimate job and does not use cocaine give us insight about her former activities?

DRUGS IN THE MEDIA

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In Chapter 3, we saw that drugs and drug use can be looked at from both the objective (or essentialist) and the subjective (or constructionist) perspectives. The essentialist perspective focuses on

drugs and drug use as materially real phenomena, while the constructionist perspective looks at depictions or representations of or beliefs about drugs and drug use and what is done about them, for instance, legally. Here, we examine one aspect of the social construction of drug use: how drugs are depicted in the news media. The media create a reality of drugs and drug use—whether factually true or false—by presenting stories about them. During a particular period, the media might seize on drug use as a major problem, stirring up public fears and concern. By focusing on the issue, the media generate discussion, politicians and community organizers launch plans to control drug use, legislators pass laws, enforcement officers arrest users—all, in part, because the media depict drug use in a certain way. At other times, the media may present a portrait of drug use in more nuanced, more complex, less negative, less denunciatory terms. As a result, the public, legislators, and law enforcement become less concerned about the issue. So, the *media's* representations of drug use (a constructed reality) often results in the *law's* definitions of drug use (another constructed reality). Here, in Chapter 5, the question is the *how* and *why* of drug reporting. This issue underscores the importance of the concept, so crucial throughout this book, of the social construction of reality: how a particular reality of drug use is constructed and, more specifically, how the media depict drug use—and with what consequences.

How do the news media depict the reality of drugs? Is it portrayed in an accurate, unbiased, and—to use an overworked word—“objective” fashion? Or is the coverage of the drug beat biased, unfair, and—to adopt a term used by two media critics to refer to the cocaine story—“cracked” (Reeves and Campbell, 1994)? Just as important, if bias is evident in the media’s coverage of the drug story, as I indicated, does it influence legislation and law enforcement? Drugs have remained a frequently reported and standard fixture in the news for over a century: Bennett (2006) offers the interested reader a 108-page, 6,000-item collection of “Over 100 Years of National Drug Related Headlines” and the journals and magazines in which their articles were published.

One brief digression before we plunge into the media’s representation of drugs. “The media” as a generic concept encompasses an enormous number of separate yet overlapping enterprises: newspapers and magazines, television news, drama, comedy, and documentaries, films, videotapes, CDs and DVDs, books (both fiction and nonfiction), comic books and graphic novels, advertising of every conceivable description, government informational materials, leaflets, flyers, solicitations, interest group propaganda, and of course, the Internet. To discuss how each and every one of these enterprises depicts drug use would require an entire book-length treatment. Here, I focus specifically on what is regarded as news, as opposed to fictional representations. In addition, I’ll concentrate mainly on the print media (magazines and newspapers), since they are more accessible to the researcher than the broadcast media (mainly television). The depiction of drugs in the electronic media (the Internet) would require yet another separate treatment.

ARE THE NEWS MEDIA BIASED?

What is “bias”? Is any assertion or argument with which someone disagrees “biased”? In the 1960s and 1970s, many Marxist criminologists accused sociologists investigating and writing about deviance and crime of bias for not supporting a socialist revolution to destroy the capitalist system (Quinney, 1979, pp. 12–14, 422). With the collapse of

Marxist-inspired regimes in Eastern Europe and the downfall of Marxism as a dominant—or even a viable—intellectual, theoretical, and political framework among academics and activists around the world, the earlier charge of bias no longer seems plausible. Many fundamentalist Christians accuse scientists and the mainstream media of bias because they support the idea of the evolution of the species. Scientists argue that the evidence supports their position, asserting that it is creationists, not they, who are biased.

So, once again, what is “bias”? Is it merely in the eye of the beholder? It’s not as easy to determine bias as critics who charge the media with it claim. Taken as a neutral, descriptive term rather than the refusal to accept the observer’s version of truth, bias can have at least two meanings. The first is *factual* bias—making factually and empirically false claims or assertions in order to justify a particular moral, ideological, or political position. And the second is *selection* bias—focusing on the particular facts that support a certain slant or position and ignoring those that challenge or undermine it. In principle, these two forms of bias are quite different, although in practice, they are intertwined. Let’s start with the first form of bias: making factually false statements.

Journalists will say that it is their job to tell the truth about the significant and important events of the day; they will say that it is their responsibility to ensure that established interests don’t foist lies on the public. They claim that they serve as a “watch-dog” for the truth, they are on the lookout for the facts; they want to get it right, media representatives insist.

Nearly all reporters are distressed if they are lied to by their informants, and editors become doubly so when their reporters swallow factually false tales from their informants and sources. Journalists say that when a story is unmasked as factually false, there are usually harmful consequences for its writer, editor, and publisher. In this chapter, we’ll encounter precisely these consequences for the relevant parties. All reporters are aware of the consequences of writing stories that are fabricated or factually erroneous. Any journalist whom editors and publishers find to be “error-prone” will be fired (Mencher, 2010, p. 34). Hence, journalists will emphatically deny that the news media practice factual bias.

It is also true that not all news media are equally concerned about issues of factual accuracy. The higher the prestige of a particular media institution, the more professional embarrassment factually false stories cause. But even many low-prestige scandal sheets must adhere to certain verifiable facts because they can be sued; the subjects of stories that appear in the *National Enquirer*, mostly celebrities, have sued the paper for printing factually false stories. (At the height of its popularity, the *Enquirer* sold 6 million copies a week; today its circulation is under 600,000.) But the *Weekly World News*, a former print tabloid, is now online; its editors and journalists do not concern themselves about whether or not their stories have been fabricated. No one fact-checks these stories because everyone knows they are bogus; their purpose is entertainment, not news. Here are a few of its recent headlines: “Alien Space Ships Attack Earth”; “Justin Bieber Must Wear a Gas Mask”; “Locusts Invade Detroit”; “Dennis Rodman Named Leader of North Korea”; “Drones Attack Rand Paul.” What the subjects of their stories are concerned about is *defamatory* stories—whatever causes them to sue the tabloid—not factually false assertions. On the other hand, publishers, editors, and reporters who work for prestigious publications such as *Time* magazine, *The New York Times*, and *The Washington Post* care a great deal about factual accuracy, and not only because they can be sued, but for

professional reasons; these publications spend a great deal of money, time, and effort engaging in fact checking.

This does not mean, however, that everything in even the most highly respected newspapers and magazines is true. Given the enormous volume of factual assertions made in them every day, and the immense number of sources the media must rely on, lots of errors inevitably slip through the cracks. But notice that what editors and publishers consider factually wrong assertions are nearly always *specific, concrete* facts—facts about events that either happened or did not happen, facts that are one way, or another. Editors become a great deal less distressed about big or general assertions that are based on putting together and drawing conclusions from many specific, concrete facts. Editors and publishers permit much more latitude to writers for interpretations from the facts than for the specific facts themselves.

For instance, the question of whether a given program of drug treatment is effective or ineffective can be interpreted in a variety of ways. Most researchers believe that if we agree on what we mean by “effectiveness,” yes, drug treatment is at least modestly effective. (The evidence to support that generalization is presented in Chapter 15.) But enough researchers can be located and quoted to make it seem that this is not the case, that there is disagreement in this area, and many journalists have presented the case that drug treatment is a failure. Conservative publications will welcome articles criticizing drug treatment programs even though expert consensus is that such programs work. Editors and publishers will be dismayed, however, when a reporter writing about drug treatment gets the specific facts wrong—if a given program is located in California rather than New York, if it treats heroin addiction rather than cocaine addiction, or if it treats 100 clients rather than 1,000. They will become especially distressed if a reporter makes up facts, fabricates interviews, or steals quotes from other journalists. But what editors and publishers are tolerant about is errors of reasoning from the facts—big-picture conclusions or generalizations that are no less factually relevant than specific facts—since they are more difficult to verify. Furthermore, in most cases, such errors are likely to square with the biases of the publication they work for or own.

Hence, the kind of bias we’re interested in here is less a question of factual correctness than of the slant or focus of stories based on (more or less) factually correct specific facts. This is our “selection” bias. In this respect, of course the media are biased—they tend to present a particular angle or point of view on the events of the day. No story can present “the truth, the whole truth, and nothing but the truth.” In fact, there is no such thing as the “whole” truth. In narrating a story, it is impossible to present each and every relevant fact about a particular phenomenon or set of events. *Some* selectivity is necessary and inevitable. The question is, What *form* does this selectivity take?

This type of bias isn’t necessarily a bad thing—indeed, it is impossible to avoid—but it is important to know how it operates in the news. After all, all narrators select and focus on particular features of a phenomenon and leave others out of the picture. To be sure, many news stories are a factually inaccurate representation of reality. But the most important thing about how the press handles the drug beat is their “take” or slant—how they construe and narrate their stories, what is *newsworthy* about a given story. Other institutions and entities such the general public, criminologists, other social scientists, law enforcement personnel, politicians, lawmakers, educators also have their own slant,

also construe and narrate the same phenomena, but in somewhat different ways. What is the special slant of the media, and why do they hold it?

FOUR THEORIES OF MEDIA BIAS

Four theories that attempt to explain the direction of media slant or bias come to mind.

The first is the ruling elite theory (or “top-down” theory), which argues that the media consciously and purposely serve the interests of the ruling elite. In one version of this theory, mainstream society, including representatives of the media, has been socialized to accept the ruling elite’s version of truth; this is referred to as hegemony or *institutional dominance*. In another version of the theory, members of the elite conspire to coerce representatives of society’s mainstream institutions, including the media, to accept versions of the truth that agree with their own class interests. In both versions of ruling elite theory, the media distort the truth by presenting the news in a manner that favors the interests of the ruling class, and hence maintains the status quo. Says Michael Parenti, a major advocate of this position: “We do not have a free and independent press in the United States but one that is tied by purchase and persuasion to wealthy owners and advertisers and subjected to the influence of state power” (1993, p. 4). In this theory, *ideology* is the central factor at work, not profits for the press.

A second and related but distinctly different theory of media bias is the “money machine” theory. This perspective argues that owners of newspapers and television stations are interested in the bottom line, not political indoctrination. Ruling elite theorists would argue that earning a profit depends on maintaining ideological hegemony, but many ideologically motivated systems do not turn a profit. Many profitable enterprises may, each in its own way, challenge the status quo. In principle, profits and ideology are separate and distinct from each other. According to journalists Leonard Downie Jr. and Robert Kaiser, summing up the money machine theory, as a result of the pressure to earn an unrealistically high profit from newspapers and television news, the media are being debased. In short, their news coverage is unduly influenced by the financial bean counters. Delivering a profit—and a substantial one at that—has become the guiding principle of news organizations, leading to triviality, sensationalism, bias, and irrelevancy. And meanwhile, the major stories of the day are ignored. Or so some critics argue.

The third theory of media bias is the *grassroots* theory, which argues that the press responds to the biases of the public at large by reporting stories in ways that are appealing to their readership as a whole. Hence, it is the general public’s view that determines the slant of the news. The bias of the media is the bias of their audiences. The grassroots theory doesn’t necessarily hold that the general public has interests that oppose or support those of the ruling class. Some views of the public at large are populist and anti-elitist, while others are consonant or in agreement with the interests of the elite. In the grassroots theory, the elite are more or less irrelevant to shaping media content. Interestingly, the grassroots theory is not radically different from the money machine theory, since what appeals to the masses is also likely to make a profit—hence the saying, “if it bleeds, it leads.” Journalists refer to this slant as the “Hey, Mabel!” principle. (To be nonsexist, it could just as easily be referred to as the “Hey, Fred!” principle.) A man is sitting at the kitchen table, sipping coffee and reading the morning newspaper. He comes

across an item that he finds especially remarkable. He shouts out to his wife, who's preparing breakfast, "Hey, Mabel! Listen to this!" In this case, the remarkableness of the story is a "grassroots" phenomenon: It spontaneously strikes the ordinary, grassroots reader as remarkable.

The fourth theory of media bias is the *professional subculture* theory. By the lights of this view, the media approach the events of the day according to the distinct norms, expectations, and ethics of practitioners of the profession of journalism. For instance, one norm among journalists is to verify a story with two or more sources. A second is to always keep in mind the cardinal rule of journalism: "Accuracy, accuracy, accuracy" (Mencher, 2010, p. 34). A third is to "tell the story in human terms. . . . Human interest is an essential ingredient of news" (p. 51). And a fourth is to shape the story with a specific audience in mind (pp. 66–67). The first two of these principles pull the journalist away from bias toward objectivity, whereas the second two (stressing the human interest angle and keeping the audience in mind) may—and often do—contradict the norm of factual accuracy and move the news toward biased reporting. Hence, the media's bias is slanted toward the norms of reporters, editors, and publishers. It is those subcultural norms that determine the content, and hence the slant or bias, of the news.

These four theories are not mutually exclusive or contradictory in every detail. And advocates of none of them would argue that their theory explains every single story or every single media source. There will always be some exceptions to any rule. What counts is not to pick and choose examples or illustrations to verify one or another of these theories, but to determine whether one or another of them explains the basic structure and dynamics of how news in general is reported. It is entirely possible that the way the media work is a mixture of different processes spelled out by all four of these theories. Still, the question is relevant: Which of these theories *best* explains the slant the media adopt in their stories on drugs?

THE SOCIAL CONSTRUCTION OF A SOCIAL PROBLEM

"Execute Drug Dealers, Mayor Says," "Brutal Gangs Wage War of Terror," "Flood of Drugs—A Losing Battle," "Surge of Violence Linked to Narcotics," "War on Drugs Shifting to Street," "Drug Violence Erodes a Neighborhood"—these and similar headlines fairly scream out the public's anxiety over the drug abuse issue.

These headlines tap a certain fear and *concern* felt by the public about drug abuse. (More specifically, they tap the fear and concern that journalists, editors, and newspaper publishers believe the public feels—a belief that is often justified.) Drug use, like every other endeavor or social condition, has a socially constructed or *subjective* dimension: the public's feeling or attitude about it; what is believed about it; the feelings, attitudes, and beliefs of the public, or segments of the public, about the individuals who engage in it. Likewise, as we saw, drug use and abuse have an *objective* side as well: what drugs actually do to humans who use them, how widely and frequently they are used, and what kind of impact they have on the society.

As with most other behaviors, conditions, and issues, the constructed and the objective sides of drug use overlap, but extremely imperfectly. We may be concerned about behavior and conditions that, objectively speaking, are not threatening or damaging at all;

and we may be unconcerned about behavior and conditions that are objectively *very* threatening or damaging. As we proceed through the book, we'll encounter multiple instances of this principle—mountains made of molehills, molehills made of mountains. These two dimensions—the subjective and the objective—may be out of sync with one another over time, with concern rising when damage from drug abuse is dropping, and declining when it rises. It is wise, when investigating deviant behavior and conditions, to keep the subjective and the objective dimensions analytically separate in one's mind (even though in real life they influence each other). *Regarding* a given condition or behavior as threatening and damaging, as deviant, or as a social problem (the subjective or socially constructed dimension) may be completely unrelated to the *actual* physical or psychological damage it causes (the objective or positivist dimension). The connection between these two dimensions cannot be assumed; it has to be investigated empirically.

In the United States, the fear of and concern about the threat of drug use and abuse have waxed and waned over the years. One measure of that fear and concern is the number and content of news stories on the subject. In the 1930s, newspapers and magazines published hundreds of sensationalistic articles that detailed the supposed horrors of marijuana use. In the 1940s and 1950s, such stories declined sharply in number and stridency. In the second half of the 1960s, literally thousands of news accounts were published and broadcast on LSD's capacity to make users go crazy and do terrible things to themselves and others. By the early 1970s, LSD had ceased to be news, and heroin stormed into the headlines. By the mid-1970s, the media had quieted down on the drug front. But the mid- to late 1980s witnessed a rebirth—indeed, something of an explosion—of public concern over the use and abuse of illegal drugs.

For instance, between the early and mid-1980s, the number of articles on the subject of drug abuse published in the popular national magazines that are indexed by *The Readers' Guide to Periodical Literature* increased eightfold. In the single year between 1985 and 1986, the number increased more than two and a half times. Although it had been building up in the two or three years prior, 1986 was the year that drug use and abuse fairly *erupted* as a social problem in the United States, subjectively speaking. However, in the 1990s, this concern, although it remained high, declined significantly. And into the twenty-first century, drug use remains a focus of media attention, but that attention is only moderate compared with the peak years of the mid- to late 1980s. Other concerns—such as the economy, the war in Iraq, and the “war on terrorism”—shoved drug abuse off the center stage of media attention.

Another measure of the subjective dimension is the public's designation of a given condition or behavior as a serious problem. Each year, and several times during some years, the Gallup Poll asks a sample of the public what they regard as the “number one problem facing the nation today.” As with the articles published in *The Readers' Guide*, the Gallup Poll provides a very rough measure of subjective public concern over a given condition at a particular time. The public's concern over drug abuse rose and fell, and rose and fell again, between the early 1970s and the early 1990s. In February 1973, 20 percent of the respondents in the Gallup Poll felt that drug abuse was the nation's number one problem. However, between that date and 1985, the percentage mentioning drug abuse as the country's most serious problem was so low it did not even appear among the top half-dozen problems. During 1985 and into January 1986, between 2 and 3 percent of the American public mentioned drug abuse as the country's most important

problem; in April 1986, in a set of parallel polls conducted by *The New York Times* and CBS News, again, 2 percent mentioned drugs as the country's number one problem. In a July 1986 Gallup Poll, the figure was 8 percent; in an August *Times*/CBS poll, it was 13 percent. The figure continued to rise throughout the remainder of the 1980s until September 1989, when a whopping 64 percent of respondents in a *Times*/CBS poll said that drugs constituted the most important issue facing the country at that time! This response represents one of the most intense preoccupations by the American public on the drug issue in polling history.

The September 1989 figure proved to be the pinnacle of public concern about drugs; it is unlikely that a figure of such magnitude will ever be achieved for drug abuse again. After that, said one media expert, intense public concern simply "went away" (Oreskes, 1990). By November 1989, according to a *Times*/CBS poll, the figure had slipped to 38 percent; in July 1990, to 18 percent; in August 1990, to only 10 percent (Kagay, 1990; Oreskes, 1990; Shenon, 1990). Between November 1990 and December 1991, the figure remained in the 8 to 12 percent range; between March 1992 and August 1994, it had dipped slightly into the 6 to 8 percent range. Currently, the drug issue is hugely overshadowed by the wars in Afghanistan (30%), the economy (25%), and health care (12%), along with a host of other issues such as unemployment, dissatisfaction with the government, and illegal immigration. In 2010, drug abuse ranked at number 22, having been nominated by only 1 percent of the respondents in a Gallup Poll as the country's most serious problem. Between 2001 and 2012, in a series of polls, Gallup also asked respondents whether they "personally worry" about certain problems. In the most recent of such polls (conducted in March 2012), the economy was the nation's top problem, with 71 percent saying that they worried about it "a great deal." Gas prices, federal spending and the budget deficit, and the availability and affordability of health care ranked as numbers 2, 3, and 4, respectively; drug abuse ranked 11th.

What we saw during the late 1980s, then, was a period of *intense* public fear of and concern about drug use and abuse. It was so intense that observers referred to it as a drug "scare" or "moral panic" (Goode and Ben-Yehuda, 2009). A moral panic is a heightened, widespread, explosively upsurging feeling on the part of the public that something is terribly wrong in their society because of the moral failure of a specific group of individuals, a subpopulation that has been defined as the enemy, a "folk devil" (Cohen, 1972, 2002). In a panic, a category of people is "deviantized" (Schur, 1980). This is precisely what happened with drug use and abuse between 1986 and 1989. During this period, American society was undergoing something of a moral panic about drug use; drug abusers were defined, even more intensely than had been true in the past, as deviants. Illegal drug use was regarded as deviant before 1986, and continues to be so regarded today, but the *intensity* of this feeling reached something of an apex during that relatively brief three- or four-year period.

This does not necessarily mean that, objectively speaking, by the late 1980s and early 1990s, drug use had ceased to be a problem in the United States. In fact, by some indicators, such as drug overdoses, in the late 1980s, the drug problem actually *increased* in seriousness. Moral panics, and the fear of and concern about a given behavior or condition, do not emerge solely as a result of public awareness of an objective threat. During a moral panic, there are often far more serious conditions or more dangerous behaviors that attract little or no concern compared with those that generate

intense concern. As a rule, the public has an extremely hazy notion of how threatening or damaging certain conditions or forms of behavior are, and the world of drug abuse is no exception.

As I've asked before, why is illegal drug use, including the illicit use of pharmaceuticals, of far greater public concern than legal use (alcoholic and cigarettes), when the latter kills more than ten times as many of us (Horgan, Skwara, and Strickler, 2001)? Why are illegal drug users regarded as deviant while legal drug users are not? There may be concrete reasons for this greater concern and condemnation that explain the objective or real-world impact of illegal drugs as opposed to legal drugs. Perhaps it is based, in part, on the fact that the victims of illegal drugs are *younger* than the victims of alcohol and tobacco, and hence, far more years of life are lost per death. Perhaps the public has the (objectively true) feeling that drugs such as cocaine and the narcotics are vastly more harmful *on a dose-by-dose basis* than is true of alcohol and tobacco. Perhaps there is the feeling that drug dealers destroy communities and corrupt law enforcement in a way that is quite unlike the way that purveyors of legal drugs do. (The very illegal status of some drugs may contribute to the harm they cause.) There may very well be a wide range of objective factors influencing this relationship. But the fact remains, legal drugs kill more than 10 times as many Americans as illegal drugs, yet Americans are far more concerned about illegal drug abuse than about legal drugs. This paradox is central to any examination of drug use as a form of deviance. As a general rule, the public formulates judgments about the seriousness of certain conditions, behavior, and issues, and regards certain behaviors as deviant, on the basis of criteria that are to some degree *independent* of estimates of their objective harm. In fact, the public's estimates of the objective harm of specific conditions, behaviors, and issues are extremely faulty and are influenced by a wide range of extraneous factors (Slovic, Layman, and Flynn, 1991).

SENSATIONALISM IN THE MEDIA: THE DRUG STORY

Of the many different forms of bias of which critics accuse the media, the one that is most directly relevant to stories on drugs is sensationalism—the intention to amaze, thrill, or excite intense reactions by using exaggerated, superficial, or lurid methods. The charge of sensationalism goes directly to the heart of all four of our theories of media bias—the ruling elite, the money machine, the grassroots, and the professional subculture theories.

Sensationalism is relevant to the ruling elite theory of media bias because, elite theorists argue, sensationalistic stories divert attention away from the fundamental, structural problems of society—such as racism, inequality, and poverty—whose solution would require that the elite relinquish society's power and resources. When the media feed the public with sensationalistic stories of celebrity stalkers, road rage, crack whores, and child molesters, audiences tend to forget about what needs to be done to make the society a more humane and just place in which to live. The media, radical critics argue, serve the function of maintaining *social control*—preventing the masses from demanding significant, meaningful, and radical social change.

Sensationalism is relevant to the money machine theory because, its theorists argue, what counts in making a profit is attracting a large audience. To be more precise, in the

world of print media, especially magazine publishing, success means carrying stories and attracting ads that appeal to specialty “niche” audiences, such as those interested in skiing, interior decorating, cooking, computers, gardening, and wrestling. More specifically, it argues that attracting advertising revenue is fundamental to making a profit, and advertising flows from the size, the affluence, and the interests of specific audiences. Hence, large audiences within a specific market is a good thing. An audience need not be large for the advertiser to recognize that well-placed ads in a specific media venue are likely to attract customers and hence, sales. Tiffany and Cartier advertise in the pages of *The New Yorker*, as do the Westin Hotels and Resorts, Louis Vuitton, Eileen Fisher, the Metropolitan Opera, and Versace—all corporations whose exclusive, expensive products or services attract customers tending to earn a six- or seven-figure salary. But the money machine theorist would argue that while affluent specialty audiences are, taken as a whole, enormously profitable, other things being equal, the bigger the media outlet—and hence, its audience—the larger the total profit. After all, television networks (with vastly larger audiences) earn a great deal more than *The New Yorker*. Moreover, affluent, sophisticated audiences, while they are attracted to a wide range of stories, are no less fascinated by sensationalistic stories than larger mass audiences. In magazine publishing, then, specialization is the rule; in network television broadcasting, mass marketing is the rule, although this is changing, since the large networks are losing their audiences to cable and satellite hookups. Sensationalism is still important for seizing the public’s attention, but how important it is depends on the nature of each medium.

Sensationalism is relevant to the grassroots theory because it addresses the fact that the general public loves a good, exciting story, and the more sensationalistic it is, the more it grabs an audience by the throat. To much of the grassroots populace, fact checking is secondary; to a populist, the fact that a story *feels* true is more important than whether it has been *verified* as true. Anyone interested in what a populist-driven publication looks like should peruse the tabloids; in New York, *The Daily News* and the *New York Post* lean in a more sensationalistic direction than *The New York Times*. Here, the human interest angle, innuendo, and sensationalism tend to be central; in this world, too much factual detail and nuance is distracting and boring.

And sensationalism is relevant to the professional subculture theory of media bias because journalists believe they have an obligation to personalize, dramatize, and individualize the news, and to approach it from the perspective of one or more relevant audiences, so that readers and viewers identify with their stories. Even reputable, prestigious media sources walk a fine line between news as drama and news as verified fact; often news as drama slants stories in a sensationalistic, distorted, and biased fashion. Among the more reputable and prestigious media sources (such as *The New York Times*), the norm of factual accuracy will dampen sensationalism; among less prestigious media sources (*Weekly World News*), the norm of personalization will permit sensationalism to run wild. But drama always plays a role in all media, and hence, opens the door to bias as a consequence of sensationalism.

Do the media sensationalize stories on drug use? Do they exaggerate a moderately threatening situation into a far graver, more ominous, and much more serious threat? Do they emphasize lurid details? Through the use of a biased selection and presentation of the facts, do they lead audiences to false conclusions? Sensationalism comes in a variety of forms when reporting on drug use, including exaggerating the number of people

engaged in the behavior, the amount of harm the behavior causes, and the number of victims who are harmed; advocating the “enslavement” theory of the behavior (“once you start, you can’t stop”); claiming that all social categories are equally at risk for engaging in the behavior, that it is randomly distributed in the population rather than socially patterned; implying that drastic, harsh, draconian measures are necessary to deal with the offending behavior, that “lock ‘em up and throw away the key” is the only solution.

The slant of the media in presenting drug stories in exaggerated, sensationalistic terms can readily be seen in their graphic representations of use. The media represent increases in drug use in the form of charts and graphs which exaggerate them, thereby creating the illusion of the explosion of a “new” drug problem. This is achieved by truncating the bottom half of a graph or chart and compressing the time line during which increases take place, making them seem steeper and sharper than they actually are (Orcutt and Turner, 2003)—depicting use over time in the form of a “gee whiz” graph (Huff, 1954, pp. 60–65).

These days, however, the subject of sensationalism in the media needs to be accompanied by an important qualifier: As we saw, the public no longer regards drugs as the major problem it did in the late 1980s, during the height of the crack scare. Media audiences no longer feel that the recreational use of psychoactive substances is the *threat* it once was. Hence, the media do not focus as much attention on it as in the past; moreover, even the headlines and content of drug stories are not as lurid or as melodramatic as they were 20, 30, or 40 years ago. I’m not saying that drug “scares” are strictly a thing of the past, but such a panic is unlikely to storm back into the press in the same way that the classic panics of the past did. Even if a new, “scary” drug were developed, began to be used on a widespread basis, and seemed to pose a threat to users, most media practitioners have become more sophisticated about substance abuse than was true in the past, and would be unlikely to report the story in the same sensationalistic manner that they used in generations past. It is true that methamphetamine use remains a menace in many parts of the country, especially in rural areas, and local media stories continue to focus on it in a manner in which the national press or urban journalism would and does not. But in some ways, for the most part, drug panics are of historical interest, and here, we’ll look at five of the most revealing of case studies of how the media treated the drug threat: marijuana in the 1930s, LSD in the 1960s, PCP in the 1970s, crack in the 1980s, and meth in the 1990s and beyond.

DRUGS IN THE MEDIA: AN INTRODUCTION

When a previously unknown drug begins to be used on a widespread basis, or a drug begins to be taken by a category in the population that had not previously used it, the media all too often indulge in sensationalistic reports of this brand-new “scary drug of the year” (Akers, 1990). The details are different, but the common element is the hysteria generated over the use of a novel substance, initially believed to be far more harmful than it eventually turns out to be. More specifically, new drugs are usually, although not always, attributed with a criminogenic effect—causing violence and crime.

Though the subject of the stories—the specific drug that the media focus on—changes, the structure of news reporting remains the same. A few dreadful,

scary episodes, alleged or real, are presented as if they were the *paradigmatic* (typical, characteristic) experience with this new drug. In the heat of a drug scare, such episodes come to be regarded as *summary* events, representing or standing in for the experience most or many users have with the substance. The worst-case scenario is depicted as if it were common, even typical. This pattern has prevailed for over a century, beginning with alcohol, opium, and cocaine in the nineteenth and early twentieth centuries. And it was true for marijuana in the 1930s, LSD in the 1960s, PCP in the 1970s, crack cocaine in the 1980s, and methamphetamine beginning in the late 1980s and extending into the twenty-first century. In all of these cases, we see the same sensationalistic reporting, the same exaggeration, the same distortion and hyperbole to convey a single message: The use of each particular drug is one of the biggest threats this society has ever faced.

Marijuana in the 1930s

“An entire family was murdered by a youthful [marijuana] addict,” claims a typical—and famous—article published in the 1930s, authored by the commissioner of the Federal Bureau of Narcotics (FBN). “When officers arrived at the home, they found the youth staggering about in a human slaughterhouse.” The boy was “pitifully crazed.” The cause? Marijuana (Anslinger with Cooper, 1937, p. 19)! As it turns out, the young man was mentally ill *before* using marijuana—and before his outburst of lethal violence—but this fact was conveniently forgotten in this sensationalistic story.

The 1930s was an interesting era in the history of drug use and drug legislation, as we’ve seen in Chapters 1 and 2. In the early 1930s, the FBN had resisted proposals to criminalize marijuana (Himmelstein, 1983, p. 57). Beginning in 1934, however, the FBN did an about-face and lobbied each state to support the Uniform Narcotic Drugs Act. In order to generate public and legislative support for this act, it had to “conjure up the specter of a marihuana ‘menace’” (Himmelstein, 1983, p. 59). Once committed to this cause, the FBN launched a moral crusade against the drug. “Policymakers and the media faithfully adopted the bureau’s image of marihuana, repeating [its] examples of marihuana-related violence and ignoring the data that the bureau chose to ignore. . . . Marihuana was believed to be not just dangerous but a menace. Its . . . effects on consciousness were said to lead . . . to a maniacal frenzy in which the user was likely to commit all kinds of unspeakable crimes” (p. 59).

In an analysis of the articles on marijuana published in popular magazines between 1935 and 1940, Himmelstein found that 95 percent depicted the drug as “dangerous,” and 85 percent specifically mentioned violence as an effect of its use; 73 percent regarded moderate use as impossible (1983, pp. 60–67). “Addicts [meaning marijuana “addicts”] may often develop a delirious rage during which they are temporarily and violently insane,” stated Harry Anslinger, the FBN’s chief during the 1930s; “this insanity may take the form of a desire for self-destruction or a persecution complex to be satisfied only by the commission of some heinous crime” (Anslinger with Cooper, 1937, p. 150). Violence was the central guiding principle of the media’s depiction of marijuana’s effects. “In short,” says Himmelstein, “nearly every effect imputed to marihuana was also linked to violence and was interpreted in its light. Insanity, destruction of the will, suggestibility, distortions of perception, and alterations of consciousness all carried the connotations of

violence and crime. The image of the violent criminal tied these disparate effects together and gave them coherence” (p. 65).

Marijuana does not cause or induce users to violence, as any examination of the contemporary scientific literature will tell you. By the 1960s, anti-marijuana propagandists and the media quietly dropped the violence theme and emphasized almost exactly the opposite effect: passivity. Between the 1930s and the 1960s, marijuana had become transformed “from killer weed to dropout drug” (Himmelstein, 1983, pp. 121ff). Nonetheless, Anslinger used his atrocity-oriented articles on marijuana in popular magazines as a bully pulpit from which to argue for the passage of the Uniform Narcotic Drugs Act. In the mid-1930s, only 10 states had passed the act. But by 1937, all of the then-48 states had enacted an anti-marijuana law, and the federal government had approved the Marihuana Tax Act. Harry Anslinger’s media-driven campaign to convince the public of the “menace” of marijuana was successful, and his effort to criminalize the possession and sale of marijuana was a complete triumph.

LSD in the 1960s

“Under the influence of LSD,” read a June 17, 1966 article from *Time* magazine, “non-swimmers think they can swim, and others think they can fly. One young man tried to stop a car . . . and was killed. A magazine salesman became convinced that he was the Messiah. A college dropout committed suicide by slashing his arm and bleeding to death in a field of lilies.” Before 1967, the media theme for LSD’s effects was psychosis. The danger posed by the use of LSD was not so much crime and violence to others but insanity and self-destruction. The pre-1967 media stories conveyed a distinct impression that anyone who ingested LSD stood an unwholesomely strong likelihood of losing one’s mind—temporarily and possibly even for good.

The effects of LSD were described in the media as “nightmarish”; “terror and indescribable fear” were considered common, even routine. *Life* magazine ran a cover story on March 25, 1966, entitled “The Exploding Threat of the Mind Drug That Got Out of Control.” Psychic terror, uncontrollable impulses, unconcern for one’s own safety, psychotic episodes, delusions, illusions, hallucinations, and impulses leading to self-destruction—these formed the fare of the early articles on the use of LSD.

As sensationalistic as magazine articles were, those published in newspapers were even more lurid, sensationalistic, and one-sided. While magazine stories usually qualified their scare stories by saying that not everyone “freaked out” when they took the drug, newspaper articles rarely offered such a qualification. Newspaper headlines screamed out stories such as “Mystery of Nude Coed’s Fatal Plunge,” “Thrill Drug Can Warp Minds and Kill,” “Strip-Teasing Hippie Goes Wild on LSD,” and “LSD: For the Kick That Can Kill” (Braden, 1970). Public hysteria at the time was summed up in the statement by the New Jersey Narcotic Drug Study Commission in 1966. LSD is, the Commission declared, “the greatest threat facing the country today” (Brecher et al., 1972, p. 369).

Today, as measured by the Drug Abuse Warning Network (DAWN) data on emergency department (ED) episodes, LSD’s role in causing panic or psychotic reactions is minuscule. In 2011, DAWN recorded 4,819 LSD-related episodes requiring medical intervention; PCP, a far less popular drug, is implicated in 15 times as many ED episodes, and MDMA, almost five times as many. LSD’s ED visits are 1 out of 1,000 total

drug-related ED reports for all drugs. And based on the total number of users and the average number of times the drug is taken, this figure is one untoward LSD episode out of roughly 5,000–10,000 incidents of use. (Keep in mind, however, that DAWN is far from complete in its enumeration of all untoward drug episodes.) Today, ingesting LSD today rarely leads to the kinds of extreme episodes that were widely reported in the media in the 1960s.

Why the discrepancy? One possible explanation is that the media seized upon and reported the very small number of untoward LSD-related episodes that did take place and ignored the immense volume of peaceful experiences that users had with the drug. The LSD phenomenon was a case of novelty and the usual media exaggeration—with a new, practically unknown drug producing surprising and scary effects. Another possible explanation is that, over time, users learned to handle the novel, strange, and unsettling LSD experiences they had and, hence, no longer “freaked out” under the drug’s influence (Becker, 1967). It’s clear that the media were guilty of sensationalistic coverage of the effects of LSD in the 1960s. The fact that LSD does not typically cause untoward effects did not receive and has not received the same amount of attention that was given to the story that it did. Once again, media bias rears its ugly head. In the context of the 1960s, LSD “freak-outs” were news; the story that LSD very rarely causes psychotic outbreaks was *not* news.

In March 1967, the prestigious scientific journal *Science* published an article about the research of a geneticist and two of his associates, who found that when human blood cells were placed in a culture containing LSD, the cells underwent some chromosome breakage. In addition, one schizophrenic mental patient who was treated with LSD 15 times in a therapeutic setting was found to have a higher-than-normal rate of chromosome breakage (Cohen, Marinello, and Back, 1967).

Within 24 hours, news of the study had swept the country like wildfire. The findings from this research report were translated into the inescapable “fact” that LSD would damage one’s offspring. News stories intimated that if youth began taking the drug, uncountable generations of infants would be born deformed. Popular magazines published hundreds of articles, explaining that the drug would cause genetic mutations and birth defects. “If you take LSD, even once,” intoned an August 1967 article in *Look* magazine, “your children may be born malformed or retarded.” Just below the title of this article was this statement: “New research finds it’s causing genetic damage that possesses a threat of havoc now and abnormalities for generations yet unborn” (Davison, 1967, pp. 19–22).

An indication of how seriously these early findings were regarded is the fact that even in the decidedly pro-marijuana underground newspapers, such as *The East Village Other (EVO)*, a number of articles appeared during the summer of 1967 affirming that genetic damage would take place in anyone who ingested LSD. One such article published in *EVO* bore the headline “Acid Burned a Hole in My Genes.” Antidrug propaganda campaigns rarely failed to mention LSD’s supposedly “monster-producing” properties. The National Foundation–March of Dimes distributed a leaflet containing photographs of deformed, legless, or armless children pitifully attempting to perform simple tasks such as writing or picking up toys with their flipper-like limbs or artificial hands or feet. (These deformities had not been caused by LSD.) The text contained the warning that “there is evidence that LSD and other similar drugs may cause

chromosome damage.” Though the leaflet qualified this warning by stating that “there is no proof that chromosome breaks cause birth defects in humans,” the impact of the photographs was so devastating that the caveat was completely lost on the reader.

The media seized on the *Science* article, broadcasting its findings as if they were clear-cut evidence of LSD’s harmful effects on human chromosomes. Just four years later, a team of four scientists conducted an exhaustive survey of the findings reported in nearly 100 scientific papers on the subject of LSD and genetic damage (Dishotsky et al., 1971). These researchers concluded: “We believe that pure LSD ingested in moderate dosages does not produce chromosome damage detectable by available methods.” The media stories reporting that the drug caused damage to human chromosomes had represented a premature rush to judgment. To repeat, as we would expect, the story that LSD does *not* damage chromosomes was not given a small fraction of the fanfare given the earlier stories that it does.

In a nutshell, the panic generated by the early use of LSD led many reporters to find plausible the conclusions of a shoddy piece of research that supposedly indicated that the drug is harmful. Given that, in the context of the 1960s, the subject of the article was LSD, the findings that the drug had horrendous effects made the story newsworthy and believable. It is out of the raw material of (1) the introduction of a new drug into the society, (2) claims of unusual, damaging effects, and (3) a resultant panic or scare that sensationalism in the media is born. Not all contemporary observers agree that concern about LSD during the 1960s was a panic or scare (Cornwell and Linders, 2002), but the fact is, in reporting on the supposed threat of the drug, the media used exaggeration, stereotyping, a rush to judgment, sensational anecdotes, and bogus claims (Goode, 2008). Moreover, later *corrections* of mistaken claims never received the media attention that the original mistaken claims had received.

Media attention to LSD triggered—or at least preceded—criminal legislation. The federal Drug Abuse Control Amendments, which penalized the manufacture and sale of hallucinogens, including LSD (along with barbiturates and amphetamines), was passed in 1965 and became effective in 1966. In May 1966, Sandoz, the only pharmaceutical company to manufacture LSD, withdrew the drug from the market. In 1966, California and New York passed state laws criminalizing LSD. In 1968, the Drug Control Amendments were revised, rendering the sale of LSD a felony and its possession a misdemeanor. In 1970, the Controlled Substances Act classified LSD a Schedule I drug, indicating that it had a high potential for abuse and no medical utility. Possession of LSD for personal use called for a one-year penalty; possession with intent to sell called for a maximum of five years’ imprisonment. Since 1970, nearly all the states have adopted their own version of the federal act, and for a number of them, penalties are even more severe than under the federal law. In New York State, possession of LSD with intent to sell brings a prison term of up to seven years.

PCP in the 1970s

PCP, or phencyclidine (whose trade names are Sernyl and Sernylan) is an animal tranquilizer and anesthetic whose use is not medically approved for humans. PCP began to be used illegally on the street in substantial numbers in the late 1970s. During that period, the media devoted enormous attention to the drug and its effects. Two researchers

examined 323 newspaper and 23 magazine articles, as well as a number of television news broadcasts and dramatic television dramas on the use of PCP (Morgan and Kagan, 1980). Most of the coverage of PCP took place in the single year 1978; after that date, the number of stories dropped off sharply.

Media accounts of PCP were very narrowly focused. In a quarter of the newspaper articles, “violent or shocking themes” predominated, and in one, an especially gruesome story appeared. In 1971, a Baltimore student blinded himself in jail. This real-life event served as an inspiration for 17 newspaper articles in which a person under the influence of PCP had gouged out his or her eyes. The story also appeared in 7 out of the 23 magazine articles on the horrors of PCP, as well as a large number of television broadcasts. The identity of the person who supposedly did this horrific act of self-mutilation changed from story to story. In one, the victim was a woman, arrested for assault, who gouged out her eyes in jail; in another, a young man, arrested for indecent exposure, who gouged out his eyes in prison; in still other versions, (correctly) a Baltimore college student and (incorrectly) the son of a Massachusetts congressman, a man from a mid-western city, and a man from San Jose (Morgan and Kagan, 1980, p.197). These different identifications suggest that the tale, though based on an initially true event, is as much an urban legend as an account of a real-life event. It became a story that was a little “too good to be true,” moving “from anecdote to apocrypha” (p. 201). Years after the supposed event, the story is “exhumed, polished and transformed into part of the PCP mythology” (p. 202).

In the other “horror stories,” a “nude, unarmed man refuses to halt on police command” and is killed “after [a] varying number of bullets are fired” (13 stories); a “person drowns in [a] shower stall with four inches of water” (12 stories); a “young man shoots and kills [his] own father, mother and grandfather” (9 stories); a “person sits engulfed in flames, unable to perceive danger” (9 stories); a “person amputates a bodily part: [a] nose, breast or penis” (9 stories); a “man crosses [an] eight lane freeway, enters a house, randomly stabs [a] pregnant woman and toddler” (8 stories); a person “pulls out [his or her] own teeth with pliers” (7 stories). And so on. The theme in each of these stories is that under the influence of PCP, the user becomes deranged, psychotic, and completely unconcerned for his or her safety, and engages in horrific self-destructive and/or violent behavior toward others.

In the 1970s, fictionalized television dramas made especially strong use of this “mindless violence and self-destructive acts” theme. In one, a young woman, attempting to evade her pursuers, tries to fly off the roof of a building. Another stresses the “strength and invincibility” of a PCP-high youth. In yet another, the police have to fire “multiple bullets” into the user’s body to halt his advance. In still another, a young man, high on the drug, breaks the handcuffs and leg shackles that were used to restrain him.

The way the PCP story is reported in the media bears strong parallels with how other drugs are covered by the news. According to Morgan and Kagan,

Every new drug experience in America is handled in a stereotypical fashion by the media. Emphasis is placed on individual tales of dangerous, criminal or self-destructive behavior by the drug-crazed. The myth is newly erected and slightly embellished with each new drug, and the stories come to resemble the myths, ballads and folk-tales previously generated and transformed by oral transmission. Indeed, the best model seems to be the Frankenstein monster who advances impervious to pain, bullets and . . . fire in order to murder, dismember or bugger

men, women, children and the household pets. The myths are compelling because they touch an emotional core that has meaning in the individual and the culture, and they exploit our fascination with horror. . . . The monster must die bizarrely: drowning in inches of water, attempting to fly from a building or trying to halt a speeding two-ton vehicle with its bare hands or body. If it lives it should commit the most . . . meaningful of self-mutilations—removal of the eyes or castration. These tales are the archetypical expressions of human inner terrors and exist in the preserved ballads and epic tales of most languages (p. 201).

Were *some* of these media anecdotes about persons who, high on the newly introduced drug, committed terrible acts of violence and self-destruction, actually true? Almost certainly! But “myth feeds on fact nearly as well as it feeds on fancy” (p. 201). PCP *is* extremely dangerous, very possibly the most dangerous currently used drug in the United States, but in the 1970s, the horrifying effects attendant upon use of this drug were sometimes fabricated—and nearly always exaggerated. In 2011, the Drug Abuse Warning Network (DAWN) reported 75,538 PCP-related emergency department episodes, quite high for the relative infrequency of its use, though about the same as for the amphetamines. One study estimated that in the late 1970s, out of the roughly 20 million instances of use experienced each year by some 300,000 regular users, only about 5,000–6,000 resulted in such unpleasant or life-threatening effects that they required a trip to an emergency room—approximately 1/30 of 1 percent of all such episodes (Newmeyer, 1980, pp. 214–215). Since then, use of the drug and hence, such episodes, have declined substantially.

The media sensationalized PCP by depicting the most violent and bizarre, unusual and atypical effects as if they were common and routine. While the user did and still does take a certain psychological and physical risk by ingesting PCP, and while that risk has always been higher than for any other illicit drug currently in use, at the doses that are usually taken, the risk is fairly small. Once again, we have the same formula: New drug equals media sensationalism. And just as new drug equals media sensationalism, media sensationalism frequently leads to criminalization.

Crack in the 1980s

Beginning late in 1985, a substantial number of Americans began using an old drug in a new form. On November 17 of that year, in what was the first mention of this drug in the mass media, *The New York Times* journalist Donna Boundy described a substance referred to as “crack” as “rock-like pieces of prepared ‘freebase’ (concentrated) cocaine.” Crack is neither freebase nor concentrated, but the brief news item was the first in an avalanche of over 1,000 stories that appeared in the media in less than a year. In the following year, two major television stories, CBS’s “48 Hours on Crack Street” and NBC’s “Cocaine Country,” were broadcast. Within six months, over 400 television broadcasts on the same topic were aired. Crack became what was probably the biggest drug story of all time.

Just as previous media constructions of drugs had focused on a core theme, the earliest stories on crack concentrated on a specific theme: the drug’s supposed addictive property. A March 17, 1986 *Newsweek* article quoted one drug expert as saying, “Crack is the most addictive drug known to man.” Smoking the drug, he said, produces “instantaneous addiction. Try it once and you’re hooked! Once you start, you can’t stop!” Using

crack, claimed a June 16, 1986 *Newsweek* story, immediately hurls the user into “an inferno of craving and despair.”

A theme in media stories about crack that emerged slightly later than the addiction theme emphasized that the use of crack was becoming widespread and threatened to become a virtual “tidal wave” of substance abuse. Crack now “infested” every community and group in the country, these stories announced, and had become a “plague” comparable to the Black Death in fourteenth-century Europe. The use of metaphors and mental images often leads audiences to think about something in a particular way. The common use of the term *plague* to refer to crack use in the second half of the 1980s is especially revealing (Reinarman and Levine, 1997, pp. 33–36). When we observe that in 1986, both *Newsweek* and *U.S. News and World Report* compared the devastation of illicit drug use to that of medieval plagues, we realize that the reader was being asked to regard substance abuse as a catastrophe of unimaginable proportions.

In the sixth century, the bubonic plague killed about 100 million people in Europe and the Middle East. In the fourteenth century, the bubonic plague returned in the form of what is referred to as the “Black Death,” killing roughly a third of the population of Europe—about 75 million people. Each of these episodes came and went in a matter of a couple of years. Since the use of *all* illicit drugs in the United States is associated with, as we saw, a total of no more than 30,000–50,000 deaths a year, the comparison seems remarkably biased, twisted—indeed, one is tempted to say, sensationalistic. Even cigarette use (which, experts agree, kills roughly 440,000 smokers in the United States each year), and alcohol consumption (which kills about 85,000 annually) are benign in comparison with the genuine medieval plagues.

A third theme found in the media made the claim that not only was crack use becoming “pervasive” and “universal,” it had become as common among the educated, middle-class sectors of the society as among unemployed, poverty-stricken school dropouts. In its March 17, 1986 issue, *Newsweek* proclaimed that crack “is rapidly spreading into the suburbs.” Three days later, *The New York Times* stated that crack was spreading from the inner cities to “the wealthiest suburbs of Westchester County.” Said a representative of the New Jersey Health Department, “It’s all over the place.” On June 8, the *Times* ran a story that proclaimed, “Crack Addiction Spreads Among the Middle Class.” Three weeks later, the *Times* announced the “growing use of crack” in several suburban counties; in them, the newspaper stated, the “per capita use of cocaine is the heaviest in the state.” On August 11, referring to crack use, *Newsweek* declared that “nearly everyone now concedes that the plague is all but universal” (Reinarman and Levine, 1997, pp. 3–4).

And the fourth theme that emerged in the media to capture the “reality” of crack use was the “crack babies” phenomenon. Between 1989 and 1991, following the announcement of several medical reports, a flood of news stories indicated that if pregnant women smoked crack (or used powder cocaine—the distinction was never made clear), their children would be born with a range of neurological and anatomical defects. These children would be permanently impaired, these stories indicated, and would cost the society many billions of dollars in hospital bills, remedial educational programs, and, ultimately, other immense expenses in the form of criminal offenses and incarceration. It became an established fact that crack babies represented a major social and medical problem.

William Bennett, then federal drug “czar,” claimed that in the late 1980s, 375,000 crack babies were born each year—one out of every 10 births! This figure was echoed

by respected *Washington Post* columnist Jack Anderson and *New York Times* editor A. M. Rosenthal (Gieringer, 1990). The medical care of crack babies, stated one of the most widely quoted articles to appear in a mass magazine on the subject, cost 13 times more than that for normal newborns—\$7,000 versus just under \$500 (Toufexis, 1991). The nation was filled with fear that these youngsters would become “an unmanageable multitude of disturbed and disruptive youth. Fear that they would be a lost generation” (p. 56). A Pulitzer Prize-winning journalist describes the crack baby crisis in dramatic, heart-wrenching prose: “The bright room is filled with baby misery: babies born months too soon; babies weighing little more than a hardcover book; babies that look like wizened old men in the last stages of a terminal illness, wrinkled skin clinging to chicken bones; babies who do not cry because their mouths and noses are full of tubes. . . . The reason is crack” (Quindlen, 1990). According to common media wisdom that sprang up in the late 1980s and early 1990s, crack cocaine use among pregnant women causes serious, in all likelihood irreparable, medical problems in babies. This condition was extremely widespread, we learned from the news, and would be extremely costly to the society.

What of these four media crack themes: universal addiction; widespread use; use as widespread in the middle classes as among poor, inner-city residents; and devastating, irreparable harm to children born to crack-using expectant mothers, or the so-called crack babies syndrome? Are these assertions actually true?

First, crack never became a popular drug, even at its height of use. And after the early 1990s, its use declined rather sharply. The Monitoring the Future survey did not begin asking questions about crack use until 1987; in that year, only 5.7 percent of American high school *seniors* had ever even tried the drug, and 1.3 percent had done so in the month before the survey. (Let’s remember, this survey does not include dropouts and absentees.) MTF’s latest report, conducted in 2012, indicates that, of the combined eighth-, tenth-, and twelfth-grade classes, the prevalence of lifetime crack use was only 1.5 percent, and the prevalence of those who had used crack during the past month was only 0.4 percent.; for seniors, these figures were 2.1 and 0.6 percent, respectively. In other words, crack use among schoolchildren was *relatively* low during the drug’s peak, and then declined to its even lower figures today. Not only was there was no “epidemic,” ever, crack’s use did not grow or become “rampant” or “widespread”—it actually declined considerably (Johnston et al., 2013, pp. 51, 53). In 1988, NIDA (the National Institute on Drug Abuse) conducted a national household survey of drug use among the American population; only 1 percent of 12- to 17-year-olds said that they had used crack, even once, and 3 percent of 18- to 25-year-olds had done so; the 1990 figure for young adults was even lower: only 1.4 percent (“NIDA Capsules,” 1989, p. 1, 1990, p. 2). According to the National Household Survey on Drug Abuse, in 1992, just after crack’s use had peaked, only 0.6 percent of 12- to 17-year-olds, 3.2 percent of 18- to 25-year-olds, 3.3 percent of 26- to 34-year-olds, and 0.4 percent of persons age 35 and older said that they had *ever* used the drug—even once. Statistics on use in the prior year were 0.3, 1.1, 0.9, and 0.1 percent, respectively (SAMHSA, 1995). Clearly, this “tidal wave” of use never developed. Crack never became a drug of widespread use, and most of the users who experimented with the drug fairly quickly stopped using it. Without question, the media reported the crack cocaine story in a sensationalistic fashion, in that, at the time, they exaggerated the extent of its use, and they predicted catastrophic consequences that never remotely came to pass.

Precisely the opposite of widespread use was the case. Crack use was, and remains, anything but universal. In addition, not only did—and does—a very small proportion of the population use the drug, but also its use tends to be very strongly patterned according to social class and educational level. The higher up on the occupational and educational ladder, the lower the likelihood that an individual will use crack cocaine; the lower one is on this continuum, the higher that likelihood is. Moreover, this has always been true. Crack use is relatively rare—although it does exist—among middle-class, suburban youngsters. But its use tends to be concentrated mainly in poverty-stricken, inner-city communities. There are plenty of exceptions to this rule, but as a pattern, this is a sound and consistent generalization. In any case, even among the poor, crack use is very much the exception, not the rule.

Going back to the 1992 National Household Drug Abuse Survey, near the crest of the crack scare, among 18- to 25-year-olds, the percentage who said that they had at least tried crack was 7 percent of high school dropouts, 3 percent of high school graduates, 1.6 percent of those with some college, and only 0.6 percent of college graduates. As education increased, the likelihood of crack use decreased. The same pattern prevailed for the older age categories, for more frequent use, and for later and earlier surveys as well. The media's claim that crack abuse was as common in the middle-class suburbs as in the inner cities was completely bogus.

What about the “crack babies syndrome”? To be fair to the media, the views expressed reflected the opinion of the researchers who published the earliest articles in the medical literature. However, even by the late 1980s, a few experts challenged the veracity of the crack baby story. But it was not until the early 1990s that enough medical evidence was assembled to indicate that the crack baby syndrome is, in all likelihood, a myth. By 2001, in an article published in the most prominent medical journal in the country, the *Journal of the American Medical Association (JAMA)*, a panel of experts, summarizing the entire research literature on the subject, concluded that there is “no consistent negative association between prenatal cocaine exposure and physical growth, developmental test scores, or receptive or expressive language” (Frank et al., 2001, p. 1613). The problem with the earlier studies, these researchers argued, is that they applied no analytic or statistical controls; they did not sort out the many *other* factors that could have caused, and commonly do cause, such impairment, such as the mother's cigarette smoking, alcoholism, the use of other drugs, and poor diet, as well as the inadequate or nonexistent medical care she received or elected to receive. Mainstream medical opinion now holds that it is these other factors that caused the medical problems that had been observed in the late 1980s and early 1990s among cocaine-using mothers—not their cocaine use. It is entirely possible that the crack baby issue was a hysteria-driven rather than a fact-driven syndrome.

Interestingly, while the media were quick to pick up on and publicize the early research that seemed to show that both powder and crack cocaine caused medical problems in newborns, infants, and school-age children, very little media attention was devoted to correcting this—in all likelihood—mistaken view. One rare exception is the *Boston Globe* columnist Ellen Goodman (1992), who wrote: “It turns out that ‘crack babies’ may be a creature of the imagination as much as medicine, a syndrome seen in the media more often than in medicine.” Dr. Ira Chasnoff, whose work originally pointed in the direction of indicating problems for these children, was quoted by Goodman as saying: “Their average developmental functioning level is normal. They are no different

from other children growing up.” According to Dr. Clair Coles, another researcher cited by Goodman, the crack baby story became a “media hit” in part because (much as some journalists claimed the opposite) crack is not used by “people like us”—well-educated, middle-class people who constitute the principal audience for the majority of the print media (Goodman, 1992). “Why all the hullabaloo about crack babies?” asks Dr. Wendy Chavkin in a commentary on the Frank et al. (2001) summary of the available medical literature. Crack babies, she argued, “have become a convenient symbol for an aggressive war on drug users because of the implication that anyone who is selfish enough to irreparably damage an innocent child for the sake of a quick high deserves retribution. This image, promoted by the mass media, makes it easier to advocate a simplistic punitive response than to address the complex causes of drug use” (Chavkin, 2001, p. 1627).

How did the media’s coverage of the crack story influence drug law? Drug bills and drug legislation followed in the wake of the 1980s media panic over drug use generally and crack abuse specifically. In a series of speeches between June and September 1986, President Ronald Reagan called for a “nationwide crusade against drugs, a sustained, relentless effort to rid America of this scourge.” His proposed legislation added \$2 billion in federal monies to fight the problem, including \$56 million for drug testing of federal employees. In September 1986, the House of Representatives approved, by the overwhelming vote of 393 to 16, a package of drug law enforcement measures, including stiffer federal sentences and penalties against drug-producing countries that do not cooperate with U.S.–sponsored drug eradication programs. Approved by the Senate in October 1986, the drug bill, ultimately costing \$1.7 billion, was signed into law by President Reagan. In it, a death penalty provision (unlikely ever to be carried out) was included for drug kingpins. Except for some antidrug provisions enacted in 1984, the 1986 legislation represented the first effort by Congress in 15 years to enact a major antidrug law. Much the same was happening at the state level all over the country. In addition, it was the crack baby stories that inspired the many court rulings, beginning in 1989, that ruled that pregnant women be convicted of delivering a drug to a minor—specifically, the fetus they are carrying. And in 1986, Congress passed the federal Anti-Drug Abuse Act, which dictated that the same 10-year penalty be imposed for the possession of 50 grams of crack cocaine as for the possession of 5,000 grams of powder cocaine. (As we saw, in 2010, the Fair Sentencing Law substantially reduced this ratio to 18:1.) “Crack cocaine is the only drug for which there exists a mandatory minimum penalty for a first offense of simple possession” (Kennedy, 1997, p. 364). Almost certainly, the media hysteria surrounding drugs—and more specifically crack cocaine—was instrumental in the punitive legislation that followed.

One of the four major theories of media bias, as noted previously, is the ruling elite approach; it is exemplified by the work of criminologist Henry Brownstein (1991), whose book on how the media covered the biggest drug story of the late 1980s is subtitled *Crack Cocaine and the Social Construction of a Crime Problem* (1996). As we know, the late 1980s witnessed a huge increase in crack-related violence in the United States. More specifically, during those years, in many cities across the country, 50 percent of homicides were drug related, and roughly 80 percent of drug-related homicides were specifically traceable to the crack cocaine trade (Goldstein et al., 1989). Before 1985, hardly anyone used crack and there were no crack-related homicides. As with all phenomena, this real and present condition—the sudden and startling increase in crack-related killings—was socially constructed by the press. The press reported the story of

the connection between criminal homicide and drug selling in its own distinctive fashion. However, saying that the story was socially constructed does not necessarily mean that it was reported inaccurately. Did the media *distort* the reality of this phenomenon or did they report it accurately?

Brownstein argues that the media seriously distorted and sensationalized the nature of crack-related violence. What was the image the press projected of a typical or modal drug killing in the late 1980s? Beginning early in 1989, the message conveyed in the news of crack-related criminal homicides was that they were random, that anyone could become a victim of a gangland shooting. More specifically, the message was that consumers of the media—readers of the newspapers and audiences of the television broadcasts in which such stories appeared—could be gunned down in a crossfire between rival drug gangs. Middle-class people, people who lived in communities that were not crack infested, people who consumed the media and paid attention to their stories, people who feared drug gangs and applauded the efforts of the police and the courts to root them out and incarcerate their members—these people constituted the audience at which such stories were aimed. And it was specifically they who were reported to have been the accidental victims of drug gang shootings.

A January 22, 1989 story that appeared in *The New York Times* was entitled “Drug Wars Don’t Pause to Spare the Innocent.” Detailing the “killing of innocent bystanders” caught “in the crossfires of this nation’s drug wars,” the story argued that these killings had “suddenly become a phenomenon that greatly troubles experts on crime.” The next day, the *New York Daily News* referred to such killings as “spillover,” quoting a community leader as saying, “there are no safe neighborhoods any more.” The following week, the *New York Post* ran a related story under the sensationalistic headline, “Human Shield—Snatched Tot Wounded in Brooklyn Gun Battle.” A three-year-old boy, the story reported, was “critically injured yesterday when a teenager snatched him from his mother’s grasp and used him as a human shield in a gun battle.”

The message was loud and clear: Many innocent bystanders had become victims of the drug wars. Drug-related killings were indeed “random”; spillover was a fact of life on the urban landscape. In record numbers, innocent white, middle-class people were being gunned down on the street because they happened to be in the wrong place at the wrong time. The media “constructed” the problem of crack-related violence as an issue that was central to the concerns of their audiences: It was a serious problem because *they* could become victimized. The conclusion was obvious: Something had to be done to deal with this extremely serious problem.

In actual fact, drug-related violence was not random, of course. Indeed, during the late 1980s, a middle-class person innocently sipping a latte at Starbuck’s was *extremely* unlikely to be gunned down in a random shooting. During the first six months of 1990, for example, the New York City Police Department determined that just a shade over 1 percent of all its homicides involved innocent bystanders. And researchers determined that of the 414 criminal killings they looked at that took place in New York City in 1988, again, just over 1 percent were of noninvolved bystanders (Goldstein et al., 1989). A study of four American cities up to the late 1980s concluded that “bystander shootings are a rare event” (Sherman et al., 1989, p. 303). The media didn’t fabricate stories about innocent bystander shootings, but depicting such shootings as common, even typical, was inaccurate and sensationalistic. Such shootings were almost freakishly unusual events.

So why the bias? Why did the media report random, senseless killings as common when they were actually extremely rare? Why were there so many news stories about random, drug-related killings when, overwhelmingly, dealers killed one another and their employees and customers—not middle-class bystanders? And why did the media target their message specifically to middle-class whites? What's the media's agenda? What does the press hope to accomplish with such biased reporting?

Brownstein adopts the power-elitist position that the media were working hand-in-glove—in a sense *colluding*—with the powers that be in their reactionary program to convince the public that society's problem was not structural inequality but individual immorality. Drug scares were hoked up, Brownstein argued, to divert attention away from the problems of racism, inequality, poverty, and unemployment—and away from any possible solution to these problems—to place attention on a problem that is both non-existent and, supposedly, locatable in the “bad” motivation of a few violent, greedy, and evil drug dealers. The attention the media paid to random, crack-related violence represents *scapegoating in the service of right-wing politics*.

According to this line of reasoning, it is in the interests of the rich and the powerful to maintain injustice and inequality because they profit from them. And focusing on sensational stories maintains injustice, the power elitists argue, because that diverts attention from the fundamental problems of society, like inequality. All the while, the poor and the powerless receive society's crumbs, and the public receives biased news stories. Anything the elite can do to perpetuate that inequality serves their interests. And since challenges to inequality would undermine their interests, the rich and the powerful attempt to stifle such challenges. Instilling fear in the middle class over the possibility that its members could, say, be accidentally cut down in a hail of bullets targeted for a drug dealer is precisely such a smokescreen. And media overlords, anxious to please—and also controlled by—the powers that be, collude with elite interests by publishing articles and broadcasting stories that instill fear in the public over nonexistent problems.

Is this a valid explanation for why so many stories appeared on crack-related violence in the late 1980s? As we saw, an entirely different perspective toward the functions of the media, the profession of journalism is the conveyor of a distinctive subculture. The job of the journalist, according to this view, is not to defend the interests of the ruling elite, but to practice a craft in a fashion compatible with the norms of the profession of journalism. Just as physicians possess and promulgate a sense of what constitutes good and bad doctoring, journalists learn and practice their own special notion of their journalistic agenda.

Interestingly enough, while most members of the ruling elite occupy the right or conservative wing of the political spectrum, most members of the profession of journalism occupy the left or liberal wing of the political spectrum. Most professional journalists regard themselves as liberal, hold liberal ideological and political beliefs and values (pro-choice, pro-gun control, anti-prayer in public schools, anti-death penalty, and so on); and vote for the Democratic Party candidate in presidential elections (Goldberg, 2002, pp. 122–126). And most conservatives—as well as the majority of the wealthiest and most powerful members of the society—believe that the press holds a “liberal” bias.

Media biases do exist, but they neither automatically favor the interests of the ruling elite, as radicals and ruling-elitist theorists charge, nor are automatically slanted to favor liberal causes, as conservatives charge. Journalists claim it is their job to tell an important

story fairly and accurately. However, in addition to getting it right, journalism has a second task, and that task has its own slant or bias: to grab the public's attention by telling an interesting, exciting, dramatic, human interest story that emotionally resonates with their audience's lives.

What moves readers is news; what's uplifting is news; what's distressing is news; what is in the audience's face is news. The press operates, as I explained earlier, on the basis of the "Hey, Mabel!" principle. This principle is that whatever attracts the reader's attention and causes him or her to exclaim to another person, "You've gotta hear this!" is a successful story. Whatever catches the reader's attention is a successful story.

To address Brownstein's thesis, media representatives do not think of themselves as depicting reality in a wholistic, generalizing fashion. By that I mean that their stories do not necessarily reflect the actual incidence or rate of a phenomenon's occurrence in real life. Brownstein seems to imagine that journalists should reason and depict reality in exactly the same way that criminologists or social scientists do. For instance, he would argue that if 1 percent of all drug-related violence is "random" and "spills over" to innocent, middle-class victims, then newspaper stories ought to report that fact, or the distribution of their news stories should reflect that fact. But this is an extremely naïve, unrealistic expectation.

The murder of one drug dealer by another is news, but it is not major news. In contrast, the killing by a drug dealer of a baby used as a human shield would be major—indeed, sensational—news. The accidental killing by a drug dealer of a bystander, an executive, lawyer, or doctor who is sitting in an outdoor cafe sipping coffee, is major news. "Dog bites man"—which is the routine, expected story—is boring and not likely to grab the public's attention. But the "man bites dog" story—what *isn't* routine or expected and which may be relatively rare—is exciting, is news, and will forever have a place in the headlines.

The fact that media stories about random, drug-related violence may (or may not) divert attention away from the major problems of our day or support the interests of the ruling elite has nothing whatsoever to do with why such stories receive attention from journalists. Such stories tell an exciting tale, provide a surefire human interest angle, and hence, grab the public's attention. Therefore, according to the norms of journalism, they are newsworthy. The ruling-elite theorist's hidden political or ideological agenda, supposedly lurking behind media accounts of random, drug-related violence, is sheer speculation. In contrast, the explanation offered by the professional subculture theory provides a view of how journalism actually practices its craft on a day-to-day, story-by-story basis. Biasing news stories toward the dramatic and the personal admittedly promotes sensationalism, but this is how journalism works.

Methamphetamine in the Late 1980s to the 2000s

Beginning in the late 1980s, the media began reporting on a terrifying epidemic of a new form of an old drug: methamphetamine. The drug was sweeping the country "like wildfire," and within a few short years, the United States would be "awash" in "ice": recrystallized methamphetamine sulfate. Methamphetamine was, according to the media in the late 1980s, the drug of choice for a "new generation." It would replace heroin, cocaine, and even marijuana as the nation's premier problematic drug. Law enforcement

was put on notice; “crystal meth,” “crank,” “crystal,” or “glass” (other terms for illicit methamphetamine sulfate) was the drug to watch for. Or so the media announced in the late 1980s and early 1990s (Young, 1989; Lerner, 1989; Labianca, 1992). But the media drumbeat to the meth epidemic did not fizzle out, as it had for PCP and LSD; it continued well into the 2000s. Between October 2004 and March 2006, *The Oregonian* ran a series of over 250 stories on the horrors of methamphetamine. Steve Suo, the key reporter in these stories, became the chief advisor for the Public Broadcasting System’s sensationalistic 2006 broadcast, “The Meth Epidemic.” In its cover story of August 8, 2005, *Newsweek* proclaimed methamphetamine “America’s Most Dangerous Drug.”

To make the public acutely aware of the dangers of meth, some members of the press quoted officials who compared methamphetamine with crack cocaine. “Meth makes crack look like child’s play,” declared one law enforcement officer to *New York Times* veteran reporter Fox Butterfield, “in terms of what it does to the body and how hard it is to get off” (Butterfield, 2004). “It makes the crack epidemic of the 80s look like kids eating candy” (Williams, 2006), said another law enforcement official to a South Carolina reporter. In neither case did the official present any corroboration or empirical evidence of his claim; in a climate of fear, a mere assertion, it seems, is sufficient. The public’s—largely distorted—knowledge of crack became a measuring rod against which to compare the new drug menace. And like crack cocaine, methamphetamine was said to be instantly addicting. Said a Milwaukee law enforcement official: “If you use it once, you’ll become an addict” (Zielinski, 2005).

In addition to methamphetamine’s supposed crack-like addictive properties, news stories stressed the drug’s inexorable march across the country from coast to coast and up the socioeconomic ladder. On December 31, 2004, *The Oregonian* ran a story entitled “East Coast Horror Stories Reflect New Map of Meth,” indicating that communities east of the Mississippi had been invaded by methamphetamine and were now as swamped as those in the West and Midwest. The *Newsweek* story proclaimed that not only had the drug “marched across the country” but it had also moved “up the socioeconomic ladder” (Jefferson, 2005). The implication of the story was that the meth epidemic was so widespread that it was not confined to poverty-stricken rural whites but could also strike a “good” family “with two children, a six-figure income, a dog and a Volvo in the garage” (King, 2006, p. 17).

As we’ll see in more detail in Chapter 11, on the stimulants, as of the first decade of the 2000s, methamphetamine use remained a regionalized drug—it had not “invaded” the East Coast to any appreciable degree; its use and abuse remained below that of at least a half-dozen more commonly-used illicit drugs; its use had not risen in the previous half-dozen years or so; among high school students, its use actually declined substantially (King, 2006, pp. 2–3). And the decline has continued to the present. The combined eighth-, tenth-, and twelfth-grade lifetime prevalence figure for meth plummeted from 6.5 percent in 1999 to 1.6 in 2012, as reported in the Monitoring the Future study (Johnston et al., 2013). Make no mistake about it: Methamphetamine is a harmful, dangerous drug. It is one of the most dependency-producing drugs known to humanity, and its abuse causes a wide range of medical pathologies. Nevertheless, the claims of these hysteria-driven news stories—including the drug’s “instantly addicting” property, its widespread use nationwide, its invasion into all communities, and the recent massive increase in its use and abuse, as well as huge increases in overdose deaths—were all false. As a result of these media exaggerations, a media backlash took place, with dozens of stories

refuting these original claims. (A few of them: Valdez, 2006; Shafer, 2005, 2006; King, 2006). In short, how the methamphetamine story was handled moved from exaggeration and sensationalism to skepticism and accuracy.

SUMMARY

We need not invoke conspiracies or hegemonic machinations to explain the phenomenon of how drugs are depicted in the media. The interests and the influence of the ruling elite do make it possible for certain themes to be woven into the news and certain stories to be planted in the media. The elite owns the media, and they influence its content, but that does not explain why journalists find certain stories newsworthy or why certain stories capture the imagination of the public, nor does it explain the sweep and direction of drug stories.

The plain fact is that most of what criminologists and sociologists know about the facts of drug use is not newsworthy. Nor is the *way* most criminologists and sociologists approach and study drugs especially interesting to the public—statistically or structurally, on the basis of large numbers, general factors, and the configuration and interrelationship of society's major institutions. "Factors" and "variables" do not excite audiences—the lives of real-life people do. Media representatives and the media-consuming public find human interest *anecdotes* engaging—not statistics. They find stories about *individuals* interesting—not analyses of the major social institutions. They find the offbeat, the unusual, the dramatic interesting—not the routine, the mundane, or the ordinary. They find the plight of vulnerable souls, threats from monstrous villains, and the exotic lives of celebrities (or the feet-of-clay frailties of celebrity personalities) interesting—not an extension of the nuts-and-bolts, meat-and-potatoes lives the rest of us lead.

In the 1930s, the claim that puffing on a marijuana cigarette will cause men to assault and kill, and women to become sexually wanton, was wildly interesting and newsworthy. (The fact that these stories were, for the most part, planted by the Federal Bureau of Narcotics is important, but not the only issue.) That marijuana possesses no such power was not worthy of media attention.

In the 1960s, the assertion that LSD causes users to go crazy and bear children with birth defects was major and shocking news. The fact that the drug simply does not cause these effects was barely a blip on the news radar screen.

In the late 1970s, the story that PCP caused users to gouge out their eyes and attempt to fly off buildings to their deaths was sensationally exciting news; at the time, the fact that such behavior was exceedingly rare seemed trivial, irrelevant, a distraction.

In the late 1980s, stories on the horrors of crack cocaine waxed in volume and stridency; the use of the drug was proclaimed a "plague," and addiction was said to be immediate and "instantaneous." The drug knew no social or economic boundaries, news stories asserted, and it marched ruthlessly and relentlessly through every community. Moreover, the drug caused serious neurological damage among the infants of crack-using mothers. And in the 1980s, the fact that drug gangs gunned down innocent, middle-class bystanders in substantial numbers was news; the fact that this happened extremely rarely was not felt to be especially interesting.

Before long, as crack stories began to wane, the media seized on methamphetamine as the new "scary drug." Observers predicted a tidal wave of meth abuse. So far, this

drug has not invaded states east of the Mississippi to any significant degree; moreover, the press has hugely exaggerated its addictive properties.

What academics, researchers, criminologists, and sociologists consider “the truth” about drugs is not particularly newsworthy to the general public, nor is it to most journalists. “The truth” is very rarely a “Hey, Mabel!” story.

Again, elite machinations need not even enter into the picture here. The news media are conveyors of myth, just as folktales and legends have been recounted in cultures around the world for thousands of years, long before capitalism existed, even long before any such entity as a ruling elite existed. Saying that the news tells “eternal stories” that serve a “mythological role” (Lule, 2001) does not mean that media stories are necessarily or always—or even usually—factually false. It means that certain eternal themes, themes that have always existed in the form of folktales, are emphasized in the media because they correspond to essential societal and individual struggles, notions of right and wrong, and dilemmas and dichotomies that we humans face and deal with in our everyday lives. These themes include the victim, the scapegoat, the hero, the good mother, the trickster, the “other world,” and disasters (Lule, 2001). One or more of these themes form the backbone of nearly all exciting news stories.

Yes, specific stories are *volatile*, in the sense that they erupt in the media, receive enormous attention, then recede from the limelight. The master themes that make stories exciting are ancient, but the specific stories that revolve around these themes are most exciting and newsworthy when they are new and fresh. And, though what’s news is socially and culturally constructed, it is not *solely* and *exclusively* a social and cultural product. What’s happening in the world around us does provide raw material from which to draw news stories, and new developments happen to be more newsworthy than what is familiar to media audiences. And, though news stories are not necessarily “engineered” by the ruling elite to preserve the status quo, most often they *affirm* the existing order. (Occasionally, they may challenge hierarchies of power—for example, the Pentagon Papers, Watergate, the “big tobacco” story.) The ruling elite theory of the media is wrong because it is far too narrowly focused. In many authoritarian regimes, elites do control the content of the media, but in modern capitalism, they do so only minimally. News is myth, news is legend, news is gossip, news is the magical tale—with its feet rooted in the ground and its eyes scanning the heavens. The plain fact is, forces far more ancient and more powerful than capitalism determine what is news.

ACCOUNT: Goth Girl Speaks Out About Alcohol in the Media

In Teen Ink, goth_girl12 of Oshkosh, WI, registers her harmful personal experiences with drinking, arguing that the media glamorize teen drinking, causing many adolescents to consume and abuse alcohol.


Goth Girl is lying in bed in a rehab program, her “whole body sore,” as if every part of it were placed on a hot stove. She had cold sweats, her thoughts were mixed up; “just lying there” made her “want to scream.” Her surroundings “seemed

so far and distant like I was in a fog or asleep,” yet, at the same time, even the slightest sound “felt like nails on a blackboard.” She had never felt more afraid in her entire life. “It makes you wonder about how much the media” glamorized and encouraged underage drinking. Roughly 5,000 underage drinking deaths occur in the United States each year, she argues—and yet, research has shown that we’ll see 100,000 alcohol commercials by the time we are 18. And surveys such as the National Survey on Drug Use and Health, sponsored by Health and Human Services, indicate that over 80 percent of adolescents have tried alcohol and over a quarter have tried it before their 13th birthday. “I was at one of my friend’s house once and her dad made her 6-year-old sister go in the fridge and get him a beer. It’s crazy how many advertisements we see for alcohol.” Watching television, we see young people drinking, having a good time, and partying as if there were no harmful consequences. Of course, the ads are “going to give us what we want and make it look as fun as they possibly can. The truth is that even though it may look like fun it’s not.” You never see or hear about all the stars who are in rehab because of their substance abuse, or those who have died, or all the kids who die as a result of alcohol poisoning. “The media never really shows us” those harmful

effects, now do they? “They don’t show us having hangovers or ditching your friends to go drink or get high [or] how bad you feel once you come down from it all. . . . “When I saw what fun drinking was on television,” she tells us, “I never once expected that it could all get so out of control. . . . Now I look at the ads and listen to the songs and like them but I can also determine what’s fake and what’s not.”

QUESTIONS

Do you feel that Goth Girl’s explanation of the media’s role in her harmful drinking is persuasive? Should the government control the content of the media? Do you believe that this account is accurate with regard to how the media presents teen drinking and drug use? *Is* it mainly positive? Or is Goth Girl’s view skewed? Do you believe that the media’s current self-control on its presentation of the consequences of adolescent drinking and drug use is adequate—or should the government impose censorship on the media in the way that substance abuse is depicted? Given the young lives that such a measure would save, is this censorship at all? Is the cure worse than the disease?



P A R T

III

METHODS, DATA, THEORIES

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STUDYING DRUG USE

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“I’m not a statistic!” David insists. “You can’t reduce people’s lives to a table, chart, or graph!” Lisa insists. These assertions, which I’ve

heard from students in my courses on drug use, are only half right. David—and you—may not *be* a statistic, but both of you are *included* in lots of statistics. For instance, during every year ending in a zero, the U.S. government conducts a census—a nose count of the entire population of the United States. In the 2010 census, David was counted, along with 310 million or so other people living in the United States; he added one person to the total population. Does that mean David was a population “statistic”? Of course it does! Does that mean *all he is*, is a statistic? Of course not; he is other things as well. To the extent that, as a number, Lisa’s characteristics or answers in a survey can be put in a table, chart, or graph, she is likewise part of one or more “statistics.” Both David and Lisa happen to be interesting, complex human beings, but they *also* happen to contribute to the statistics demographers use to numerically depict the population.

“We’re Losing the Drug War,” screams one headline. “Student Drug Use Increases,” announces another. “Roofies—The Date Rape Drug,” intones a TV report. “Meth—the New Killer Drug,” claims a magazine cover story. “Tidal Wave of Drugs Rolls into the Suburbs,” alleges the nightly news. “Drug Arrests at Record High,” asserts our daily newspaper. *How do we know* when an assertion we read or hear is true? Specifically, how do researchers gather information about drug use? And how do they draw conclusions from the evidence they’ve gathered?

Researchers make use of a wide range of information to determine what the drug picture looks like. Indeed, there is something of an “embarrassment of riches” here, since there are so many data sources. But not all of them are equally valid, and all are flawed in one way or another. However, when we put several data sources together, we get a clearer sense of what that picture looks like. Researchers use the term *triangulation* to refer to using two or more sources of information to focus on a single phenomenon. If these data sources agree with one another, researchers call this *multiple confirmation*. And when two or more independent pieces of evidence say the same thing, our confidence that what the evidence says is true increases.

In Chapter 3, we looked at some of the aspects of drugs and drug use in which pharmacologists and other medical and natural scientists are interested. Here, we examine how social scientists study drug use. Sociologists and criminologists are interested, among other things, in *rates* of drug use, or how widespread it is. There are many different sources of information summarizing how much drug use takes place in the general population. The systematic study of drug use entails making use of self-report surveys, as well as drug tests, arrest data, and hospital and medical examiner (ME) reports. In addition, the sale of legal psychoactive drugs (alcohol, tobacco, and prescription drugs) is recorded and is therefore publicly available for study. Illegal drug use poses special problems for the social researcher since it is, by its very nature, clandestine—hidden from public view. Hence, we must rely on a variety of *indirect* sources of information, including surveys. But before we make use of these sources, we need to understand the principles of social research.

SOCIAL RESEARCH ON DRUG USE: AN INTRODUCTION

How do we know it’s true? How can we feel confident that the conclusions we read in a study on drug use are reasonably valid, reliable, and accurate? Here are a few things we need to know about three matters in social research: lying, sampling, and statistics.

Lying

It is a half-truth that people will tell lies in surveys about their deviant, criminal, illegal, and controversial behavior. True, it is almost certain that a substantial proportion of respondents understate their drug use. When we compare what people say about their drug use in surveys with the results of drug tests, the latter figures tend to be significantly higher than the former. The discrepancy also tends to be much greater for some segments of the population than for others. But in surveys on illicit and criminal behavior, *most* respondents tell the approximate truth, to the best of their ability—if they believe that they will remain anonymous, that their responses will remain confidential, and that they will not get into trouble as a result of revealing incriminating information.

All of us make mistakes when we answer questions about the things we do, even if these things are legal. We forget things, we imagine, we conflate, we distort, we telescope; there are many common flaws in recalling events that make answers to questions in surveys far from perfect. And not *all* respondents trust researchers to protect the information they give them. Hence, there is likely to be something of a dampening effect in the answers people give to questions about illicit, illegal, deviant, and delinquent behavior. But the picture we get of drug use from surveys is *roughly* accurate. It is good enough to give us a *fairly* accurate idea of what's going on; it provides us with enough information to make generalizations and predictions.

In an *absolute* sense, there is a measure of inaccuracy in self-report surveys. If 5 percent of a sample say they used cocaine last year, chances are, if we had more accurate measures (such as urine tests), we'd probably find a figure that's closer to 10 percent. In a study of young adults in a "high-risk" community in Chicago (that is, in a neighborhood whose population had a high proportion of admissions to drug and alcohol treatment programs), researchers found that, in comparison with the results of drug tests based on hair samples, respondents significantly *underreported* their cocaine and heroin use (Fendrich et al., 1999). It's not clear whether and to what extent the same technique (drug tests) could be used on a sample consisting of tens of thousands of respondents, one that was truly representative of the American population at large. In any case, we can't assume that in an absolute sense, self-report surveys on criminal or deviant behaviors are completely accurate.

But in a *relative* sense, our figures are likely to be reasonably accurate. By a "relative" sense, I mean that respondents who said they used cocaine last year are statistically a great deal more likely to have done so than those who said they did not. In addition, surveys probably give a fairly accurate picture of drug use over time. If more respondents say they used illicit drugs in a survey conducted in 2014 than responded yes in a survey conducted in 2000, other things being more or less equal, I'd place my bet on an increase. And if a survey revealed a *lower* percentage saying that they had used drugs in the previous year, that generalization would probably be accurate as well. The same thing could be said about differences between and among populations in geographic categories (large cities versus small towns, for instance) and demographic categories (men versus women). For instance, if surveys report that a higher percentage of males than of females say they used marijuana in the past month, in all likelihood, if we were to take blood or urine samples to verify this, the male edge would be confirmed. The reason this is so is that, when we compare categories in the population, years, or geographic regions, whatever

errors prevail in one category usually take place in another; the distortions tend to cancel each other out. There is very little doubt that the results of self-report surveys are fairly valid sources of data in making comparisons. Given the controversial nature of the drug researchers' questions, it's remarkable that respondents are as honest as they are.

This does not mean that more valid techniques to obtain more honest answers in self-report surveys cannot be devised. Eric Wish and his colleagues (1997) found that persons in a drug treatment program who were tested for the presence of drugs in their urine before being interviewed gave accurate answers concerning their drug use. (He refers to this as the "test first" method.) Would this work for the population at large? Well, we can't—and shouldn't—do it, but if we were to conduct research using this method, we would know the answer.

Sampling

In surveys, sampling is typically a bigger problem than lying. Sampling refers to the way that respondents in a survey are chosen. Aside from the U.S. Census, no criminologist, sociologist, demographer, or medical researcher studies *every* person in a given group, category, or universe. (The Census has begun experimenting with the accuracy of surveys among representative chunks of parts of the population.) A total enumeration for all surveys would be wasteful and unnecessary—indeed, virtually impossible—not to mention silly. Instead, researchers rely on drawing samples of people who are similar in important ways to the whole group, category, or universe from which they are chosen. But the way a sample is drawn is extremely important. Researchers who conduct surveys do not pick people in a haphazard fashion. They select their samples so that everyone in the universe (the population at large) has an equal chance of appearing in the sample. That way, the sample will be a cross-section of, will look like, or will "represent" the universe. This means that the sample contains more or less the same proportion of men, women, blacks, whites, younger and older people, educated and less well educated individuals, and so on, as the entire population. Statisticians refer to a sample that does not look like or reflect the population as a whole as *biased* or *skewed*. Its respondents may be answering honestly, but not necessarily in the same way that a cross-section of the population would.

One problem with sampling the general population is that a lot of people can't be located or questioned; hence, samples that fail to include these hard-to-find segments of the population are not a true cross-section of the whole "universe," the population as a whole. This matter is especially problematic for studies of drug use and criminal behavior because it is precisely the difficult-to-locate segments that typically have the highest rates of illicit drug use. How do we study runaways and the homeless when they don't live at a fixed address? Most surveys don't include people who are incarcerated in a jail, prison, or mental institution, as well as people who are in the military. When we conduct a survey of drug use among high school students, we miss dropouts and absentees. And no matter how hard researchers try, some people refuse to take part in their surveys.

Statistics

Much information is conveyed in the form of statistics. Many students find reading discussions that make use of statistics unappetizing, even boring. Criticizing a course whose instructor draws on statistical information, students often complain, "We had to memorize

a bunch of statistics!” But the fact is, no instructor wants his or her students to “memorize a bunch of statistics” simply for their own sake. Statistics should be harnessed to a larger purpose: presenting important information in a condensed and powerful way.

Saying that more than 99 percent of all the people who have jumped off the Golden Gate Bridge in San Francisco were killed in the fall is a very dramatic and concrete way of saying that that particular act is extremely dangerous. Saying that smokers are more likely to die at the age of 65 than nonsmokers are to die at 75 is a specific and vivid means of presenting the idea that smoking cigarettes shortens life. Saying that 20-year-olds are more than 30 times more likely to have taken an illicit substance during the previous month than persons age 65 and older is an effective way of conveying the idea that age is related to recreational drug use. Statistics can be a powerful way of hammering home many basic facts of human existence. It is true that many statistics are so complex and difficult to understand that they do not tell most people much of anything. But presenting simple, direct, clear statistical facts about basic data of our lives can be a forceful, in-your-face way of imparting information that cannot be communicated by any other means.

The researcher is interested in two different types of statistics: descriptive and inferential statistics. Descriptive statistics *describe* what something is like in quantitative terms—that is, in the form of numbers. In descriptive statistics, the rough approximation, “more” versus “less,” is given exactitude. Descriptive statistics are the basic numerical facts of life, and they may be in the form of absolute numbers, or rates and percentages.

For instance, the 2011 National Survey on Drug Use and Health (NSDUH) estimated that 22.5 million persons living in the United States (an absolute number), or 8.7 percent of the population age 12 or over (a rate or percentage), said that they used one or more illicit drugs during the prior month. In 2011, the National Crime Victimization Survey estimated that 5.8 million Americans were victims of violent crimes (an absolute number), for a violent crime victimization rate of 22.5 per 1,000 households in the population (Truman and Planty, 2012, pp. 2, 3). Rates and percentages represent standard measures that make possible a systematic comparison between different areas, social categories, or years. For example, the violent crime rate for 2011 represented significant and substantial declines from the 1990s and the early 2000s; the 2002–2011 decline in violent crime was 30 percent.

In contrast to descriptive statistics, inferential statistics attempt to measure *cause-and-effect* relationships between and among two or more factors or variables. When things happen, we want to know what caused them to happen. The problem is, we don’t usually see them happening before our eyes. From descriptive statistics, we simply see that two or more things are associated or related to one another. Among persons who vote, the higher the income, the greater the tendency to vote Republican; the lower the income, the greater the tendency to vote Democratic. But what *causes* these relationships? Why do they exist? Inferential statistics attempt to answer questions such as these.

For instance, we know from descriptive statistics that, generally speaking, drugs and crime are related. People who use illicit drugs are more likely to commit crimes of all kinds than people who do not use drugs. Just as interesting, as their drug use increases, their likelihood of committing crimes increases as well. But does drug use cause criminal behavior? Or is it the reverse—does engaging in criminal behavior cause drug use? We also know that alcohol consumption is related to violent behavior: As the use of alcohol

rises, so does violence. But is the consumption of alcohol causally related to violence? Or are other factors the reason why the two are related to one another? Many things are descriptively but not causally related to one another. We'll look at some of these issues in Chapters 7 and 13.

For example, the consumption of ice cream is statistically and “descriptively” related to rape: During a given year, as ice cream consumption goes up, so does the incidence of rape. Using descriptive statistics alone, we'd find a strong correlation, relationship, or association between eating ice cream and committing rape. But does eating ice cream *cause* men to rape women? Is this a cause-and-effect relationship? Of course not, as inferential statistics will show us. The fact is that both ice cream consumption and rape rise during the summer; in the United States, consistently, the months with the highest rates of reported rape are July and August—precisely the months in which ice cream consumption reaches its peak. Here, the relevant factor is the season—summer—when it's warmest and social interaction is denser and more frequent than during the rest of the year. When we control for or “hold constant” the season, it is clear that the consumption of ice cream has no independent or causal impact whatsoever on rape.

In a like fashion, inferential statistics attempt to weed out, control, or hold constant all the other factors that are related to the ones in which we are interested. They cast a clear, cold light on the precise cause-and-effect connections between and among them. Unlike descriptive statistics, which are usually very straightforward and easy to understand, inferential statistics are usually complex and technical. But in order to answer the most important questions about how the social world is put together, researchers have to rely on them.

RATES OF DRUG USE: AN INTRODUCTION

What's the best way of finding out about rates of drug use? There is no single best way, but the use of a variety of research techniques will give us a more accurate and complete picture of this interesting and important phenomenon than relying on only one. Pharmacologists study the effects of drugs in the lab or in hospital clinics. Criminologists and sociologists are interested in drug use in *naturalistic* settings: on the street, in the home, among friends, on the job, in the school—anywhere people decide to alter their consciousness. In surveys, they also *ask* people about their real-life, naturalistic behavior. Social scientists want to know who uses, with what frequency, and with what consequences.

As we saw, when it comes to the “how many” question, with respect to the consumption of alcohol and tobacco, the researcher is in a fortunate position, because these are legal, taxable products. Hence, records are kept of how many bottles of beer, wine, and distilled spirits, cigars, containers of pipe tobacco, pounds of chewing tobacco, and cartons of cigarettes are sold each year. The same applies to the prescription drugs: A record is kept of every prescription written for each and every pharmaceutical or legendary drug. We know, within fairly narrow limits, how frequently each prescription drug is used in a legal, medical context.

Unfortunately, we don't have the same sort of hard data for rates of illegal drug use. To give us the full illicit drug consumption picture, researchers utilize drug tests,

surveys, and hospital and coroner's records. The following large-scale, systematic data sources convey crucial information about drug use and abuse in the United States: the Arrestee Drug Abuse Monitoring program (ADAM II); the Drug Abuse Warning Network (DAWN); the Monitoring the Future (MTF) survey; and the National Survey on Drug Use and Health, or NSDUH (which, prior to 2002, was referred to as the National Household Survey on Drug Abuse). They are the four mainstays of the social science drug researcher's data sources when it comes to rates. Each data source tells a slightly different story, each is flawed, yet each has strengths. Let's look at them one by one.

ARRESTEE DRUG ABUSE MONITORING (ADAM II)

If you want to know about the relationship between drugs and crime, a feasible place to begin would be to examine the drug use of people who have been arrested for criminal behavior. In 1987, the National Institute of Justice established the Drug Use Forecasting (DUF) program. In 1997, the name of the program was changed to the Arrestee Drug Abuse Monitoring program (or ADAM); ADAM ran from 2000 to 2003. Its current incarnation, renamed in 2007 as ADAM II, is based on a sample of arrestees for a variety of crimes; it is drawn from 10 counties in which some of the nation's large cities are located: Atlanta, Charlotte, Chicago, Denver, Indianapolis, Minneapolis, New York, Portland (OR), Sacramento, and Washington, DC. The 2011 sample, all male, was made up of about 5,000 booked arrestees, of whom 4,400 agreed to supply a urine sample—87 percent of all arrestees who were approached. What is so useful about ADAM II is that it accesses populations that would be inaccessible by means of more conventional research methods, such as the surveys conducted by the NSDUH or MTF. This is the case because many of those in ADAM II's samples do not live in conventional households, nor can they be located in a conventional institution, such as a school or workplace. For someone interested in the relationship between drug use and crime, ADAM II is a good place to start. For pragmatic research purposes, in its summary tables, ADAM II looked at the charge for which its sample was arrested—"violent crime," "property crime," "drug crime," and "other." When looking at the relationship of drug use and crime (that is, the offense that prompted arrest), I'll focus only on comparing violent versus property crime offenders.

Table 6-1, below, presents the median percentages for arrestees testing positive for the specific drugs indicated in the metropolitan counties participating in ADAM II's program for the year 2011. This table tells several stories.

The first story Table 6-1 tells is that arrestees—presumably, all or almost all of whom are criminal offenders—are *extraordinarily* highly likely to use drugs. In 2011, for the 10 cities, a median of 66.5 percent of arrestees urine-tested positive for at least one drug. The median for marijuana is 47.0 percent, and it is 20.6 percent for cocaine. In stark contrast, according to NSDUH, in 2011, only 8.7 percent of the American population said that they used at least one illicit drug once or more during the past *month*. With most tests employed, no drug can be detected a month or more since most recent use—most are detectable only within two to three days. The chances are that if the 8.7 percent figure is accurate, for any given moment in time, considerably less than 3 percent of the

TABLE 6-1 ADAM II, Adult Male Arrestees Testing Positive, Select Counties, 2011

Primary City	Any Drug	Marijuana	Cocaine	Multiple Opiates	Meth	Oxycodone	Multiple Drug
Atlanta	67.7	44.2	31.7	6.2	2.1	0.9	20.1
Charlotte	65.4	40.0	21.9	3.2	1.1	0.0	14.8
Chicago	70.6	52.8	19.3	14.2	0.2	0.3	20.4
Denver	65.1	41.1	22.5	8.5	6.6	2.6	20.4
Indianapolis	65.7	47.3	19.3	13.4	2.4	3.0	21.2
Minneapolis	69.6	52.0	20.4	9.8	3.5	2.6	20.7
New York	67.1	46.7	23.1	7.8	0.4	1.6	18.3
Portland	72.4	50.8	15.4	16.3	23.2	1.0	32.9
Sacramento	77.7	53.6	11.2	10.9	38.7	1.1	36.5
DC	65.9	42.7	20.8	8.8	0.2	0.4	19.1
Median:	66.5	47.0	20.6	9.3	2.3	1.1	20.3
Violent:	61.7	50.2	13.7	7.3	2.8	1.6	17.5
Property:	77.3	50.2	27.3	10.5	4.4	0.8	29.2

N for Violent Offenders=1,176; *N* for Property Offenders=1,147

Note: Counties in Table 6-1 are Fulton (Atlanta), Mecklenburg (Charlotte), Cook (Chicago), Denver (Denver), Marion (Indianapolis), Hennepin (Minneapolis), Manhattan (New York), Multnomah (Portland), and Sacramento (Sacramento). The District of Columbia is an “exclusive jurisdiction” and is not part of any state or county; the city is coterminous with the jurisdiction or entity.

American population would test positive for any illegal drug, since they used recently enough to have traces in their bodies. This indicates that arrestees may be as much as 20 times more likely to use illicit drugs than the population at large.

Of course, the illicit drug use of urban counties is more than twice as high as for the country as a whole, so even if we were to double that 3 percent figure, we’d see that when we set this statistic against the fact that roughly *two-thirds* of arrestees test positive for at least one drug, the message is loud and clear: Compared with a cross-section of the population at large (most of whom are *not* criminals), criminal offenders are *extremely* more likely than non-offenders to use psychoactive drugs—on the order of *twenty times* as likely as non-offenders to do so.

The second tale that Table 6-1 tells is that, except for our two methamphetamine outliers (Portland and Sacramento), for all these counties and all these drugs, the rank order of the drugs arrestees tested positively for is virtually identical. Marijuana is the top drug everywhere; cocaine (which includes crack) is number two almost everywhere; and the opiates, meth, and oxycodone are three, four, and five, respectively. In contrast, PCP, the benzodiazepines, methadone, barbiturates, and propoxyphene are nearly everywhere comparatively rarely used among arrestees. Again, taking our two exceptions into consideration, criminals in major cities and their surrounding counties seem to have *more or less similar patterns of drug use*.

Third, for the most part, marijuana use, for criminals generally (and, as it turns out, for the population as a whole), is highly *generic*—it is used practically universally, across

the map, from coast to coast and everywhere in between; marijuana travels everywhere. The drug is widely used in all regions of the country, and it is used by criminal and noncriminal alike. In fact, the median use of marijuana among violent and property offenders alike is exactly the same: 50.2 percent. Marijuana's use seems untouched by region of the country or the offense committed by arrestees. It is not only the most commonly used drug—by any research measure we might adopt—it is also the most commonly used of all the drugs we might examine. (The anomalous, remarkable, and almost astounding exception is the higher drug tests for cocaine, 66.3 versus 40.6 for marijuana, among property offenders in Washington, DC.) Marijuana is by far the premier drug that arrestees have taken recently. Some observers argue that marijuana seems to have become the “drug of choice” of the nation's criminals, especially among the young (Golub and Johnson, 2001). Just under half of the arrestees (for a median of 47%) tested positive for the presence of marijuana. It's not so much that marijuana is the “drug of choice” among the nation's young criminals; it's the most commonly used drug in general, for everyone, criminals and noncriminals alike. The fact that marijuana is more slowly excreted from the body than the other drugs is almost irrelevant in the face of its ubiquity.

In contrast—and this is the fourth story we can draw from Table 6-1—the use of methamphetamine (which, in the late 1980s, the media claimed to be “sweeping the country,” becoming the America's number one “drug of choice”) remains highly *regionalized*—by far, the most regionalized of the five drugs that showed up the most on arrestee testing. Tests were substantially more likely to be positive for arrestees in West Coast cities such as Sacramento (38.7%) and Portland (23.2%) than in counties that are located in states on the East Coast: New York (0.4%), Washington, DC (0.2%), and Charlotte (1.1%)—in fact, on the order of 190 times more likely in the case of Sacramento versus the District of Columbia. While the pattern of the use of all the other drugs is, for the most part, generic, for methamphetamine, it is the opposite: territorial.

Fifth: With the exception of meth, the range of variation in positive drug tests from one county to another is *vastly* smaller than the range of variation from one drug to another. In other words, *the dynamic of drug use is dictated by the drug more than by the region*. It is possible that a “tidal wave” of the use of a particular drug will hit a specific region at some time in the future, but at the present time, drugs have found their niche in the market more or less everywhere.

Sixth, when we compare violent offenders ($N = 1,176$) with property offenders ($N = 1,147$), we notice two differences. The first can be seen on the bottom two rows: property offenders are substantially more likely to have tested positive for the presence of drugs than is true of violent offenders. A positive test for any of the 10 drug tested was achieved at a median of 77.3 for property offenders and 61.7 for violent offenders—more than a 15 point difference. Over the years, researchers have argued that a major swath of the crime that drug abusers commit is an expression of their compulsive *need* to earn money to support their drug habit. What argues against that is that the difference in positive tests between the two categories (violent and property arrestees) for the manifestly addicting opiate drugs is fairly small—7.3 versus 10.3 percent. These offenders seem to be criminals first and drug abusers second. The other thing that we notice in our comparison is that the stereotypical explanation that the effects of the drug dictate the crimes users commit seems not to work here. For instance, cocaine and meth are

TABLE 6-2 ADAM II, Adult Male Arrestees, Median City Figures, 2011

Urine Test		Self-Report, Past 30 Days	
Marijuana	49.4	Marijuana	47.7
Cocaine	19.0	Crack Cocaine	9.1
Opiates	10.1	Powder Cocaine	6.9
Meth	2.8	Heroin	4.4
		Meth	4.3

Cities: Charlotte, NC; Denver, CO; Minneapolis, MN; Portland, OR; and Washington, DC.

Source: ADAM II, 2011 Annual Report (2012)

stimulants and could cause users to engage in crimes of violence; instead, what we find is that positive meth testees, as with the rest of the sample, are more likely to have been arrested for property crimes. As we saw, marijuana is an intriguing exception, as is oxycodone, a narcotic, with a higher proportion of violent than property offenders (1.6% vs. 0.8%).

A seventh lesson from the ADAM II data (Table 6-2): The validity of self-reports of drug use among arrestees depends on which end of the telescope the researcher is looking through. The correspondence between self-reports and urine tests was quite high—84 percent for marijuana, 88 percent for cocaine, 93 percent for the opiates, and 97 percent for methamphetamine. On the other hand, the proportion of arrestees actually using the drug (that is, they tested positive) *who self-reported* it was low—84 percent for marijuana, 45 percent for cocaine, 41 percent for opiates, and 61 percent for methamphetamines. These are sobering statistics for the survey researcher, not to mention researchers who rely on the results of self-reports of drug use. Still, positive testees for each drug were substantially *more likely* to self-report the use of that drug than nonusers were.

ADAM II gives drug researchers a rough picture of use among arrestees on a drug-by-drug, urban county-by-urban county, and year-by-year basis. It is an absolutely essential tool for understanding one major link in the drugs-and-crime equation. But its data do have limitations. Most important, by definition, arrestees are offenders who get caught. Many offenders are able to escape detection; those who do may differ from arrestees in important ways, including their drug use patterns. Second, these data are limited by virtue of the fact that its measure or indicator is a positive drug test. The human body metabolizes different drugs at different rates; hence, these drugs rarely show up on drug tests because traces of them disappear within hours. Marijuana has a long half-life; traces of it stay in the body for a week after use, and a very sensitive test can detect it even then. In contrast, LSD (a drug criminals are unlikely to use anyway, and which ADAM II doesn't test for) disappears very rapidly. Another drawback: For some of the categories, the numbers are small—for instance, for Washington, DC (44 for violent offenders, 25 for property offenders). Of course, the reason is that we are examining three variables simultaneously, and that cuts down on sample size. In spite of these and other limitations, ADAM II's sample of arrestees is as good as any

sample is likely to be on the drugs and crime equation, and data from its tabulations are crucial to an understanding of this important subject.

DRUG ABUSE WARNING NETWORK (DAWN)

Through a program funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), information is collected on two crucial drug abuse events: emergency department (ED) episodes and medical examiner (ME) reports. This program is referred to as the *Drug Abuse Warning Network (DAWN)*. The magnitude of DAWN's figures depends on two factors: (1) the recording activity of emergency department and medical examiner personnel, and (2) abuse and misuse among drug users. To make epidemiological sense of DAWN's figures, medical and sociological researchers have to operate under the assumption that these figures reflect, however imperfectly, one feature or *aspect* of drug abuse in the United States. If we assume that DAWN's program relies on data from medical personnel who record drug-related episodes randomly, erratically, or in an incomplete or skewed fashion, then we cannot make reasonable assumptions from their data. Fortunately, over time, the bases of DAWN's figures are becoming more reliable and more standardized, and increasingly reflect drug-related behavior that takes place in the material world rather than the manner in which medical personnel record them.

ED episodes are the number of recorded emergency department visits (or nonlethal "overdoses") to hospitals in DAWN's catchment area that are caused by or associated with the use of certain drugs. Comparing DAWN's figures with the percentage of the population who use these drugs gives us a rough idea of how dangerous their use is, at least within the time frame of a particular episode of use. In DAWN's 2004 ED data, for the first time, information was drawn from and is representative of the hospitals for all 50 states and the District of Columbia. Unfortunately, its ME and coroner's drug-related mortality reports are not as complete; in 2010, 543 jurisdictions in 37 states submitted detailed data. Findings cannot be "extrapolated to the United States as a whole," or so states this report, which was published in 2012. Meanwhile, the diligent researcher must make use of such data as are available, and interpret them accordingly. As a general rule, incomplete and unrepresentative data cannot be used for drawing inferences about the absolute size of numbers, but can often be used, with caution, to determine relationships between and among factors or variables.

An ED episode is any nonlethal, untoward, drug-related event that results in an emergency department visit to a facility with 24-hour services. Such episodes include drug misuse or abuse and adverse drug reactions. DAWN defines reactions that are associated with *drug misuse or abuse* as the use of illicit drugs, alcohol abuse by minors, and the misuse or abuse of pharmaceuticals *in a manner other than as prescribed or directed*. DAWN defines *adverse reactions* as side effects and drug-drug or drug-alcohol interactions; they include any and all untoward effects that are experienced "when drugs are taken for therapeutic purposes or prescribed as directed." In addition, the reports tally ED visits that result from accidental ingestion (about 100,000), visits to obtain treatment or detoxification (200,000), and drug-related suicide attempts (200,000). In a given episode, recorded by a designated member of the ED staff, up to four different drugs may

be mentioned as the cause of the untoward effect. In a given year, the same patient could visit one or more emergency departments on two or more occasions; hence, the yearly tabulation of episodes does not indicate the number of people who experienced untoward, drug-induced emergency department visits during that year, just the number of episodes. And since several drugs could be mentioned as having been used in a given episode, the number of times a drug is mentioned is greater than the number of drug visits or episodes (in the case of ME reports, an “episode” is the drug-related death of the user) that took place.

Keep in mind the fact that DAWN tabulates only *acute* drug reactions—those that take place specifically during the immediate aftermath of an episode of use. It does not tally the untoward *chronic* effects of drugs, those that take place over the long run, after weeks, months, or years of use. If a heroin addict is hospitalized for hepatitis, a “crack whore” dies of AIDS, or an alcoholic is admitted for cirrhosis of the liver, that hospital or morgue event will not be tallied in the DAWN data. And keep in mind the fact that many factors could cause a given untoward episode, including the dose and combination of drugs taken, any impurities in the drugs, and the route of administration. Also, the methods of recording both ED and ME episodes are unstandardized, varying from one metropolitan area to another.

Table 6-3 tells several stories about drug abuse. First, drug-related adverse reactions so serious that they require a hospital or clinic visit result from taking both legal and illicit substances. In fact, they come from a variety of sources: hormones, laxatives, herbal products, respiratory agents, impotence cures—almost any medical agent, cure, or potion imaginable. But a half-dozen stand out as the most frequently mentioned substance-caused or -related chemical agents. Alcohol, whether by itself or consumed in conjunction with another psychoactive substance, is associated with more untoward reactions than any other agent. In addition, legal prescription drugs—psychotherapeutic agents—when misused are likewise associated with hundreds of thousands of drug-related trips to emergency departments; this is especially true of sedative/hypnotics and, among them, most often the benzodiazepine or Valium-type drugs. “It falls to the public health community to raise awareness of possible serious consequences of prescription as well as over-the-counter drugs,” concludes DAWN’s report. “This objective is especially challenging because pharmaceuticals are perceived as being safe because they are legally manufactured and dispensed.” DAWN emphasizes that its data “demonstrate the increasing involvement of pharmaceuticals in both drug misuse and adverse reactions.” Likewise, the legally manufactured but illicitly used opiates, and most particularly the hydrocodones and oxycodones, figure in half a million recorded trips to hospital emergency departments, a development of fairly recent vintage.

The second story that Table 6-3 tells is an elaboration of the first: The two drugs that contributed the greatest absolute and percentage increase in the 2004–2011 period were the prescription opiate/narcotics, oxycodone and hydrocodone, along with their cognate brand-name compound products: OxyContin, Lortab, Roxicodone, Endocet, Vicodin, and so on. The *PDR (Physician’s Desk Reference)* advises users not to break up or chew OxyContin tablets because they can “quickly release a potentially fatal overdose,” and abusing these pills by ingesting them in this manner, snorting them, or dissolving them in liquid and injecting them “can slow down breathing and lead to death.”

TABLE 6-3 DAWN, Emergency Department (ED) Visits, 2011

	Number	Rate (per 100,000)
Alcohol	724,306	232.5
Illicit Drugs		
Cocaine	505,224	162.1
Marijuana	455,668	146.2
Heroin	258,482	83.0
Amphetamines	70,831	22.7
Methamphetamine	102,961	33.0
MDMA (Ecstasy)	22,498	7.2
GHB	2,406	0.8
Ketamine	1,550	0.5
LSD	4,819	1.5
PCP	75,538	24.2
Inhalants	10,032	3.2
Psychotherapeutic Agents		
Sedative/Hypnotics	501,207	160.9
Benzodiazepines	425,616	136.6
Antipsychotics	76,197	24.5
Antidepressants	108,388	34.8
Central Nervous System Agents		
Opiates/Narcotics	556,551	178.6
Amphetamines	18,399	5.9
TOTAL ED VISITS	2,462,948	790.4
TOTAL DRUG REPORTS	4,510,768	1,447.7

Note: Because a visit may involve multiple drugs, the sum of all drug reports will be greater than the total number of visits, and, because the drug categories may overlap, the sum of the percentages will be greater than 100. Note that this classification is not consistently applied by drug; the same drug may appear for different cases in different categories according to hospital directives; they represent non-overlapping visits. In contrast, some visits appear in categories within categories, and hence *should* represent overlapping visits, although representatives of different EDs categorize drugs in variable ways. Some specify heroin, while others use the generic category “opiates/narcotics.”

Source: National Estimate of Drug-Related Emergency Department Visits, 2004–2011, Drug Misuse and Abuse, by Drug, 2013

What goes for lethal overdoses holds even more strongly for non-fatal overdoses: oxycodone and hydrocodone are strong medicine indeed.

The third story that DAWN’s ED figures tell is that two extremely popular illicit drugs contribute substantially to untoward visits to the hospital, and roughly to the same degree—about half a million—cocaine (505,224) and marijuana (455,668). Marijuana’s contribution might seem surprising, since it is widely regarded as a safe, mild herbal agent, but the fact is, its potency has been rising over the years, and novice users, who may not be accustomed to higher-strength weed, may feel insecure, out of control, and suffer a panic attack when they begin experiencing effects that are substantially more powerful than they expected. Novice users may also experience disorientation and even

TABLE 6-4 DAWN, Drugs Mentioned in Drug-Related Deaths, Medical Examiner (ME) Reports, 2010

Opiates	10,281	(44%)
Alcohol	3,567	(15%)
Benzodiazepines	3,463	(15%)
Cocaine	2,786	(12%)
Antidepressants	1,982	(9%)
Stimulants	1,065	(5%)

Note: For each jurisdiction, the percentages are only for the top five drugs. Most drug-related deaths involve more than one drug.
Source: Substance Abuse and Mental Health Services Administration, *Drug Abuse Warning Network, 2010: Area Profiles of Drug-Related Mortality*, 2012.

paranoia, which typically passes after several hours. As I've said several times before, it is impossible to *die* of a marijuana overdose, but it is possible to experience a panic attack when taking what one *experiences* as a marijuana overdose.

DAWN mortality data (see Table 6-4) come from 543 participating medical examiners (MEs) and county coroners who reported to the DAWN program on all criteria on deaths that were reported to their office that met DAWN's criteria for a drug-related death, that is, one that is determined by the ME/C to be related to drug use—caused by or “implicated in” the death. Keep in mind, again, that DAWN's ME data are very incomplete and, according to its mortality data report, its findings “cannot be considered representative of ME/Cs that did not participate” in the program and hence, results “cannot be extrapolated to the United States as a whole.” For instance, the New York metropolitan area's coroners do not even report drug data to DAWN; this is also true of several dozen major jurisdictions. However, in spite of these limitations, the regularities we see in DAWN's ME report are so consistent that it would be foolish to ignore them. Hence, as with DAWN's ED figures, we assume that ME reports reflect a fragment of objective reality and that, to some extent, we can reason about drug abuse from them. For instance, the fact that opiates rank at the top of ME reports and marijuana never appears alone in them says *something* about the effects of these two drugs or drug types.

Drug overdoses represent a major and increasing source of death in the United States. It's important to note that between 1980 and 2010, the death rate from motor vehicle traffic plummeted from approximately 23 per 100,000 to 12; motorists are driving more safely, they are less likely to be intoxicated when behind the wheel, and automobiles and roadways are safer. In contrast, during that same period of time, the drug overdose rate increased from roughly 3 to 13. In 2008, drug overdoses surpassed motor vehicle accidents as a source of death (Jones, 2012). In spite of overall declines in drug use, a small and increasing number of addicts, abusers, and drug misusers are taking greater quantities of prescription and recreational substances, and to lethal effect. Moreover, physicians seem less reluctant to prescribe the narcotic painkillers, and users seem increasingly likely to take them.

In almost every state, county, and city that reported, the opiate drugs appear most commonly in drug-related deaths—and by a very wide margin. Opiates appear on ME reports almost *three times as often* as alcohol and the benzodiazepines, the number two

and three drugs. In contrast, while marijuana appears relatively frequently in DAWN's ED figures as an accompaniment of temporary untoward effects that cause medical or psychiatric emergencies because it is so frequently used, it *never* appears by itself in DAWN's mortality (ME) figures. The fact is that marijuana does not activate the centers of the brain that regulate breathing or heartbeat and, hence, virtually cannot cause death by itself. In contrast, cocaine, outranked only by alcohol in the drugs that are associated with ED episodes, ranks fourth in ME reports. Likewise, the commonly prescribed benzodiazepines, the sleep and anti-anxiety agents such as clonazepam, diazepam, and lorazepam, rank high on both DAWN lists; if taken in sufficient quantities, its representatives can generate adverse effects that lead to fatal or nonfatal overdoses. With respect to DAWN's ME victims, most are male (70%), and white (67%)—but slightly more likely to be black than their numbers in the population would indicate (25% are black)—and *older* than use patterns would indicate (40% are over the age of 35).

How do we juggle frequency of use with toxicity, not to mention two measures of seriousness of toxicity? Obviously, alcohol is an extremely commonly used substance, but DAWN included it in both of its overdose lists only if taken in combination with other drugs; if counted when taken by itself, it would rank far higher on these lists. The opiates or narcotics are used by a very small proportion of the population, yet they rank head and shoulders above all other drugs in association with lethal overdoses and third among those that are related to emergency department episodes. Cocaine and the benzodiazepines are popular drugs, and cause effects both pleasurable and harmful—the latter effect is sufficient to send users both to hospitals and the morgue. There is no single drug that precipitates so much harm that experts are forced to say, This is the most dangerous, widely used drug we know of. But when we examine DAWN's ED and ME figures, four drugs stand out above all others—the “Big Four” of dangerous drugs: opiates, alcohol, the benzodiazepines, and cocaine. No other drugs or drug types come close to them in being associated with abusive use and other physical, especially mortal, harms.

Historically, at least for a century, men have died of drug overdoses at a vastly higher rate than women; this is especially the case for recreational use, mainly of heroin and cocaine. For instance, according to the Centers for Disease Control (CDC), in the United States in 2007, nearly twice as many males died of a drug overdose (18,029) as females (9,626). Only among persons 75 and older have the ratios been more or less equal. In 2008, roughly three times as many men as women died of lethal *illicit* drug overdoses; however, the ratio for prescription drugs is only 1.45, and for opioid pain relievers, it is 1.6. During the course of the 2000s, women's rate of death by drug overdose is beginning to catch up to that of men, especially for the misuse and abuse of the pharmaceuticals. In 2013, the CDC noted that between 1999 and 2010, while men's lethal overdose rates increased by 265 percent, women's jumped more than 400 percent. In 1999, the National Vital Statistics reported that 1,287 women nationally died of an overdose of prescription opioids, such as OxyContin, Vicodin, and Percodan; in 2010, this had increased to 6,631. In comparison, in 2010, 10,020 men died of an opioid overdose. For the benzodiazepines, for women, the comparable figures were 420 in 1999 and 2,579 in 2010. The reasons for women's overdose deaths? Analysts suggested that women suffer from types of pain that are more intense and longer-lasting than is true for men, are more likely to be prescribed sedatives in addition to opiate pain relievers, and are more likely to engage in “doctor shopping” to obtain more pharmaceuticals (Mack, Jones, Paulozzi, 2013).

MONITORING THE FUTURE (MTF)

Each year since 1975, the Institute on Survey Research at the University of Michigan has surveyed a nationally representative sample of 15,000 or so high school seniors about their use of and attitudes toward legal and illegal drugs. Beginning in 1977, the survey also questioned adults, both college educated and non-college educated, who had completed high school one or more years earlier; it divided the adult sample into college students and non-college respondents, whose answers are tabulated separately. In 1980, the study drew a specifically college sample and surveyed them about drug use. In 1991, it included samples of eighth- and tenth-graders. In 2012, the survey drew a sample of 45,400 students in nearly 400 secondary schools around the country. This ongoing study is referred to as The Monitoring the Future, or MTF, survey.

The MTF's surveys are conducted in the classroom, and its questionnaires are self-administered by each respondent; for each drug, it asks about four levels of use: (1) lifetime prevalence—whether the respondent has ever used the drug in question; (2) annual prevalence, or use during the prior year; (3) 30-day prevalence, or use during the prior month; and (4) daily use, or use on 20 or more days during the previous 30 days. Respondents are also questioned about perceived risk of taking drugs, their disapproval of drug use, and perceived availability of specific drugs. In addition to presenting data on each class separately, MTF presents the results of its surveys by combining eighth-, tenth-, and twelfth-grade samples.

Table 6-5 has some interesting things to say about drug use among its adolescent respondents. Alcohol attracts the greatest percentage of students using psychoactive substances—and by a considerable margin. (Remember, legally, no one under the age of 21 can purchase alcohol; hence, all teenagers who buy and/or use it are in violation of the law.) Two-thirds of high school seniors in MTF's 2012 survey (66%) said that they had drunk alcohol during the prior year, and 4 out of 10 (42%) said that they had done so in the past month; over a quarter (28%) had been *drunk* during the previous 30 days. And one of 10 of MTF's eighth-graders (most of whom are only 13 years old) had 30-day alcohol prevalence. As for the illegal drugs, marijuana stands out as the most popular among teenagers—again, by quite a wide margin. It is possible that half of all episodes of illegal drug use involve marijuana alone. A third of MTF's seniors (36%) said that they had used marijuana during the prior year, and nearly a quarter (23%) said that they had done so in the previous month. This is a small but significant increase—4 percentage points for both figures—since 2008.

Taking the population as a whole, the drugs that the media have tended to focus on, the ones with the greatest potential for harm—crack, heroin, and methamphetamine—are for the most part fairly exotic, marginal, and not commonly used. Between 1 and 3 percent of even the seniors have used these drugs during the prior month. As we might expect, MTF's survey verifies that adolescents use alcohol far more than all of the strictly illegal substances combined, and more than half of the illicit drug use of teenagers is made up of marijuana use. In fact, they use the most dangerous drugs the least. GHB and ketamine, two widely publicized “date rape” drugs, were so rarely used at the 30-day prevalence level that their rates could not even be calculated. Alcohol remains the most common “date rape” drug and, while such behavior is a tragedy (and a crime) when it happens, it is also atypical. The only truly surprising finding of MTF's survey is how

TABLE 6-5 Monitoring the Future (MTF), Annual and 30-Day Prevalence, Various Drugs, Eighth, Tenth, and Twelfth Graders, Monitoring the Future (MTF), 2012

	Annual			Prior Month		
	Eighth	Tenth	Twelfth	Eighth	Tenth	Twelfth
Marijuana/hashish	11	28	36	7	17	23
LSD	1	2	3	*	1	1
MDMA (Ecstasy)	1	3	4	1	1	1
Cocaine	1	2	3	1	1	1
Crack	1	1	2	1	1	1
Heroin	1	1	1	*	*	1
OxyContin	2	3	4	—	—	—
Vicodin	1	4	8	—	—	—
Adderall	2	5	8	—	—	—
Amphetamines	3	7	8	1	3	3
Methamphetamine	1	1	1	1	1	1
Any Illicit Drug	14	27	37	8	18	25
Any Illicit Drug Other than Marijuana	6	11	17	3	5	8
Alcohol	32	53	66	11	28	42
Been Drunk	13	30	46	4	15	28

*less than one-half of one percent

—Data not presented

Source: Adapted from Johnston et al., 2013.

many of its seniors had been drunk—almost half during the past year (46%) and over a quarter (28%) during the past 30 days. The results of MTF's survey remind us that use and media attention are two entirely separate matters.

There are some limitations to the MTF survey. Two obvious such limitations involve absentees and dropouts. There is always the possibility that the young people of the appropriate age that are most likely to use the more dangerous drugs (heroin, meth, PCP, and GHB) have already dropped out of school, or were absent the day the survey was conducted and do not appear in a sample such as MTF's; by the senior year, the dropout rate totals nearly 20 percent nationwide. And it is almost certain that the drug use of absentees and dropouts is higher than that of students who attend regularly and graduate with their class. Hence, MTF's estimates of drug use among students in the eighth, tenth, and (especially) twelfth grades must be regarded as an underestimation. Twelfth-graders form an even less-representative segment of their appropriate age category than is true of tenth- and, especially, eighth-graders. It is also not clear whether and to what extent answering questions in a school setting about an illicit activity (drug use) reflects real-world behavior. As we've seen, reason dictates that respondents are likely to understate their drug use to a certain—but unknown—degree. Still, MTF's yearly survey on the use

of and attitudes toward legal and illegal drugs is the best available study on student drug use. Its sample is huge and reasonably representative of its target population; its questions are standardized and permit comparison on a year-by-year, drug-by-drug, region-by-region, and social category-by-category basis; and the data tabulations in MTF's publication are detailed and informative. The Institute for Social Research's survey on drug use sheds a clear light on a significant area of human behavior.

NATIONAL SURVEY ON DRUG USE AND HEALTH (NSDUH)

In 1971, the federal government undertook the first systematic survey of drug use among a randomized sample of Americans. Sponsored by the National Commission on Marihuana and Drug Abuse, this survey gave us our first accurate and systematic look at patterns of drug consumption in the United States. Between 1975 and 1991, the National Institute on Drug Abuse (NIDA) sponsored nine similar surveys. Beginning in 1992, the Substance Abuse and Mental Health Services Administration (SAMHSA), a division of the U.S. Department of Health and Human Services, sponsored yearly surveys of drug use in the American population. In 2002, the survey's name was changed from the National Household Survey on Drug Abuse to the *National Survey on Drug Use and Health (NSDUH)*. The 2011 NSDUH survey was based on a sample of 67,500 respondents. The resultant report, released in 2012, provides, in the words of SAMHSA representatives, national estimates of rates of use, number of users, and other measures related to the use of illicit drugs, alcohol, and cigarettes and other forms of tobacco, by the population ages 12 years and older. It's important to note that accompanying a table in the 1994 SAMHSA report, published in 1996, is the following note: "Due to improved survey procedures, *these estimates are not comparable to previous years and should not be used for trends with pre-1994 data*" (p. 26). Here, we will be skeptical rather than dismissive of pre-1994 and post-1994 trend data. As comparison and contrast, we have MTF's data, which fits with my earlier invocation of multiple confirmation.

As with the MTF study, the NSDUH survey asks about lifetime prevalence, yearly prevalence, 30-day prevalence, and daily prevalence for each drug. SAMHSA's national household survey presents data for the population as a whole, age 12 and older, and, separately, also divides its sample into youths ages 12–17, young adults ages 18–25, and adults ages 26 and older. Table 6-6, which reports the findings of the most recent survey, conducted in 2011, tells basically the same story for the population at large that the MTF survey revealed for drug use among schoolchildren. Alcohol is by far the drug used by the largest percent of the American population (52% past-month use), followed by tobacco (22%). And, again, marijuana is America's most popular illicit drug, likewise by a considerable margin; nearly 7 percent of the population said they had used cannabis during the 30 days prior to the survey. No other illegal drug is used by remotely as many people as is marijuana. Just as important, *virtually all of the increase in drug use between 2002 and 2011 was with marijuana alone*; in effect, non-marijuana illicit drug use hardly increased at all. Again, as measured by past-month use, the prescription pain relievers such as oxycodone and hydrocodone, which users take nonmedically and recreationally for the purpose of getting high, ranks in the number two spot of popular illicit drugs (1.7%). As we see in Table 6-6, and as we've likewise seen from other data sources,

TABLE 6-6 NSDUH, Nonmedical Use of Various Drugs, Age 12 and Older, 2002–2011

	2002			2011		
	Lifetime	Past Year	Past Month	Lifetime	Past Year	Past Month
Marijuana	40.4	11.0	6.2	42.0	11.6	6.9
Cocaine	14.4	2.5	0.9	14.3	1.8	0.6
Crack	3.6	0.7	0.2	3.2	0.3	0.1
Heroin	1.6	0.2	0.1	1.6	0.2	0.1
LSD	10.4	0.4	0.0	8.9	0.4	0.1
PCP	3.2	0.1	0.0	2.4	0.0	0.0
Ecstasy	4.3	1.3	0.3	5.7	0.9	0.2
Pain Relievers	12.6	4.7	1.9	13.3	4.3	1.7
Tranquilizers	8.2	2.1	0.8	8.4	2.0	0.7
Stimulants	10.0	1.4	0.4	7.9	1.0	0.4
Meth	6.5	0.7	0.3	4.6	0.4	0.2
Sedatives	4.2	0.4	0.2	2.9	0.2	0.1
Any Illicit Drug	46.0	14.9	8.3	47.0	14.9	8.7
Any Illicit Drug Other than Marijuana	29.9	8.7	3.7	29.3	7.4	3.1

	Use in Past Month 2002	Use in Past Month 2011
Cigarettes	26.0	22.1

	Use in Past Month 2002			Use in Past Month 2011		
	Ever	Binge	Heavy	Ever	Binge	Heavy
Alcohol	51.0	22.9	6.7	51.8	22.6	6.7

Note: “Binge” alcohol use: drinking five or more drinks on the same occasion or within a couple of hours of each other on at least one day in past 30 days; “heavy” use is drinking five or more drinks on each of five or more days in the past 30 days; all heavy drinkers are also binge drinkers.

Source: Results from the 2011 National Survey on Drug Use and Health: Summary of National Findings (SAMHSA, 2012).

crack cocaine and heroin tend to attract very low numbers and percentages of users; for both, only one-tenth of one percent of respondents said that they had used one or the other of these substances during the prior 30 days. At the same time, as we see from other data sources, very small numbers of very serious abusers of very harmful drugs (such as heroin) can cause a great deal of harm, including their own deaths. NSDUH is

probably the best survey that has ever been conducted on the incidence of the consumption of psychoactive substances among the American population. And future surveys will be improved, year by year.

NSDUH's data takes on even great relevance when we compare a drug's volume of use in the population at large with its appearance on drug testing among arrestees and the two components of DAWN-measured untoward effects, ED episodes, and ME reports. By making this comparison, we can set forth some (albeit inexact and rough) estimates as to each drug's *degree* of harm or danger. Opiates are used vastly less frequently than alcohol. The fact that heroin, along with the painkillers oxycodone and hydrocodone, is associated with many more recorded lethal overdoses than alcohol is a significant fact; it points to the fact that *on a dose-by-dose basis*, heroin and the illegally used prescription narcotics are extremely toxic drugs. In contrast, the fact that marijuana never appears among the "top five" drugs associated with drug-related ME reports tells us that the drug does not strongly activate the neurological pathways that control breathing and heartbeat rate; it is, again, virtually impossible to die of a marijuana "overdose." The fact that the benzodiazepines or Valium-type drugs (such as lorazepam, diazepam, Xanax, and Ropyh-nol) are rarely mentioned in the media as a dangerous drug type, yet are associated nationally with some 3,500 recorded fatal drug ingestions, is an indication that, perhaps, they have been given something of a free pass with respect to public attention and legal control. Likewise, when antidepressants—not generally thought of as a type of dangerous drug—frequently rank among a number of jurisdictions' "top five" lists in ME reports should give us serious concern. On the other hand, cocaine's toxicity is in line with the attention it receives in the media as a recognized dangerous drug.

What a comparison of usage patterns, as measured by MTF and NSDUH, with DAWN's overdose statistics does is to underscore what I said about the "Big Four" drugs when it comes to harm. DAWN's ED and ME reports are not strictly compatible, but a reasonable though inexact list of "Big Four" dangerous drugs, in the light of prevalence figures, would indicate that heroin/narcotics/opiates are unquestionably our most dangerous drug or drug type; the benzodiazepines stand at number two; cocaine is probably number three; and alcohol (given how often it is used) is number four. In a British context, Nutt, King, Salisbury, and Blakesmore (2007) rank heroin, cocaine, and the barbiturates at first through third place in "harm scores," alcohol at fifth place, and the benzodiazepines in seventh place; they place khat, an East African plant containing a mild stimulant, as the safest drug among those that the research team ranked.

Several facts and qualifications should be kept in mind when comparing drug-related harms, as measured by DAWN's program, versus the prevalence and frequency of use, as determined by surveys such as NSDUH and MTF: First, again, DAWN does not measure chronic harm, such as lung cancer; hence, the use of cigarettes does not appear in ED or even ME reports. Second, DAWN's data are flawed and incomplete; they provide very rough and inexact estimates of even the extent of acute harms. Third, the categories of drugs that are used in the available data sources do not always correspond with one another. For instance, "heroin" is not the same thing as "opiates," and many government studies classify PCP as a hallucinogen similar to LSD, which is a serious mistake; hence, data based on such a classification are worthless. Still, comparing DAWN's measures with MTF's and NSDUH's use figures gives us a peek at degrees of dangerousness, and here, the narcotics and the benzodiazepines are at or close to the top with respect to potential for harm.

SUMMARY

Without a grounding in research methodology, we have no idea whether the estimates of prevalence of drug use we hear or read in the media, or the “guesstimates” of our friends, relatives, and acquaintances are accurate. Knowing how data are gathered is a first step in developing a critical perspective toward any social phenomenon. All data sources are flawed or incomplete, which means that we have to examine them carefully, and critically, rather than simply dismiss—or accept—they outright.

Researchers try to put together a variety of sources of information to give them a complete picture of drug use. This is called “triangulation,” a term borrowed from land surveying to refer to pinpointing an exact location, or distances to a location, by observation from two other locations. When two or more data sources agree, we call this “multiple confirmation.” The drug researcher is primarily interested in “incidence” figures—the occurrence of drug use within a specific period of time, whether in the form of a rate or percentage or in the form of an absolute number. For instance, in 2011, an estimated 22.5 million Americans, or 8.7 percent of the population age 12 and older, used one or more illegal drugs at least once during the previous month. Fortunately, as we saw, drug researchers have multiple sources of data to determine such things as incidence and prevalence of drug use, drug use in different demographic categories, drug use over time, and drug use in various geographical locales. One data source is the survey.

Lying occurs—many people consciously underestimate the extent of their consumption of psychoactive substances—but it is less of a problem than one might think. We can get a roughly (although not completely) accurate picture of drug use from the answers people give in surveys. Lying influences the absolute size of figures far more than it influences the relative rank of categories of users. Sample size and representativeness are a more serious problem than respondent lying. For instance, with small samples, it is impossible to accurately estimate the size of rare forms of drug use. In addition, in drawing a sample, it is difficult to locate homeless people, and most surveys do not include prison populations—two segments of the population most likely to use drugs. Hence, we must always be skeptical about the percentages that surveys produce for the use of various drugs.

We tend to make statements about incidence figures in the form of statistics, which present information in a condensed and precise fashion. It is not difficult to understand most “descriptive” statistics, which describe what something is in quantitative terms, in the form of numbers. “Inferential” statistics are more complicated, and measure “cause-and-effect” relationships. They hold constant or control for a variety of factors to reach an explanation for why things happen. For instance, does drug use cause criminal behavior? Inferential statistics attempt to answer such analytic questions.

To answer the question of how many people use which drugs, who does so, with what frequency, and with what consequences, we rely on a variety of sources. For the legal drugs, which are taxable, we have sales records. For the illicit drugs, we have ADAM II (Arrestee Drug Abuse Monitoring), DAWN (Drug Abuse Warning Network), the MTF (Monitoring the Future) survey, and the National Survey on Drug Use and Health (NSDUH). All are flawed and incomplete, but together, they offer an approximation to the size and shape of illicit drug use.

ADAM II (formerly referred to as DUF—Drug Use Forecasting) currently gathers a sample of adult arrestees in more than 10 metropolitan counties and asks them if they would

agree to be interviewed and drug tested (nearly 85 percent agree). Although ADAM's data are limited, they tell us a great deal about drug use and trends, and use in different metropolitan counties—and especially the empirical relationship between drug use and crime. For instance, we know that PCP use is very rare among arrestees and that widespread methamphetamine use is geographically confined to certain areas, especially the West.

DAWN collects data in hospitals and from medical examiners/coroners around the country. The program gathers two sources of data: untoward drug-related emergency department (ED) visits, and medical examiner (ME) reports on lethal drug “overdoses” or drug-related deaths. In ED visits often, and in ME reports usually, more than one drug is used. DAWN's data are based on acute effects. The important news that DAWN reports, putting ED and ME data together, is that a small number of specific drugs (the “Big Four”) appear most frequently in both emergency department and medical examiner reports—the narcotics, benzodiazepine, cocaine, and alcohol (in combination with one or more other drugs).

Since 1975, every year, MTF has drawn a huge sample of twelfth-graders, college students, and young adults not in college, and, in addition, since 1991, eighth- and tenth-graders, and asked respondents about their drug use and their attitudes about drug use. More than 15,000 respondents are in each category—a total of 45,000 schoolchildren and about 35,000 post-high school respondents. MTF conducts these surveys in schools and asks questions about lifetime, yearly, monthly, and daily prevalence. In 2012, about 400 schools participated in the study. Obviously, for the school samples, dropouts and absentees are not included—and they are segments of the school-age population most likely to use drugs; this represents a limitation of MTF's data. Overall, however, MTF is unquestionably the best ongoing survey conducted on drug use among schoolchildren.

The federal government sponsored the first national household survey on drug use in 1971. Between 1975 and 1991, the National Institute of Drug Abuse (NIDA) conducted nine surveys on drug use. And since 1992, the Substance Abuse and Mental Health Administration (SAMHSA), a division of the federal Department of Health and Human Services, has sponsored these surveys yearly. (These surveys did not report their findings for their total samples—that is, with all age ranges combined—until NIDA's 1985 report.) The sample of its National Survey on Drug Abuse and Health (NSDUH) is huge (67,500 in 2011). Although extremely accurate for determining the incidence of commonly used drugs, for the rarer forms of drug use (such as heroin addiction and crack consumption), NSDUH's findings are shakier, and they are questionable in adolescent drug use, since adults are present a third of the time when adolescents are interviewed. But for most forms of drug use, and especially for the adult segment of the population, we can have a great deal of confidence in the results of the national household survey. NSDUH is the best survey we have on the drug use of the general population.

ACCOUNT: Interview with a Polydrug User

This account illustrates one of the research methods discussed in this chapter—the in-depth interview. Moreover, it illustrates the fact that, when grounded in methodology and the subject matter of a sociology course, undergraduates can gather

relevant information about a given subject and informally test sociological hypotheses. For instance, does this interview say something about the relationship between rural poverty and drug use? What about the relationship between abusive alcohol

consumption and female sexual victimization? Zhanine Brooks wrote a paper on drug use for a course taught by Linda Silber, a sociology instructor at Union College in Kentucky; this interview is the result. The respondent is a 29-year-old white mother of three young children, one of whom was taken away by family court to live with the child's grandmother. She has lived all her life in the region where the college is located; she works in a factory earning minimum wage, resides in a trailer, and is receiving federal support. Her male companion is currently incarcerated.

Zhanine: What kinds of drugs have you used?

Ashley: I have used OxyContin, Roxycontin, I've tried heroin, I've tried meth, I've snorted cocaine, I've smoked crack, drunk [a lot of] alcohol, never really was very big on marijuana but I've smoked it. Acid, 'shrooms, Ecstasy, nerve [sedative] pills, pain pills, methadone, I've even tried inhalants.

Zhanine: OK, what kind of pain pills did you [take]?

Ashley: OxyContin, Roxicets, Percocet, Loratabs, Lorcets—just about any kind of pain pill there is, I've done them. [These are all narcotics—analgesics. All are addicting, all can cause an overdose, and at a sufficient dose, all cause mental clouding and a “high” or intoxication.]

Zhanine: Which drug would you say you used the most?

Ashley: Cocaine, cocaine's the one—that was my drug of choice.

Zhanine: How did you get involved with cocaine?

Ashley: The first time I ever tried cocaine I was eighteen years old and I went to a concert . . . with some of my friends from high school

and they had, like, two-and-half grams of it, in powder form. I tried it then, but I didn't mess with it again until I was twenty-one, and then some people [I knew] had some crack, which is powder rocked-up, it's made hard instead of soft. I was drinking and they asked me if I wanted to try it, and I tried it and never let it go 'til this past year.

Zhanine: Can you tell me what the first time was like for you? How it made you feel?

Ashley: (*Chuckles*) Yeah, the first time I did it, the first time is the only time you're gonna feel like that, 'cause I got this big rush of energy. Everything was intensified, you could hear, you know how some people say you can hear a mouse pee on cotton, you could hear everything, you feel as if you could see ten miles away, you're just real energetic, you can't sit still, it just felt good. I felt great. When I first did it, I didn't have a worry in the world.

Zhanine: Did you do any other drugs before you were eighteen?

Ashley: I tried heroin when I was sixteen, which wasn't my fault. (*Chuckles*) My brothers had bought some in [from a major city in Ohio], and they lined out some in the back of my brother's bathroom and told me it was meth—crank—and I snorted it. And the lines was 'bout three centimeters long and 'bout a centimeter wide, and I snorted two of 'em, and that was the most, oh, God, that was crazy. I felt like I was floating. I threw my guts up, and then each time I threw up, I got higher and

higher. I was on the floor rolling around, I didn't know where I was. When I was sixteen I tried meth, and I stayed on it, for probably a week and hallucinated for three or four days after that, I seen every kind of animal there ever was. I was talking to people that wasn't there. Now, alcohol I always [drank], since I was fourteen I liked to drink, but drug-wise, when I was a teenager, I really didn't do anything at all but drink alcohol, and then in my twenties is when I started doing the heavy drugs.

Zhanine: What was the best part about you using drugs?

Ashley: You don't care about nothing. It numbs every hurt, every issue you've got, every worry that you've got, you're not worried 'bout nothing but getting high, that's all—you don't [care about anything]—it numbs everything.

Zhanine: What's the worst part?

Ashley: You spend all your money, you let yourself go, you let your children go, you let your home go, all your responsibilities go, every dime you get, you wanna spend it on drugs. It don't matter if you have children, if your children have diapers or not, you always depend on somebody else to get it, and you take every dime you have and spend it on drugs.

Zhanine: What would you say was the worst part for you?

Ashley: The worst part for me is that all I cared about was getting high. I lost my children, I did not—even though they was taken care of home-wise, food-wise, and cleanliness-wise—they did not have the emotional love that they

needed because all I wanted to do was get high. If somebody showed up at my house, it don't matter if I was in the middle of doing something with my kids or not, if they wanted me to go and get some drugs for 'em, I'd leave them there and go get it, and then I'd put my kids in the room while I was in the other room getting high. And they didn't have stuff that they really needed that they coulda had.

Zhanine: How often did you use?

Ashley: Every day.

Zhanine: You said your kids were the worst part being taken away. Did you ever have any outside support?

Ashley: I had all kinds of outside support, but when people help you for so long, and you keep doing the same pattern and you use drugs like an addict will, people eventually get tired, and then you lose your friends, you lose your support group, you lose all the good things in your life when you're on drugs and—you're a addict. You lose everything that's positive. You just care about your drugs. You really don't care if somebody's there to help you or not. Then you blame everybody for everything, everything bad happens to ya, it's everybody else's fault when really it's your own.

Zhanine: Did any of your family ever reach out and try to help you?

Ashley: My grandmother. My boyfriend's mother, my boyfriend's whole family, matter of fact, my family. I just used them for whatever I could. I'd lie to them, tell 'em I needed money for this bill and that bill, and I really did need

the money for the bill, but as soon as I got it, I'd go and get drugs with it.

Zhanine: What did they do to try to help you?

Ashley: They tried to. I went to rehab. My boyfriend's mother sent me and her daughter to rehab. That lasted thirty days [and then I] came home, stayed clean for about two weeks, and I went right back at it [doing drugs]. And then my grandmother, her idea of helping me was completely cutting me off. Any money, seeing my daughter, not even speaking to me on the phone, just letting me hit rock bottom.

Zhanine: After rehab, how did you get back into drugs?

Ashley: I went around with the same people and the same places I knew they was gonna be at.

Zhanine: And all the friends you had that you were with then, all of them were drug users?

Ashley: Every one of 'em.

Zhanine: What are the consequences you've experienced from using drugs?

Ashley: Losing jobs, physical appearance goes down, you don't care whatchu look like, your weight—you lose weight, you don't take care of your home. You just let yourself go.

Zhanine: Have you had any good consequences from using drugs?

Ashley: Nothing good come out of using drugs at all. Nothing. Some people will say that it makes you forget. It don't make you forget, it just temporarily stalls it and then as soon as your high is gone, you got more problems than what you did before you started.

Zhanine: And how do you feel when you would come off your high?

Ashley: Oh, I was depressed, I was so depressed. It's like when I was coming down off of that, I got what I used to call a crack conscience, 'cause what I did, I smoked cocaine. You feel bad about your kids, like I would feel bad 'cause I was pregnant, I used [drugs] when I was pregnant. I felt bad like 'cause I wasn't thinking about it at the time, but I felt bad that I messed up my child, I felt bad that I put my other kid in her room and if she tried to play or be loud, I'd get upset 'cause that stuff makes you really paranoid and it's just she was making too much noise and I wanted her to sit down and be quiet or sit down and watch TV. I felt bad about not paying my bills, knowing my electric was getting ready to get cut off, knowing if I didn't pay my rent I was gonna get evicted, then I'd have to go out and hustle and steal to get money that I should already have to pay those bills. I just felt bad about everything that I was worried about and I'd angry about [wanting] to get high and I'd use that as an excuse, it was still gonna be there. And I knew that, but when I was high I wasn't thinking about it, but when I come down that's when reality set in that you know all these problems are still here and they're not going anywhere.

Zhanine: Have you ever been arrested for using?

Ashley: I've been arrested [*chuckles*] probably I'd say about fifteen times for AI's and PI's, which is alcohol intoxication and public intoxication. I've never been

arrested for using cocaine or selling cocaine. I got arrested last year in April for trafficking a controlled substance, unspecified in the first. And they didn't have enough to indict me on that 'cause they didn't find any drugs on me, any money, anything like that, or on any of the people I was in the car with. They had arrested a guy about an hour before us. We had this man in the car with us that we was giving a ride, it was his friend, and they arrested him 'cause they caught him with forty Oxy eighties [80 milligram tablets], and he told 'em that we was the ones that had all the pills and was bringing 'em [to the area]. I knew to an extent what was going on, but when the dude got in the car with us, he was ready to go home, he didn't want to be where he was, he didn't have any drugs when he was in the car with us, but that other guy's statement telling them [the police], that we was the ones doing it, they set up this big thing to get us back. The dude called us wanting to speak to his friend, he's like, man, if you ready to go back, he was like, come on, let's go, I'm ready to go home, I'm tired of being here. So we turned around, we was already in [one county], we had gotten out of [another county]. We turned around to take the guy back to his friend, and we pulled into an Arby's. The DEA and the county sheriff and state troopers surrounded us and put guns in our faces. That's why they arrested us for the trafficking, even though they didn't have anything on us.

And then they had to let us go 'cause they didn't have enough evidence. Then they indicted us on complicity to trafficking 'cause they said that we willingly knew that one of those individuals was selling OxyContin, but we didn't say anything about it. Even though we didn't see anything or touch anything, we had a roundabout idea of what was going on, so I had to plead. I'll go back on June the 10th, 2010. I gotta go back to court, but they charged me with a class D felony of complicity to trafficking OxyContin in the second, and I have to do eighteen months of drug court. But I've already been in family drug court before this, because I tested positive for cocaine after I had my daughter and she tested positive for it also.

Zhanine: And did they take your kids away?

Ashley: They came and got [her on] January [the] twelfth, they took both of them outta the household and placed them in temporary care with their grandmother.

Zhanine: And how did that make you feel?

Ashley: Oh it broke [me], it destroyed me, it broke me down. 'Cause I stayed high, from the time they took 'em to February the fourth. I used that as an excuse to not care, to just give up. Then my boyfriend went to jail and I was sitting there by myself with nobody, nothing. My kids gone, getting ready lose my home, getting ready to lose everything that I had worked so hard to get. It was all gone because of cocaine and it all happen in matter of a week, I lost everything.

Zhanine: And your boyfriend, was he a drug user too?

Ashley: We used together, yep.

Zhanine: Are you still on drugs?

Ashley: No I'm not on drugs anymore, I've been off of drugs since February the twenty-fourth of 2010.

Zhanine: How long had you been on them?

Ashley: I was on them from the time I was—all through my twenties. My whole twenties I was on drugs. Well, from 21 to 29, and alcohol was from 14 to 29.

Interviewer: Can you describe what drug court has been like for you?

Ashley: Drug court—at first I hated it. I was pissed because I had to get up, I gotta get up every morning. They assign you a number. You have to call in every morning to see if they gonna drug screen you and if you do, you gotta go down there and pee at least thirty milliliters into a cup. And you hafta do AA or NA meetings twice a week, you have to go to comprehensive care center and you have to have individual meetings and group meetings with them once a week, you have to meet with your drug court worker, every—well, I have to [go] every Thursday, you have to do that once a week. You have to maintain a job. I mean, it's just all kinds of stuff you gotta do and you gotta do it on their time. I mean, they keep you so busy you don't have time to sit down and really breathe.

Zhanine: Has the drug court been going good for you?

Ashley: It's been going great. I've relapsed twice on alcohol and I spent a total of four days in jail over that.

The first time, I just didn't care, I didn't think alcohol would show up 'cause they don't test you for alcohol, but if they do lab it, it'll come back if it's been within three to five days after drinking, and I thought I was gonna get by with it, and I didn't. But I admitted when I was in court in front of the judge, she asked me when was the last time you used, so I told her, [and] so I got two days. And then the next time, I was going through a lot of stress with people and family members, and just [about] everybody took over my household, nobody's helping me pay bills. I'd be at work and everybody in the area where I lived was in and out, in and out, stuff was coming up missing, my house was staying filthy, didn't know who was in there, didn't know what was going on in there, and I just used that as an excuse and downed two fifths of vodka and ended up doing cocaine and don't even remember it, and I didn't even have to drug screen that day, but I went in and asked to speak to my counselor and told her what I had done. But drug court, it's worked for me, it really has, 'cause if it wasn't for drug court, I'd find every excuse possible to still stay strong in my addiction.

Zhanine: And what about the people you hang out with now?

Ashley: I've had to almost completely change everybody I hang out with. I really don't hang out with anybody except my boyfriend's mother and my two children [who are still under my care], that's about it, and my oldest child;

she's nine, [she's with] her grandmother. I can't go places that I used to go because it triggers me [to use drugs]. I still talk to the people that I hung around when I was in my addiction, I still talk to them, I'm still around them, but as far as hanging with them, I don't. I can't.

Zhanine: Can you tell me how you've changed since you started drug court?

Ashley: Since I've been in drug court I've got a job and I seem to be keeping it, I'm with my children every day, I work every day, I love my job, I keep my house clean, I'm starting to gain some of my weight back. I don't have the desire to do drugs anymore; I don't have the desire to drink. Even my whole attitude, like, everything that I was so used to and even how I acted, how I talk, have changed because when I was in my addiction it was chaos in my life constantly, I always had to have some reason to fight, some reason to argue, some reason to justify something I had done that I knew wrong. I didn't care about anything but getting high, only thing I cared about when I was on coke is staring out the window to see if the police was coming in the driveway or if I was going to get drugs for somebody, was I getting ready to get busted for it or how much I could rip somebody off or how much I could rob 'em for—that's all I cared about when I was in my addiction. But since I been in drug court I care more about my personal appearance, I spend my money how I'm supposed to,

I spend it on my bills, on my children, on myself, on necessities. I don't hang out with anybody I used to. I found new friends and it is easier for me to be out. It's like I have more self-respect, more confidence in myself because before I didn't. I hung out with a crowd that was worried about who could get the most drugs [for them], how you could benefit them [drug-wise]. Nobody is a true friend who's an addict, everybody's out for theirself, that's just how that is. But my whole personality has changed. I don't find some reason to always stay mad, I don't find a reason to always bitch about something, I don't find reasons to get out outta work because before I had jobs, and they might last two months, and within those two months, I probably missed about 20 days just from making up excuses, going to the emergency room to get an excuse. Now, I go to work every day. I never miss unless I hafta go to court, or if I hafta go to a meeting with comp care. Pretty much I've changed everything about myself which you have to, to get better you gotta change everything.

Zhanine: When you say when you would rip people off and rob 'em what do you mean?

Ashley: They come to me because they didn't know where to get the drugs and I knew the people and I could get it for them. Say they wanted \$100 worth of dope, I'd probably give them about \$50 worth of dope and keep the other \$50 worth of dope or keep some of the money.

Zhanine: And when you say dope, you mean?

Ashley: Cocaine, pills, marijuana.

Zhanine: Can tell me how you learned who had the drugs and how you approached them?

Ashley: How I learned who they was, when you hang around certain people, they have a certain lifestyle and you always end up meeting somebody that has something 'cause the drug dealers know who to go to, and then through time, you just meet 'em and this community it's so small, everybody knows everybody.

Zhanine: And did most of them trust you to come [back with the drugs]?

Ashley: Even if they didn't trust me 'cause I had ripped them off before, they wanted it so bad that they took a chance on coming back.

Zhanine: Do you think that you will ever relapse?

Ashley: I can't tell you I'm not gonna relapse 'cause I don't know. Only thing I can say is I don't have any intentions of relapsing. As of right now I'm OK, I'm not having any type of craving or any type of wanting to do drugs. But, you know, with an addict, somebody like myself, I don't know from day to day whether I'm gonna [relapse] because I don't know if something bad is gonna happen and that's the first thing I'm used to running to is alcohol, like if something really bad happens or I get really upset or something like if somebody was to die or I was to lose my home, I was to lose my job, that's what I've been used to, but as of right now, I don't think I have any intentions

of relapsing. I have a sponsor that I talk to on a regular basis; I have a drug court worker that I can call at any time of the day, the people at the meetings you know, they give you their numbers and if you ever need somebody to talk to, there's always somebody you know who'll help you.

Zhanine: And what do you think about people in this area, like, how they get started?

Ashley: I think people in this area get started on drugs cause there's absolutely nothing to do, there's not hardly any jobs, there's nothing. What's the word I'm looking for? There's nothing constructive for the teens to do. I mean there's just nothing here. There's no boys' and girls' clubs to give the youth anything to do; the only thing they know is how to hang around and watch older people and most of older people here is already on drugs, addicted to drugs, been doing drugs their whole life. . . . There's nothing here for anybody to get into besides to get into drugs.

Zhanine: Is there any advice you would give to anybody else?

Ashley: The advice that I would give somebody is if you do a drug more than one time, then you have an addictive personality, which means you could very easily be addicted to drugs. So if you haven't done it, don't do it, and if you've been doing it, you should seek help, 'cause it's just gonna get worse.

Zhanine: I wanna go back [to an earlier subject]. How did you go from snorting cocaine to smoking?

Ashley: Like I said, when I first tried [cocaine], I think I was like eighteen. But just going around different people that you know, that knew how to do that, people who had been doing it for awhile and you're always looking for a better high, because after that first time you get high, you're not gonna get no higher. You'll never feel that good again, you'll never feel the feeling you had when you're first high—never. It's just being around people that got experience and knew how to do it. I got to the point [where] I could cook crack, I could do anything in the world that you wanted done. The only thing I haven't done with cocaine is shot it. I've never used a needle, ever in my life.

Zhanine: And how did you pay for all of your drugs?

Ashley: Well, when I got a welfare check, \$225 a month, that was supposed to be for my children. I spent it. I'd hold a job for maybe three to four checks, but the majority of how I supported my habit was ripping people off who came to me to get their drugs.

Zhanine: Were there any other drugs you were addicted to other than [crack]?

Ashley: Yeah. When I decided that I was sick and tired of doing the cocaine, sick of having that paranoid feeling, sick of losing everything, sick of just staring out windows, and just like I said, that paranoia will kill you, but I substituted. That's what an addict will do; you quit one thing to start another, and I started doing pills. And the last two to three months of my addiction all I was

doing was OxyContin, Roxicets, any pain pill I could get. And using alcohol: I never did quit the alcohol till I got into drug court.

Zhanine: And how did the pain pills make you feel?

Ashley: Oh, pain pills gave me energy and they'd make you feel drunk as hell, you'd just be sitting there, it just feels like you're floating on a cloud. I didn't care 'bout nothing, I was just out of it. Oxycontin, it will [do that], the small pain pills that I got, like Loratabs, Loracet, Percocet, stuff like that. They gave me energy, they just made me wanna clean. They also made the crack bust feel better. If you snorted a pain pill before you did crack you didn't get that paranoia feeling. For awhile I was doing both at the same time, I'd always snorted a pain pill before I did crack so I wouldn't be paranoid. . . .

Zhanine: Does it bother you when people talk about you?

Ashley: It used to really bother me because I knew what they was saying was the truth. It doesn't bother me now because I'm not doing drugs, I have a job, I take care of my kids, I pay my own bills, I keep up my own house. I'm at a point right now I'm content and I'm happy, everything couldn't be better, I could have a car, I could have more money than what I have, and I go to church. Now that's another thing. Before, when I was into my addiction, I never went to church. Since I've been in drug court, I don't know how to put it, it's like I had my spiritual awakening one night when I thought I was

down and out and lost all hope and had nothing. That's when God came to me, and I've been in church ever since then and I love it and every time I have a problem, I don't go out and get high or drunk anymore. I just pray and it seems to work itself out.

QUESTIONS

Do you think the evidence the respondent gives answers the two questions I raised in the introduction to this account: (1) Do you think there's a connection between rural poverty and drug abuse? And (2) does extreme drug abuse make females more likely to be subject to sexual victimization? Do you think the respondent is typical or representative of polydrug users? What

do you think causes her abuse of multiple drugs? Is the use of some drugs regionalized—common in some areas and rare in others? What does her heavy use of psychoactive substances say about the generalization that drug use is more common in urban than in rural areas? How does it compare with recreational drug use in middle-class suburbs? What do you think of her explanation that just by being around certain social circles, she fell into a pattern of extreme drug use? Most typically, polydrug users smoke a great deal of marijuana; why do you think this one does not? Is this woman sincere in saying that her drug use is behind her? In your opinion, has her drug court program helped to get her off drugs? What's in store for her children? Will they become involved in drug abuse, or do you think they'll avoid it?

EXPLAINING DRUG USE

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Here, we'll look at explanations of the causes of drug use. To understand the cause of an activity such as drug use, we need a theory. A theory is

simply an explanation for a general category of phenomena—any set of events, conditions, or behaviors. The word *general* is important, because scientists don't usually apply the term *theory* to a unique event or condition or act. Astrophysicists have theories or explanations about the birth, movement, characteristics, and death of stars; biologists have theories about genetic changes in organisms over time; sociologists and political scientists have theories about voting behavior.

One major type of theory or explanation of drug use would be the attempt to explain why people use drugs. There are two absolutely necessary preconditions for use—the *predisposition*, or motive or susceptibility, to do so; and the *availability* of one or more psychoactive substances, as well as *access* to them. Each of these preconditions is *necessary but not sufficient* to explain drug use. If a drug is not available in a particular locale, drug use is not possible—whether or not a predisposition to use is present. Likewise, without the predisposition to use, use does not take place; *by itself*, availability cannot explain use. Each is an essential—or necessary—condition for use; neither is sufficient for it to take place. In this chapter, we focus mainly on the predisposition or motive, on the factors that make drug use seem desirable, enticing—an activity in which a given person would want to engage.

For millennia, humans have always asked, “Why do they do it?” about a variety of anomalous, unconventional, or deviant behaviors. The ancient Greek philosophers began thinking about the forces and factors that lead some of us to go astray. But, for the most part, until just a few hundred years ago, the dominant theory for wrongdoing was *demonology*, meaning that the devil (or evil spirits) made them do it. Demonology has not completely disappeared in the popular or public mind, however. Toward the end of a course on criminology taught at a small Bible Belt college, Frank Schmalleger asked his students to speculate on which theory of crime they thought made the most sense: biological, psychological, or sociological. The overwhelming majority of the class chose none of these three and instead thought the “devil made them do it” explanation was the most valid (1996, p. 88).

In contrast, nearly all intellectuals, experts on and researchers of human behavior, favor a *materialistic* or *naturalistic* explanation, one rooted in the social, psychological, or biological worlds. Social scientists look to such forces as childhood socialization, urban decay, poverty, and bonds to conventional society to account for why people do the unconventional or deviant things they do. However, once we agree that it is forces in the material world that best explain drug use and abuse rather than evil demons and spirits, we are still left with an almost bewildering array of theories.

In the world of the natural and social sciences, as we just saw, a theory is an explanation for a general class of events or phenomena. Researchers have proposed dozens of explanations for drug use and abuse. And therefore, presumably, a theory of drug use would be an explanation of why people use and abuse drugs. But not all the theories that social, psychological, and natural scientists have proposed address this specific issue. Most theories do not explain the entire spectrum of use; many are more narrowly focused. The majority concentrate on illicit use or drug “abuse,” or on alcoholism. Some focus entirely on addiction, usually to the narcotics. Some focus on the individual, others on society, and still others on the individual's relationship to society. While a number of theories deal with initiation into drug use, several focus on continued or habitual use. Nearly all these theories are *partial* in scope: They select one or a limited number of factors that are

believed to cause or be associated with drug use or abuse. Most theorists admit that the factor they focus on, *in combination with others*, influences drug taking. Hardly any researcher in the field believes that one factor, and one alone, explains the phenomenon under investigation. Moreover, a factor is not a theory; most theories put together several factors to form a coherent explanation, a systematic argument with several different pieces that articulate with one another. This means that most theories of drug use are not contradictory or in competition with one another; most cover aspects of the same phenomenon yet may be regarded as complementary rather than contradictory.

As is true of theories of crime and deviance, theorists and researchers have proposed three broad *types* of explanations for drug use: (1) *biological* theories (Hanson, Venturelli, and Fleckenstein, 2012, pp. 63–67; Goldberg, 2013, Chapter 3; Sheff, 2013); (2) *psychological* theories (Abadinsky, 2014, pp. 127–139; Goldberg, 2013, Chapter 3), and (3) *sociological* theories (Levinthal, 2011, p. 19; Abadinsky, 2014, pp. 140–150; Hanson, Venturelli, and Fleckenstein, 2012, pp. 71–86). Other theorists attempt to blend all three into what may be called the *biopsychosocial* approach (Hart and Ksir, 2013, pp. 40–41). Each perspective focuses on a different range of factors or mechanisms as crucial in determining why people use and abuse psychoactive substances. Even within each broad type, there is a range of specific theories. All biological theories, and nearly all psychological theories, are individualistic in that they focus on differences between and among people. They can be referred to as “kinds of people” theories: Person X is different in some way from Person Y (or has had different kinds of experiences from Person Y), and, as a consequence, Person X is more likely to use drugs than Person Y. In contrast, most sociological theories tend to focus not on individual differences but on *group* or *category* differences (persons in group X differ from those in group Y), or *structural* differences (the structures within which persons are *located* differ, such as cities, neighborhoods, time periods, social conditions, or countries). At the same time, some sociologists do promulgate more individualistic explanations; in this chapter, we’ll encounter a few. Since most of these theories explain only a piece of the puzzle, most of them are complementary rather than contradictory. Still, some explanations do contradict others: If one is true, one or more others cannot be true. It’s important to understand the implications of each one so that we have a clear idea of what manner or type of evidence confirms or falsifies it.

BIOLOGICAL THEORIES

Biological theories are those “kinds of people” explanations that postulate specific physical mechanisms in individuals that impel or influence them either to experiment with drugs or to abuse them once they are exposed to them. Some are constitutional, that is, are based on mechanisms that are present at birth and vary from one person to another. Others are partly environmental, that is, inborn factors *in conjunction with* environmental factors generate drug-using, or drug-abusing, or addictive behavior. Two of these explanations are genetic theories and the theory of metabolic imbalance.

Genetic Factors

According to one line of thinking—*genetic theories*—the genetic makeup of individuals predisposes them toward drug abuse and alcoholism. A gene or combination of genes

influences the specific biological mechanisms relevant to substance abuse—such as being able to achieve a certain level of intoxication when using drugs, becoming ill at low doses as opposed to much higher doses, having anxiety levels lowered or not lowered when under the influence, or having the capacity to metabolize chemical substances in the body. Any and all these factors could vary from one individual to another or from one racial or national group to another, and could influence continued use. This “genetic loading,” in combination with environmental and personality factors, could make for a significantly higher level of drug abuse or alcoholism in certain individuals or groups in the population (Schuckit, 1980). Indeed, the tendency to prefer alcohol to other beverages can be bred in animals, suggesting the relevance and strength of the genetic factor in drug use and abuse.

Most of the research attempting to demonstrate a genetic factor in drug abuse has focused on alcoholism. Studies have shown that adopted children have rates of alcoholism closer to those of their natural parents than to those of their adoptive parents (Schuckit, 1984, p. 62). One study found that 30–40 percent of natural children of alcoholics become alcoholics themselves, as opposed to a rate of 10 percent for the general population (Kolata, 1987). Some experts conclude that the rate of heritability of alcoholism—the chance of inheriting the disorder—is “similar to that expected for diabetes or peptic ulcer disease” (Schuckit, 1984, p. 62). Now that the entire human DNA sequence has been “decoded,” it is possible that during the coming decade, scientists will discover a genetic link with alcoholism.

No researcher exploring the inherited link with alcoholism asserts that genetic factors comprise the only or even the principal factor in compulsive drinking. Rather, they posit a genetic *predisposition* toward alcoholism. Inheritance is one factor out of several. Alone, it does not “make” someone a compulsive, destructive drinker. In combination with other variables, genetic factors may facilitate or make the process more likely, however.

What are some precise mechanisms that may push someone in the direction of alcoholism? What’s the lynchpin between biology and abusive drinking? One study found that the sons and daughters of alcoholics tend to be less affected by alcohol than the sons and daughters of nonalcoholics: Their coordination is less debilitated, their bodies produce a lower hormonal response, and they feel less drunk when they imbibe a given quantity of alcohol. According to researchers Marc Schuckit, Jack Mendelson, and Barbara Lex, 40 percent of the children of alcoholics exhibit a significantly lower sensitivity to alcohol in these three respects, while this was true of only 10 percent of members of control groups (Kolata, 1987). In addition, researcher Henry Begleiter found that boys who do not drink but whose fathers are alcoholics have brain waves significantly different from boys who are sons of alcoholics (Kolata, 1987). Many researchers point out that inherited mechanisms, in combination with other factors, could lead to an increased likelihood of chronic, compulsive, destructive drinking.

Metabolic Imbalance

A second biological theory postulates metabolic imbalance as a possible causal factor in at least one type of drug abuse: narcotic addiction. Developed by Vincent Dole and Marie Nyswander (1965, 1980; Dole, 1980), this theory argues that heroin addicts suffer from

a metabolic disease or disorder, much as diabetics do: Once certain individuals begin taking narcotics, a biochemical process kicks in, and physiologically, they begin to crave opiate drugs in much the same way that the bodies of diabetics crave insulin. Repeated doses of a narcotic complete their metabolic cycle; narcotics act as a stabilizer, normalizing an existing deficiency. The narcotic abuser can never be withdrawn from narcotics because his or her body will continue to crave them, just as diabetics cannot be withdrawn from insulin; in both cases, the substance provides what the body lacks and cannot provide.

No precise biological mechanism corresponding to metabolic imbalance has ever been located. The best that can be said about this theory is that the treatment program based on it, methadone maintenance, has helped a certain proportion of addicts—a far lower proportion than its proponents claim, and a higher proportion than its critics claim. We'll explore the various available drug-treatment modalities in more detail in Chapter 15. Here, it is enough to know that hormonal imbalance has been proposed as a factor influencing drug abuse in certain individuals, even though its existence has never been established empirically. The only evidence supporting it is that some addicts behave *as if* they suffer from a metabolic imbalance. Comparing their early with their later writings on the subject, it is clear that the proponents of the metabolic imbalance theory have retreated somewhat from their original insistence on the importance of this factor (Dole and Nyswander, 1980). It is possible that the theory is relevant only on the clinical, and not the theoretical, etiological, or causal level. Indeed, it may remain as a relevant theory only in order to justify the maintenance of addicts on methadone for life.

PSYCHOLOGICAL THEORIES

Theories relying on psychological factors fall into two basic varieties: those emphasizing the mechanism of reinforcement, and those that stress that the personalities of the drug user, the abuser, and especially the addict, are different from those of the abstainer, and hence, are causally related to use and abuse. The mechanism of reinforcement is fairly straightforward: People tend to maximize reward and minimize punishment; they continue to do certain things because they have a past history of being rewarded for doing them. Drug users are individuals who have been rewarded for use, and hence they continue to use. While *reinforcement theories* underplay personality factors, in contrast, personality theories, as we might expect from their name, emphasize the important role of personality factors in causing drug use and abuse. The precise personality configuration that its supporters argue determine drug use and abuse varies with the theorist; theorists invoke one or more personality factors over others. The key factor that binds these *psychodynamic theories* together, however, is that they postulate that certain individuals have a type of personality that impels them into the arms of drug use and abuse.

Reinforcement

A major psychological theory underplays the idea of personality differences between users and nonusers and emphasizes the role of reinforcement. Even animals use certain drugs compulsively under the right experimental conditions, casting doubt on the need to invoke psychodynamic variables in the development of addiction (Wikler, 1980, p. 174;

McAuliffe and Gordon, 1980, p. 139). In addition, experiments have shown that, independent of personality factors, human subjects who are administered opiates without knowing what they have taken wish to repeat taking the drug; their desire grows with continued administration (McAuliffe, 1975). For some aspects of the drug-taking process, a consideration of personality variables is not necessary. (At the same time, there is individual variation in reactions to and experiences of drug effects.) However, it is an axiom in science that *you can't explain a variable with a constant*. If two people take the same highly reinforcing drug (a constant) and one becomes addicted to it and the other does not (a variable), it is insufficient to argue that reinforcement explains continued use, because it does not account for the difference in behavior. Consequently, we need to bring into the picture variables or factors in addition to simple reinforcement.

There are two distinctly different types of reinforcement—positive and negative—and consequently two different theories that cite reinforcement as a mechanism in continued drug use. (Actually, some approaches make use of both these mechanisms—different types of reinforcement for different types of drugs or drug abusers.) *Positive reinforcement* occurs when the individual receives a pleasurable sensation and, because of this, is motivated to repeat what caused it. In brief, “The pleasure mechanism may . . . give rise to a strong fixation on repetitive behavior” (Bejerot, 1980, p. 253). With respect to drug use, this means that getting high is pleasurable, and what is pleasurable tends to be repeated.

According to this view, the continued use of all drugs that stimulate euphoria is caused by their “extremely potent reinforcing effects” (McAuliffe and Gordon, 1980, p. 137). Inferring from the way that users behave, it is difficult to draw a sharp distinction between a strong psychological and a physical dependency. Indeed, physical dependence is not even a necessary mechanism for the proponents of the theory of positive reinforcement. What is referred to as “addiction” is simply an end point along a continuum indicating that “a sufficient history of reinforcement has probably been acquired to impel a high rate of use” in the user (McAuliffe and Gordon, 1980, p. 138). This also means that ongoing, even compulsive, use and abuse do not require the mechanism of a literal physical addiction to continue taking place. Many users are reinforced—they experience euphoria—from their very first drug experience onward, and the more they use, the more intense the sensation and the greater the motivation to continue use.

Negative reinforcement occurs when an individual does something to seek relief or to avoid pain, thereby being rewarded—and hence motivated—to do whatever it was that achieved relief or alleviated the pain. In the world of drug use and addiction, when someone who is physically dependent on a particular drug undergoes painful withdrawal symptoms upon discontinuing the use of that drug, and takes a dose to alleviate withdrawal distress, he or she will experience relief with the termination of the pain. Such an experience will motivate the addict to do what has to be done to obliterate the painful sensations associated with withdrawal.

While positive reinforcement can occur with *any* euphoric drug—indeed, with any pleasurable sensation (Bejerot, 1980)—the theory emphasizing the mechanism of negative reinforcement as a major factor in drug abuse is largely confined to drugs that produce a physical dependence, especially the opiates. Relatively little attempt has been made to apply this theory to explain either the continued use of nonaddicting drugs or the use of opiates that does not involve a literal physical dependence. (However, some

nonaddicting drugs, such as cocaine and marijuana, may provide relief from depression; some researchers also mention this factor as a reason for continued use.)

The argument invoking negative reinforcement goes as follows: Initially, pleasure dominates as a motivating force in use. Hence, the first few weeks of narcotic drug use have been called the “honeymoon” phase of drug addiction. However, the user gradually becomes physically dependent without realizing it. Because of the body’s growing tolerance to narcotics, the user, in order to continue receiving pleasure, is forced to increase the doses of the drug—eventually to a point at which addiction takes place. If use is discontinued, whether because of arrest, disruption of supply, or lack of money to purchase the drug, painful withdrawal symptoms wrack the addict’s body. Because the user recognizes that doses of a narcotic drug can alleviate these symptoms, an intense craving is generated for the drug over time.

According to Alfred Lindesmith (1947, 1968), a proponent of this theory:

The critical experience in the fixation process is not the positive euphoria produced by the drug but rather the relief of the pain that invariably appears when a physically dependent person stops using the drug. This experience becomes critical, however, only when an additional indispensable element in the situation is taken into account, namely a cognitive one. The individual not only must experience withdrawal distress but must understand or conceptualize this experience in a particular way. He [or she] must realize that his [or her] distress is produced by the interruption of prior regular use of the drug (Lindesmith, 1968, p. 8).

The “perception of withdrawal symptoms as being due to the absence of opiates will generate a *burning* desire for the drug” (Sutter, 1966, p. 195). According to this theory, addicts continue taking their drug of choice *just to feel normal*.

As originally stated, the theory does not account for most narcotic use among addicts. The majority of addicts and other compulsive drug abusers *do* experience euphoria, and this is a major factor in their continued drug use. In one study of addicts, all of whom used heroin at least once a day, 98 percent of the sample (63 out of the 64 interviewed) said that they got high or experienced euphoria at least once a month, and 42 percent got high *every day* (McAuliffe and Gordon, 1974, p. 804). In this sample, euphoria was consciously desired and sought: 93 percent said that they wanted to be high at least once a day, and 60 percent wanted to be high all the time (McAuliffe and Gordon, 1974, p. 807). Heavy, compulsive heroin users continue to seek and achieve euphoria, and its attainment is a major motivating force behind their continued use.

Researchers have offered a resolution to the apparent conflict between the positive and the negative reinforcement models of drug addiction. (While the negative reinforcement school argues that only the avoidance of pain and the desire to feel normal motivate the addict, the positive reinforcement advocates argue that both factors, as well as others, may be operative.) It is likely that there are actually two types of narcotic addicts—the *maintainers* and the *euphoria seekers*. The maintainer takes just enough narcotics to avert withdrawal distress. Some addicts lack the financial resources, and are unwilling to engage in a life centered on the commission of crime, to obtain enough heroin to attain euphoria. They are simply staving off the agony of withdrawal, “nursing” their habit along (McAuliffe and Gordon, 1974, p. 826). To achieve the high they really want would require taking such substantial quantities of the drug that their lives would be transformed utterly and completely. They would have to work very hard and run a substantial risk of

harm and arrest. Not all users want to commit crimes to get high; not all think the chance of arrest is worth threatening such valued aspects of their lives as their jobs, their families, and the freedom to come and go where and when they want. They prefer to maintain a habit rather than risking what they have in order to achieve euphoria. They have retained most of their ties with conventional society, and “let loose only periodically” (McAuliffe and Gordon, 1974, p. 822).

In contrast, the pleasure-seeking addict takes narcotics in sufficient quantities and at sufficiently frequent intervals to achieve euphoria. This habit is extremely expensive and hence typically requires illegal activity to support it. In addition, the lifestyle of the euphoria-seeking addict is sufficiently disruptive that a legal job is not usually feasible; he or she must resort to criminal activity instead. It is also difficult for the nonaddict to fit in with and be capable of tolerating the addict’s lifestyle, so marriage and a family are a chancy proposition unless the addict’s spouse is also addicted. And since heavy opiate use depresses the sexual urge, erotic relationships tend to be difficult. The euphoria-seeking addict has sacrificed conventional activities and commitments for the pursuit of pleasure, and to engage in this pursuit, a commitment to a deviant and criminal lifestyle is usually necessary. Such sacrifices would make no sense “if they were directed solely toward reducing withdrawal symptoms, which could be accomplished with much less effort, as every addict knows” (McAuliffe and Gordon, 1974, p. 828).

Inadequate Personality

Some researchers suggest that psychological disorders, pathologies, defects, or inadequacies explain drug abuse. There is something wrong in the emotional or psychic life of certain individuals, they say, that makes drugs attractive to them. Abusers take drugs as an escape from reality, as a means of avoiding life’s problems and retreating into euphoric bliss and drugged-out indifference. Euphoria, says one inadequate-personality theorist, is adaptive for the immature individual who lacks a sense of responsibility, independence, and the ability to deter hedonistic gratification for the sake of achieving long-range goals (Ausubel, 1980, pp. 4–5). Although drug use is adaptive for the disordered personality in that it masks some of life’s problems, it is adaptive only in an exclusively negative way: The problems never get solved, only covered up, and, meanwhile, the drug use itself generates a host of other, more serious problems. Normal people, who do not share this disorder or inadequacy, do not find drugs appealing, and are not inclined to use them. Not all drug users share personality inadequacies and defects to the same degree; some will be impelled to experiment or use simply because of social pressure or availability. However, the more inadequate the personality, the greater the likelihood of becoming highly involved with drug use, and the more that use becomes abuse and eventually addiction. For the weak, drug abuse is a kind of crutch; for the strong, experimentation leads to abstinence, not abuse. For the inadequate-personality theorist, drug abuse is an adaptation or a *defense* mechanism, a means of obliterating feelings of inferiority (Wurmser, 1980, pp. 71–72).

One major variety of the inadequate-personality approach is the self-esteem or *self-derogation perspective*. This theory holds that drug use and abuse, like deviant and criminal behavior generally (Kaplan, 1975, 1980), are responses to low self-esteem and self-rejecting attitudes. (But it does not apply in societies in which the particular type of

drug use being explained is practically universal and normatively accepted by the majority.) Low self-esteem could come about as a result of “peer rejection, parental neglect, high expectations for achievement, school failure, physical stigmata, social stigmata (e.g., disvalued group memberships), impaired sex-role identity, ego deficiencies, low coping abilities, and (generally) coping mechanisms that are socially disvalued and/or are otherwise self-defeating” (Kaplan, 1975, p. 129). For some, normatively approved activities and group memberships are sources of painful experiences; deviant or disapproved activities and memberships, however, are effective sources of self-enhancement. Drug use provides exactly such a deviant activity and group membership, and one that permits a deadening of the painful feelings stirred up by self-rejection. It is difficult to reconcile such self-derogation theories, which explain drug use as being brought on in part as a consequence of social rejection, with the fact that illicit drug users tend to have more intimate friends than nonusers (Kandel and Davies, 1991), not fewer, as the theory would predict. In addition, in recent years, the entire edifice of self-esteem theory—that low self-esteem “is to blame for a host of social ills, from poor academic performance and marital discord to violent crime and drug abuse” (Erica Goode, 2002, p. D1)—has come crashing to the ground. Most researchers no longer believe that a poor sense of self accounts for any of the behaviors that were once attributed to it, and that includes drug abuse.

Problem-Behavior Proneness

In a third type of psychological theory of drug use, researchers see the phenomenon as a form of deviant or problem behavior. In sociology and in social psychology, the branch of psychology most influenced by sociology, the term *deviant* has no negative, pejorative, or pathological connotations. Instead, it refers to behavior that is not in accord with the norms of, and that tends to be condemned by, the majority. Likewise, “problem” behavior is not necessarily bad or pathological; the term simply denotes behavior that has a certain likelihood of getting the individual who enacts it in trouble. Social psychologists have found that drug users typically have attitudes, values, and personalities that depart significantly from those of the nonuser majority. And these, in turn, make it likely that he or she will engage in behavior that, likewise, departs from the conventional path. These are statistical, not absolute, differences; many users and nonusers may be similar to one another in a number of ways, but differ substantially from one another in other important respects. Still, the statistical differences are there, and they are often quite striking. What are they?

Before examining the literature on the subject, it must be stressed that *problem-behavior proneness* is a dimension, the key elements of which are unconventionality and the willingness to take risks. Not all problem-behavior-prone individuals stand at the extreme end of the spectrum—that is, are so unconventional and so willing to take risks that they are unlikely to survive in polite society. In fact, *moderately* unconventional and *moderately* risk-taking individuals are often among society’s most creative, innovative, and successful individuals: artists, inventors, writers, scientists, even academics. Without unconventionality, risk taking, and a certain tolerance for both, society is likely to be repressive, and social change is likely to be sluggish or nonexistent. Many problem-behavior-prone youngsters are bright, do well in school, and are headed for successful careers.

The concept has no meaning outside a specific social and cultural context, and a society that provides a place for eccentrics may also profit from their often considerable contributions—just as it often also punishes their unconventional behavior. But other things being equal, the problem-behavior-prone youngster is more likely to use a wide range of drugs than the one who follows the rules, plays it safe, and takes few risks.

With respect to users' personality and attitudes, a great deal of research (for instance, Jessor and Jessor, 1977, 1980; Robins, 1980) demonstrates that users, in comparison with nonusers, tend to be more rebellious, independent, open to new experience, willing to take a wide range of risks, tolerant of differences, accepting of deviant behavior and transgressions of moral and cultural norms, receptive to uncertainty, pleasure-seeking, hedonistic, peer oriented, nonconformist, and unconventional. (Once again, some of these qualities are also related to imagination, creativity, and certain kinds of talent, ability, and accomplishment.) Users also tend to be less religious, less attached to parents and family, less achievement oriented, and less cautious. This personality manifests itself in a wide range of behavior, much of it not only unconventional but problematic for the individual and for mainstream society: earlier sexual behavior, and with a wider range of partners; underachievement in school and on the job; and at least mildly delinquent behavior.

Researchers who emphasize the unconventional personality as a key factor in drug use can demonstrate the validity of their approach with longitudinal studies. They can predict *in advance*, before youngsters have used drugs, with a high degree of accuracy, which ones will experiment with and use psychoactive substances and which ones will not. With respect to personality, the adolescent *less* likely to experiment with and use drugs "is one who values and expects to attain academic achievement, who is not much concerned with independence, who treats society as unproblematic rather than as an object for criticism, who maintains religious involvement and a more uncompromising attitude toward normative transgression, and who sees little attraction in problem behavior relative to its negative consequences." The adolescent *more* likely to experiment with and use drugs "shows an opposite pattern: a concern with personal autonomy, a lack of interest in the goals of conventional institutions, like church and school, a jaundiced view of the larger society, and a more tolerant view of transgression" (Jessor and Jessor, 1980, p. 109). A "single summarizing dimension underlying the differences between users and nonusers might be termed conventionality-unconventionality" (Jessor and Jessor, 1980, p. 109).

Like most theories, the view that drug users are more unconventional and risk taking than nonusers sees the relationship as a matter of degree. The more unconventional the youth, the greater the likelihood that he or she will use drugs. In addition, the more unconventional, the more serious the drug involvement. *Mildly* unconventional youngsters are likely to drink and experiment with marijuana, but do little else. *Moderately* unconventional youngsters will drink alcohol more heavily, use marijuana regularly, and experiment with other drugs. *Highly* unconventional youth have a much greater chance of becoming seriously involved not only with alcohol and marijuana, but also with more dangerous drugs as well. It is possible that this explanation accounts for the typical or modal drug user—mainly, the "recreational" drug user. However, an account of why some recreational users become compulsive, abusive, and addicted consumers of psychoactive substances requires a separate theory or the introduction of additional factors. What causes someone to *use* drugs may be different from what causes someone to *abuse* them.

SOCIOLOGICAL THEORIES

In contrast to biological and some psychological theories, which emphasize the individual (the “kinds of people” explanations), sociologists tend to make broader, structural factors the focus of their theories. For most sociologists, the crucial factor they examine is not the characteristics of the individual, but the situations, social relations, or social structures in which the individual is, or has been, located. More specifically, it is the individual *located within* specific structures. (See Table 7-1.)

Sociology proposes seven partially overlapping *sociological theories* to help explain drug use: (1) social disorganization; (2) anomie; (3) social learning and subculture; (4) social control; (5) self-control; (6) selective interaction/socialization; and (7) conflict theory. (I’ll mention an eighth theory, routine activities theory, only in passing.) The overlap among these theories is sufficiently great that some of the theorists who endorse one of them also support one or all of the others.

Social Disorganization and the Chicago School

Just after World War I, a school of thought emerged out of research that was conducted in the city of Chicago by professors and graduate students at the University of Chicago. This school came to view the factors that explained deviance and crime as being located not in the person or the individual but in the social structure. This social disorganization or “Chicago School” argued that *entire neighborhoods* had become so disorganized that merely living in them hugely increased the likelihood of engaging in certain forms of deviant behavior, including drug use, abuse, and addiction. Social disorganization theorists situate their theory at the *community* level; it is a structural, not an individual explanation. Socially disorganized neighborhoods lack economic and social resources to exercise control over their residents. Poverty is usually, although not necessarily always, causally linked with low community resources, exercise a low level of control over its

TABLE 7-1 Sociological Theories of Drug Use

Theory	Explanatory Factor	Proponents
Anomie/strain theory	Disjunction between means and ends	Robert Merton; Richard Cloward and Lloyd Ohlin
Social control theory	Absence of bonds to conventional society	Travis Hirschi; others
Self-control theory	Inadequate parenting, leading to lack of self-control	Michael Gottfredson and Travis Hirschi
Social learning and subculture theories	Deviant socialization	Edwin Sutherland; Ronald Akers; Howard Becker
Selective interaction/socialization theories	Attraction to unconventionality, and influence by peer groups	Bruce Johnson; Denise Kandel
Social disorganization theory	Community or neighborhood disorganization	many
Conflict theory	Differences in power, resources, and opportunities	Elliott Currie; Harry Levine; many others

constituent members, find it difficult to regulate the untoward behavior of their fellow neighbors, and to exercise the kind of social control that would discourage delinquency, crime, deviant behavior, and drug abuse. *Entire neighborhoods* lack the capacity, the will, or the power to monitor and sanction behavior their residents consider untoward and non-normative. When drug dealers move into an abandoned building, the community does not root them out—or lacks the clout with the police department to have them displaced. Prostitutes are permitted to patrol the streets; harass residents; and engage in sex in cars, alleyways, or hallways without local interference. Junkies shoot up on front stoops, homeless men urinate in hallways, burglars routinely rip off apartments and clean out their contents—and little or nothing is done to stop them. The socially disorganized neighborhood is the playground of the criminal and the drug abuser.

The social disorganization school, with its emphasis on social disorganization, had its heyday between the two world wars, roughly from 1920 to 1940 (Park, 1926; Shaw and MacKay, 1942). The Chicago theorists argued that deviant and criminal behavior tended to be a “package deal.” Socially disorganized areas of a city were usually those in which drug abuse was a component of a pattern of wrongdoing, features or aspects of poverty or economic “deprivation,” geographical instability, and population diversity. As popular as the theory was in the 1920s and 1930s, by the end of World War II, it was widely regarded as obsolete. But the decline of Western society’s industrial base and the rise of the service sector brought with them a hollowing out of many cities that relied on the factory economy, developments which revived attention to social disorganization as an explanation for deviance. With increasing problems of unemployment, the single family household, and urban decay, by the late 1980s and early 1990s, the social disorganization school had made a comeback; a substantial volume of contemporary research and writing on deviance is making use of the Chicago school’s approach, concepts, and theories (Bursik and Grasmick, 1993). Although it will never regain its former dominant status in the field, social disorganization theory is experiencing a renaissance. However, to reenergize this approach, some theoretical reformulations were necessary—for instance, recognizing that social disorganization theory is a more persuasive explanation if the researcher introduces the concept of power: fighting back against developers, forging alliances with City Hall, organizing social movement organizations to oppose urban decay and political vulnerability, making neighborhoods unattractive and uninviting to addicts, prostitutes, and drug sellers, mobilizing resources that a community does have (Feagin and Parker, 1990).

Anomie Theory

In the 1930s, sociologist Robert K. Merton generated what came to be referred to as the *anomie theory* of deviant behavior. In his view, deviant behavior—illicit drug use included—takes place when avenues to material success are blocked off. Anomie theory, as Merton developed it (1938, 1957, pp. 131–160; 1968, pp. 185–248), argues that in a competitive, materialistic, achievement-oriented society, success is encouraged as attainable for all members but actually is attainable for only a small proportion of society. Individuals who do not succeed must devise “deviant” or disapproved adaptations to deal with their failure. Those who have given up on achieving society’s materialistic goals, whether by approved or disapproved means, become *retreatists*. “In this category fall

some of the adaptive activities of psychotics, autists, pariahs, outcasts, vagrants, vagabonds, tramps, chronic drunkards, and drug addicts” (Merton, 1957, p. 153). An extension of this theory holds that the person who is most likely to become a drug addict is someone who has attempted to use both legal (or legitimate) and illegal (or illegitimate) means to achieve success, but has failed at both. The addict is a “double failure” and has “retreated” into the undemanding world of addiction.

Other researchers have refined anomie theory but, some believe, never entirely successfully. In response, critics have launched devastating attacks on anomie theory and its application to drug use and abuse. The anomie perspective experienced an eclipse in the late 1960s, and remained at a low ebb throughout the 1970s and early- to mid-1980s. At that time, many researchers believed that it had been discredited and “disconfirmed” (Kornhauser, 1978, p. 180), irrelevant to an understanding of the etiology, or causality, of drug use. Some argued that it had become something of an embarrassment to the field and, as it applied to drug use and addiction, was regarded by many researchers as fanciful, generated in the almost total absence of knowledge of the world of drug use (Lindsmith and Gagnon, 1964; Preble and Casey, 1969).

The imagery of the model addict that predominates in anomie theory is that of the Chinese opium addict, puffing on his pipe in a dreamy, somnolent slumber. In fact, the world of the addict is anything but undemanding. It is a brutal, abrasive world requiring substantial skill and effort even to survive (Preble and Casey, 1969). And it is not the poorest members of poor communities—the most clear-cut “failures”—who turn to heroin, but those who are a rung above them financially and occupationally.

Many drug researchers felt that these and other critiques fatally weakened anomie theory. However, beginning in the late 1980s, anomie theory underwent a renaissance; the field began to look at the perspective in a new way, revised some concepts and assumptions, and pursued fresh lines of research (Messner and Rosenfeld, 1997). Is the anomie approach relevant to drug abuse after all?

It is possible that the earlier judgment about the theory was premature and overly harsh in at least one sphere of behavior—that of drug selling. Since legitimate achievement is blocked off for a significant proportion of the members of the society, one avenue of illegitimate achievement is rendered more attractive as a consequence. What is drug dealing but an *innovative* attempt to maintain the goal of achieving material success by engaging in an illegitimate, illegal, and deviant means? Drug dealing is an innovative adaptation to blocked or frustrated material success for many members of society who have learned to expect that success but who live in a setting in which high levels of achievement are all but impossible. Hence, anomie theory has a great deal to say about one major aspect of the drug scene (dealing), but not drug use, abuse, or addiction. The fact is, failure to achieve economic success, whether through legitimate or illegitimate means, does not help us understand why people use and abuse psychoactive substances; when it comes to drug use, anomie theory confuses the picture more than it clarifies.

Social Learning and Subculture Theories

The theory that criminal or deviant behavior is a product of learning was first elaborated by sociologist Edwin Sutherland in the third edition of his textbook, *Principles of Criminology* (1939). He called this formulation the theory of *differential association* because

the key mechanism in becoming criminal or deviant is the fact that one associates and interacts differentially with social circles whose members define crime and deviance in favorable terms. The central tenets of this theory are that crime and deviance are learned in intimate, face-to-face interaction with significant others, or people to whom one is close. A person engages in deviant and criminal behavior to the extent that the definitions to which he or she is exposed are favorable to violations of the law—because of an excess of definitions favorable to legal and normative violations over definitions unfavorable to such violations. The key to this process, according to Sutherland, is the *ratio* between definitions favorable and those unfavorable to legal and normative violations. When favorable definitions exceed unfavorable ones, the individual will turn to deviance and crime.

The learning approach has been extended by sociologists who have blended Sutherland's theory of differential association with the principles of behaviorism in psychology. *Social learning theory* holds that behavior is molded by rewards and punishment, or reinforcement. Past and present rewards and punishments for certain actions determine the actions that we continue to pursue. Reward and punishment structures are built into specific groups. By interacting with members of certain groups or social circles, people learn definitions of behaviors as good or bad. It is in the group setting, differentially for different groups, where reward and punishment take place, and where individuals are exposed to behavioral models and normative definitions of certain behavior as good or bad.

Social learning theory has a clear-cut application in explaining drug use: It proposes that the use and abuse of psychoactive substances can be explained by differential exposure to groups in which use is rewarded. "These groups provide the social environments in which exposure to definitions, imitations of models, and social reinforcements for use of or abstinence from any particular substance take place. The definitions are learned through imitation and social reinforcement of them by members of the group with whom one is associated" (Akers et al., 1979, p. 638). Drug abuse is determined "by the extent to which a given pattern [of behavior] is sustained by the combination of the reinforcing effects of the substance with social reinforcement, exposure to models, definitions through association with using peers, and by the degree to which it is not deterred through bad effects of the substance and/or the negative sanctions from peers, parents, and the law" (Akers et al., 1979, p. 638). Social learning theory, then, proposes that the extent to which substances will be used or avoided depends on the "extent to which the behavior has been differentially reinforced over alternative behavior and is defined as more desirable" (Radosevich et al., 1980, p. 160). We tend to repeat what we receive rewards for doing. The theory does not, however, explain how a given individual falls into a social circle that defines an activity (such as drug use) in positive terms.

Subcultural theory and the theory of differential association are related but distinctly different. The central thesis of the subcultural theory is that involvement in a particular social group with attitudes favorable to drug use is the key factor in fostering one's own drug use, and that involvement in a group with negative attitudes toward drug use tends to discourage such use. Drug use is expected and encouraged in certain social circles and actively discouraged, even punished, in others. Although subcultural theory has certain parallels with the theory of differential association, there are crucial differences as well. For one thing, Sutherland's theory of differential association, and the learning

theory that grew out of it, do *not* require that the process of socialization take place within stable, identifiable social groupings. Indeed, Sutherland postulated that, in principle, deviant or criminal socialization could be effected through association with a single individual, such as a friend, or a small group of individuals, such as a delinquent gang. In contrast, subcultural theory identifies the socialization process as taking place through the assimilation of individuals into specific groups or social circles, with a resultant transformation in identity, values, norms, and behavior.

The first systematic application of subcultural theory to drug use was made by Howard S. Becker (1953, 1955, 1963), who focused on the process of becoming a marijuana user. Becker, like the other interactionists, was not concerned with the question of etiology or cause-and-effect explanations; the traditional question of why someone uses marijuana and someone else does not did not capture Becker's attention. His focus was not so much on the characteristics that distinguish the user from the nonuser (the characteristics of the user that cause the user to use and the nonuser to abstain) but rather the question of how someone comes to use and experience marijuana in such a way that it will continue to be used to achieve pleasure. For this to take place, three things must happen, according to Becker's model.

First, one must learn how to use marijuana so that the drug is capable of yielding pleasure; one must learn the proper technique of smoking marijuana. Second, since the effects of the drug are subtle and ambiguous, one must learn to perceive them: One must learn that something is happening to one's body and mind, and that it is the marijuana that is causing this effect. And third, one must learn to enjoy the effects. By themselves, the sensations that the drug generates are not inherently pleasurable. Without knowing what is happening to one's body, the feelings attendant upon ingesting marijuana may be experienced as unpleasant, unsettling, disorienting, uncomfortable, confusing, even frightening. The drug's effects must be conceptualized, defined, and interpreted as pleasurable. How do these three processes come about? They depend, Becker said, "on the individual's participation with other users. Where this participation is intensive, the individual is quickly talked out of his feeling against marijuana use" (1963, p. 56).

Learning to enjoy marijuana "is a necessary but not a sufficient condition for a person to develop a stable pattern of drug use" (Becker, 1963, p. 59). Marijuana use is, after all, a deviant and criminal activity (and it was even more so in the 1950s and early 1960s, when Becker wrote about the subject). The individual must also learn how to deal with the social control that punishes users in its attempt to eliminate use. Deviant behavior can flourish when "people are emancipated from the controls of society and become responsive to those of a smaller group" (p. 60)—in Becker's words, a "subcultural group." To continue smoking marijuana, users must ensure a reliable supply of the drug, keep knowledge of their use from relevant disapproving others, and nullify the moral objections raised by mainstream society. These three processes, again, require normative and logistic support from the marijuana-using subculture.

An interesting feature of Becker's model is that it turns the traditional view of drug use on its head. Far from motives causing use, Becker proposed the opposite—that *use causes motives*. One does not learn that drug use is acceptable and then use drugs as a result; rather, one first uses drugs, and, during the course of drug use, learns the necessary justifications and explanations that provide the motivations for further use. In a

group setting, one is furnished with “reasons that appear sound for continuing the line of activity” he or she has begun (1963, p. 39). As Becker summarized the matter:

To put a complex argument in a few words, instead of deviant motives leading to the deviant behavior, it is the other way around; the deviant behavior in time produces the deviant motivation. Vague impulses and desires . . . are transformed into definite patterns of actions through the social interpretation of a physical experience which is in itself ambiguous. Marihuana use is a function of the individual’s conception of marihuana and of the uses to which it can be put, and this conception develops as the individual’s experience with the drug increases. (1963, p. 42)

The individual’s involvement with the marijuana-using subculture is the key factor in use. People do not begin using the drug on their own; individualistic theories cannot account for use. The characteristics of individuals count for nothing in the absence of social circles whose members explain use to the novice, supply the drug, and provide role models. It is only through contact with other users, Becker reminds us, that use, especially regular use, can take place.

Becker’s model does not include any discussion of specific individual or group characteristics that cause someone to use. His theory is very close to a “pure” subculture model, discussing the mechanisms of the socialization of the novice without mentioning the fact that only certain types of individuals and members of only certain types of groups are likely to be attracted to marijuana use. Becker seems uninterested in the fact that people who have certain attitudes, beliefs, or personality characteristics, or who engage in certain forms of behavior, are a great deal more likely to be attracted to social circles or subcultural groups who use drugs. Becker’s model seems to presuppose an almost random recruitment into drug subcultures—although, once an individual is recruited, selective interaction and socialization are the major mechanisms at work.

For Becker, the *content* of the user subculture—apart from its use of the drug and its definition of the drug and its use—is secondary. Becker did not touch on any potentiating factors in use at all. He does not explain which individuals are more likely to be attracted to the use of the drug, or which individuals are likely to be attracted to other individuals or groups who are users. He does not deal with the issue of the compatibility between a given individual and the content of a specific subculture—what it is that draws a novice to a circle of individuals who use marijuana. Following the interactionist approach, Becker underplayed the question of cause or etiology. Why someone finds himself or herself in the company of others who smoke marijuana and actually ends up using the drug—rather than turning down the chance—is something of an unexplained or “black box” factor in Becker’s analysis. He assumed that the user’s subculture is favorable toward use and defines it as such. But he made no assumption about any other values or behavior that might or might not be consistent or compatible with use itself.

Social Control and Self-Control Theories

Two major theories whose adherents attempt to explain deviant and criminal behavior—and, by extension, drug use and abuse as well—are social control, or bonding, theory and self-control theory, or the “general theory of crime.” Both are individualistic theories and not group or structural theories, the approach adopted by most sociologists. These two

theories make extensive use of the concept of control and focus on why some people *conform* to society's norms and laws. Both assume that deviance and, by extension, drug use, do not need to be explained. If left to our own devices, all of us would deviate, break the law, use drugs, and get high; we would simply be doing what comes naturally. What really needs to be explained is why some people do *not* deviate from the norms, violate the law, use drugs, or get high. These two theories differ considerably in the emphasis they place on the dynamics of deviance, crime, and drug use, and the relevant explanatory time frame.

According to *social control theory*, what causes drug use, like most or all deviant behavior, is the absence of the social controls encouraging conformity. Most of us do not engage in deviant or criminal acts because of strong bonds with or ties to conventional, mainstream persons, beliefs, activities, or social institutions. If such bonds are weak or broken, we will be released from society's rules and free to deviate—and this includes drug use. It is not that drug users' ties to an unconventional subculture attract them to drugs; it is their *lack* of ties with the conforming, mainstream sectors of society that frees them from the bonds keeping them from using drugs. It is the *absence* of these bonds that explains illicit, recreational drug use.

Delinquency, deviance, and criminal behavior—including recreational, nonmedical drug use—are matters of degree. Just as most of us engage in at least one technically illegal act in our lives, a high proportion of the American population eventually uses at least one drug outside a medical context. Social control theory does not assert that persons with strong ties to conventional society will *never* engage in any deviant action, regardless of how mild, including using a drug recreationally. It would, however, assert that both deviance and control are matters of degree: The more attached we are to conventional society, the lower the likelihood of engaging in behavior that violates its values and norms. A strong attachment does not absolutely insulate us from mildly deviant behavior, but it does make it less likely.

Social control theory emphasizes the actor's stake in conformity. The more we have "invested"—with respect to time, emotion, energy, money, and so on—in conventional activities and involvements, the more conventional our behavior is likely to be. A "stake" could be anything we value, such as a loving relationship, good relations with one's parents, a family, children, an education, work, a satisfying job, and/or a career. Someone who has "invested" in these positively valued, reward-laden enterprises is less likely to engage in behavior that may undermine them than someone who has no such investments. One or more stakes in conformity tend to act to keep us in line and away from the clutches of drug abuse.

The more *attached* we are to conventional others—parents, teachers, clergy, employers, and so on—the less likely we are to break society's rules and use drugs. The more *committed* we are to conventional institutions—family, school, religion, work—the less likely we are to break society's rules and use drugs. The more *involved* we are in conventional activities—familial, educational, religious, occupational, and so on—the less likely we are to break society's rules and use drugs. And the more deeply we *believe* in the norms of conventional institutions—again, family, school, religion, occupation, and so on—the less likely we are to break society's rules and use drugs. Drug use is "contained" by bonds with or adherence to conventional people, institutions, activities, and beliefs. If these bonds are strong, recreational drug use is unlikely. Social control theory has a kind of commonsensical flavor to it, and it also has a loyal following in the fields of the sociology of deviance, criminology, and the sociology of drug use (Hirschi, 1969).

Self-control theory represents another explanation of drug use and other unconventional, deviant, and/or criminal behavior. Self-control theory sounds a great deal like the “social” control theory we just looked at; however, the two are really very different. Many of the assumptions made by the latter are rejected by the former. Travis Hirschi, a sociologist, had been a major proponent of social control theory; starting in the late 1980s, in collaboration with Michael Gottfredson, he developed an altogether different and to some degree contradictory perspective, and in 1990, they presented self-control theory in book form, entitled *A General Theory of Crime*.

Self-control theory does share with social control theory the assumption that drug use and crime are “doing what comes naturally”—in the absence of controls, most people would engage in them. What is necessary to explain, then, is *how* controls come to be absent. It is here that the two theories diverge. The proponents of self-control theory conceive of crime as including not only crime itself but also a variety of other illegal, illegitimate, deviant, and self-interested actions. The authors define crime as “force or fraud in pursuit of self interest.” This encompasses an extremely diverse kettle of fish, but the authors explicitly state that drug use and abuse qualify (Gottfredson and Hirschi, 1990, pp. 40–42).

Drugs and crime are similar activities, they argue, because “both provide immediate, easy, and certain short-term pleasure” (p. 41). Crime and drug use are basically *the same sort of behavior*. They represent grabbing what someone wants without regard for the social or legal consequences. Getting high is fun—why not do it? Stealing gets you what you want—go ahead, do it! Both behaviors manifest low levels of self-control (pp. 233–234). Compared with law-abiding citizens and nonusers, criminals and drug users (whose personnel heavily overlap) are hedonistic, short-sighted, nonverbal, inconsiderate, intolerant of frustration. In a nutshell, the “general theory” of crime’s explanation of drug use is that some people find drugs attractive because they lack self-control. They take the easy, self-indulgent route; they are pleasure oriented. They do not think about the consequences—the possible harm to themselves or others in using drugs or anything else. They take shortcuts; they do whatever yields immediate gratification. They are grabbers, exploiters, liars, thieves, cheaters; they are reckless, careless, violent, impulsive, insensitive, and self-centered. They have no concern for the long-range consequences of their actions. Drug use is simply a manifestation of their general orientation to life: Do whatever gets them what they want, whatever feels good, regardless of whether their actions harm others or even, in the long run, themselves. The usual controls that keep the rest of us in check do not operate well in their lives.

What causes low self-control? Here again, social control and self-control theories diverge. According to self-control theory, a lack of self-control is caused by inadequate parental socialization. Parental socialization is a factor that operated in the past but exerts a lifetime influence, whereas social control is a factor that operates only in the present. Parents who are lacking in strong affection for their children, who are unable or unwilling to monitor their children’s behavior, and who fail to recognize that their children are engaging in wrongdoing are more likely to raise offspring who both engage in criminal behavior and indulge in drugs. Hence, as we have seen, self-control is caused by a factor that takes place very *early* in one’s life, whereas social control operates more or less *throughout* one’s lifetime.

The most important reason why self-control theory and social control theory are incompatible or contradictory is that, in order for the forces of *social* control to operate,

it is necessary for someone to have attained a certain level of achievement to begin with—and that requires *self-control*. If individuals lack self-control, one cannot get to the point where social control is relevant. Social control theory says that persons with a stake or investment in conformity—in the form of, say, a house, a marriage, children, a college education—are more likely to conform to society’s norms. How can persons who lack self-control achieve such a stake? They can’t; their lack of self-control makes it difficult for them to purchase a house, hold down a job, sustain a meaningful marriage, have a rewarding relationship with their children, or do well enough in school to enter college, stay in college, and graduate. According to this theory, self-control is prior to and more pervasive than social control. Hence, in the book that articulates self-control theory, *A General Theory of Crime*, co-author Travis Hirschi barely acknowledges the existence of a theory he once embraced.

Once again, as with all other factors or variables, self-control is a continuum, a matter of degree. The theory would predict that self-control and drug use are inversely or negatively correlated with each other: The lower the level of self-control, the greater the likelihood of drug abuse; the higher the self-control, the lower that likelihood is. It does not argue that all persons who lack self-control abuse drugs, only that they are *more likely* to do so than those governed by strong self-control. Further, it would predict that self-control and drug use are related to each other in a linear fashion; the experimenter is more likely to possess self-control than the occasional user, and the occasional user than the regular user; the weekend marijuana smoker is more likely to possess self-control than the crack or heroin addict; and so on. As with all sociological theories or explanations, self-control theory makes comparative or relative rather than absolute statements: The greater the self-control, the lower the likelihood of drug abuse.

Gottfredson and Hirschi argue that their theory demolishes all other explanations of drug use, including anomie and learning theory, with the exception of two: social disorganization and routine activities theory. Self-control theory is *social disorganization theory* writ small. The key to drug use, as with crime and deviance in general, in social disorganization theory is that members of the neighborhood are unwilling or unable to monitor or control wrongdoing, and so, it flourishes. The same applies to inadequate parenting. To the extent that parents are unable or unwilling to monitor or control their child’s behavior, that child will manifest low self-control and hence, will get high, steal, and engage in violent behavior. Neighborhood social disorganization and low self-control are structural versus individual levels of basically the same factor.

Routine activities theory argues that deviance and crime will take place to the extent that three factors are present: (1) a *motivated offender*, (2) something worth offending against (a *suitable target*, such as a quantity of cash), and (3) someone who can defend or protect that which is offended against (a “*capable guardian*,” such as the presence of a police officer). But routine activities theory ignores or takes for granted the motivated offender. To that extent, it is very different from self-control theory, which focuses *entirely* on the offender, and simply assumes low self-control leads to drug use, delinquency, deviance, and criminal behavior. However, self-control theory is (at least partly) consistent with routine activities theory in that for both, opportunity is a major piece of the puzzle. Routine activities theory argues that persons offend to the extent that a suitable target is available and a “capable guardian” is absent—in a word, that the opportunity to offend exists. People will use drugs to the extent that they are available and agents

of social control are not in the picture. Again, the theory does not raise the question of which people will follow up on the available opportunity, stating only that there are enough motivated offenders in the population to keep the enterprise of offending healthy and strong. In any case, routine activities theory has not been used much by researchers in the area of drug use; it applies most strongly to money-making crimes.

Selective Interaction/Socialization Theories

The term *selective interaction* refers to the fact that potential drug users do not randomly “fall into” social circles of users; they are attracted to certain individuals and circles—subcultural groups—because their own values and activities are compatible with those of current users. There is a dynamic element in place: Even before someone uses a drug for the first time, he or she is “prepared for” or “initiated into” its use—or, in a sense, *socialized in advance*—because his or her values are already somewhat consistent with those of the drug subculture. As a result, one chooses friends who share these values, and who are also likely to be attracted to use and to current users. I call this process “selective recruitment.” In addition, once someone makes friends who use drugs, he or she becomes socialized by a using subcultural group into those values compatible and consistent with use. This is why I call this the *selective interaction/socialization* model. Johnson (1980) calls it the subcultural model, and Kandel (1980a, pp. 256–257) calls it the socialization model. It is both a subcultural and a socialization perspective, but it does not follow the lines of Becker’s classic argument, and it is a somewhat different process of socialization from the traditional model.

Studying drug use in a college setting, Johnson (1973) made use of both the subcultural and the socialization models. He demonstrated that drug use occurs because adolescents are socialized into progressively more unconventional groups (p. 5). Briefly stated, Johnson’s argument holds that the more that adolescents are isolated and alienated from the parental subculture, and the more involved they are with the teenage peer subculture, the greater the likelihood that they will experiment with and use a variety of drugs. The peer subculture provides a transition between the parental and the drug subcultures. For the most part, the parental generation is conventional and antidrug, and also opposes a number of other unconventional and deviant activities. Adolescents who are strongly attached to, influenced by, and committed to the parental subculture tend to adhere more closely to its values and follow its norms of conduct. As a consequence, they are more likely to abstain from drugs than the teenager who is isolated from his or her parents and involved with peers, who favor more unconventional norms, and therefore is more likely to accept certain forms of recreational drug use, especially marijuana smoking.

Not only does the peer subculture exist somewhat independently of and in opposition to the conventional parental generation, it also emphasizes activities in contexts in which parental control is relatively absent. There is something of a competition for prestige and status ranking within peer groups. Higher status is granted in part as a consequence of engaging in activities and holding values that depart significantly from parental demands and expectations. These include alcohol consumption, marijuana use, the use of certain hard drugs, some delinquent activity, including what Johnson calls automobile deviance (speeding, driving without a license, and so on), shoplifting, hanging out, hooking up, and cruising.

Johnson's study found that if one has marijuana-using friends, one tends to use marijuana; if one does not have marijuana-using friends, one tends not to use marijuana. The more marijuana-using friends one has, the greater the likelihood of using marijuana regularly, buying and selling marijuana, and subsequently using hard drugs. In addition, having marijuana-using friends and using the drug regularly tend to be strongly related to sexual permissiveness (having sex early and with a number of partners, and approving of sex in a wide range of circumstances), political leftism, planning to drop out of college, and engaging in delinquent acts (Johnson, 1973, p. 195). Note that marijuana use is instrumentally involved in this process; using marijuana vastly increases the chance of engaging in numerous other drug-related activities. But Johnson's study suggests that it is not the physiological action of the drug itself that does this, but the subcultural involvement that marijuana use entails. Marijuana use is an index or measure of subcultural involvement, and the more involved one is with the drug subculture and the groups that sustain it, the more socialized by it, influenced by its values, and engaged in its activities one is.

The selective interaction/socialization model of drug use has been explored most systematically and in the greatest empirical detail by sociologist Denise Kandel. Kandel can be said to be the principal proponent of the perspective. Kandel's approach is eclectic and makes use of concepts taken from learning theory, the social control model, and the subcultural approach. She places less of an emphasis on "selective recruitment"—the fact that young people who eventually use drugs are different from those who never use, even before use takes place—and relatively more on the processes of selective interaction and socialization.

Adolescents vary with respect to a range of individual and social background characteristics. Likewise, adolescent social gatherings or groups have different and varying characteristics. Some are more compatible with a given adolescent's own traits; some are less so. As a general rule, people of all ages, adolescents included, tend to gravitate to groups whose characteristics are compatible with or similar to their own, and to avoid those that are incompatible or dissimilar. However, in early adolescence, young people tend to be "drifters"—their early drug use, mainly of beer and wine, or nonuse is dependent mainly on accidental, situational factors. If they are in a circle of adolescents who drink, their chances of drinking are greater than if they are in a circle of nondrinkers. Early on, general peer climate powerfully influences patterns of substance use, and young adolescents are not strongly motivated to select a peer group that reflects their own interests and inclinations.

Adolescents are socialized by several different "agents." Socialization theorists locate four main agents of socialization: parents, peers, school, and media. Two are tightly related to drug use: parents and peers. Adolescents tend to internalize definitions and values and engage in behavior enacted and approved by significant others. The impact of the various agents of socialization depends on the values and behavior in question. For broader, long-term values and behavior, such as religion, politics, and lifetime goals, parents tend to be most influential; for more immediate lifestyle behavior and values, peers are most influential (Kandel, 1980a, p. 257).

The parental influence on the drug use of teenagers is small but significant: Parents who use legal drugs (alcohol, tobacco, and prescription drugs) are more likely to raise children who both drink hard liquor and use illegal drugs than are parents who abstain from drugs completely. In the earliest stages, parental example will influence substance use in the form of beer and wine, and a bit later on, hard liquor. However, peer influence on drug use is even more formidable. Teenagers, especially older ones, tend to associate

with one another partly on the basis of similarities in lifestyle, values, and behavior—and drug use or nonuse is one of those similarities. Friends typically share drug using patterns: Users tend to be friends with users, nonusers tend to be friends with nonusers. Of all characteristics that friends have in common—aside from the obvious social and demographic ones, like age, gender, race, and social class—their drug use or nonuse is the one they are most likely to share (Kandel, 1973, 1974).

Selective peer group interaction and socialization represent probably the single most powerful factor related to drug use among adolescents. Imitation and social influence play a significant role in initiating and maintaining drug use among teenagers. Over time, participation in specific groups or social circles reinforces certain values and patterns of activity. Association with friends whose company one enjoys reinforces the values shared and behavior engaged in with those friends. And the closer one's bond, the greater the likelihood of maintaining the values and behaviors that are shared. Note, however, that adolescents do not choose friends at random: They are, in a sense, socialized "in advance" for participation in certain groups. They choose and are chosen by certain groups because of that socialization process, and, likewise, participation in those groups socializes them toward or away from the use of illicit drugs. We have a reciprocal or dialectical relationship here.

Kandel's model of adolescent drug use is dynamic in that she does not end her analysis with substance use per se—at the point when someone has experimented with a psychoactive substance, or with continued use over time. Kandel is interested in drug use *sequences*. For her, to focus on a single drug would be fallacious; adolescents use several drugs, and they use them in specific patterns and in specific "culturally determined" and "well-defined" developmental stages. The "use of a drug lower in a sequence is a necessary but not a sufficient condition for progression to a higher stage indicating involvement with more serious drugs" (Kandel, 1980b, pp. 120, 121). These stages can be reduced to four: (1) beer and/or wine, (2) cigarettes and/or hard liquor, (3) marijuana, and (4) other illegal drugs (1980b, p. 121). Adolescents rarely skip stages; drinking alcohol is *necessary* to smoking marijuana, just as marijuana use is necessary to moving on to more dangerous drugs such as cocaine and heroin.

Kandel supports the idea that unconventionality is related to drug use generally. However, she argues that the relevance and importance of specific variables are dependent on the young person's stage in life and the relevant drug used; there is a *time-ordering* of specific factors. In the early stages of substance use, early in adolescence, as noted above, the most important drugs used are beer and wine, and the most crucial causal factor is general peer climate. The less serious the drug use (beer and wine versus heroin and cocaine), and the more widespread it is, the more important the role played by accidental situational features and by broad peer-subcultural attitudes and drug-related behavior. Here, most adolescents are "drifters" with regard to drug use; users' attitudes and beliefs about drugs are not significantly different from nonusers'. At this point, most adolescents are "seducible" with respect to psychoactive substances, particularly beer and wine.

At later stages, different factors come into play. For marijuana, in middle adolescence, attitudes toward the drug are very important, peer influence remains strong, and parental influence is fairly weak. In later adolescence, three factors that were less crucial earlier loom especially large. First are psychological pressures: More troubled adolescents will tend to progress from marijuana to "harder" drugs; less troubled ones will be less likely to do so. Second is the relationship with parents: The more alienated an adolescent

is from his or her parents, the greater the likelihood that he or she will progress from marijuana to more dangerous drugs. Intimate relations with parents tend to “shield” the adolescent from the more serious forms of drug use. And third, while peer climate in general declines in importance over time, having at least one specific friend who uses one or another dangerous drug assumes central importance. Here, the adolescent breaks away from peer circles who do not favor the use of more dangerous drugs toward specific individuals who use them. “The individual who progresses to the use of other illicit drugs may, as a result of his drug-related behavior, factors of availability, or family difficulties, move away from long-term friendships and seek less intimate relationships with those who share his attitudes, behaviors, and problems” (Kandel, Kessler, and Margulies, 1978, p. 36). This adolescent is no longer a “drifter” but a “seeker.”

Conflict Theory

More than three decades ago, the National Institute on Drug Abuse (NIDA) issued a volume entitled *Theories on Drug Abuse* (Lettieri, Sayers, and Pearson, 1980). Conspicuously absent from this compendium was one of the more influential contemporary theories of drug abuse, *conflict theory*. This perspective is distinctly “macro” in its approach: It examines the broader, larger, structural factors—forces that influence not merely individuals but members of entire societies, cities, neighborhoods, and communities. Conflict theorists have focused their perspective more or less exclusively on the heavy, chronic, compulsive abuse of heroin and crack, and only marginally on the use of alcohol, tobacco, and marijuana. Hence, conflict theory explains only a portion of the drug abuse picture; it is not a complete explanation of drug abuse—no explanation can be that—but one that addresses the issues that much of the public finds most troubling.

Proponents of conflict theory hold that the heavy, chronic abuse of crack and addiction to heroin are strongly related to social class, income, power, and locale. A significantly higher proportion of lower- and working-class inner-city residents abuse the hard drugs than is true of more affluent members of the society. More important, this is the case because of the impact of a number of key structural conditions, conditions that have their origin in *economics* and *politics*. More specifically, several key economic and political developments have taken place in the past three or four decades that bear directly on differentials in drug abuse.

Sociologist Elliott Currie spells out this perspective in *Reckoning: Drugs, the Cities, and the American Future* (1993), as does Harry Gene Levine, in his paper, “Just Say Poverty: What Causes Crack and Heroin Abuse” (1991). In my view, it is one of the more satisfactory and comprehensive explanations for a number of developments in the world of drug abuse. Connections that have always existed between income and neighborhood residence, on the one hand, and drug abuse and addiction, on the other, have become exacerbated by these recent developments. What are these crucial recent developments?

First, since the early 1970s, economic opportunities for the relatively unskilled and the relatively uneducated sectors of the society have been shrinking. In 1970, it was still possible for many heads of households with considerably lower-than-average training, skills, and education to support a family by working at a job that paid them enough to raise their income above the poverty level; this was especially the case if more than one member of the household was employed. Today, this is much less likely to be true.

Far fewer family breadwinners who lack training, skills, and education can earn enough to support a family and avoid slipping into poverty. Decent-paying manual-level jobs are disappearing. Increasingly, the jobs that are available to the unskilled and semiskilled, the uneducated and semi-educated, tend to be dead-end, minimum-wage, poverty-level jobs. The bottom third or so of the economy is becoming increasingly impoverished, and one consequence of this development is the growing attractiveness of drug selling.

As a result—and this is the second of our recent developments—the poor are getting poorer; ironically, at the same time, the rich are getting richer. That this is always the case is part of our collective wisdom, but this hasn't always been so. The income earned by quintiles (or 20 percent layers) in the population is one way of expressing how income is distributed; in the United States in 2011, the top quintile (one-fifth of the population) earned *14 times* more than the bottom; in 1968, the ratio was 7.7 to one. In short, income inequality in the U.S. is substantially *growing*, and it has taken place under administrations of both parties. According to data gathered by the Brookings Institution, which sponsors research on public policy issues, in 2011, “tax units” at the 10th percentile of incomes earned \$9,235; nearly all of the persons in this category are unarguably poor. The federal government’s definition of poverty for a family of four is \$17,029. The 50th percentile—the median income for tax units in the United States in 2011—was \$42,327. And the income of the 99th percentile was just over half a million dollars: \$506,553. But income tends to rise very steeply at the very top of the distribution ladder; at percentile 99.5, income stands at \$815,868, and at percentile 99.9 rung, it is \$2,070,574. In 2012, the U.S. Census released a report on *family* income and poverty in the United States, particularly focusing on recent changes. The top 5 percent of the population increased their share of the total income by 4.9 percent—from 21.3 percent to 22.3 percent, and the top quintile (20 percent) increased their share of income by 1.6 percent (DeNavas-Walt, Proctor, and Smith, 2012, p. 10). In the United States, during 2010 (that is, from January 1, 2010 to December 31, 2010), *93 percent of the economic growth in income was monopolized by the richest 1 percent of the society*. And another statistic: Adjusted for inflation, the 2011 per capita income was \$1,000 *lower* than it was in 1968—\$32,986 versus \$33,880. Income inequality is great, it is growing, and incomes are stagnating—except for the very rich. Income today in the United States has not been as great as it has since the 1920s, which preceded the Great Crash and the Depression. The U.S. has a higher proportion of its children living in poverty (a fifth) than all but one of the richest countries in the world—and an even greater proportion than do Bulgaria, Greece, and Latvia (Stiglitz, 2012/2013, 8SR). It is possible that the current global economic stagnation is a cause of increasing inequality—but it’s also possible that the reverse is true.

A third development is especially relevant to the issue of the distribution of illegal drugs: community disorganization and political decline. As a consequence of the economic decline of the working class and the polarization of the economy as well as the “flight” of more affluent members of the community, the neighborhoods in which poor, especially minority, residents live are becoming increasingly disorganized and politically impotent (Wilson, 1987, 1997). Thus, they are less capable of mounting an effective assault against crime and drug dealing. The ties between such neighborhoods and the municipal power structure have become weaker, more tenuous, even conflictual. The leaders of such communities increasingly learn that they cannot expect resources once extended to them. All factors make drug dealing in such communities more viable.

In such neighborhoods, criminals and drug dealers make incursions in ways that would not be possible in more affluent, more organized communities, which have stronger ties to the loci of power. In cohesive, unified, and especially prosperous neighborhoods, buildings do not become abandoned and become the sites of “shooting galleries”; street corners do not become virtual open-air markets for drug dealing; the police do not as routinely ignore citizens’ complaints about drug dealing, accept bribes from dealers to look the other way, steal or sell drugs, or abuse citizens without fear of reprisal; and innocent bystanders do not become victims of drive-by gangland turf wars. In communities where organized crime becomes entrenched, it does so either because residents approve of or protect the criminals or because residents are too demoralized, fearful, or impotent to do anything about it. Where residents can and do mobilize the relevant political forces to act against criminal activities, open, organized, and widespread drug dealing is unlikely. In contrast, where communities have become demoralized, disorganized, and politically impotent, drug dealing is far more likely to thrive. And many poor, inner-city minority communities have suffered a serious decline in economic fortune and political influence over the past generation or so. The result: Drug dealers have been able to take root and flourish (Hamid, 1990).

These three developments—the decay of much of the economic structure on which the lower sector of the working class rested, the growing economic polarization of the American class structure, and the physical and political decay of poorer, especially minority, inner-city communities—have contributed to a fourth development: a feeling of hopelessness, alienation, depression, and anomie among many inner-city residents. These conditions have made drug abuse especially attractive and appealing. For some, getting high—and getting high frequently—has become an oasis of excitement, pleasure, and fantasy in otherwise dreary lives. Let us be clear about this: *Most* of the people living in deteriorated communities *resist* such an appeal; most do *not* abuse drugs. Our structural or macro-oriented conflict theories do not explain why some members of a blighted community turn to drugs and others—*most* residents—do not. But *enough* succumb to drug abuse to make the lives of the majority unpredictable, insecure, and dangerous. A violent subculture of drug abuse flourishes in response to what some have come to see as the hopelessness and despair of the reality of everyday life for the underclass.

Conflict theory argues that there are two overlapping but conceptually distinct forms or types of drug use. The first, which makes up the vast majority of illegal users, is “casual” or “recreational” drug use. It is engaged in by a broad spectrum of the class structure, but it is most characteristic of the middle class. This is “controlled” drug use, drug use for pleasure, drug use which takes place experimentally, or once or twice weekly, once or twice a month; it is drug use in the service of other pleasurable activities. This type of drug use is caused by a variety of factors: unconventionality, a desire for adventure, curiosity, hedonism, willingness to take risks, sociability, and, as we saw, involvement with a subcultural group. Relatively few of these drug users become an objective or concrete problem for the society, except for the fact that they are often targeted or singled out *as* a problem.

The second type of drug use is abuse—compulsive, chronic, heavy drug use that often reaches the point of dependency and addiction; it is usually accompanied by social and personal harm. A minority percentage of recreational drug *users* progress to becoming drug *abusers*. For all illegal drugs, there is a pyramid-shaped distribution of users: Many experimenters at the bottom, fewer occasional users in the middle, and a small

number of heavy, chronic abusers at the pinnacle. This second type of drug use is in large part driven, as we've seen, by despair, hopelessness, alienation, poverty, and community disorganization and disintegration. By abusing drugs, users are harming themselves and others, including the community as a whole. Use results in medical complications, drug overdoses, crime, violence, imprisonment, and even, in a small minority, a trip to the morgue. Experts argue that moving from the first type of drug use (recreational) to the second (abuse) is far more likely to take place among the impoverished than among the affluent, by residents of disorganized rather than intact communities (Currie, 1993; Johnson, Elmoghazy, and Dunlap, 1990; Levine, 1991). And, while drug abuse is facilitated by the political and economic developments I just mentioned, when abuse becomes widespread in a community, it contributes to *even greater* community disorganization. Inner-city residents become trapped in a feedback loop: Powerlessness and disorganization in a community contribute to drug abuse and drug dealing, which, in turn, entrench the community in even greater powerlessness and disorganization.

Drug abuse is far from unknown among members of the middle classes and residents of politically well-connected communities. Significant proportions of *all* categories of the population fall victim to drug abuse, and both "micro" and "macro" forces operate. Micro or personal forces may be sufficient to impel some members of affluent communities into drug abuse. And most members of communities subject to the macro forces addressed by conflict theory resist the blandishment of drug abuse. While *some* members of *all* economic classes abuse cocaine and heroin, those members of the bottom economic strata are *more likely* to do so. To deny this would be to deny that living at the bottom of the economic hierarchy in this society creates problems for those who do. But even if there were no class differences in drug abuse, *drug abuse has especially harmful consequences in poor, minority communities*. Drug abuse more seriously disrupts the lives of persons who lack the resources and wherewithal to fight back effectively than is true of the lives of those who possess these resources. Poor neighborhoods are especially vulnerable to intrusions by drug dealers and increases in drug abuse.

Poor and minority people and neighborhoods are already struggling with a multitude of problems; drug abuse is another major exacerbating difficulty. Members of more affluent neighborhoods are more likely to have connections, ties with city hall and the state house, "clout" or political influence, money to tide them over, a bank account, mobility, autonomy, and so on—a variety of both personal and institutional resources to deal with the problems they face. Hence, the drug abuse of some of their community's members is not as devastating as it is among the poor and the powerless. And the neighborhoods in which they live, likewise, get favored treatment from the powers that be; they are less likely to fall victim to the many marauders and exploiters that prey on the powerless and the vulnerable.

In contrast, poor, minority communities are shortchanged by local, state, and federal governments, and bypassed by developers and entrepreneurs. Banks are reluctant to lend money to open businesses in such communities; stores that do open tend to be undercapitalized and frequently fail; landlords abandon buildings that become shooting galleries. It is the vulnerability and powerlessness of such neighborhoods that make them a target for both petty and organized criminals, for drug dealers small and large, for corrupt officials and police officers. And vulnerability and powerlessness enable drug abuse to flourish in such communities and wreak havoc with their residents' lives. When we ask, "Why drug abuse?" our answer must be tied up in issues of economics and politics.

SUMMARY

A number of factors encourage drug use and abuse; no single factor or variable can completely answer the question of why some people use drugs and others do not. The main theories of drug use and abuse can be boiled down to three: biological, psychological, and sociological explanations.

Biological theories are based on constitutional or inborn differences between persons who become drug users and those who do not. One such theory is genetic. Some progress has been made in locating a genetic predisposition to alcoholism, but it is only one factor among many. Another theory locates the cause of one type of drug abuse, narcotic addiction, in metabolic imbalance. Methadone maintenance providers argue that once persons with a metabolic imbalance begin using heroin, a physiological process “kicks in” to make their bodies “crave” narcotics and render them prone to becoming heroin addicts. No concrete evidence supports this theory, but methadone maintenance seems to be one therapeutic program, evidence suggests, that significantly lowers narcotic addiction and criminal behavior for a high proportion of enrollees.

Psychological theories focus on one of three factors—positive and/or negative reinforcement and two personality theories, inadequate personality and problem-behavior proneness. Do drug users and abusers have “inadequate personalities”? Users’ personalities are no doubt different from those of nonusers. However, to test the proposition, the researcher would have to establish this fact *before* use takes place, since socialization by user groups is likely to transform the individual’s personality, or at least his or her values. One value common in deviant or unconventional groups, these theorists argue, is self-deprecation—in a phrase, low self-esteem. In contrast, other theorists argue that users who continue to take narcotics, once addicted, do so to avoid the painful withdrawal symptoms of discontinuing the administration of heroin. Still others claim that continued use results from the jolt of pleasure, or the “rush”—*positive reinforcement*—that users get from administering a gratifying drug. All or nearly all persons who administer one or more reinforcing drugs receive that jolt of pleasure, but not all continue using these drugs. Other factors are clearly at work.

The “problem-behavior proneness” perspective offers a somewhat different take on drug use. Individuals with certain kinds of personalities and values are more likely to get into trouble than are those with more mainstream or conventional personalities and values. This can be predicted in advance by establishing the degree of the individual’s unconventionality: Someone who strays from society’s mainstream values and behavior in one dimension, as well as in general, is likely to stray in other dimensions as well. Users are more rebellious, critical of and alienated from conventionality, independent, open to new experience, pleasure seeking, peer oriented, risk taking, and less mindful of real-life consequences than are nonusers. The evidence linking unconventionality to the rejection of mainstream institutions and the recreational use of psychoactive drugs is incontrovertible. But are these personality characteristics or are they subcultural in nature? Sociologists would tend to see them as originating in the subcultural group, as values that characterize certain social circles; psychologists would emphasize their individualistic psychodynamic origin. This dispute is unlikely to be resolved overnight. Still, the differences between users and nonusers are significant, powerful, and almost certainly causally connected to use, and, at higher levels of drug involvement, these differences assume greater relevance.

The sociological perspectives likewise shed light on the phenomenon of substance use and abuse; they include anomie theory, the social control and self-control theories, subcultural or learning theories, the selective interaction/socialization theory, and conflict theory.

Anomie theory argues that drug use can be explained by an individual's being socialized to want, need, and expect material success, and failing to attain that success. As a result, one "retreats" into a state of drugged-out bliss and oblivion. While such a dynamic does not characterize most drug users or abusers, one adaptation to success or failure in the legal or legitimate realm is attempting to attain success in illegal or illicit enterprises—and here, drug dealing appears to fit extremely well.

Social control theorists argue that they can explain deviant, delinquent, and criminal activities by weak or absent bonds to conventionality and a "stake" in conformity. Self-control theorists argue that drug use, nothing more or less than a manifestation of a selfish quest for short-run hedonistic self-indulgence, is a by-product of poor or inadequate parenting which causes or leads to low self-control.

Drug use is learned and reinforced within a group setting. Future drug users interact with current users and learn appropriate definitions of the drug experience, which has a strong impact on their future experiences and behavior. Individuals learn how to smoke, snort, inject; how to recognize and enjoy drug effects; how to ensure a drug supply; and how to keep their use secret from conventional, disapproving society. All of this is part of the "lore" of the user subculture.

Characteristics of social background, parenting, personality, behavior, and values predict which young people will gravitate toward one another—toward peer circles whose values and behavior are compatible with use. Once someone is selectively "recruited" into such a circle or group, his or her likelihood of use increases rapidly. Young people socialize one another into values favorable to drug use by the social circles in which they interact and are involved. The more consistent these values, and the more concentrated and intense the interaction, the greater the likelihood of use. In addition, involvement in a using circle also provides role models for use, so imitation comes into play here. Youngsters do not magically and independently devise a solution to a psychological problem they may have, and then rush out, looking for a chemical substance to alleviate that problem, as the inadequate-personality theory seems to predict. Future users turn to drugs because they have friends who use and endorse use, and because they are relatively isolated from circles who don't use and who actively discourage use.

However, as the theorists of this perspective emphasize, the relative importance of certain dimensions, factors, and variables shifts with the stages in a youngster's life, with his or her drug history, and with the drug in question. The dynamics or causal sequence of using (or not using) different drugs is somewhat different for each stage. In early adolescence, beer and wine are the drugs of choice, and here, peer factors—simply falling into or drifting toward a certain circle of users—play the most prominent role. Moreover, parents set a pattern for alcohol use: Parents who drink are more likely to raise children who also drink. Warnings not to drink have little impact in the face of parental examples. Once in a specific social group, the process of socialization takes over, and such socialization prepares the youngster for more serious drug use—initially, the use of cigarettes and hard liquor and, a bit later on, marijuana. In middle adolescence, general beliefs and values, especially about drugs, play a more prominent role, as does peer influence. At this stage, strong differences in values and

lifestyles predict marijuana use, and these differences increase with greater levels of use and involvement.

The conflict perspective shifts our attention squarely into the “macro” or big-picture level of causality; it is the larger or structural forces that influence or determine drug use, abuse, and sale. Differences in control of economic and political resources help us understand why members of some communities and neighborhoods are more likely to use drugs and become victims of abuse. Economic developments that have taken place since the 1970s—especially the collapse of the lower rungs of the working class, the polarization of the economy, and an escalation of social, political, and economic disorganization in the poorest neighborhoods—have speeded up processes that have always existed. Over time, as the poor become poorer, the communities in which they live become increasingly politically impotent. Drug dealers are more able to gain a foothold in them, and their residents find drug dealing an attractive career option. Politicians learn that the demands of the leaders of such communities can be ignored without consequence. The physical decay of the community, the economic decline of its residents, and its shrinking political clout all contribute to the growing drug abuse of some of its residents and the institutionalization of drug dealing on its streets. (Conflict theory is partially dependent on social disorganization theory.) Naturally, this approach does not explain why some residents of such neighborhoods turn to drug abuse and/or dealing while most do not. As with most other theories, conflict theory has to be supplemented with others.

In spite of what some theorists argue, the validity of one theoretical perspective does not imply the falsity of another. Each explanation addresses a portion of a large, sprawling, and complex phenomenon. No single theory of drug use or abuse could possibly explain everything that we might want to know about the drug scene. Macro processes may or may not be relevant to micro phenomena, and vice versa; explaining alcoholism says next to nothing about heroin addiction; accounting for drug experimentation says nothing about dependence; subcultural processes may operate alongside psychodynamics; and so on. In attempting to answer the question, “Why drug use?” we need to be broad and eclectic in our approach rather than narrow, parochial, and dogmatic.

ACCOUNT: Explaining Drug Use

Multiple Drug Use

The subject of the following account, Sam, is a college student.

Most people think that hard core drug users come from poor neighborhoods or broken homes, so I guess I’m not your typical drug user. I grew up in a small town in Ohio. The worst thing I ever saw was this long-haired kid smoking a cigarette on the steps of my school one day. I was confused because

I thought cigarettes were only for adults. He looked like a loser, and from what I remember he was a trouble maker.

I didn’t even know anything about drugs or alcohol until I moved to the suburbs of DC at the age of 13. At first I didn’t have any friends. Kids made fun of me because I wore imitation Adidas shoes from K-Mart. This was considered taboo in my school, but in Ohio, K-Mart was a cool place to shop. One day at school, this guy Steve started

talking to me. We became friends, and before I knew it, I was wearing Calvin Klein, and I was part of the “in crowd.” I started hanging out at other kids’ houses, and eventually they hung out at mine. I told Steve that my parents were going out of town, and he said that I should have a party. I said okay, and then we started planning. We handed out directions and fliers for about a month prior to the party! (I can honestly tell you that I had no idea what I was doing, but I didn’t want to let my cool friends down, and I didn’t want to go back to being a loser in K-Mart tennis shoes.) We all took the bus to my house after school and set up for the party. We each grabbed a bottle of alcohol from my parents’ bar and started drinking! I picked up a pretty green bottle with a yellow label, took a sip and choked on it! I really didn’t like the taste of the scotch, but I carried the bottle around all night, taking little sips of it! Before I knew it, a few hundred people were in my house, and everything was being destroyed. Eventually the police arrived and kicked everyone out, but the damage was already done! My parents’ house was trashed, and I had opened the door to an ugly world that I would have to live in for the next 15 years.

We continued to drink occasionally in junior high, and I tried a few cigarettes, but the real addiction started in high school. I had just started 9th grade at [a very affluent] high school. From time to time I would make eyes with this really pretty girl in the hallways. One day I saw her at a football game, and I told her she was cute. By the end of the game, we were kissing under the bleachers! Jody asked me if I wanted a cigarette, and I said sure! I remembered trying it, in junior high, and I figured if she was smoking it must be wonderful. As it turned out, she became my girlfriend, and I became a smoker. I feel that this evil habit was my biggest downfall. Nicotine took my normal mind and turned it into a nicotine-dependent, drug-craving machine. I loved smoking! I couldn’t wait for class to end so that I could light up with my friends. What I didn’t know was that I would spend the next 15 years trying to quit. For 15 years my lungs burned, I coughed all the time, and I couldn’t exercise. But I loved my cigarettes! One day we skipped

school, and went down by the railroad tracks. I knew that Jody smoked pot, but I had never tried it. She pulled out a joint and started smoking it. I took a couple of hits, but I didn’t feel much of anything. A few days later we smoked another joint in her apartment. This time I got high. I couldn’t really tell what had happened to me, but I felt confused, and overwhelmed. Over the next few months we continued to smoke cigarettes and pot. Jody and I started skipping school to get high, and our grades started slipping. We didn’t really care about school anymore.

My brother asked Jody and I if we wanted to go to the railroad tracks with him and his friends. We said sure. My brother’s friend, John, offered us each a hit of acid. We were excited because we had talked about doing acid, but we could never find any. We each took a hit and waited for the fun to begin. Before I knew it I had lost my friends, and I was talking to a bear that had been painted on the wall. My brother came up to me and told me to come with him because everyone was lying on the tracks waiting for the train to come, and he wanted me to try it. I lay down on the track and forgot about everything. Apparently the train was coming down my track, and I wasn’t moving. My brother and his friend had to pull me off the track. I really don’t remember this, but my brother tells me about it all the time.

My parents became so fed up with my behavior and performance in school that they sent me away to military school. While in military school, I was able to get my act together and finish out my freshman year. . . . Summer came around, and we were allowed to go home. I convinced my parents to take me to the beach because I felt that I deserved a break. While at the beach, I met some guys on the boardwalk. I told them my story, and they said that I could live with them for the rest of the summer. I begged my parents until they gave in. So my parents went home without me. I had no money, very few clothes, and no job. My new friends and I spent the summer going out and having parties at our house every other night. I was never quite sure as to who really lived in the house because so many people crashed there every night. We drank alcohol

every night, smoked cigarettes all the time, and smoked weed whenever we could get our hands on it. I remember one time when one of the guys smoked some pot laced with PCP. He became really angry and kept punching the wall. Eventually, he had punched a hole big enough to walk from the kitchen into the bedroom without using the door. We thought it was really funny. Luckily, some of the guys worked at restaurants, so we could get free food sometimes. I also remember filling up cups with the free chili sauce from seven eleven, and sometimes that's all we had to eat. After a while the landlord kicked us out, and we all went back home. I was fourteen and had decided that I didn't want to go back to military school, so I floated around from public school to public school, and then I quit going to school altogether. I started working as a part time cashier at a gas station and moved into a group house with some strangers. I met this Nigerian guy at my work, and he loved to smoke pot. He came over quite often, and we smoked pot on a regular basis. Our lease eventually ran out on our house, and I was forced to move back home with my parents.

My father decided that if I was going to graduate, he needed to get me into a school. He quit his job as a stock broker and got a job teaching at a private school. . . . I was able to return to school. I studied hard, got straight A's my senior year, and was able to graduate. I was accepted by many schools, but my parents chose [a particular university] because it was affordable and close to home, and they had a great engineering program. I had no idea what I was getting into.

I moved into [a dorm] my freshman year. It was just one big party. Everyone was smoking pot, drinking alcohol, and no one really cared about school. I met this guy, Jan, who lived on my floor, and we became best friends. He was pledging a fraternity, and the following semester he convinced me to rush his fraternity. I was given a bid and decided to pledge. These guys seemed really different from me, but I trusted Jan and pledged the

fraternity anyway. I was voted pledge class president, so I was responsible for all of my pledge brothers. I needed money to pay for the fraternity so I got a job bartending at [a local bar]. I would get drunk at work every night, come home at four in the morning, and have to be at the fraternity house at seven a.m. to clean up after the parties. Pledging was really difficult. There was hazing, rampant drug use, alcohol and alcoholics everywhere. One time I was kidnapped by an older fraternity brother and taken to the [mountains]. We hiked for several miles and then set up our tents. Later, we built a fire, and he handed us each a bag of mushrooms. We made mushroom tea, and ate the rest of the mushrooms. I waited about a half an hour and then started hallucinating. I remember being really sad and then really happy and then really sad again. I would cry for a while, and then I would laugh uncontrollably. I remember seeing ballerinas in the trees, and the rocks were breathing. It was an exhausting trip, and I continued to hallucinate for a few days afterwards. I also remember one really bad experience when I was lined up with my pledge brothers and pissed on by one of the fraternity brothers. It was degrading, but in the end, there was supposed to be some great reward. I never found it, even after living in the fraternity house for two semesters. To this day, I still wonder what purpose my fraternity served.

QUESTIONS

Which theory of drug use does this account illustrate? Would Sam have used drugs without social contact with friends who supplied them and endorsed their use? Does Sam's background strike you as one characterized by poor parenting? Is his life characterized by low self-control? How does anomie or "strain" fit into his pattern of drug use? What about his bonds to conventional others? His stake in conformity? Can theories explain individual cases—or are they generalizations that apply only to patterns?



P A R T

IV

DRUGS AND THEIR USE

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What's the difference between alcohol and the substances we usually refer to as drugs—for example, LSD, heroin, and cocaine? We've

already seen that alcohol is a depressant, LSD a hallucinogen, heroin a narcotic, and cocaine a stimulant—but is alcohol a *drug* in the same sense that the illicit substances are? Does alcohol belong in their company? Isn't alcohol a beverage whose consumption typically results in pleasant, benign effects and satisfying congeniality? The answer to these questions centers on the *psychoactive* properties of alcoholic beverages.

If we drink enough alcohol, we become drunk, high, or intoxicated. Alcohol influences the workings of our minds; and, because alcohol is psychoactive, users take it mainly for the effects it generates: It is a *recreational* drug. And it is a drug for a third reason as well: Alcohol can induce an “addiction” or *dependence*; heavy, long-term drinkers engage in extraordinary measures to continue using in spite of the day-to-day or potential harm they experience, or know they will experience, by using. Abusive alcohol consumption is our second most common addiction or dependency, the first being the smoking habit: There are roughly ten million alcoholics in the United States who continue to drink heavily in spite of the social cost to themselves and others. The toll alcoholism takes on drinkers and the people in their lives is enormous, but they seem powerless to stop it. In a nutshell, in the pharmacological sense, then, *all drinkers are drug users*. Physically—in the essentialistic sense—alcohol is a drug, no different from LSD, heroin, or cocaine.

Referring to its psychoactive properties, the question “Is alcohol a drug?” can be answered in a straightforward fashion. Yes, in the essentialistic or objectivistic sense, alcohol is a drug: It influences how the mind works. When introduced into the body, it produces physiological and psychopharmacological changes that are not substantially different from the category of substances we refer to as drugs. And it causes a dependency in a substantial percentage of users.

But taking the framework spelled out in the first chapter seriously, it is also true that in the subjectivistic or *constructionist* sense, *no*, alcohol is not a drug: Most of the public does not *regard* it as a drug, does not treat or interact with most drinkers in the same way as users of the illegal drugs—as deviants and outsiders. The use of these substances is not as stigmatized as is crack and heroin, and legally, adults cannot be arrested for possessing or purchasing them. This dual nature of alcohol, its consumption, and its users, means that there will be both similarities and differences between the use of alcohol and the consumption of “street” drugs, those substances that are universally regarded as drugs.

The behavioral worlds of these two types of substances, legal and illegal, do not exist in separate and distinct realms. An interesting clue to the parallel between the consumption of alcohol and the use of the illegal drugs is that a strong statistical relationship prevails between them. For instance, youths who drink heavily (five or more drinks on five or more occasions in the past month) are *sixteen times* as likely as non-drinkers to be current illicit drug users—4.3 versus 68.5 percent (Grundbaum et al., 2004). The same relationship prevails for all drugs and all levels of alcohol consumption. The recreational use of psychoactive substances reflects, *in degrees*, a drug-taking *lifestyle*. People who drink, especially heavily, are more likely to use controlled substances, and, to turn the equation around, people who use controlled substances overwhelmingly drink alcohol. The impulse to alter one's consciousness with *one* substance—whether legal or illegal—is strongly related to altering it with *other* substances, whether these substances are legal or illegal. It is true that the majority of drinkers do not use illicit

drugs, but they are statistically *more likely* to use them than alcohol abstainers are—and the more that they drink, the greater the likelihood—and that goes for all illegal drugs, from marijuana to heroin, crack cocaine, and methamphetamine.

ALCOHOL: AN INTRODUCTION

Fermentation is one of the most ancient of human discoveries, dating to the Stone Age; As paleontology tells us, humans have been ingesting beverages containing alcohol for more than 10,000 years and today it is, coffee excepted, the most widely used drug in existence—ubiquitous, almost omnipresent the world over. Alcohol emerges spontaneously from the fermented sugar in overripe fruit; the starch in grains and other food substances also readily converts to sugar and from there to alcohol. Because this process is so simple and basic, the discovery of alcohol by humans was bound to be early. Alcohol consumption, in all probability, began when a prehistoric human consumed fermented fruit and experienced its effect. Alcohol can induce pleasure, euphoria, intoxication, a sense of well-being, a state of relaxation, a relief from tension, a feeling of good will toward others, the alleviation of pain, drowsiness, and sleep. As a result, it is an almost universally acceptable beverage. Untoward effects tend to occur at higher doses, but nearly everywhere, such levels of use tend to be the exception rather than the rule. Consequently, as paleontologists and anthropologists tell us, alcohol's use tends to be both ancient and nearly universal.

Societies differ vastly in their average level of alcohol consumption. Every society that has some acquaintance with alcohol has devised and institutionalized rules for the proper and improper consumption of alcohol. These vary systematically from society to society and from one social group or category to another. Although alcohol does have objective or biochemical effects, both short-term and over the long run, most of them can be influenced, mitigated, or drastically altered by the belief in and observance of cultural norms. The extent to which intoxication leads to troublesome, harmful, or deviant behavior varies considerably from society to society. In most societies, alcohol use poses no problem to the society according to almost anyone's definition; the drug is consumed in moderation and is associated with little or no untoward behavior. In other places, however, alcohol use has been catastrophic by any conceivable standard. The overall impact of alcohol, then, is not determined solely by the biochemical effects of alcohol, but by its relationship to the characteristics of the people drinking it. This is not to say that alcohol can have *any* effect the members of a society expect it to have. There is a great deal of latitude in alcohol's effects, but it lies within certain boundaries.

Acute Effects of Alcohol

Chemically, alcohol is known as ethyl alcohol or *ethanol*; it is one of dozens of substances chemists call "alcohol." (Methyl alcohol, a poison, is another.) Alcohol, says one expert, is "the only addictive drug that dangerously alters behavior yet at the same time is freely and legally available without a prescription" (Goldstein, 2001, p. 137). When it enters the body, alcohol translates into what pharmacologists call *blood-alcohol concentration (BAC)*, or *blood-alcohol level (BAL)*. This corresponds fairly closely to the percent of the volume of one's blood that is made up of alcohol upon ingestion. A given

BAC or BAL level has been described as “bathing the brain” in a given alcohol concentration (p. 137). Alcohol is a depressant, much like the sedatives such as the barbiturates. Alcohol depresses, slows down, retards, or obtunds many functions and activities of organs of the body, especially the central nervous system. Organs become more sluggish, slower to respond to stimuli. If the dose is too high, the body’s organs will shut down altogether, and death will ensue. Alcohol also disorganizes and impairs the ability of the brain to process and use information and hence impairs many perceptual, cognitive, and motor skills needed for coordination and decision making.

Ethyl alcohol (ethanol) is 100 percent “absolute” alcohol. Beer contains 4–5 percent alcohol; wine is 13–14 percent alcohol. “Fortified” wine, in which alcohol or brandy is added to wine, is legally set at 20 percent; for instance, sherry is a fortified wine to which brandy has been added. Wine “coolers” contain roughly the same percentage of alcohol as beer. The process of distillation (boiling, condensing, and recovering the more volatile, alcohol-potent vapor from the original fluid and adding an appropriate quantity of water) produces drinks such as Scotch, vodka, gin, and tequila that are 40–50 percent alcohol, or 80–100 “proof.”

Consequently, to consume 1 ounce of alcohol, one drinks two 12-ounce cans of beer, *or* one 8-ounce glass of wine, *or* a mixed drink containing about 2 ounces of Scotch or gin. According to *the rule of equivalency*—which states that the effects of alcohol are determined principally by the volume of absolute alcohol that is drunk rather than the type of drink itself—these drinks would be roughly equal in strength and would have approximately the same effects on one’s body. The rule of equivalency denies that different drinks, independent of their alcohol content, have different levels of potency. Drinking lore has it that different *kinds* of drinks—say, wine versus Scotch, or gin versus beer, or tequila versus vodka—have different capacities to make drinkers drunk. This is false; aside from mitigating factors (which I discuss below), how much “pure” or “absolute” alcohol one has consumed is the *only* factor that matters in determining level of intoxication. Drinking lore also claims that mixing different drinks produces greater intoxication than drinking the same quantity of absolute alcohol by sticking to the same drink; again, pharmacologists insist that this is false. Alcohol is alcohol is alcohol. Nothing else except the quantity of alcohol, consumed within the same period of time, makes a difference.

The effects of alcohol are, however, influenced or mitigated by many factors in addition to the total volume of alcohol in the drinker’s body. Some of these factors are directly physiological. Because alcohol registers its impact via the bloodstream, the size of the drinker influences BAC. Other factors that mitigate the effects of alcohol include the presence of food and water in the stomach, the speed with which one drinks, and sex or gender. Women seem to be more sensitive to the effects of alcohol, and manifest effects at lower doses, or greater effects at the same dosage, than is true of men. In addition, as with practically all drugs, alcohol builds up a pharmacological tolerance: It takes more alcohol to achieve a given effect in a heavy or regular drinker than in an abstainer or infrequent drinker.

There is a measurable relationship between BAC and behavior. The effects of alcohol are, to a large degree, dose related: The more the drinker consumes, the greater the effect. But level of alcohol intoxication does not automatically translate into behavior under the influence. Two people with the same measurable level of intoxication may exhibit very

different behaviors; people in the same society drinking in two different locales may reach the same level of intoxication but behave substantially differently; people in different societies may react differently to the same blood-alcohol concentration. Here's where our story gets really interesting: Alcohol is a drug, with objective, measurable effects, *and* a social phenomenon the impact of which is shaped by culture, society, and social context.

One ounce of "absolute" alcohol, or roughly two mixed drinks, consumed in less than an hour will result in a BAC of roughly .05 percent in a person of average size. This produces in most people a mild euphoria, a diminution of anxiety, fear, and tension, a corresponding increase in self-confidence and, usually, what is called a release of inhibitions. Decreased fear also typically results in a greater willingness to take risks; this effect has been demonstrated in laboratory animals as well as humans. For most people, alcohol at low doses is a mild sedative, an anti-anxiety agent, and a tranquilizer. This is not universally the case, however. For many people, alcohol ingestion results in paranoia, distrust, heightened anxiety, and even hostility. As I noted previously, alcohol also disorganizes and decreases the ability of the brain to process and use information, and hence, impairs most perceptual cognitive and motor skills needed for coordination and decision making. When these effects occur, they do so at moderate to high doses.

Alcohol's effects on motor performance are familiar to us all: clumsiness, an unsteady gait, an inability to stand or walk straight, and slurred speech. One's accuracy and consistency in performing mechanical activities decline dramatically as BAC increases. And the more complex, the more abstract, and the more unfamiliar the task, the steeper the decline in accuracy and consistency. The most noteworthy example is the ability to drive an automobile. It is crystal clear that drinking, even moderately, deteriorates the ability to drive and contributes to highway fatalities. How intoxicated does one have to be to lose the ability to perform mechanical tasks? What does one's blood-alcohol level have to be to display a significant decline in motor coordination? How many drinks does this represent?

The answers depend on a number of factors. All drinkers experience a loss of motor skills at a certain point, and it occurs at a fairly low BAC. There is a kind of "zone" within which alcohol impairment occurs. At about the 0.03 percent BAC, after finishing one alcoholic drink, some very inexperienced and particularly susceptible individuals will display a significant decline in the ability to perform a wide range of tasks. At the 0.10 level, even the most experienced drinker will exhibit impairment in coordination; this is roughly four drinks each containing one ounce of 50 percent alcohol. However, many drivers are quite willing to get behind the wheel while intoxicated: According to the FBI's *Uniform Crime Reports*, in the United States, in 2011, the police made roughly 1.4 million arrests for drunk driving.

Alcohol Consumption Today

As we've seen, in 2010, Americans age 15 or older consumed an average of 2.26 gallons of absolute alcohol per person per year. This is a fairly "hard" or reliable statistic because it is based on sales and not simply what people say they drink. This figure is called "apparent" alcohol consumption since not every drop of the alcohol purchased is necessarily drunk during a given year. Still, the possible sources of error are small, mere blips

on the radar screen; they do not change the big picture at all. The figures on alcohol sales are very close to actual consumption levels. In any case, 2.26 gallons of absolute alcohol per year works out to a bit under an ounce of absolute alcohol per person age 15 or older per day. Some people drink more than this, some less, and some not at all. But roughly a third of all Americans are more or less total abstainers; they did not (or they say they did not) consume a single drop of alcohol during the previous year. Thus, it makes sense to tabulate the quantity of alcohol consumed specifically for drinkers and leave abstainers out of the picture altogether. On average, adult drinkers consume roughly 1.3 ounces of absolute alcohol per day. This represents slightly more than two 12-ounce bottles or cans of beer or one-and-a-half 6-ounce glasses of wine or two-and-a-half 1-ounce drinks of hard liquor (at 50% “absolute” alcohol) per day for every drinking adolescent and adult in the country.

Recorded yearly alcohol sales (a “hard” statistic) can be backed up with information on the proportion of the American population who say they drink (a “soft” statistic). Every year or so, the Gallup Poll asks a sample of Americans age 18 and older the following question: “Do you have occasion to use alcoholic beverages such as liquor, wine, or beer, or are you a total abstainer?” This question was first asked in 1939, when 58 percent defined themselves as drinkers, 42 percent as abstainers. In 1947, 63 percent said that they drank. The percentage rose steadily throughout the 1950s and 1960s, reached a peak of 71 percent in 1976, 1977, and 1978, and after some fairly small year-to-year fluctuations, plateaued between 1992 (64%) and 2011 (66%).

The NSDUH’s 2011 survey questioned respondents on their alcohol consumption in addition to their illegal drug use. This survey’s questions are a bit different from Gallup’s; they are more specific about the time periods in which the alcohol consumption took place—“ever,” “within the past year,” and “within the past month.” The figure for use in the past 30 days for 12- to 17-year-olds was 37 percent in 1979, 20 percent in 1991, 18 percent in 2001, and in 2011, 13 percent (Fishburne, Abelson, and Cisin, 1980, p. 91, NIDA 1991, p. 85; SAMHSA, 2006, 2012). Clearly, underage alcohol use has *substantially* declined over the course of the past three-and-a-half decades. For young adults age 18–25, the corresponding last-month figures declined from 76 percent in 1979 to 61 percent in 2011. For everyone age 12 and older, as we’ve seen, about half (52%) the population say they’ve drunk an alcoholic beverage in the previous 30 days.

Alcohol Abuse and Risky, Deviant Behaviors

Thousands of studies have investigated the relationship between alcohol consumption and untoward, risky, criminal, violent, and deviant behavior. Different researchers or research teams have measured different aspects of these phenomena and have used somewhat different definitions of their key concepts. How does the researcher define alcohol “abuse”? And what is untoward, risky, criminal, violent, and deviant behavior? Most researchers regard *binge* and/or *heavy* drinking as a form of alcohol “abuse.” One common operationalization of “binge” drinking is the consumption of five or more alcoholic drinks three times or more during the prior month (some researchers set this figure at two; others, four; some track such drinking over a month: others, over two weeks; and so on), and “heavy” drinking (one way of defining this is consuming more than three drinks per day during the past month; another is five or more episodes of five or more

drinks on a single occasion). And researchers look upon “risky, deviant behavior” as that which both the sociologist sees as deviant and the physician regards as harmful: driving under the influence; smoking; engaging in criminal and violent behavior; putting oneself into a situation in which becoming a *victim* of criminal and violent behavior is likely; engaging in risky sexual behavior (multiple partners, unprotected sex, sex with strangers); using and abusing illicit drugs; and suicide.

Empirically, drinkers, taken as a category, are more likely to engage in risky, criminal, and deviant behavior than nondrinkers, and the more they drink, the greater this tendency is. Further, people who are intoxicated are more likely to engage in such behavior than are persons who are not intoxicated, and the more intoxicated they are, the greater this tendency is. One study found that the *sale* of alcohol in an area was strongly correlated with the likelihood that local residents would be hospitalized for assault. If you live near a place that sells a lot of alcohol, you’re more likely to be seriously injured by a heavy drinker than if you live near a place that sells very little alcohol (Ray et al., 2008). In this case, the victim isn’t the deviant, the victimizer is.

The relationship between alcohol abuse and risky, deviant behavior is strongly *contingent* on drinking locales or contexts, or the social and physical circumstances or situations within which drinking takes place, such as a bar, a restaurant, a beach, a park, the drinker’s home, the home of friends, a moving vehicle, or a party, or among intimates, relatives, or strangers. For instance, aggressive and other problematic behaviors, such as arguments, fights, and drunk driving, are more likely to be associated with drinking in a bar than with drinking at home (Nyaronga, Greenfield, and McDaniel, 2009). And *where* people drink as well as *what they are doing* determines how, and how seriously, they get injured. Compared with other locales, a relatively low proportion of people drink on the job; hence, again relatively speaking, the few who do rarely show up at an emergency room (ER) as a result of an alcohol-impaired work injury. On the other hand, again, a very high proportion of people in bars drink, and hence, by that factor alone, a great many people show up in ERs as a result of having been injured in those locales because of alcohol impairment. In fact, in a summary of data from dozens of studies gathered in 16 countries, a team of researchers (Macdonald et al., 2006) found that injuries in bars were significantly more likely to involve alcohol impairment than in any other setting. Of all injuries that took place in a bar in which the party injured was taken to an ER, nearly 35 percent entailed alcohol impairment. In contrast, this was true of only 2 percent where the injured person was in a school or workplace, 5 percent in a park or at a beach, just under 10 percent in a house, and just under 15 percent in a moving vehicle (Macdonald et al., 2006).

Broadening our conception of context or locale and addressing violence specifically, we could include the society or country in which drinking takes place. In some countries, such as France, Italy, Portugal, and Spain, a high proportion of regular drinkers consume alcohol, usually in the form of wine, in a convivial setting with family and other intimates copresent, such as dinner. Such societies tend to have low rates of violence, especially criminal homicide, following drinking, and the relationship between alcohol consumption and violence is weak. In other countries, such as Russia and the former Soviet Union as well as the other countries of Eastern Europe, a high proportion of drinkers are single men who consume alcohol, mainly in the form of distilled spirits and mainly for the purpose of getting drunk, in the presence of other single men, often in a public place,

such as a bar, with few females or family members to restrain their aggressive, argumentative behavior. In such societies, there is a closer relationship between heavy drinking and violent behavior. Hence, it is not *only* heavy alcohol consumption that counts in this relationship, but the social, cultural, and local contexts of drinking behavior, as well as the specific alcoholic substance (wine versus distilled spirits) that is consumed.

Here, the crucial question is *why*. What *causes* higher (and non-normative) levels of alcohol to co-vary with risky, deviant behavior? Hypotheses differ somewhat and, hence, the mechanism by which this relationship occurs differs according to the hypothesis. Three possible explanations of this relationship come to mind (Young, Sweeting, and West, 2008, pp. 204–205).

First, we have the *disinhibition* hypothesis: *Being under the influence* is the key mechanism causing this relationship. Alcohol *causes* risky, deviant behavior. Because one of alcohol's effects is a "release" from the inhibition that result from normative constraints on dangerous acts, the drinker is more likely to engage in those acts under the influence. Sober, we stop ourselves from engaging in these behaviors; intoxicated, we do engage in them, because of this "release of inhibitions" effect. A variation on the disinhibition hypothesis is the "alcohol-myopia" model: Alcohol disorganizes the brain's capacity to pay attention and process information and, hence, "do the right thing" (George and Norris, 1991).

Second, there's the *susceptibility* hypothesis: Alcohol abuse and engaging in risky, deviant behavior are related because they are *effects of a common cause*. The abusive drinker is the *kind of person* who drinks, and drinks heavily; that is the key explanatory factor. Whether the drinker is under the influence at the moment the act is committed is secondary; what counts is that he or she is the *kind of person* who is more likely to engage in risky, deviant behavior. The person who drinks heavily is *also* the sort of antisocial person who engages in behavior that harms others or him- or herself. These are people who are unable to regulate or control their own behavior: impulsive, sensation seeking, aggressive, and highly risk tolerant. Neither factor causes the other; they are both caused by the antisocial proclivity of the drinker.

Third, there's the *reciprocal* hypothesis: Alcohol abuse and risky behavior feed back into and fuel each other. True, a certain type of individual seeks out certain types of risky behaviors; but getting intoxicated also disrupts the drinker's judgment and contributes to both further heavy and binge drinking *and* impulsive, risky, deviant behavior (Young, Sweeting, and West, 2008).

Which of these three hypotheses fits the facts most faithfully? Are they mutually exclusive? If one is right, are the others wrong? Or do we need more information?

Alcohol Consumption: Death on the Highway

The fact that alcohol causes discoordination leads us to emphasize the subject of one of this drug's more harmful consequences: its role in causing accidents, especially on the highway. Driving while intoxicated is a dangerous, illegal act. And the likelihood of fatalities increases in proportion to the blood-alcohol concentration of the driver: The greater the BAC, the greater the chance that the driver will get into an accident that kills someone. For young, and particularly male, drivers, this likelihood begins to increase at an extremely low level of BAC. Among 16- to 20-year-old male drivers, a

BAC level of 0.02 *doubles* the likelihood of a fatal accident. Remember, that's about two-thirds of what's considered one drink. In the 0.08 to 0.10 range, 35-year-old and older drivers increase their likelihood of having a fatal accident by 11.4 times; for 16- to 20-year-olds, the increase is 51.9 times (Zador, Krawchuk, and Voas, 2000). Zador (1991) estimates that, compared with someone who is sober, a driver with a BAC between .02 and .04 has a 1.4 times increased chance of a fatal single-vehicle crash. This risk increases to 11 times for drivers with a BAC between .05 and .09, 48 times at the .10 to .14 level, and 385 times for drivers with a BAC over .15. The risk increases even more sharply among younger drivers. For instance, the increased risk of being killed in a single-vehicle crash at the .15 BAC level for 16- to 20-year-old males is over 15,000 times (Hingson and Winter, 2003, p. 66). Compton and his colleagues (2002) calculate a "relative risk estimate" in the form of a curve that rises slowly at first, then very steeply, and then less steeply at the top of a very high curve. In earlier decades, before such precise calculations had been made, most states defined a 0.15 BAC as drunk driving; the Compton research team estimated that, controlling for demographic factors for age, gender, and socioeconomic status, at the 0.15 BAC, drivers are 22 times more likely to get into a fatal car crash. At the 0.20 level, this likelihood was estimated to be 82 times, and at the 0.25 level, 154 times. The precise risk ratios differ and the age at which a given BAC causes a given level of risk also varies, but the lesson is clear: Compared with being sober, driving drunk *hugely* increases the likelihood of a fatal accident.

In the United States, over the long run, alcohol-related automobile fatalities have substantially declined. Each year, the National Highway Traffic Safety Administration compiles, tabulates, and publishes data on motor vehicle accidents. In 1982, 60 percent of all automobile fatalities involved one or more drivers who had a BAC of .08 or higher—a total of 26,173 deaths. The figure continued to decline into the close of the first decade of the twenty-first century; in 2011, these figures stood at 31 percent and 10,228—a decline of nearly half. (More than twice as many miles are driven on America's roadways today as compared with two-and-a-half decades ago; hence, the number of fatal alcohol-related accidents per 100 million miles has consistently declined over time.) The overall decline is partly due to the fact that, as we've seen, U.S. alcohol consumption has been declining since its twentieth-century high in 1980 (though it began to increase slightly early in this century), and also because today, law enforcement and public awareness of drunk driving are significantly less tolerant and more punitive. Despite the long-term decline, alcohol's effects remain distinctly disordinating, and at the legal level of driving while impaired (0.08% in two-thirds of the states), drivers are a danger to themselves and others. However, between 1982 and 2007, the *total* number of highway fatalities in the United States was almost completely flat—from 43,945 to 41,059—and it did not decline much until 2008, with 37,261 highway deaths; in 2011, it had dipped to 32,885—a *60 percent* decrease in three decades. (See Table 8-1.)

All of this is true—but something else is true as well. Over the past quarter century, a great many changes have taken place on the American highway: Roads are safer, cars are safer (more "crashworthy"), passengers are more likely to wear seat belts, motorists drive more slowly and more safely. In addition, fewer Americans are obtaining licenses and driving during their teenage years. Still, what's important for our purposes is that

TABLE 8-1 Drunk Driving Statistics, United States, 1982–2011, Selected Years

Year	Total Number of Fatalities	Alcohol-Related Fatalities	(BAC 0.8 or higher) Percent
1982	43,945	26,173	60
1985	43,825	23,167	53
1990	44,599	22,587	51
1995	41,817	17,732	42
2000	41,945	17,380	41
2005	43,443	16,885	39
2011	32,885	10,228	31

Source: National Highway Traffic Safety Administration, “Alcohol Impaired Driving Statistics” for 2010 and relevant years; for 2011, “Prevalence of High BAC in Alcohol-Impaired-Driving Fatal Crashes,” *Traffic Safety Facts*, August 2012.

alcohol consumption is down, and, specifically, drivers are less likely to drink and get behind the wheel of a car. Thus, for a variety of reasons, traffic fatalities have substantially declined. When automobile fatalities are expressed per 100 million miles driven, the decrease is impressive: In 1994, this rate was 1.73, in 2003, it was 1.48, and in 2011, 1.11—the lowest ever recorded in the history of the automobile. The years of potential life lost (YPLL) as a result of alcohol-related highway fatalities has declined by almost half. Alcohol-impaired driving fatalities declined 53 percent from 1982 to 2011; alcohol-impaired driving fatalities per 100,000 in the American population have declined 65 percent since 1982. The decline among youths under the age of 21 has been especially precipitous: In 1982, 5,215 alcohol-impaired youths died in fatal car crashes, a rate of 6.9 per 100,000; in 2011, 1,240 died, at a rate of 2.0 per 100,000—a decline of over 75 percent; when population increases are factored into the equation, the decline works out to 80 percent. (Century Council, “State of Drunk Driving Fatalities in America,” 2013. In the interest of full disclosure, the Century Council describes itself and its mission as “Distillers Fighting Drunk Driving & Underage Drinking”; it is supported by the distilled spirits industry, whose representatives seek sensible drinking as good public relations and as compatible with maximum profits.) Tens of thousands of adults and teens today are alive because over the past three decades, the norms of drinking vis-à-vis driving have become more moderate and abstemious, law enforcement is less tolerant and more punitive, and designers of cars and roads are more safety conscious. In few areas of public health has saving human life been more successful.

Nonetheless, alcohol remains related to death on the highway (see Table 8-2). Today, about 3 out of 10 fatal car crashes are alcohol related. Moreover, the *more serious* the crash, the greater the likelihood that alcohol played a role in it. According to the National Highway Safety Administration, in 4 out of 10 alcohol-involved driving fatalities, the driver tested with a BAC of 0.19 or higher, but only for 4–5 percent of such fatalities, the BAC was 0.08 or under. The degree of intoxication of the driver *substantially* increases the odds of having a serious, and especially a fatal, accident. Drinking and driving is itself a risky, deviant, dangerous—and illegal—act. Driving while intoxicated increases the driver’s likelihood of taking chances not usually taken when sober. And it results in a substantially higher likelihood of death on the highway.

TABLE 8-2 Alcohol-Related Traffic Fatalities per 100 Million Vehicle Miles Traveled United States, 1994–2010

1994	1.73
2000	1.53
2006	1.36
2011	1.11
Percent Change	–0.36

Source: NHTSA, NCSA Data Resource Website, <http://www-fars.nhtsa.dot.gov/Main/index.aspx>

Alcohol and Violence

Motor vehicle accidents are not the only source of alcohol-related death. Alcohol consumption is strongly and causally related to violent crime; both offenders and victims are highly likely to have been drinking before incidents of violence. Because wine, beer, and liquor are such fixtures of mainstream American society and culture, the assertion that alcohol is related to violence is likely to sound strange. Such a statement might seem equivalent to saying that consuming tea, chocolate, and Pepperidge Farm cookies is related to violence. Common sense rejects the idea that alcohol is related to committing violent behavior. What could possibly be wrong with drinking a glass of wine with dinner, a beer while watching a ball game, or a sherry nightcap before retiring? Most Americans drink and the vast majority of those who do so experience no untoward consequences whatsoever.

What criminologists and drug and alcohol researchers mean when they say that alcohol is “related” to violence is *not* that alcohol—and alcohol alone—arouses the impulse to inflict harm upon others. They do not mean that most episodes of drinking lead to violence. They do not mean that most people who drink have committed one or more criminally violent acts during the past week, month, or year. Of the many millions of daily instances of alcohol consumption, very few have anything to do with violence. Statistically speaking, taking all episodes of drinking as a universe of behavior, violence *rarely* accompanies alcohol consumption.

Criminologists and epidemiologists mean two things when they say that alcohol and violence are related. (1) Drinkers have higher *rates* of criminal violence than nondrinkers, and (2) the more that someone drinks, the greater the likelihood that he or she will inflict violence on another person. In addition, alcohol is related to being a *victim* of violence: Drinkers are more likely to be victimized by violence than are nondrinkers, and the more one drinks, the greater that likelihood is. This relationship is especially strong if one person is a female and her companion is a male.

These statements are statistical, not absolute; again, they refer to *likelihoods*—not certain outcomes. They are based on a comparison of the rates of violence of drinkers versus nondrinkers, heavy versus light drinkers, and people who are under the influence versus those who are sober. Granted that violence is a statistically relatively rare event, considering what most people do when going on their rounds of everyday life, the fact that it is more common among drinkers in comparison with nondrinkers, and more common among heavy than light drinkers, and more common among the intoxicated than

the sober, means that the statement “Alcohol is related to criminal violence” is a 100 percent true statement. It is a *generalization*, not a description of the behavior of every person on Earth. While most of the time alcohol is consumed, violence does not take place, it is also true that, with respect to the total number of drinking episodes, alcohol consumption is a frequent accompaniment of violence when it does take place. *Most* cases of criminal violence are accompanied by the consumption of alcohol, but since alcohol consumption is a far more common event than acts of criminal violence, in the typical episode of drinking, no violence occurs.

The epidemiologist—the specialist who studies the social and geographical distribution of diseases, disorders, or harmful behaviors—looks at data across societies, time periods, and individuals. Hence, we have three types of information that we might use to determine the relationship between alcohol and violence: a country-by-country international comparison; a year-by-year comparison in one country; and an individual-by-individual comparison. Let’s look at individual differences in drinking as they relate to violent behavior.

In 1998, the U.S. Department of Justice released a report surveying its own data on crime; its publication, *Alcohol and Crime*, established that in an extraordinarily high proportion of criminal offenses, the perpetrator had been drinking prior to the offense. In about a third of all violent offenses committed yearly in the United States (35%), the victim reported that the offender had been drinking prior to the offense. Two-thirds of all victims who suffered a violent act at the hands of an intimate (current or former spouse, boyfriend, or girlfriend) reported that alcohol had been a factor in the violence; the figure was three-quarters for spouse violent victimization. For rape and sexual assault, roughly four offenders in 10 were perceived by victims to have been drinking prior to the offense; for victims of robbery, the figure was less than half of that (16%); and for aggravated or serious assault, the figure was three in 10. Of the 5 million convicted offenders on parole or probation, nearly two million (36%) were drinking at the time of their offenses. Therefore, no, *by itself*, alcohol intoxication does not cause crime. The type of crime in which intoxicated offenders engage varies enormously from crime to crime. For violent offenses, the connection is strong; for crimes principally involving an economic motive, it is comparatively weak. The one bright spot in the panoply of alcohol-crime connections is in DUI offenses: Although this has leveled off in the past decade or so in comparison with the 1990s, over time, the offense of driving under the influence is, as we can already guess, becoming less and less common.

In *Alcohol and Health*, the review of the worldwide research literature conducted by the U.S. Department of Health and Human Services (the last of which, the tenth, was published in 2000), consistently, an average of 50 to 60 percent of the perpetrators of criminal homicide were under the influence of alcohol when they murdered their victims. Alcohol is implicated in the majority of criminal killings, and criminologists regard this fact as causally significant.

As I said, an important aspect of the alcohol-crime picture is the huge contribution that *being under the influence* makes to being victimized by criminal acts, especially violence. The proportion of homicide victims who had been intoxicated at the time of their demise is usually very similar to the proportion of offenders under the influence. Intoxication interferes with judgment and self-protection, increases the likelihood of risky behavior, and places the weaker party in a position of profound vulnerability—hence, its

causal connection with violent victimization. Also interesting is the fact that the role of alcohol varies according to the sex of the perpetrator and the victim. In one study, alcohol was present in 62 percent of cases involving a male assailant and a male victim, in 53 percent of those involving a male assailant and a female victim, but in only 27 percent of all cases involving any female assailant (Pernanen, 1991). This study indicates that norms play a role in the contexts within which alcohol-related violence occurs. The role of alcohol in episodes of violence generally and homicide specifically is one of the most robust, well-established, and empirically grounded generalizations in the entire criminological literature. Any challenge to it would be a fool's errand.

Once again, once we've established the empirical regularity, our first question becomes *why*. What *causes* higher rates of violence among drinkers versus nondrinkers, and higher rates among heavy versus lighter drinkers? As we know, establishing a correlation or statistical relationship between two variables is one thing; determining a causal relationship is quite another.

For centuries, folk wisdom held that alcohol caused violence because drinking "releases inhibitions." The commonsensical answer has traditionally been that the inhibitions that normally prevent most of us from striking out at others are "released." It seemed a reasonable explanation for such a long time that few questioned its validity. The proposition that alcohol more or less automatically released inhibitions and caused violent behavior in the violently inclined is referred to, as we saw, as the *disinhibition* or pharmacological theory. This theory assumes that it is the effects of alcohol, and pretty much that factor alone, that causes what drinkers do under the influence—violence included. Describing the effects of alcohol, one expert wrote: "Progressively the centers of basic emotional control are depressed, and the inhibitory functions of the centers are lost with an alteration in the conduct of the individual moving towards [being] 'miserable, mean, nasty and brutish'" (Paul, 1975, p. 16).

A different perspective is presented by anthropologists Craig MacAndrew and Robert Edgerton, in their book, *Drunken Comportment*, whose central thesis directly challenges the "release of inhibitions" claim (1969). MacAndrew and Edgerton emphasize the factor of cultural context. Alcohol does not act on the human animal in a standardized fashion, they argue. Instead, alcohol's effects are influenced or mediated by cultural norms that dictate that specific forms of behavior are appropriate under the influence, while other forms are defined as completely unacceptable. Drinkers are not simply under the influence of alcohol; instead, the effects of alcohol are under the influence of the culture which drinkers grow up with and learn, and in which they live according to the dictates they've learned. Alcohol alone cannot account for the variation in alcohol-related behavior, since alcohol is the same everywhere it is consumed. In short, "drunken comportment"—behavior under the influence—is as much a cultural as a pharmacological product. Drinking does not simply release inhibitions and stimulate the drinker's assaultive and homicidal tendencies. Instead, the alcohol-violence link is culturally determined and usually takes place within circumscribed, normatively governed limits.

This perspective is referred to as the "*cognitive guidedness approach*." But does the approach go too far? Is intoxication irrelevant to alcohol-related violent behavior? So marginal are alcohol's effects to this approach that one researcher was led to comment with reference to two anthropological studies of barroom behavior: "As far as one can judge from their description, the patrons might as well have been drinking orange juice." In such

studies, said this researcher, “the role of the physiological and psychological effects of alcohol is downplayed almost to the vanishing point” (Pernanen, 1991, pp. 18, 211).

Which perspective is correct—the pharmacological (disinhibition) or the cultural guidedness perspective? Is it the effects of the alcohol or the norms of the society that create the link between drinking and engaging in violent behavior? Which of these two “master frames” (Pernanen, 1991, p. 215) offers the best explanation of why the heavy consumption of alcohol so often leads to assault, rape, and criminal homicide? The best explanation borrows a bit from both frames.

It is clear that the norms do not provide a ready justification for the most seriously untoward behavior that takes place under the influence of alcohol *that would not happen when the actors are sober*. Pernanen (1991, p. 211) cites the case of drunken passengers of jet planes who attempt to enter the cockpit to convince the pilot that they should fly the plane. Examples could be cited endlessly. Such extremely dangerous behavior is fairly rare under the influence—but it is also vastly rarer sober. “Why is alcohol used in this way and not coffee, tea, or milk?” Pernanen asks (p. 212). The obvious answer is that alcohol has certain “natural” effects that these other substances do not.

Arguing that alcohol has natural or pharmacological effects does not deny the fact that, in being socialized into the rules and norms of drinking, the drinker learns culturally approved behavior. In learning the appropriate norms of drinking, drinkers also learn that drinking puts them in a position where they are able to do things that they would not ordinarily do. Part of learning the drinking process involves learning *what the effects of alcohol are*—which is itself largely a product of the natural, pharmacological effects of this drug (p. 213).

For instance, the social setting in which drinking takes place influences how much one drinks—the amount consumed in one sitting, the speed of drinking, and the length of drinking occasions (Pernanen, 1991, p. 193). Once the drinking begins, socially occasioned though it is, the effects of the alcohol begin kicking in. Yes, the pharmacology of alcohol *does* disinhibit behavior, and yes, this disinhibition sometimes *does* result in violent behavior. But that violence has limits; it is selective as to time, place, and target.

And yes, there are other “causal agents” in violent behavior aside from alcohol (Parker, 1995, p. 28). But given the fact that violence is such a statistically rare event, some situations involving heavy alcohol consumption are much more likely to result in violence than other situations, identical except for the presence of alcohol. Acknowledging that alcohol is “selective” in producing disinhibition, we are nonetheless forced to accept the fact that alcohol disinhibits, that this disinhibition is a product of the drug’s pharmacological effects, and that one consequence of disinhibition is the hugely higher incidence of violent behavior. Does alcohol cause violence? Stripped of qualifications and reservations, most contemporary researchers would answer this question with an affirmative answer. In Goldstein’s vocabulary (1985), the alcohol-violence link seems—in large part—to be *psychopharmacological* in origin.

Alcohol Consumption and Sexual Victimization

Is examining the relationship between alcohol abuse and sexual victimization an example of “blaming the victim” (Ryan, 1976)? *All* researchers of this topic, either directly or by implication, distinguish “blame” from “cause” (Felson, 1991). More specifically, they

refer to a “cause” as a *factor*, further removing the victim’s drinking from “blame” in the dynamics of alcohol-related victimization. In the area of alcohol-related harm, more research has been conducted on *sexual* victimization than any other type. A woman who is intoxicated is substantially and significantly more likely to be sexually victimized than a woman who is sober. Is this relationship spurious—an artifact of the situation? Are women more likely to drink on *dates* and, hence, more likely to be in situations in which they are confronted by men who may force them to have sex? Are dates who offer women drinks more likely to be sexually aggressive than men who do not? Are men who offer women a drink on a date more likely to *perceive* women who accept drinks as sexual victims than they would women who refused drinks? Do the physiological effects of alcohol render the intoxicated woman more helpless and vulnerable to victimization than a woman would be if sober? Many causal explanations present themselves to account for this relationship. Which one is—or which ones are—valid?

Maria Testa (2004) surveyed four bodies of research on the role of substance use, alcohol included, when men commit violence against women: research on nonsexual physical violence perpetration; sexual violence perpetration; nonsexual violence victimization; and sexual violence victimization. Men under the influence are more likely to commit violence, including sexual violence, against women than men who are sober. The evidence supporting the relationship between substance use and a woman’s experience of sexual victimization is substantially stronger. This is especially the case at the “proximal” or *event* level—in the immediate context of the victimization. Sexually aggressive dates are more likely to include alcohol (and drugs) in their dating agenda and attempt to inflict sexual violence on their dates than is true of nonaggressive dates (Testa, 2004, p. 1497). Testa concludes that women who have consumed alcohol “show [more] impairment in their ability to recognize and respond to sexually aggressive risk” than women who are sober (2004, p. 1497). While she qualifies her literature summary by stating that the substance use–violence relationship is not universal for all people, all circumstances, or all measures of use, the pattern is strong enough to merit the generalization: Alcohol (and drug) intoxication increases the likelihood that women will be sexually victimized by men.

Muehlenhard and Linton (1987) report that, when a college woman described her alcohol consumption on a date as “heavy,” she was four times likelier to experience sexual aggression from the male than if it was “light” or she consumed none at all. About 15 percent of the women respondents in this survey said they had engaged in “unwanted sexual intercourse” on dates (p. 186). Along with other factors, alcohol is strongly related to, and seems to facilitate, sexual aggression and tacit victimization in a college dating situation. In another study (Parks and Fals-Stewart, 2004), over a six-week period, college women were nine times more likely to experience sexual aggression on days when they were drinking heavily and three times more likely when it was lighter, than when they were not drinking at all. These could be days specifically when they were out on a date and, hence, vulnerable to men’s aggressive sexual advances. As the authors say, the “temporal association” between college women’s alcohol consumption hugely increases their risk for sexual victimization (p. 625). Finally, in another study (Ullman, Karabatsos, and Koss, 1999), drinking by victims (and offenders as well) was associated with riskier, unplanned situations in which the victims did not know their offenders well prior to the assault. In addition, victim (and attacker) drinking was associated with more severe levels

of sexual victimization (coercion, force, hitting, slapping, and choking), though if she was drunk, her resistance was more easily overcome than if she was sober. The study suggests that “alcohol use plays both direct and indirect roles in the outcomes of sexual abuse,” including completed rape (p. 603).

Again, researchers do not “blame” the victim when they document that intoxication makes sexual victimization more likely. Victimizers, exploiters, and brutalizers are more likely to seek out vulnerable targets, and drinking contributes to their victimizers’ perception that a woman is more vulnerable to sexual victimization, which in turn increases the likelihood of resulting in her actual sexual victimization. Here, women are unwillingly coerced into victimization partly as a result of their excessive use of alcohol.

The tendency of women to be victimized while intoxicated frequently leads to another victimization, some critics say. In a study using mock rape trials (Finch and Munro, 2007), juries regard complainants as *more* responsible than their sober attackers—a true case of “blaming the victim”—while drunk attackers are held to be *less* responsible than the sober defendants. In effect, a woman who is drunk when she is raped is regarded as guiltier than a sober victim, but a drunk rapist is seen as less guilty than a sober rapist.

The social construction of the intoxicated woman’s vulnerability is twofold: First, there is the men’s construction of intoxicated women’s vulnerability as well as their belief that taking advantage of such women is permissible and nonculpable. And second, there is society’s after-the-fact interpretation or construction of the meaning of such assaults. Objectively, intoxication lowers the woman’s “awareness of risky situations and impairs the ability to resist assault” (p. 592). The woman’s intoxication in sexual-consent scenarios often “influences the way in which observers assign responsibility to the parties involved” (p. 592). “When the female is intoxicated, audiences regard her drunkenness as her responsibility. But when the male perpetrator is intoxicated, his drunkenness is a partial exoneration for his crimes” (Stormo, Lang, and Strizke, 1997).

Audiences regard alcohol intoxication “as a culturally sanctioned masculine activity” (Finch and Munro, 2007, p. 593), whereas when the female drinks too much, audiences regard her as deviating from gender-role norms. Hence, in a rape case, observers “tend to hold a voluntarily intoxicated complainant more responsible than her sober counterpart” (p. 594). She “has exhibited a reckless disregard for her own safety by sending out a message of sexual interest through her intoxication and by placing herself in a position in which she is vulnerable to the inevitable sexual aggression of an intoxicated male companion” (pp. 594–595). These stereotypes tend to govern the way that juries or potential juries think about the culpability of a rape defendant. The members of one mock jury assigned more responsibility to the victim than they did to her intoxicated attacker when the victim was drunk because she accepted the drinks. Even if the defendant spiked her drinks with alcohol, they were unwilling to charge him with rape. It was only when his motive was to render the woman helpless and force her to have sex that they were willing to convict him of rape. Alcohol is “heavily normalized” and, hence, not regarded as a “demon” substance instrumental in the heinous crime of rape, such as Rohypnol. It was apparent that jurors “were often prepared to attribute responsibility for the rape to the defendant but are reluctant to translate this into an attribution of blame [to the defendant] in the form of a guilty verdict, possibly because they were

simultaneously attributing some responsibility for the subsequent sexual events to the intoxicated complainant” (p. 603).

Alcohol and Drug Use

The consumption of alcohol and the use of illicit psychoactive drugs are related in revealing and important ways. But since many fewer people use illicit drugs than use alcohol, the relationship is far from perfect. Let’s express their relationship in the following two generalizations. (1) *Most people who drink alcohol don’t use illegal drugs*, and (2) *people who drink alcohol are more likely to use illegal drugs than people who don’t drink*.

The data on the relationship between alcohol consumption and drug use are instructive. Drinking alcoholic beverages is significantly related to the use of *all* psychoactive recreational drugs. Drinkers consume alcohol *mainly* for its effects, and illicit drug users take illicit substances *mainly* for their effects. Drinkers are more likely to know the users of illicit drugs than nondrinkers are, and hence become socialized to accept the desirability of drug use as well as have access to illicit drugs. Statistically speaking, people who drink are more unconventional and more willing to take risks than people who do not drink; as a result, they tend to be more open to the experience of getting high on illegal drugs. In a nutshell, these are the most informative explanations for why we observe such a strong and irrefutable relationship between alcohol and illicit drug consumption. To repeat: Not all drinkers take illegal drugs; most don’t. But they are a lot *more likely* to use drugs than nondrinkers. In fact, as the 2011 NSDUH report indicates, drinkers are roughly *10 times* more likely to use illicit drugs than nondrinkers. But it’s also true that *most illegal drug use is with marijuana*; about three-quarters of all episodes of illicit drugs are with marijuana alone. When anyone refers to illicit drug use, they are talking *mainly* about marijuana use. Let’s look at Tables 8-3 and 8-4.

TABLE 8-3 Illicit Drug Use in Past Month by Alcohol Use in Past Month

	No Alcohol Use	Use, but Not Binge Use	Binge Use, but Not Heavy Use	Heavy Use
Marijuana	1.9	4.0	12.4	25.1
Cocaine	0.2	0.4	1.5	5.5
Hallucinogens	0.1	0.2	0.9	2.2
*Non-Medical Prescription Use	1.6	1.9	4.6	10.5
**Illicit Drug Other than Marijuana	2.0	2.4	6.5	15.4
ANY/ALL DRUG USE	3.4	5.5	16.1	31.3

*Non-Medical Prescription Use indicates the use of at least one prescription drug without a physician’s prescription; includes pain relievers, tranquilizers, stimulants, and sedatives.

**Illicit Drug Other than Marijuana refers to the use in the past month of at least one illegal drug in addition to or aside from marijuana.

Note: Use of drugs whose numbers of past month users are too small to be meaningfully presented in this table does not appear.

TABLE 8-4 Use of Illicit Drugs in Past Month by Alcohol and Cigarette Use in Past Month

	Neither Cigarettes Nor Alcohol	Alcohol, No Cigarettes	Cigarettes, No Alcohol	Cigarettes and Alcohol
Marijuana	0.9	4.6	7.0	20.3
Cocaine	0.0	0.3	1.1	3.8
Hallucinogens	0.1	0.2	0.4	1.7
*Non-Medical Prescription Use	1.2	2.1	3.4	7.9
**Illicit Drug Other Than Marijuana	1.4	2.6	4.6	11.5
ANY/ALL DRUG USE	2.2	6.4	9.7	25

Source: SAMHSA, NSDUH 2007, "Detailed Tables" (not in NSDUH, 2008). I would like to thank James Colliver for supplying me with these tables and helping me interpret their significance.

What is the tale of Tables 8-3 and 8-4? The consumption of alcohol and the use of illegal drugs are strongly related; not only are users of alcohol more likely also to use illegal drugs, but the more alcohol the drinker consumes, the greater the likelihood that he or she will use psychoactive drugs. There is a stepwise, linear relationship between alcohol and illicit drug use; the heavy drinker is between 6.5 and 27.5 times more likely to regularly use certain drugs, depending on the drug, than the nondrinker, and as we look at increasingly greater alcohol consumption, we see a greater likelihood that persons will use one or more illicit drugs.

We refine the relationship even further when we introduce cigarettes into the picture. Smoking cigarettes seems to correlate even more strongly with illicit drug use than drinking (compare the figures in the "Alcohol, No Cigarettes" column with those in the "Cigarettes, No Alcohol" column in Table 8-4). This may be because monthly-or-more cigarette smokers—less numerous and more committed substance users than the mainstream of monthly-or-more drinkers—are, very possibly, a bit more unconventional. But using *both* tobacco *and* alcohol is even more compatible with, and hence, more statistically related to, psychoactive drug use than is using one but not the other legal substance. This is especially the case with marijuana use: Drinkers and smokers are 22.5 times more likely to have used marijuana in the prior month than nondrinkers *and* nonsmokers. This correlation is probably not directly causal; drinking and smoking likely do not *cause* illicit drug use, but the *kinds of people* who drink and smoke are more likely to be the kinds of people who also use drugs.

The question, yet again, is why? Do we have a *direct* cause-and-effect relationship on our hands? That is, does feeling the *effects* of drinking alcohol impel the drinker to seek the effects of a cognate psychoactive substance? Or is it that "heavy" drinkers are the kinds of unconventional people who are likely to do other unconventional things, like getting high on marijuana or taking a "toot" of cocaine? Or, alternatively, are the social networks that "heavy" drinkers, as well as regular drinkers *and* cigarette smokers, hang out with and among *also* the kinds of social networks whose members encourage and

practice the use of one or more illicit drugs? My guess is that it's all three; many deviant behaviors "cluster" together in the same social circles, and attitudes toward unconventional behaviors in one sphere of life tend to "spill out" into other areas of life. The generalizability of deviance is one more of the more firmly established patterns in crime and deviance, and may be taken as something of a truism (Gottfredson and Hirschi, 1990; Hirschi and Gottfredson, 1994).

Has Under-21-Year-Old Drinking Increased?

States determine the laws on drinking, but the federal government influences what the states legislate. In 1984, then-President Ronald Reagan approved a bill setting the minimum drinking age at 21. A codicil to this law mandated that states that did not approve the 21-year-old minimum would lose federal funds for highway construction; by 1988, all states had adopted the ban on under-21-year-old drinking. As with nearly all recently enacted laws, this one is at least moderately controversial. Libertarians opposed the recently enacted law on the grounds of personal freedom; if 18- to 20-year-olds can vote, drive, marry, and serve in the armed forces, why shouldn't they be allowed to drink? Many liberals likewise oppose the ban on the purchase of alcohol by the under-21 sector of the population, claiming that it forces underage imbibers into a subculture of extreme consumption that encourages dangerous "binge" drinking. Initially, some researchers put forth the claim that after the ban, youth under 21 began drinking at least as much as, if not more than, they had before the 21-year-old drinking age limit was imposed (Ravo, 1987; Mooney, Grambling, and Forsyth, 1992). However, this assertion is not borne out by the evidence. The Monitoring the Future (MTF) survey verifies what other systematic studies tell us. The annual prevalence for alcohol use for high school seniors stood at 88 percent in 1979; in 2001, it was 78 percent; and in 2011, it was 64 percent. The 30-day prevalence was 72 percent in 1979; 54 percent in 2001; and 42 percent by 2011. For the study's full-time college subsample, the annual prevalence declined 27 percentage between 1980 (when the first survey of college students was conducted) and 2011—91 versus 64 percent—and the decline in the 30-day prevalence was 18 percentage points, from 82 to 64 percent (Johnston et al., 2013). Given the weight of the evidence, the conclusion seems clear: We've seen a significant decline in alcohol consumption by adolescents and young adults—indeed, for the population as a whole—in the past generation or two.

Some critics have pointed out that, though teenagers' overall level of alcohol consumption may have declined, binge drinking among the young has increased (Hoover, 2002). For all of MTF's school samples, from eighth grade to seniors, we see a *declining* percentage from 1991 to 2011 who say they have "been drunk" in the past 30 days: from 8 to 4 percent for eighth-graders; from 21 to 15 percent for tenth-graders; from 32 to 28 percent for high school seniors (Johnston et al., 2013). The same downward trajectory prevails for the figures on having been drunk over the past year. Although the differences are small, they are entirely consistent and significant, and they do suggest a decline in "binge" drinking during the past decade and a half.

One beneficial consequence of the nationwide prohibition on the sale of alcohol to persons under the age of 21 has been a decline in alcohol-related highway fatalities among drivers in the 16- to 20-year-old age range. In 1982, the National Highway Traffic Safety Administration (NHTSA) began recording alcohol-related traffic fatalities; in that

year, 5,215 alcohol-related fatalities involving an under-21-year-old driver took place. In 1991, 2,905 such deaths occurred; and in 2011, according to the NHTSA, 1,249 alcohol-related highway fatalities occurred. The most current figures represent a 76 percent reduction in such deaths since 1980, and a 57 percent reduction since 1991. There seems to be no doubt about it: The under-21-year-old drinking age has *hugely* reduced the number of dead adolescent bodies on the highway and made it possible for thousands of young people to grow into adulthood who otherwise would not have done so. The ban has saved lives.

In 2001 and 2007, the Gallup poll asked a sample of respondents whether the drinking age should be lowered to 18; in both years, exactly the same proportion questioned (77%) said that they *opposed* such a change. There is no indication that opinions have changed in the years since these surveys were conducted. The 21-year-old drinking laws seem to be having a positive impact, the majority of the public is aware of this fact, and likewise, the majority supports them.

Alcohol Consumption: A Brief Overall Assessment

My focus on excess alcohol consumption and its negative impact on the society is narrow and deliberately negative. There is a positive side to this drug as well. In fact, for most people, most of the time, alcohol has entirely positive effects. A team of drug experts states that from the very beginning, alcohol has been a “double-edged sword” for human societies (Maisto, Galizio, and Connors, 2010, pp. 184–185). Alcoholic beverages, they say, have played a role in important social occasions, such as births, religious ceremonies, marriages, and funerals (p. 185), not to mention, for families, communities, and other collectivities, an enjoyable accompaniment to congenial gatherings such as feasts, banquets, and celebrations, and ordinary, everyday meals; for couples, drinking provides a lubricant to and an enhancement of courtship, romance, and sex; and for individuals, it offers a pre-dinner libation, an enjoyable accompaniment to contemplation, and, at the culmination of the day, a pleasant nightcap.

And yet, as we’ve seen, virtually everywhere that humans consume alcohol, a certain proportion of the society’s members drink too much, often catastrophically, or in an inappropriate context. The English artist William Hogarth’s famous woodcut, “Gin Lane” (1751), depicts the dark, squalid side of alcohol: a prostitute, her legs pustulant with syphilis sores, neglecting her child, as the infant falls over a railing, probably to his death; a man in a uniform stupefied with drink who, from his appearance, seems to be starving to death; a couple dressed in rags at the door of a pawnshop, selling necessary household items; two men dumping the body of a woman into a coffin, her child bawling on the ground nearby; a man and a dog fighting over the same bone; a building collapsing, possibly from alcohol-induced shoddy workmanship; a barber hanging himself because drunkards, unconcerned about their appearance, no longer get haircuts; a baby impaled on a lance by an insane man dancing and hoisting a beer mug; two men fighting; a couple wheeling dead or unconscious people off in a wheelbarrow, probably to steal their belongings; a blind man staggering around on a cane; and a rowdy mob wielding an axe, thick staffs, and a small table. (The same year he crafted *Gin Lane*, Hogarth also produced *Beer Street*, depicting happy, healthy, prosperous drinkers—so the artist was not opposed to drinking alcohol per se.) It is this negative side of alcohol

consumption that has captured the lion's share of attention from commentators and researchers, and it is that side on which this chapter has focused its attention.

But most of us experience and acknowledge the overwhelmingly benign, beneficial aspects of alcohol. Very possibly 90 percent of drinkers undergo none of the horrendous effects that Hogarth depicted. For most of us, alcohol tastes pleasant and helps make food even more savory than it ordinarily is; its effects, if it is imbibed in moderate amounts, are pleasant, not harmful, and alcohol contributes to the enjoyment of many activities that are themselves already enjoyable. For most societies, and almost certainly for the United States, alcohol has proven far more beneficial than harmful. Moderate drinking is the rule, and it has been a boon to humanity. Prohibition was injurious not only because the efforts to circumvent the banning of alcohol corroded the social fabric but also because it denied an important aspect of human nature—our capacity to use alcohol, in moderation, to explore our sensuous and convivial side.

TOBACCO: AN INTRODUCTION

Is tobacco a drug? Like marijuana, tobacco is a plant product that contains a number of ingredients—chemicals—that have psychoactive properties. The principal psychoactive drug in tobacco is nicotine; the tobacco leaf contains roughly 1 percent nicotine by weight. In the dosages normally taken, nicotine does not produce a profoundly psychoactive effect on users. The short-term or acute effects of small doses of nicotine are fairly mild and transient; Goldstein refers to the effects of nicotine as “a low-key high” (2001, p. 121).

As we've seen so many times before, route of administration is crucial here: Smoking is such an efficient means of taking a drug that, by this factor alone, nicotine's impact is heightened over and above that obtained with other methods of use, such as chewing or inhaling snuff. In addition, keep in mind the fact that cigarette smokers almost always inhale tobacco smoke deep into their lungs—and inhalation is an extremely effective method of use—while pipe and cigar smokers almost never inhale as deeply. So the consequences of tobacco use will be very different according to *how* it is used. Also, smoke is airborne, and so nonsmokers have to inhale the tobacco smoke generated by the people in their presence via passive, sidestream, or secondhand smoke; as a consequence, in a very real sense, they are forced to use the drug, nicotine, albeit in doses that are substantially smaller than is true for the smoker.

Tobacco: Medical Harm

Nicotine is a poison; if injected directly into the bloodstream, roughly 60 milligrams is the lethal dose—that is, the amount that's sufficient to kill a human being. Since cigarettes are smoked, most of the strength of nicotine is dissipated into the air. A cigar contains about 100 to 120 milligrams of nicotine, but its smoke is not usually inhaled. Nicotine kills as a result of muscular and hence, respiratory, paralysis. Fortunately, not enough of the drug is absorbed in a brief period of time for it to be lethal. Perhaps the most noticeable acute effect of cigarette smoking is that it releases carbon monoxide, which reduces the body's supply of oxygen to the blood, causing shortness of breath and, in more substantial doses, dizziness. (Over the long run, this chronic oxygen deficit will damage the heart and the blood vessels of smokers.) The same effect in expectant

mothers can damage the fetus and increase the likelihood of birth defects (Goldstein, 2001, pp. 126–127).

Nicotine is a vasoconstrictor; it narrows the blood vessels, causing the heart to work harder to maintain a sufficient supply of blood and oxygen. It also inhibits the stomach contractions that are associated with hunger; hence, the belief that if one stops smoking, one may gain weight has some validity. More broadly, the drug does not produce profound behavioral changes or impairment; nicotine (along with caffeine) is the only drug passengers do not have to fear if their pilot is using it (Goldstein, 2001, p. 122)—these days, an all-but-impossible illegal act. Intellectual and motor ability do not decline significantly under the influence; indeed, at certain doses, they may even improve slightly.

Is nicotine addicting? In the 1980s, Philip Morris, a major cigarette manufacturer, commissioned a study on whether tobacco produces an addiction in rats. The results of this research showed that, indeed, nicotine is an addicting drug. When the company reviewed the research findings, the researchers were fired and the lab was closed down (Kessler, 2001, pp. 113–139; Hart and Ksir, 2013, pp. 243–244). In 1994, tobacco executives testified before Congress to the effect that nicotine is not addicting. Today, most pharmacologists agree that nicotine—the primary, and very possibly the only, reinforcing substance in tobacco—is addicting. However, as Goldstein (2001, p. 121) points out, the addictive properties of nicotine were difficult to establish in the laboratory since animals found the drug so unpleasant that it was difficult to induce them to self-administer it. Researchers had to work many years to figure out a way of inducing laboratory animals to become tolerant enough to the effects of nicotine to take it regularly; this was possible only through a slow and gradual process. Years of research with both humans and animals have shown that nicotine does produce a physical dependency, and its strength depends on the size of the tobacco “habit,” that is, the quantity of nicotine consumed per day. What evidence do we have for this generalization?

Specifically, with respect to nicotine, there are at least six indications of nicotine’s addicting or dependency-producing properties. First, as we’ve already seen, of all drugs, tobacco is the one that is used *most frequently* by smokers. In the United States, smokers take their drug, on average, about 15 times a day, indicating that the drug has a strong hold over its users. Of all drugs, users of tobacco cigarettes display the strongest yearly-to-monthly ratio or “loyalty” rate—they use it most regularly, on a day-to-day basis. Second, if we were to plot use during the day with levels of nicotine in the blood, their correspondence would resemble the temperature in a room with a thermostat. The nicotine level in the smoker’s body rises during and immediately after smoking, and declines soon afterward. When it falls below a certain level, the smoker lights up again, elevating that level once again (Goldstein, 2001, pp. 118–121). A line depicting the presence of nicotine in the smoker’s body during the course of a day would resemble a sawtooth pattern, rising and falling over time. Third, once laboratory animals have been induced to take nicotine regularly, they work extremely hard to continue self-administering it. If smokers switch to a low-nicotine cigarette, they inhale more deeply and/or smoke more cigarettes to obtain the same level of nicotine in their body. As one smoker who tried to quit, then switched to a low-nicotine brand, told me about the experience of smoking at that time: “It’s like sucking on a straw.” Fourth, smokers who quit describe feeling a strong craving for cigarettes that can persist for years after the onset of abstinence. Fifth, the statistics on relapse show that, although many smokers do quit, they do so only with

great difficulty and as a result of repeated efforts; it is possible that more smokers return to their drug of choice than heroin addicts who try to abstain. And last, there are the physical effects produced by nicotine abstinence: headaches, fatigue and drowsiness, shortened attention span, irritability, anxiety, insomnia, hunger, heart palpitations, and tremors—in short, *withdrawal symptoms*.

Smokers are much more likely to die a premature death than nonsmokers are. The Department of Health and Human Services estimates that a nonsmoker is more likely to live to the age of 75 than a smoker is to live to 65. A two-pack-a-day smoker is 23 times more likely to die of lung cancer than a nonsmoker is. In what was no doubt a carefully crafted public relations move, in 1999, Philip Morris executives publicly admitted that medical research indicates that smoking causes cancer, a fact that the tobacco industry had long denied. This admission was perhaps too little and too late since most scientists had accepted the fact, a third of a century before, that cigarettes cause disease and death. The latest estimate issued by the federal Centers for Disease Control (CDC) estimates that tobacco causes roughly 440,000 premature deaths in the United States each year. This means that tobacco causes more deaths *than all other drugs combined*, and by a wide margin. The death toll from alcohol is in the 85,000 range; the death toll for illegal drugs plus the illegal use of prescription drugs may be in the territory of 25–35,000 or so. Moreover, tobacco kills more than its smokers. The Environmental Protection Agency and the Centers for Disease Control (CDC) estimate that tens of thousands of Americans die as a result of “passive” or secondhand smoke, the smoke inhaled by a nonsmoker from a smoker’s cigarette—which is why smoking has been banned from public spaces, such as train and bus stations and airports, public transportation, classrooms, and public buildings such as restaurants, museums, theaters, stores, and libraries. According to an extensive review of the literature, over 5,000 infants die as a result of their mother’s smoking habit; this does not include an estimated 19,000 to 141,000 spontaneous abortions (or miscarriages) directly or indirectly induced by tobacco smoke (DiFranza and Lew, 1995).

The CDC estimates that, in the United States, *one out of five* of all deaths can be traced to smoking. And medical experts affiliated with the United Nations estimate that in the industrialized countries of the world, 12 percent of all years of premature death is caused by the consumption of tobacco. The CDC estimates that, while cigarettes cost \$3.50 to \$6 a pack nationwide, because of the multiple harms that they cause—an immense loss of life, health, money (in terms of medical costs), and productivity—they actually cost the society about twice that. (But here’s a grim counter-statistic: Economists calculate that society *saves* money by the premature deaths of smokers because tobacco shortens life and hence, a higher proportion of smokers don’t live long enough to collect retirement benefits! See Viscusi, 2002). Tobacco is by far the country’s number one drug menace. It reduces the quality of life as well, since the last few years of the smoker’s life are more likely to be marred by diseases such as lung cancer, stroke, emphysema, heart disease, and bronchitis.

Tobacco: A Brief History

The tobacco plant is indigenous to the Western Hemisphere; prior to the 1490s, its use was completely unknown in Europe and Asia. The native inhabitants of San Salvador, an island in the Caribbean, presented Columbus with a sheaf of tobacco leaves.

When introduced into Europe, the practice of tobacco consumption generated a great deal of hostility, as well as legislation outlawing the sale and use of this plant product. Some of these laws even called for the death penalty against offenders. In 1604, King James issued a “Counterblaste” condemning the consumption of tobacco; he referred to smoking as “a custom loathsome to the eye, hateful to the nose, harmful to the brain, [and] dangerous to the lung.” Nonetheless, within a decade, the English decided to live with the “stinking weede.” Tobacco’s story was essentially the same everywhere the plant was introduced—the Ottoman Empire, Russia, China, Japan, Hindustan: condemnation, followed by legislation, and eventually, legal and public acceptance.

Today, cigarette smoking is such an overwhelmingly favorite method of tobacco consumption (in the United States, the money spent on cigarettes accounts for 90 percent of all tobacco sales), it is difficult to imagine that, just a bit more than a century ago, cigarettes were smoked hardly at all. The earliest recreational use of tobacco involved inhaling the fumes of the combusted leaf through a tube or a straw. By the 1700s, sniffing or snorting powdered or shredded tobacco snuff came to be far more popular. In the United States in the 1800s, the most popular method of tobacco consumption was chewing, but as the society became more urban, more middle class, more fashionable and sophisticated, this unsightly and unaesthetic habit declined in popularity. Still, as late as 1920, 3 out of 4 pounds of tobacco were devoted to cigar and pipe smoking, snuff, and chewing.

Smoking tobacco in the form of cigarettes did not become popular until well into the first half of the twentieth century. The change was partly cultural and partly due to technology. In 1880, according to the U.S. Department of Agriculture, the total American sale of cigarettes amounted to only a half-billion; on a per population basis, consumption was less than 1/300th as great then as it was at the peak of their popularity. In 1881, the cigarette-rolling machine was patented that could manufacture 120,000 cigarettes a day—the work of 40 hand rollers. By 1900, 2.5 billion cigarettes were sold in the United States, an average of 54 cigarettes per adult. By 1912, the total number manufactured shot up by more than five times, to 13.2 billion, and the per capita average increased by three times, to 223 cigarettes. By the end of the decade, the consumption of cigarettes had tripled, to 44.6 billion. During the decade between 1920 and 1930, the number of cigarettes consumed in the United States more than doubled, to 119.3 billion. Between 1900 and 1963, the number of cigarettes sold in the United States increased from 2.5 to 523.9 billion, an increase of more than 20-fold, and the per capita consumption jumped from 54 to 4,345, an increase of 80-fold. Today, about 6 out of 7 pounds of tobacco consumed in the United States are devoted specifically to cigarette smoking.

The Decline of Smoking

In 1964, the U.S. government published what is the most influential document in the history of the tobacco industry—the Surgeon General’s Report, entitled *Smoking and Health*. Summarizing the research current at that time, this report argued that the use of tobacco products represents a serious health hazard to smokers. In 1964, the per capita (age 18 and older) consumption of cigarettes declined slightly, and continued to fall throughout the remainder of the twentieth century and into the twenty-first. From its 1963 high of 4,300, by 2011, America’s per capita tobacco consumption for the

population age 18 and older had declined to about 1,200. The total number of cigarettes sold continued to rise for almost two decades after 1964, since the American population continued to grow. But 1981 represents the peak year for total tobacco sales, when 640 billion cigarettes were sold. By 2011, the Centers for Disease Control (CDC) tabulated cigarette sales at 293 billion in 2011—a decrease of a third in a bit more than a decade, and a 70 percent per smoker decrease since its peak (see Table 8-5). According to the World Health Organization (WHO), currently, the United States consumes almost exactly the world’s weighted average, which is 1,213 cigarettes per resident age 18 and older. The country with the highest per capita rate of smoking? Greece, which consumes an average of 4,323 cigarettes; Hungary is second with 3,265. At the bottom of the smoking pyramid we find a dozen or so African countries (along with Afghanistan and India), either because their citizens are too poor to afford to purchase cigarettes or because they obtain untaxed tobacco products and roll their own.

The American tobacco industry tried for decades to delay the inevitable decline of American smoking. In 1958, the industry founded the Tobacco Institute, a trade association of cigarette manufacturers, which attacked scientific findings that demonstrated the

TABLE 8-5 Cigarette Consumption, United States, 1963–2011 (selected years)

Selected Years	Billions Consumed (Estimate)	Estimated Per Capita Consumption Population 18 and Older
1900	2.5	54
1908	5.7	105
1914	16.5	267
1918	45.6	697
1929	118.6	1,504
1935	208.9	2,236
1945	340.6	3,449
1963	523.9	4,306
1964	511.2	4,116
1970	536.4	3,992
1975	607.2	4,093
1980	631.5	3,866
1985	594.0	3,390
1990	525.0	2,830
1995	487.0	2,468
2000	430.0	2,057
2006	371.0	1,658
2007	360.0	1,593
2009	326.0	1,400
2011	292.8	1,232

Sources: Federal Trade Commission; Tobacco Outlook Report; Joint Committee on Taxation; U. S. Department of Agriculture; the Tobacco Institute. Population estimates from the United States Census, *Statistical Abstract of the United States*, appropriate years. Cigarette sales account for 90 percent of the money spent at the retail level on tobacco products. 2011 figure from the CDC (Centers for Disease Control).

harm caused by smoking. The institute distributed materials that cast doubt on this research or glorified tobacco and its cultivation. "Tobacco is more deeply rooted in our history than any other commodity," intones the luxuriously produced pamphlet, "Tobacco: Deeply Rooted in America's Heritage," originally published in 1981 and revised in the mid-1980s. Tobacco is an important component of the American economy, it informs us. "Retail trade in tobacco products—a major segment of the nation's economy—has long been an important source for federal, state, and municipal governments. . . . Virtually every industry in the United States is connected directly or indirectly with expenditures from tobacco." This pamphlet accentuates the positive; it does not refer to the research that indicates medical harm from smoking. But "About Tobacco Smoke," released in 1982, is more combative; it claims that scientists have failed to establish that any ingredient in tobacco smoke causes any disease in humans. Nicotine? Quoting the Surgeon General, the pamphlet claims that the amount contained in cigarettes "does not represent a significant health problem." Tar? There "is no tar as such in tobacco smoke," says this brochure. Smoking represents no greater health hazard to humans than factory smoke, the natural decay of vegetable matter, or the exhaust fumes from cars traveling through New York's Holland Tunnel. The consumer has the right to "free choice in the marketplace." Very little is known about the impact of tobacco smoke on health, the leaflet declares. It asks rhetorically: "When there are so many solutions and so little supportive evidence for each, can even the basic assertion—the assertion that smoking causes disease—be anywhere near as strong as some would have us believe?" The material issued by the Tobacco Institute strikes virtually all contemporary readers as not only blatantly self-serving but ludicrously false. Almost no physicians today question the direct link between smoking and disease. Beginning in 1994, the state governments, first Mississippi and eventually more than 40 other states, sued the largest cigarette manufacturers to assume some of the medical costs they incurred as a result of harms from smoking. In 1998, the Tobacco Master Settlement Agreement ordered that the Tobacco Institute and the Council for Tobacco Research be dissolved.

It seems almost blatantly obvious that this huge decline in cigarette smoking—which, predictably, will continue to drop deep into the twenty-first century—represents one of the most momentous transformations in the history of American medicine. Cutting the volume of smoking in the United States by over 70 percent during the last half-century has saved millions of lives, and will continue to save even more over the long run. (Surveys, not as reliable as sales, do not show quite so sharp a decline.) More substantial declines can be achieved by imposing taxes on cigarettes that are so high that many potential smokers will be discouraged from tobacco use altogether—in effect, by taxing smoking into nonexistence. Unfortunately, state and federal increases in tobacco product taxation have been far smaller than tax increases on the typical commercial product. From the point of view of good health, smoking should decline to the zero point, where no one is smoking and no one's life is threatened by tobacco smoke. This is a value judgment which practically all health professionals share: Nearly unanimously, they would argue that life and good health are more valuable than the minor pleasures of drawing into the user's lungs a toxic substance that predictably degrades and destroys the body. The harms of smoking vastly outweigh whatever benefits it delivers to smokers. The lives of us all would be improved in almost every conceivable way by the complete annihilation of the tobacco industry. Such a development, in all probability, is centuries off, but even now,

the enterprise of smoking is a shadow of its former self in the United States. Thankfully, this will continue on the same trajectory for—very possibly—a hundred years.

It is important to recognize that tobacco is a multibillion-dollar-a-year industry, still one of the larger in the country; executives, employees, communities, stockholders—and governments—profit from the sale of tobacco products. Indeed, since, economically speaking, the sale of tobacco is an industry just like any other industry, it generates wealth that indirectly benefits the entire country, not just persons directly involved with it. However, as cigarette sales plummet, the tobacco industry spends a shrinking amount on promoting the product. In 2006, according to the Federal Trade Commission, the industry spent over \$12.5 billion on advertising and promotion of cigarettes; this dropped to \$8.5 in 2010—and \$6.5 of that was spent in the form of price discounts to retailers. “While it is a positive step that tobacco marketing has declined,” said Susan Liss, executive director of The Campaign for Tobacco-Free Kids, “the tobacco companies continue to spend huge sums to market their deadly and addictive products” (Craver, 2012). Other benefits from the tobacco industry to the American economy? As we saw, we also have to factor in the bizarre statistic that state and federal governments save about 33 cents per pack on Medicaid and Social Security benefits that don’t have to be paid out because smokers generally die before they are able to collect them (Viscusi, 2002). All in all, the incentives to protect tobacco from legal, political, and economic assault are massive. In 1996 alone, the tobacco industry spent \$600 million, employing 350 separate law firms, to protect their business from lawsuits (Feder, 1997); today, that figure is probably double that. On the basis of these facts alone, one might predict that tobacco was an impregnable fortress. (On the other hand, ex-smokers will predictably spend more on nonsmoking products than they did when they were smokers. In addition, smokers earn less and generate less revenue—except for the health industry—than non-smokers do; hence, the complete cessation of smoking by the entire population is likely to be an overall plus for the economy.)

The crack in the fortress was caused by a variety of factors, perhaps none as powerful as a growing concern for the fate of teenager smokers. Over 90 percent of all adult smokers began their habit before the age of 18; some experts argue that if people do not begin smoking as teenagers, they are unlikely to begin at all. Consider, too, that the earlier the smoking habit begins, the greater the likelihood that tobacco will kill the smoker. In the 1990s, experts estimated that roughly 3,000 American teenagers took up the habit every day and of these, one-third will eventually die of a tobacco-related illness (*The New York Times*, August 18, 1996, p. 14E); likewise, adolescents today—though there are many fewer of them—who begin smoking will eventually get sick more often and die sooner than those who don’t. Contemplating the horrific loss of life in the decades ahead has led many policy analysts to seek drastic measures to curtail the consumption of tobacco. Fortunately, a decline in smoking among adolescents took place during the early 2000s. Monitoring the Future’s 1995–1999 30-day prevalence figures for high school seniors were in the 33.5 to 36.5 percent range. In 2000, this declined to 31.4 percent and by 2012, it stood at 17.1 percent—a remarkable and almost unprecedented downslide. The current level of smoking is lower than it has been since MTF began conducting its surveys. If present trends continue, the decline that has taken place since the 1990s will translate into the saving of several millions of lives. Public health figures hope for a continuation of the decline well into the remainder of this century.

Are Cigarettes Sublime?

As with the discussion on alcohol consumption, perhaps I have presented too one-sided a picture of cigarette smoking. If so many people indulge in it—billions worldwide—there must be something about it that smokers find appealing. On the other hand, in the United States at least, many of these are trying to quit, and many millions of nonsmokers have quit, and are now *ex-smokers*; consequently, there must be something about the experience of inhaling cigarette smoke that smokers find *unappealing* as well. Such are the many contradictions, dilemmas, and complexities of drug use.

Richard Klein, a literature professor, tells us that cigarettes are “sublime” (1993). He argues that people smoke precisely because smoking is bad for you; “few people would smoke if cigarettes were actually good for you” (p. 2). Smokers find “little terrors in every puff” (p. 2). He does not explain why, if cigarettes are as “sublime” as he says, health concerns have actually cut the percentage of smokers in the population in the past four or five decades by nearly *three-quarters*—but then Klein is writing as a *litterateur*, not a sociologist. Against all evidence, he claims that the popularity of smoking will increase in the future because puffing a lethal substance offers a “dangerous attractiveness.” (It’s not clear when this turnaround will take place, and the author doesn’t tell us; perhaps he was ironic.) Klein argues that many of the worst tyrants in history—Hitler, Napoleon, Charles I, Louis XIV—condemned smoking and demonized tobacco (p. 12), a “praise by negative association” argument. He goes on to argue that smoking possesses a kind of “religious dignity.” In erecting smoking bans, he says, the society has “lost a right to pray in public” (p. 16). “Cigarettes have always been identified with the illicit” (p. 17), he says, lamenting that whereas “smoking cigarettes was once an act of defiance, it is now largely an occasion for guilt” (p. 17).

It is difficult to take all this too seriously, and perhaps much of it was written in tongue-in-cheek jest. Klein mixes absurdity with truism, and what is true is that smoking possesses a seductive charm. One need only peruse photographs of past smokers and grasp the visual allure of cigarettes and divine attraction that many people had to them. Coco Chanel (1883–1971), the French fashion designer, smoked and looked fashionable doing it. Edward R. Murrow (1908–1965), a newscaster, smoked on camera and looked cool doing it. (Unfortunately, he died of lung cancer.) Ernest Hemingway (1899–1961), perhaps the most important American writer of the past century, smoked and looked the consummate tough-guy writer doing it; he didn’t die of lung cancer—he blew his brains out with a shotgun. Humphrey Bogart (1899–1957), an actor who played tough-guy roles, smoked heavily, and died of lung cancer. Steve McQueen (1930–1980), an actor who played action heroes and earned the nickname “the king of cool,” smoked and looked ultra-cool doing it. (He died of cancer, but not lung cancer.) More recently, fewer celebrities smoke than in the past, and even fewer do so publicly.

During the twentieth century, smoking radiated an aura of sexiness, glamour, and charisma; without a great deal of diligence, one could assemble an enormous album of hundreds of glamorous celebrities whose photographic portrait captured them clutching or smoking a cigarette, an act that magnified their allure and enchantment. Nowadays, when smokers have been exiled from offices, restaurants, classrooms, libraries, theaters, and stores and their habit has recently attracted little but scorn, and when they are told by parents to keep away from their children for fear of contaminating them, the patina of allure has corroded away, to be replaced by furtiveness, humiliation, and disrepute.

SUMMARY

Humans are probably hard-wired to enjoy the low-to-moderate effects of alcohol; hence the use of this substance is both ancient and nearly universal. But at higher doses, drinking exacts a heavy toll: discoordination, mental confusion, risky behaviors, and, in the long run, mental and physical maladies. All societies regard excessive drinking as deviant and condemn the heavy, out-of-control drinker. Patterns of drinking are probably more influential in determining social problems and deviant behavior than the quantity consumed: who drinks, why, how much during a single occasion, and where.

Men tend to drink more than women and older adolescents and young adults drink more than older adults. Socioeconomic status (SES) displays a complex relationship with drinking: The higher the SES, the greater the likelihood of drinking; lower-SES members of the society are more likely to abstain from alcohol than those higher up in the class structure. However, among persons who drink, lower-SES individuals are more likely to engage in deviant drinking and to get into trouble as a result of their intoxication.

As with all forms of deviance we've considered in this book, alcohol consumption can be looked at through the lenses of both essentialism and constructionism. Essentialism examines the "objective" properties of alcohol: its effects, the consequences of use, and the causes of excessive consumption. Alcohol is a sedative with complex, even contradictory, properties, and some individuals react to it idiosyncratically. But as a general rule, the greater the amount of alcohol consumed, the greater the degree of intoxication, and the greater the likelihood that the drinker will engage in risky, deviant behavior, including fatal automobile accidents, risky sex, violence—and the greater the likelihood that one will be a victim of violence, including sexual violence.

Many alcohol researchers argue that alcohol "releases inhibitions" from normative constraint, and disorganizing the mind and diminishing its capacity to reason effectively, thus making certain deviant behaviors more likely. In addition, the people who engage in deviant drinking are also the kinds of people who are more likely to engage in risky behavior in the first place, alcohol or no alcohol. And third, the occasions and locales of drinking are also the kinds of times and places when untoward events take place; alcohol is, among other things, an accompaniment of risky, deviant settings.

Lethal violence is one of the most significant of the accompaniments of heavy drinking. But this relationship does not show up in a ranking of countries with respect to alcohol consumption and criminal violence because the causes of murder are complex and culturally determined, caused by far more than a release from inhibitions. However, if we track alcohol consumption over time in one country, we do see the co-occurrence of alcohol and criminal violence, indicating that perhaps a decline in alcohol consumption in the United States after 1990 had something to do with its decline in the murder rate. And looking at the individual level, people who drink in a deviant fashion are more likely to engage in violence than those who do not, and people who are under the influence, likewise, are more likely to do so than those who are sober. The same is true of engaging in risky sex and being a victim of sexual aggression. Sociologists and criminologists argue that the latter such statements do not "blame the victim" but state an objectively true generalization.

The nicotine in tobacco is a weak though effective consciousness-altering substance. More important, nicotine is both medically harmful and addicting. It constricts blood

vessels and hence, reduces the quantity of oxygen delivered to the body. Smoking causes a wide range of illnesses, including heart disease; lung cancer is 23 times as common among smokers as among nonsmokers. Hence, compulsive smokers live an unhealthier life than nonsmokers and lose an average of about an even decade of life. The CDC (Centers for Disease Control) estimates that in the United States, smoking causes roughly 440,000 deaths a year, a figure tobacco industry spokespersons once challenged; worldwide, it causes premature death in many times this total. Nicotine is strongly addicting or reinforcing and this can be observed in laboratory animals; lab animals, once acclimated to nicotine, will work extremely hard to receive regular doses of it. In humans, the nicotine contained in cigarettes is the most frequently administered drug that humans take, and the one they administer most repeatedly and “loyally” on a monthly and yearly basis.

On a per population basis, from the 1800s to the 1960s, the consumption of cigarettes increased by over 300 times. Unfortunately for human life and health, smoking is not only the most effective but also the most toxic form of drug taking. In 1964, the Surgeon General’s office published its famous report, *Smoking and Health*, which produced abundant evidence that smoking is damaging to the tobacco consumer’s health. Since that year, the per capita consumption of cigarettes has declined sharply and consistently. (Since the population has increased, the total sales of cigarettes continued to increase for over a decade and a half.) Between 1963 and today, the consumption of cigarettes has declined by over 75 percent—it is now at a quarter of its previous peak—and experts predict that this downward trend will continue into the foreseeable future. While tobacco industry advocates argue that its products enrich the economy through jobs and taxes, the illness and premature death of smokers would seem to argue otherwise. The wedge issue that drove popular opposition to smoking was unquestionably the use of cigarettes by teenagers, which frequently led to a lifetime of consumption. Surveys of school-age children and young adults have shown 70 percent declines in tobacco use during the course of the past three or four decades.

During the twentieth century, the smoker seemed to radiate an aura of glamour, sophistication, and sexiness. But eventually, the message of medical science sank in: Smoking kills, maims, and contaminates; its appeal and allure diminished, and rather than appear as a bold and sublime activity, by the twenty-first century, it had taken on a furtive, unwholesome quality. Few drug-related activities have been marked by such a dramatic crash-and-burn arc as smoking; a return to its former glory seems extremely unlikely.

ACCOUNT: Legal Drugs: Alcohol and Tobacco

The Bar Scene

At the time of writing this account, Rita was a 22-year-old college student.

It started, strangely enough, with a sociology course I took in community college. I was innocent at the time, straight out of high school. I hadn’t experienced much of the bar scene at all. I took a

sociology course in which a major theme was the instructor’s insistence that if you had experienced a variety of forms of sexual intercourse with different partners, then you would learn exactly what desires you had and pleasures you wanted to receive; you would become sensitive to both your and your partner’s needs. This rang a bell with me. I hadn’t had the variety of sexual experiences the

instructor had talked about, so after one of my night classes, I strolled into a nearby bar, “Gold Coast,” for a few drinks. It was different from any bar I had ever gone to—not that there were that many—because the clients there were mainly men who were between 25 and 30 years old. As I walked in by myself, all the men turned around and looked at me. I realized how exciting it was to receive that much attention from so many men. At first, I felt guilty because I had a boyfriend whom I planned to marry. But deep in my heart I knew there was something he wasn’t giving me. I had one drink and left.

Two nights later, I went to the same sociology class, walked out, and, as I passed “Gold Coast,” I felt an urge to go back in, but I didn’t, not at first. I went to my girlfriend Lynette’s house. At that time, she wasn’t seeing anybody, so I told her I wanted to go to “Gold Coast,” so we fixed ourselves up and left. As we got there, I felt an urge to have sex with another man besides my boyfriend. We went in; all the customers were men, and they all watched us as we walked in. I drank my drink slowly. When I finished it, different men bought me drinks, I played darts, and listened to some great classic rock music. I became half loaded, but I was still pretty much on the ball. The place became packed with people, both men and women. But I felt as if I was the greatest thing in the bar because all the men wanted to pick me up. Unfortunately, none of them turned me on except for Jim, one of the bartenders. He was soft-spoken and wore jeans and a vest. He looked great, and he hit a nerve in me. I found out he knew my brother and his friends, which hit another nerve because I always got along with my brother’s friends. I figured he must be good, too—and he was.

At four in the morning, my girlfriend wanted to leave. I told Jim that I wanted to leave, and he walked me to my car and asked me to come back tomorrow night. I said yes right away. I loved the way he kissed. The next night, I went back again, and again Lisa came with me. This time I made sure I looked great, so that when I walked in, Jim would notice me—and he sure did! He came over to me and talked for a while, then he went back behind the

bar. So I talked to the other customers, mainly men. I soon found myself outside with a clique of men smoking pot, really getting high. Jim came out and joined us. He knew some of the guys I was smoking with. When he put his arms around me, I felt a tremendous rush. He stimulated me in every possible way. I knew that this was the night I was going to have sex with him.

Later, “Gold Coast” began to clear out. At some point, Jim came from behind the bar and told me to stay. I asked Lynette if she could get a ride from someone else because I was staying. No guilt was in my mind at all. Then Jim began cleaning up the place, lowered the lights, and we began to hold one another very, very close. He locked the door of the bar while I waited on a stool. He came back over to me and started to kiss me again. I felt a strong rush of pleasure that I had not felt in a long time. I soon found myself on top of one of the tables, stark naked, having intercourse with Jim. After we were done, I told him I would see him tomorrow.

I went back to the bar a couple of nights later, but I didn’t feel the same way about Jim. I wanted someone else, but I still wanted Jim to come after me. I liked this game a lot. I started to wander around the bar, talking to other guys, getting them all hot and bothered. For some reason, I loved doing this. A few weeks before this, I would never have believed that I would have become a woman who would excite such lust in men. I always considered myself a home girl—but not now, not this time. I loved it, the flirting, exciting these men. I began talking to a man who had some roofies, and he gave me some. I only took one because I was drinking. I soon found myself on cloud nine, in heaven, coming and going with the pleasure of walking around and arousing men to want to take me to bed. Then, Jim noticed me and he walked over to me. When he was close, I touched him in his crotch. I didn’t even care if anybody saw me. It felt great. After arousing Jim, I told him I’d be back. I began hanging out outside with some more men. I found myself going home with some guy I didn’t even know. After having sex with him, I told him I wanted to go back to “Gold Coast.”

He took me back. I was still wasted. I left him, too. I called my girlfriend Lynette and told her I was leaving. She met me in the bar around 3:45, and we left together.

I started to make this a habit I could not break. It was fun because it was something that not my parents, friends, nor I myself would ever have believed. It was only under the influence of alcohol or drugs that I would get this urge to have sex with someone else. I wanted to enjoy sex that was different from the boring sex I had with my boyfriend. For once, I was getting pleasure instead of giving it.

Summer came around, and I began going to a different bar, "Places," because Friday is ladies night. It felt great getting dressed up and doing the same things I was doing at "Gold Coast." I was dancing with a lot of men, playing the field, and still dating my boyfriend. It had become a habit to have sex with other men, but I was always the one who picked who I was going to have sex with.

I met a man who had a house on the beach where my girlfriend Crystal and I went for the weekend. Chris had a lot of money and his house was fantastic. He had a swimming pool, a tennis court, and an ocean beach as his back yard. He worked as an actor and has been in some very famous movies. He was different from the other men I had sex with. Chris was into kinky sex. He always had a lot of people sleeping over at his summer house. One night, Crystal and I went to his house, and I found myself sleeping with Chris. My friend Crystal was in the same room, having sex with Ted. They left, and just as Chris and I were finished, a couple of his friends entered the room and started to undress. I soon found myself having sex with three men at the same time. I thought it was a big turn-on because they all wanted me. They did kinky things I had never experienced before in my life. Before, I might have fantasized doing these things; now I was actually doing them. After two hours of this, we went to the bathroom and showered.

I got dressed and went downstairs where Crystal and Ted were, and we all began snorting coke. There was about an ounce of it, and it was really great. I'll never forget that weekend. I had

engaged in sexual acts that, before, I never imagined I would have engaged in. I used to be so innocent, I thought, and yet here I am, this lustful woman, going from flirtations to barroom pickups to kinky group sex. If my boyfriend, my friends, or my parents knew about what I did, they would have disowned me.

I began having very negative feelings about myself as well. In a sense, I began to disown myself. I had become someone I didn't like. I saw myself engaging in sex just for the fun of it, but I knew that was not really me. I had forgotten about my morality. Once, I lived by such high standards. Then I played out all my fantasies. The urge to do wild things like the weekend at the beach had left me.

Meanwhile, the relationship I had with my boyfriend fell apart. Even though he never found out about what I had been doing, deep down, I felt I wasn't right for him. I decided I couldn't have sex with him any longer because I did these things behind his back, felt guilt about it, and secretly wished that he had found out about them and left me. After what I did, things could never be the same between us again.

I dated my boyfriend for four and a half years. We had a commitment, plans to marry. I risked all this for experiencing a year of lust in the bar scene. Now I feel I have fulfilled every fantasy about sex I ever had. Now I want and can handle having sex without feeling I've missed out on anything. I had my variety. Now I shall make my choice of who I want to be with. I'm glad I got this out of my system. I know that I could never in my entire life tell anyone about what I did. I really don't think that anyone would believe me. They wouldn't believe me because I just don't appear to be the kind of person who would have engaged in the sexual encounters I experienced during that year of my life.

QUESTIONS

Rita told me that she would not have engaged in sexually promiscuous behavior if she had not frequented bars and had too much to drink. Do you think this is just a convenient excuse for

her behavior? Do you think that getting a certain form of behavior “out of my system” is a good reason for doing something you don’t feel is right? Do you think people can engage in behavior that’s “not me” because they enter a world that’s different from the way they are and simply “go along with the crowd”? Rita says that engaging in bar scene behavior is uncharacteristic of her, and yet she did it. Was there a side to her personality she isn’t acknowledging to herself and to her audience?

Was what she did in bars her “true self”? Or was she really out of her element there? How do you feel about her attempt to normalize her alcohol-related behavior? Do you feel that her story is unconvincing, even to the possibility that none of it happened in the first place? But if this is a genuine account, why do you think she narrated it to me, knowing I’d publish it in a book that many people would read? Was it simply that she trusted me to change her name and keep her identity a secret?

9

PRESCRIPTION DRUGS

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Governments presumably control the production and distribution of drugs to ensure that the smallest possible number of people is harmed by

unauthorized, illicit use, and this includes demanding prescriptions from physicians for the purchase of substances used for medical purposes. Under a prescription regimen, patients must present certain symptoms to a licensed medical professional, usually a physician, who renders a diagnosis, typically of an ailment or pathology, for which a given medication provides some relief, control, or cure.

In many ways, the purpose of the use of the prescription pharmaceuticals is exactly the opposite of that of recreational drugs. As I noted in Chapter 1, recreational drug users take psychoactive substances so that they can reach a state of “*extasis*” or “extranormality”—achieving a high or an “out-of-everyday-mind” experience. In contrast, physicians and psychiatrists prescribe pharmaceuticals so that their patients can be taken out of their pathological or “abnormal” condition in order to attain a state of normalcy. By its very nature, health professionals regard the *departure* from the everyday mental state as abnormal. Physicians do not write prescriptions for the purpose of altering a patient’s normal state of mind to achieve a transcendent, out-of-the-ordinary mental condition. Indeed, the greater the departure from what is considered a “normal” condition a drug causes, the stricter the controls governments apply to the distribution of that substance.

The drugs discussed in this chapter are *pharmaceuticals*—they are medicinal drugs. Not all medicines are psychoactive, but those under attention here are *neuroleptics*, from the Greek, meaning substances that “seize hold” of the nerves; one major category of the “neuroleptics” are drugs that are designed to reduce anxiety or depression by inducing a more “normal” state of mind. They include the *sedatives* and *tranquilizers*, or calming agents; the *hypnotics*, or sleep-inducing agents; the *antipsychotics*, or drugs designed to alleviate a mentally disordered, usually schizophrenic or bipolar, condition; and the *antidepressants*, or agents designed to reduce or alleviate a mood of feeling dejected, sad, gloomy, or *dysphoric*. Depressants, antipsychotics, and sedatives include a pharmacologically miscellaneous set of substances, but their users share a common thread: They are suffering from an undesirable mental condition and are taking a medication, on the advice of their physician, to relieve that suffering. Few of these drugs’ users (with exception of illicit or street users of the sedatives) take these substances for recreational purposes. At one time, sedatives were referred to as “minor” tranquilizers and the antipsychotics were called “major” tranquilizers; this practice is no longer followed. In the world of medicine, the word “depression” carries two entirely different meanings: (1) a mood of despair and gloominess, and (2) a mechanism of reducing the body’s organic functioning. Knowing this, the distinctions between them should be clear.

Drug companies are business enterprises. If we can attribute a goal or purpose to an organization, theirs is earning a profit. Violations of the law risk prosecution, which cuts into profits. But if the law is too restrictive for a substantial profit, “big pharm” will seek to influence legislation, the medical profession, and the general public to its advantage. The image that representatives of pharmaceutical corporations wish to cultivate is that of altruistic, benevolent healers, not money-grubbing profit-mongers. While the truth lies somewhere in between, it’s important for us to keep our “eyes on the prize”: Drug companies are capitalist enterprises, and to survive and thrive, they *must* protect their interests, and two major elements of their interests are *doing* good, and *seeming* to do good. Many drugs work and successfully treat patients; they are the success stories. Some don’t, and disappear from medical practice, whether at the initiative of the medical profession, the pharmaceutical industry, or the government. With still other drugs, those that cause

harm and aren't entirely effective, "big pharm" finagles results in experimental trials, woos physicians, engages in public relations, and engages in a variety of dirty tricks to earn a buck. The agents of prescription drug companies are neither unblemished saviors nor hideous monsters; they are a conglomerate of different people with mixed motives, run by mostly highly paid executives who want to both stay out of trouble and also make their shareholders very happy (Goldacre, 2013). The results, as we might expect, produce an inconsistent jumble of contradictory outcomes, some good, some bad.

THE TOP 200 PRESCRIPTION DRUGS

Each year, *Pharmacy Times*, the industry's leading trade magazine, reports on the sales of pharmaceuticals; the report publishes two lists: the top 200 pharmaceuticals by total gross dollars and the top 200 by total prescriptions. In 2011, the legal drug trade sold \$320 billion worth of prescription drugs, an increase of only 3.5 percent over the previous year, and a measly increase of 0.5 percent on a per population basis (Bartholow, 2012). Such a slow, almost nonexistent, growth, unprecedented since the emergence of the drug trade, seems almost inexplicable, given the swelling ranks of senior citizens, who are the segment of the population most likely to use prescription drugs. The relevant factors include a still-sluggish economy, the growing utilization of cheaper generic over brand-name products, and the expiration of the patents on some of the most popular medications. Medical observers noted another development relevant to health care in 2011: an increase in long-term unemployment, resulting in the loss of medical insurance coverage for millions of former employed workers, and a consequent increase in the use of emergency department facilities, which increased overall health care costs.

Physicians and other health care providers dispensed roughly four billion prescriptions in the United States in 2011. At first glance, the observer interested in recreational psychoactive drug use is likely to be somewhat disappointed by the sale and distribution of prescription substances, since more than eight out of ten pharmaceuticals are "body" drugs rather than "mind" drugs—they are not psychoactive. Moreover, even the psychoactive medications are not likely to be used on the street for recreational purposes—that is, most common are the antidepressants and the antipsychotics, and they aren't fun to take. Of course, two major exceptions are the benzodiazepines (Valium-type sedatives) and the narcotics, such as oxycodone and hydrocodone, which are commonly used for recreational purposes. A third of the money spent on pharmaceuticals is for only five therapeutic agents—cancer drugs, respiratory remedies, lipid regulators, antidiabetics, and antipsychotics; then there are the antacids, HIV antivirals, antiulcerants, antidepressants, antibiotics, thyroid agents, ADHD agents, and blood pressure medications. Taken together, these types bring more than half of all prescription drugs into the circle of strictly therapeutic substances rather than "fun" drugs that can get the user high. It's true that drugs that help make the patient feel better have a "psychic" effect—by definition, they make the patient feel better!—but most prescriptions are written for medical ailments, and the drugs they control are more likely to have strictly bodily rather than mental effects. Still, psychoactive prescription drugs make up a major category of recreational substances.

Take a look at Table 9-1. Notice that *all* of the 20 most profitable pharmaceuticals ("Top Dollars") are brand-name products, whereas the majority of the most-often-prescribed drugs are generics. (In Table 9-1, I've capitalized the names of brand-name

TABLE 9-1 Top 20 Pharmaceuticals, by Total Prescriptions and Total Dollars, 2011

Total Prescriptions Written			
Rank	Drug	Drug Type	Total
1	hydrocodone	narcotic	58.829 million
2	hydrocodone	narcotic	46.628
3	levothyroxine	treats low thyroid	43.958
4	lisinopril	treats high blood pressure	42.220
5	Lipitor	anti-cholesterol agent	40.812
6	simvastatin	anti-cholesterol agent	32.455
7	Plavix	blood thinner	28.139
8	Singulair	treats asthma and bronchitis	28.101
9	azithromycin	antibiotic	26.427
10	Crestor	anti-cholesterol agent	25.685
11	Nexium	antacid	25.660
12	levothyroxine	treats low thyroid	25.358
13	metoprolol	treats high blood pressure	25.214
14	hydrocodone	narcotic	24.930
15	Synthroid	treats low thyroid	23.722
16	Lexapro	treats asthma and bronchitis	23.707
17	Proair	treats asthma and bronchitis	22.983
18	ibuprofen	non-narcotic analgesic	21.719
19	trazodone	antidepressant and anti-anxiety agent	19.949
20	amoxicillin	antibiotic	19.764

Total Dollars			
Rank	Drug	Drug Type	Total
1	Lipitor	anti-cholesterol agent	\$7.668 billion
2	Plavix	blood thinner	\$6.771
3	Nexium	antacid	\$6.156
4	Abilify	antipsychotic	\$5.194
5	Advair	anti-asthmatic	\$4.637
6	Seroquel	antipsychotic and antidepressant	\$4.637
7	Singulair	anti-asthmatic	\$4.593
8	Crestor	anti-cholesterol agent	\$4.403
9	Cymbalta	antidepressant	\$3.666
10	Humera	anti-arthritis agent	\$3.531
11	Enbrel	anti-arthritis agent	\$3.506
12	Remicade	anti-arthritis agent	\$3.474
13	Actos	anti-diabetic agent	\$3.438
14	Neulasta	fight side effects of cancer treatment	\$3.316
15	Rituxan	anti-arthritis and anti-cancer agent	\$3.005
16	Zyprexa	antipsychotic and antidepressant	\$2.965
17	Copaxone	anti-MS agent	\$2.956
18	Lexapro	antidepressant	\$2.926
19	OxyContin	narcotic	\$2.880
20	Epogen	anti-anemia agent; stimulates red blood cells	\$2.774

Source: www.PharmacyTimes.com, July 2012.

drugs, whereas those of generic drugs begin with a lowercase letter.) Only a few psychoactive drugs appear in the top 20 most-often-prescribed and most-profitable lists. Two narcotics, both generic hydrocodones—manufactured and distributed by different companies—ranked number one and two in number of prescriptions written (58.8 and 45.6 million), and a third hydrocodone ranked in the number 14 spot, but no other drugs with a recreational or psychoactive effect appeared in the top 20 most-frequently-prescribed drugs. Among the drugs that brought in the most profitable sales, only OxyContin appeared in the top 20, at number 19. However, below the top 20, we find a shelf full of psychoactive pharmaceuticals that druggies have turned to recreational use, including two more oxycodone generics (at #48 and #121), another OxyContin (at #129), a hydrocodone (#139), and Endocet, a narcotic (#196), along with numerous benzodiazepines or Valium-type drugs, which contribute mightily to both emergency department (ED) visits and medical examiners (ME) reports on drug-related deaths: clonazepam, alprazolam, generic lorazepams, and even a diazepam (the original brand name of which was Valium). Many experts regard Xanax (alprazolam) as the most frequently misused of the benzos, since it is highly potent and binds strongly and efficiently with its effect-producing sites. All of these drugs can be and have been misused and abused, and have contributed to DAWN's (Drug Abuse Warning Network) dominion.

All brand-name drugs decline in sales after their peak era in popularity, and for several reasons. The first is that the patent held by the pharmaceutical company that initially markets a prescription drug is valid for only 20 years from the time of filing, and it may take as many as 10 years for the drug to reach the market. After that, the drug falls into the public domain, which means another company can sell it under its generic name. If a drug is successful, a company will try to prevent it from entering the public domain by blocking its generic sales through a variety of legal maneuvers—for instance, by filing a patent on a “new and improved” formula of the same drug. But eventually and inevitably, the company's patent on the drug will run out. Further, physicians are aware that it is more economical for their patients to use exactly the same substance (the generic form) instead of a substance that costs far more (the trade or specific brand). Today, among the top 200 most profitable drugs, all the benzodiazepines and all but two of the narcotics (OxyContin and Endocet) are generics. When the patent a drug company holds runs out, the sales of once-popular trade products sharply decline. It becomes a major job of drug companies to convince physicians that their new drugs possess a “wrinkle” that makes them superior to the old drugs. Hence, we see the constant development of new drugs that represent variations on a theme. In contrast, almost by definition, drug companies rarely develop new drugs that represent a breakthrough in both pharmacological safety and effectiveness on the scale of, say, diazepam when introduced as Valium by Hoffmann-La Roche in the early 1960s, and for a number of years, the bestselling prescription drug in America.

A second reason why nearly all psychoactive prescription drugs decline in popularity over the long run is that physicians become aware of some of their undesirable side effects and search for less toxic substances. The pharmaceutical corporations—which stand to earn a profit by marketing a drug—submit initial reports to the Food and Drug Administration on the drug's supposed safety and effectiveness. Hence, these corporations may understate a drug's dangerous side effects, or overstate its therapeutic effectiveness. When a drug becomes widely used in medical practice, many more types of patients

take it than did so during the initial tests. Side effects, even though they may be atypical, become publicized within the profession and, sometimes (as with Prozac and Halcion) the publicity becomes so intense that news of their harms reaches the media. Although the substitutes that pharmaceutical corporations develop may be no safer than the originals, their side effects are not yet known in detail. In this game of “musical drugs,” substances introduced early on are later knocked out of the market, or suffer sharp declines in sales, and newer ones enter the arena. Hence, in this shifting-around process, the *total volume* of prescriptions that are written for a given drug category may remain stable or even rise, while *particular* drug products (whether brand names or generics) will rise and fall precipitously. For general categories such as narcotics; sedatives, hypnotics, and tranquilizers; antipsychotics; and antidepressants, the trend line will not change a great deal from one decade to another.

SEDATIVE-HYPNOTICS

There’s a story behind the sedative drugs which begins with the human central nervous system: Some of us are often too anxious and agitated to be capable of properly functioning; some of us are even too troubled to fall asleep at night. Sedatives or sedative-hypnotics are downers or *general depressants*; they retard, dull, or obtund signals passing through the central nervous system. As such, their effects are contrary or antagonistic to the stimulant drugs. Sedatives also slow down a number of functions and actions of a wide range of organs of the body, as well as general activity, or “behavioral output.” In addition, sedatives also reduce anxiety. At higher doses, sedatives are hypnotics—they induce sleep. Here, I’ll use the term *sedative* to cover all drugs that act as general depressants. By extension, this includes the tranquilizers, which sedate in moderate-to-medium doses. The sedative-tranquilizer-hypnotic dimension is a spectrum or continuum; the precise point along this dimension that defines a substance’s action is determined by the dose taken rather than the specific drug used. The same effect that dulls or subdues anxiety can, with an increase in dosage, induce hypnosis or sleep; at a higher dosage, that same sedative effect can produce coma and, even farther along the continuum, death as a result of respiratory failure. Slowing down the bodily system is a matter of degree, and it is dose related.

In sum, some of us need a substance or agent to calm our “nerves.” Researchers and clinicians have been searching for the ideal tranquilizing agents for hundreds, perhaps even thousands, of years—that is, since the ancient Greeks and Romans. To serve as that ideal agent, a drug should be both safe and effective. Herein lies our tale.

Alcohol served a sedative function for much of the duration of human history, but as we saw in Chapter 8, its effects are too complex and contradictory to be effective as a calming agent or a sleep aid. It causes agitation in some; anger and even violence in a few; and for most of us, lapses in judgment, undesired risk taking, a decline in coordination even at fairly low doses, nausea if taken in excess, and, all too often, a hangover the morning after. Physicians and chemists had to find something safer and more effective.

In the 1600s, a chemist dissolved opium powder into alcohol, thereby inventing laudanum; a 10 percent solution seemed to be about the right mixture to produce in most patients a sleep-inducing effect without serious damage. In mixing up this concoction,

chemists had devised a narcotic to serve as a sleep aid. However, laudanum's soporific properties also brought on, in some patients, addiction, along with night terrors so well documented by Thomas De Quincey's classic *Confessions of an Opium Eater*, initially published serially in a magazine in 1821. Sedation for the anxious patient had to be sought elsewhere. In the 1840s, chemists discovered the calming effect of potassium bromide, and the drug became popular for several generations. However, the side effects of this substance included depression, discoordination, lethargy, a loss of concentration and memory, tremors, and, sometimes, delirium and heart ailments. By the early twentieth century, bromide was no longer widely used as a therapeutic agent.

In the 1860s, a German chemist discovered, and published a scientific paper on, the sedative properties of a recently developed substance named chloral hydrate. It immediately found its way into clinical medicine for this very purpose, being touted as the only "safe" hypnotic-sedative. But soon after it was introduced as a pharmaceutical, patients began experiencing undesirable side effects: slurred speech, confusion, vomiting, an involuntary loss of consciousness, amnesia, anesthesia, sometimes convulsions, even coma. Physicians began issuing cautionary warnings and publishing clinical reports on the ugly side of chloral hydrate. Recreational use soon became fashionable among poets, writers, and painters; apparently, some daring, risk-taking, adventurous members of the avant-garde enjoyed that hazy, luminous, twilight state that the substance induced. Criminals and other shady characters discovered that chloral hydrate, when introduced into an alcoholic drink, served well as a "knockout drop"; thus, the "Mickey Finn" was born.

Barbiturates

Barbiturates are defined as central nervous system depressants that are derived from barbituric acid. Barbital, the first barbiturate, was marketed under the brand name Veronal. After Veronal was commercially introduced in 1903, the medical use of chloral hydrate, the sedative supreme with many distressing side effects, shrank into near-oblivion. Since then, medical chemists have synthesized thousands of different derivatives of barbituric acid, but only a few dozen of these have been sold and used in the United States.

Barbiturates are classified according to the speed of their action. The *ultra-short-acting* barbiturates include Brevital, Surital, and pentothal ("truth serum"). They are administered IV and produce unconsciousness and anesthesia within a minute, and their effects last two or three hours. The speed of their action normally precludes their use as recreational drugs, although the account at the end of this chapter indicates that, for the committed thrill-seeking user, that may be a "kick." The *short-* and *intermediate-acting* barbiturates are used for sedation and as sleep aids; they include Tuinal (once known on the street as "tooies," "rainbows," or "Christmas trees"), Seconal or secobarbital ("sekkies," "seggies," "reds," or "red devils"), Nembutal ("yellow jackets," "nimmies," or "nimbies"), Fiorinal, and Amytal or amobarbital ("ammies," in street parlance). The *long-acting* barbiturates include Luminal (or phenobarbital) and mephobarbital (Mebaral); they are used as anti-anxiety agents as well as anti-epileptic drugs, do not produce a high, are rarely used recreationally, and need not be discussed here. The short- and intermediate-acting barbiturates induce an intoxication or high if taken in sufficient doses, and have been extensively used recreationally on the street.

In the 1960s and 1970s, barbiturate drugs were widely used as psychotherapeutic sedatives, sleep aids, and anti-anxiety agents. As a result of harmful recreational use, prescribing the barbiturates for medical purposes declined sharply. From 1966 to 1986, the number of prescriptions written for Amytal, Seconal, Nembutal, and Tuinal dropped by 90 percent; between 1987 and 1990, they declined another 50 percent; and in 1996, the number of prescriptions written for all the barbiturates was less than half of that for 1992. In 2011, not one of any of the barbiturate drugs was on either one of the two lists of the top 200 prescription drugs, that is, either in dollars earned or in total prescriptions written. Barbiturates have been replaced by the benzodiazepine drugs, which physicians mistakenly regard as much safer.

In terms of their effects, the barbiturates are remarkably like alcohol; alcohol is sometimes referred to by pharmacologists as a “liquid barbiturate.” Goldstein (2001, p. 6) classifies barbiturates, the other sedatives, and tranquilizers in a category he refers to as “alcohol and related drugs.” Barbiturates are, in many ways, even more dangerous than heroin. The classic withdrawal syndrome appears upon discontinuation of “chronic” use of barbiturates: symptoms include nausea, muscular twitching, aches and pains about the head and body, anxiety and nervousness, trembling, profuse sweating, dizziness, cramps, a feeling of feebleness, and finally in the later stages, convulsions and sometimes coma, occasionally resulting in death. And the heavier the dependence, the more extreme the reactions. It is possible to die of barbiturate withdrawal, whereas death from withdrawal from the narcotics is quite rare.

Death from an overdose of a barbiturate can occur at 10 times the therapeutic dose, which makes it similar in this respect to the narcotics. Death is caused by respiratory failure: an inhibition of the breathing mechanism. Since the two drugs are so similar in their actions, barbiturates demonstrate a cross-tolerance with alcohol. The effects of the two taken together are *synergistic*, more toxic than the sum of their separate effects. Since the two are commonly taken in conjunction, this multiplier function is especially problematic: It is easier to die of a drug overdose when taking alcohol and barbiturates in combination than when taking twice as much of either substance alone. Likewise, when taking both together, the user becomes disoriented at lower doses than is true when taking either separately.

In contrast to its drastic decline in legal medical use after the 1970s, the decline in street or recreational use of “barbs” has been much more gradual. In 1975, 17 percent of twelfth-graders said that they had taken barbiturates to get high at least once in their lifetime; 5 percent said that they had done so in the past 30 days. In 2012, these figures were 6.9 and 2.0 percent, respectively. In spite of their being nearly totally discredited within the medical profession, barbiturates are still at least modestly (albeit decreasingly) popular as a recreational drug among high school students.

Methaqualone

Methaqualone is another sedative with effects similar to those of the barbiturates; once commonly prescribed, it has been classified as a Schedule I drug and thus is no longer legally prescribed in the United States. Originally, sedatives were distinguished from tranquilizers, mainly the benzodiazepines, by the fact that, at doses only slightly higher than therapeutic doses, sedatives induced mental clouding, intoxication, disorientation,

and physical dependence over a period of continued use, whereas physicians thought that tranquilizers did not. Later research showed the two drug types to be more similar than different in these respects; the most important factor determining whether these drugs induce the specified effects seems to be the dose rather than the drug type taken. Still, these differences are a matter of degree, and barbiturates and methaqualone are still regarded as more dangerous and abusable than are the milder tranquilizers/sedatives, that is, the benzodiazepines.

The birth of the barbiturates and the demise of chloral hydrate did not end the sedative story; indeed, it had barely begun. The downward trajectory of barbiturates is just as interesting as that of chloral hydrate. For decades, the medical profession continued to flounder around searching for the ideal sedative, introducing first one, then another agent that would serve to calm agitated patients and serve as a sleeping aid. Among other curiosities, these twists and turns produced methaqualone (one brand name is Quāālude)—a drug that became the inspiration for enough “that’s embarrassing” stories to fill multiple websites (<http://www.thatsembarrassing.com/story>). The ongoing challenge was how to serve these legitimate functions in a completely safe manner, with no harmful side effects to the patient. It can’t easily be done, because the side effects for all the sedatives are simply at the polar end of the same sedation spectrum that is sought in the first place. What can be achieved is a sedative that produces *fewer* and *less harmful* side effects than the others. Here, compromise is the watchword, and it would take many decades and many trips to the emergency room—not to mention the morgue—by many patients before clinical medicine settled on a class of drugs that, so far, has proven to be least bad for therapeutic purposes. “So far” because research is still looking for that “magic bullet.” In any case, methaqualone was *not* that magic bullet.

Methaqualone was marketed under a number of different trade names, including Quāālude (“ludes”), Sopor (“soaps”), Parest, and Optimil. At one time, the medical profession regarded methaqualone as safe and nonaddicting. Now, physicians consider the drug capable of producing extreme mental clouding, drowsiness, discoordination, disorientation, a true physical dependence, and, at a sufficiently high dose, death by overdose. For quite some time, the medical use of methaqualone has been completely discredited; it has not been legally prescribed in the United States since 1985.

The decline in the recreational use of methaqualone, which lagged a few years behind its spectacular decline in prescription use, was even more drastic. The following story was narrated to me by the husband of a young couple who took a substantial dose of Quāāludes in the early 1970s, imagining that it would enhance their sex lives:

We had heard an awful lot about Quāāludes and, you know, about sex. That it was supposed to be so fabulous in bed and everything. So Ellen had been bugging me for weeks about coping some. I had this really hip shrink at the time, and he said he’d write up a script for, you know, for me, for the ’ludes. We both figured it would be therapeutic, make my sex life better. So I asked him—why not, right? Thing is, at that time, we both worked at night, and we’d come home kind of tired. So Ellen came home one night and she starts groping me, with a crazed look on her face—“Quāāludes, Quāāludes,” she was whispering in my ear. So we both dropped—I think it was two 300-milligram tablets each. Which, I know it now, is a pretty heavy hit. I made Ellen some dinner while she took a shower. She came out of the shower, wobbling around like she was drunk. I figured she was goofing, ’cuz I didn’t feel a thing. She sat down in front of the food I made—a cheeseburger, beans, and a salad. I was watching

the tube. I looked over at her, and she's just lookin' at the food. I say, "Ellen, why don't you eat?" I look back at the tube for a few minutes. Then I look back at Ellen. She's still staring at the plate of food in front of her. I go over and wrap each hand around a knife and fork and say, "Eat, eat." I look back at the tube. Couple of minutes later, I look back at Ellen. She's still staring at the food. I look more closely, and her head is slowly falling down. I keep lookin' at her, and her head dropped right into the plate of food! There's ketchup and beans all over her face. Then I got scared and got up to take care of her, and I'm feeling like I'm drunk. I wiped the food off her face, turned off the tube, and we both hit the sack. That was our big sex orgy on Quāāludes!

In 1972, Quāālude ranked 112th among the nation's most commonly prescribed drugs (up from 153rd in 1971). In 1973, the federal government reclassified it as a Schedule II drug, and in a few short years it dropped out of the circle of the top 200 drugs, never to return. More than 10 times as many prescriptions for the methaqualone drugs were written in 1971 and 1976 as in 1966; in 1981, only one-third as many were written as in these 1970s peak years. By late 1985, as I said, no prescriptions were written for methaqualone in the United States at all. Its heyday of popularity as a recreational drug was from 1980 to 1984. Today, methaqualone is one of the drugs least likely to be used by high school students. In 1981, 7.6 percent of high school seniors had taken methaqualone during the prior year; in 2012, only 0.4 percent had done so—not quite *one-twentieth* as many as in its former glory days. Few recreational drugs have risen so high in popularity so quickly and fallen so far in such a short time.

Benzodiazepines

Valium, the trade name of diazepam, was the earliest and most successful of the benzodiazepines. Introduced in 1963 by Hoffmann-La Roche, between 1969 and 1982, Valium was the nation's best-selling prescription drug; in 1978, the firm sold 2.3 billion pills. This degree of success has not been and probably will never be duplicated, in part because the market has become flooded with countless competitors for any and every imaginable sedative medication. In 1985, writing for Goodman and Gilman's manual on therapeutics, Stewart Harvey declared that the benzodiazepines "are relatively safe drugs" (p. 350). The accent should be on the "relatively" because, as we saw, these drugs are one of the most widely prescribed drugs in existence; at the same time, according to DAWN's tabulations, they are associated with thousands of overdose deaths in the United States annually, as well as hundreds of thousands of nonfatal overdoses. The manual, *Problem Drugs*, states that the benzodiazepines "are far from safe." They account for "the highest number of toxic exposures reported in patients older than 17 years of age," and they increase the odds of mortality "in incidents of mixed [drug] overdose." In addition, their long-term use may cause psychological impairment and even brain damage. "It can take the brain from six to 18 months to recover after use of the drug has been stopped" (Chetley, 1995, p. 306).

In large doses, the benzodiazepines act as sedative-hypnotics: they produce drowsiness. In small to moderate doses, they act as calming agents and are effective in combating anxiety and tension. These tranquilizers include Valium, Xanax (alprazolam), and lorazepam (Ativan). Valium lost almost half of its sales between 1975 and 1980, and its use continues to decline. In 1995, it ranked only 192nd in popularity

among all prescription drugs; in 1996, it dropped off the list of the 200 most popular pharmaceuticals. In 2011, its generic equivalent, diazepam, ranked number 105 and number 200 in sales. However, as we saw, a number of related substances, such as alprazolam (#37, #68, #122, #123, and #163), lorazepam (#73, #131, and #150), and clonazepam (#55 and #101), are very widely prescribed benzos as sedatives or tranquilizers. The anxiety business, it seems, will always be brisk.

With respect to the recreational use of tranquilizers, the trend line shows a decline, then an increase. According to the Monitoring the Future (MTF) survey, the recreational use of tranquilizers by high school seniors declined fairly steeply between 1975 (10.6% annual prevalence) and 1992 (2.8%), but in 2012, the annual figure for seniors stood at 5.3 percent. Because tranquilizers are so hugely prescribed to large numbers of patients who have problems with coping with life, it should come as no surprise that some of those patients—a very tiny proportion, admittedly—decide to commit suicide by taking an overdose of the very drug that is so readily available in their medicine chest. To the extent that tranquilizers continue to be prescribed to large numbers of patients who experience difficulty in coping with life's many problems, and who are frequently depressed, these drugs will be used by some to take their life. Remember that in 2010, the benzodiazepines (Valium-like tranquilizers) caused or were associated with over 400,000 nonlethal ED visits and almost 3,500 drug-related deaths in the areas tabulated by DAWN (making up, for ME reports, an admittedly unrepresentative sector of the country). This places them among the “Big Four” DAWN drugs, second only to the narcotics, which remain the substance most frequently associated with death by drug overdose, and by a considerable margin.

Tranquilizers are sold on the street (at several times the pharmacy price) and are used for both recreational (when taken in sufficiently large doses) and quasi-therapeutic purposes. Taken in large enough doses over a long enough period of time, all the tranquilizers can produce a physical addiction or dependency. With the cessation of such heavy, long-term use, the patient will experience withdrawal symptoms consisting of convulsions, tremors, cramps, and sweating. The vast majority of users take nowhere near enough of a quantity to become addicted, and so such reactions are fairly rare. But remember that Rohypnol, which is one of several “date rape” drugs and is associated with hundreds of untoward medical and psychiatric reactions per year, is a tranquilizer and a benzodiazepine.

ANTIPSYCHOTICS

The antipsychotics were once referred to as “major” tranquilizers, to distinguish them from the “minor” tranquilizers, the sedatives. The reasoning was that major tranquilizers pacified mental patients, or psychotics—individuals with a *major* psychiatric problem—while minor tranquilizers pacified ordinary neurotics—individuals with *minor* psychiatric ailments. The similarities between these two drug types are superficial; they are in most ways strikingly different in their effects. Today, the *antipsychotic* drugs are hardly ever referred to as “major” tranquilizers. Psychiatrists use the *antipsychotics* in the treatment of psychosis; these drugs do not produce a high or intoxication, are virtually never used recreationally, and are not sold on the underground market. Nearly all antipsychotic use

is legal prescription use for controlling mental illness, especially schizophrenia. They have had an extremely important impact on the field of psychiatry.

The impact of the antipsychotics can be measured by an examination of the changes in the number of resident patients in mental hospitals in the United States from the 1950s onward. On any given day in 1955, almost 560,000 mental patients resided in the non-federal mental hospitals in the country. That year, Thorazine, an antipsychotic drug, was introduced to treat psychosis. The number of resident patients has dropped every year since then; today, there are under 80,000 resident patients in publicly funded mental hospitals on any given day. It is possible that this is an “irreducible minimum”—the number of mentally ill patients who are unresponsive to current drug treatment modalities—and will remain more or less stable over time.

The change in the number of mental patients in the United States is certainly not due to a mentally healthier population. And it is not due to a decline in new admissions to mental hospitals, since admissions more than doubled between the 1950s and the 1970s, and they continue to remain high to this day. Rather, the change was a result of the drastic decline in the average length of stay in mental hospitals. In 1955, the average period of hospitalization was six months; today, it is two to three weeks. The decline in the number of mental patients living in hospital facilities at a given time, and the reduction in their average length of stay in those facilities, is due almost entirely to the use of the antipsychotic drugs. About 85 percent of all patients in state, local, and federal mental hospitals receive some form of psychoactive medication.

One of the antipsychotics, Thorazine (whose chemical name is chlorpromazine) is described as having the following effects on agitated, manic, and schizophrenic patients: The drug, one observer wrote, “produces marked quieting of the motor manifestations. Patients cease to be loud and profane, the tendency to hyperbolic associations is diminished, and the patients can sit still long enough to eat and to take care of normal physiological needs” (Goldman, 1955). The emotional withdrawal, hallucinations, delusions and other disturbed thinking, paranoia, belligerence, hostility, and “blunted affect” of patients are all significantly reduced with the administration of Thorazine.

As a result of the use of the antipsychotics, patients exhibit fewer symptoms of psychosis and have become more manageable, which has permitted hospitals to cut back or discontinue such ineffective or dangerous practices as hydrotherapy and lobotomy. And, as a result of the administration of these drugs, hospitals have, in the words of one observer, been transformed from “zoo-smelling, dangerous bedlams into places fit for human beings to live and, at times, to recover from psychosis” (Callaway, 1958, p. 82). And by inducing a more “normal” psychological state in patients, it has been possible to release them into the community as outpatients, with only minimal treatment and maintenance in aftercare facilities. Studies have shown that about three-quarters of all acute schizophrenics demonstrate significant improvement following the administration of antipsychotics, and about 75 to 95 percent of all patients relapse if their medication is discontinued. The antipsychotic drugs are not only regarded as effective for most mental patients, but also the least expensive of all treatment modalities. It should be added that, though these drugs do reduce the most bizarre symptoms of schizophrenia and other mental illnesses, very few mental patients are able to live what are regarded as completely “normal” lives; an early estimate by the Veteran’s Administration places this figure at only 15 percent.

The antipsychotics are not addictive and rarely result in lethal overdoses. There are some side effects of a category of these drugs—the *phenothiazines*—however, including abnormal, involuntary, and sometimes bizarre movements of the tongue, lips, and cheeks; facial tics; tremors; rigidity; and a shuffling walk. These symptoms are treated with a separate type of drug, the anti-Parkinsonian drugs. Some observers feel positively about the antipsychotic drug Risperdal, which was released in 1994 and described in the journal *Drug Topics* as being more effective in improving the condition of schizophrenics and having fewer and less serious side effects; today, other frequently prescribed antipsychotics include Seroquel, Zyprexa, and Geodone. Some critics also argue that the phenothiazines reduce the mental acuity and intelligence of patients. The effects of these drugs are not experienced as euphoria inducing, and they are not used recreationally on the street.

The antipsychotics have attracted numerous critics, many within the profession of psychiatry itself. They say the administration of antischizophrenic drugs largely is involuntary, that the process amounts to a chemical straitjacket or lobotomy, turning mental patients into mindless shuffling zombies, semivegetative hulks, drooling, dribbling wrecks (James, 2008). The psychiatric profession, these critics say, is a captive of the pharmaceutical industry, whose representatives earn a living by selling pills to “cure” ailments for which there may be no cure. Release mental patients from their chemical bondage, they urge, and as for the rest of us, allow these oddballs, eccentrics, and weirdos to express themselves in their own ways (Moncrieff, 2009). Meanwhile, psychiatrists continue to prescribe pills for patients, pharmaceuticals continue to manufacture and distribute them, and patients continue to take them, for good or ill. As with virtually all ailments they treat with not-entirely-safe drugs, physicians still yearn for a neurochemist to develop that “magic bullet” for their patients—an unlikely prospect (Whitaker, 2010). In any case, as I pointed out, antipsychotics are *not* recreational drugs; they do not get the user high, they are not fun to take, and they are hardly ever abused.

ANTIDEPRESSANTS

Schizophrenia, for which the antipsychotics are effective, is classified as a *thought disorder*; the patient’s perception of reality is judged to be bizarre and delusional. In contrast, *mood* or *affect disorders* influence the emotions rather than the intellect. The principal mood disorder is *depression*. Serious clinical depression is marked by feelings of “sadness and despair,” an “inability to experience joy or pleasure” in almost all activities, pessimism and helplessness, worthlessness, and, in about 15 percent of all cases, suicidal thoughts or acts (Julien, 1995, p. 187). Patients who evidence only depressive symptoms are classified as suffering from a unipolar depressive disorder, while those who experience depressive symptoms alternated with mania—feeling abnormally grandiose, expansive, agitated, delusional, hyperkinetic, easily distracted, wildly erratic in one’s behavior and judgment—are said to be suffering from a *bipolar* or *manic-depressive disorder*.

Although anxiety usually accompanies clinical depression, anxiety is not its primary symptomology; hence, anti-anxiety or tranquilizing agents (such as Valium or Xanax) are ineffective as treatment. The stimulants cocaine and amphetamine, both euphorants

for nondepressed individuals, are not effective as antidepressants, since the pharmacological mechanisms of the two drug types, stimulants and antidepressants, are radically different. In the past, electroconvulsive or *shock therapy* (ECT) was commonly used as therapy for the clinically depressed. Although effective in a high proportion of cases, clinicians and researchers regard its use as controversial. And, although many mental health professionals swear by the procedure, its image in the general public is largely negative. Much of the public regards shock therapy as barbaric and inhumane. In the United States, ECT is used mainly on depressed patients who are suicidal (since its effects are immediate rather than long-term) or unresponsive to drug treatment.

Today, a majority of medical researchers consider clinical depression (in the absence of external reasons for depression) as having a neurochemical basis; moreover, it is often transmitted genetically. While the precise etiology of the disorder has not been traced out, it is clear that certain classes of psychoactive drugs are effective in the treatment of depression. Antidepressants (or mood elevators) are classified by pharmacologists according to their chemical structure and mechanism of action, but what unites them is that they have been used in the treatment of affective disorders. Prozac, Zoloft, Paxil, Effexor, and Lexapro are trade names for popular antidepressants.

Antidepressants do not induce a euphoric state. In nondepressed individuals, the effects of the antidepressants are experienced as unpleasant; they produce drowsiness and lethargy. Hence, these drugs have no recreational value, and are not used in an illicit context. Most of the antidepressant effects of mood elevators appear only after two to three weeks of continued use. In 60 to 70 percent of clinically depressed patients, they do elevate mood, increase physical activity, increase mental alertness, improve appetite and sleep patterns, and reduce morbid preoccupation (Julien, 1995, Chs. 8 and 9). However, roughly one in 20 depressed patients who are administered mood elevators will suffer from serious side effects, including disorientation and hallucinations. Large doses of the antidepressants can be fatal. As we saw, antidepressants show up with a fair degree of frequency in DAWN's tabulations. In the latest tabulation, during 2010, slightly north of 100,000 emergency department (ED) visits mentioned antidepressants as a causal agent, and close to 2,000 persons in DAWN's catchment area died due in part to having taken one or more of the antidepressants, often, although not always, in conjunction with another drug.

Prozac was introduced by Eli Lilly as a prescription drug in 1987. From its first full year of sale, 1988, to 1990, the number of prescriptions written for Prozac jumped five times; in 1996, it was the seventh best-selling prescription drug overall in America. Practically overnight, Prozac had become the most popular and successful antidepressant in history. For years, Prozac was the most widely prescribed of this drug category. But since the late 1990s, when its use received a substantial amount of negative media attention, it dropped out of the top 10; in 2011, its generic, fluoxetine, appear at the 65th and 145th spots among the most-often-prescribed drugs in the country. In 2004, Zoloft was the most popular prescription antidepressant, ranking at number 14 among all prescription drugs, and Paxil, another antidepressant, ranked 79th. Currently, in addition to fluoxetine, the representatives of antidepressants that appear on the top 200 list include sertraline, a Zoloft generic (#36, #60, and #119), Seroquel (#6), Cymbalta (#23), and Lexapro (#16). Clearly, depression is a common disorder for which, many psychiatrists believe, antidepressant medication is effective.

In the 1990s, a large number of physicians swore by Prozac and believed it helped their depressed patients. In Lilly's own clinical trials with the drug, over 3,000 depressed patients were randomly assigned to one of six antidepressants; a seventh group was assigned to take a placebo. At the end of the trials, the Prozac group was least likely to be prone to suicidal thoughts. Says physician Jerrold Rosenbaum, who conducted a study of his clinically depressed Prozac patients, "This drug is transporting a lot of people from misery to well-being" (Cowley et al., 1991, p. 64). Peter Kramer, a physician and author of the bestselling book, *Listening to Prozac* (1993), argued that the drug permitted patients to *remake* their depressed personalities from one that is depressed, suicidal, lacking in confidence and a will to seek pleasure, into one that is strong, positive, sensual, and active. Prozac, says Kramer, is not a "mood brightener" but a *personality transformer*.

But Prozac also has a darker side. Beginning in the early 1990s, a small number of Prozac patients began to engage in bizarre, violent, self-destructive behavior, including murder, suicide attempts, and self-mutilation. Said one patient, "You sit down and every nerve in your body has to move. . . . You feel like you're going to jump right out of your skin." This patient also had an "unaccountable longing for pain, which she satisfied by tearing at the flesh on her thighs, arms and torso." When her physician took her off Prozac, she "promptly stopped mutilating herself" (Cowley et al., 1991, p. 65). Psychiatrist Martin Teicher states that six of his patients, "depressed but not suicidal," suddenly developed an "intense, violent suicidal preoccupation" after taking Prozac for two to seven weeks.

A certain proportion of clinically depressed patients have suicidal thoughts anyway—in spite of, not because of, an antidepressant drug they might be taking—and some are also violent and self-destructive. If there were such a syndrome, unique to and caused by Prozac, it is too rare to be detected in ordinary studies, which have at most a few dozen, occasionally a few hundred, and rarely, a few thousand subjects. Even Dr. Teicher continued to prescribe Prozac to his clinically depressed patients. But among a tiny minority, idiosyncratic effects to the drug stimulate an impulse to violence and self-destructiveness. The negative publicity surrounding Prozac caused many physicians to switch to other, less notorious antidepressants. Whether this made a difference in their treatment is difficult to say. Like antipsychotics, antidepressants do not have pleasurable effects for the nondepressed drug taker, and are not used recreationally.

SUMMARY

In principle, governments attempt to control the distribution and use of dangerous drugs to minimize harm; one way they do so is through a system of medical prescriptions. Most prescriptions are for "body" drugs without psychic effects. Even most psychoactive pharmaceutical drugs are not taken recreationally; some simply induce sleep, while the effects of others are experienced by most people as unpleasant—for example, the antipsychotics and the antidepressants. Physicians wrote nearly four billion prescriptions for medications in the United States in 2011; pharmaceuticals are a \$320 billion business at the retail level. The largest sectors of the prescription drug market are the anti-cancer agents (\$23 billion), the respiratory agents (\$21 billion), the lipid or fat regulators (\$20 billion), the antidiabetic agents (\$20 billion), and the antipsychotics (\$18 billion).

One condition to which the human central nervous system is vulnerable is anxiety; it prevents normal, everyday functioning as well as the capacity to fall asleep. For millennia, humanity has searched for an agent that would serve as a solution to anxiety and sleeplessness. But medicine aims to devise medications that are both safe and effective, and many drugs achieve one without the other. Sedation often comes at the expense of a certain risk of human life, because depressing bodily functions, including the nervous system, edges perilously close to shutting down vital organs altogether. Alcohol is the most ancient of medications for anxiety, but its effects are too unreliable to serve this function without negative consequences. A variety of other substances have served for a time, but they likewise have proven to be too problematic to remain as a routine medication.

Scientists developed barbiturates early in the twentieth century as an anti-anxiety and sleep agent; they proved effective, and were popular for decades, but they too produced so many harmful side effects that the search for other agents continued. The popularity of the prescription use of the barbiturates plummeted between the 1960s and the 1980s; today, they are extremely infrequently prescribed as an anti-anxiety and sleep aid. However, some recreational drug users have continued to enjoy the hazy, drowsy feeling the barbiturates induce; hence, street use of this drug type has always been modestly popular.

Methaqualone (one trade name: Quaalude) was developed as a nonaddicting alternative to barbiturates; at first, scientists and physicians thought the drug was not habit forming and produced no ataxia (discoordination) or mental clouding and no overdoses. Alas, the doses whose effects researchers originally observed were unrealistically small; at more effective doses, the same harmful side effects as with barbiturates appeared. In fact, in the 1970s, the press seized upon methaqualone partly as a result of its alleged “sex drug” properties and partly because of a few much-ballyhooed overdoses, and so it became the most notorious drug of the 1970s. Methaqualone is currently considered so problematic that its prescription use is banned; even its recreational use has fallen into semioblivion.

The benzodiazepines are the Valium-type “tranquilizers.” Initially released in 1963, between 1969 and 1982, Valium was the most frequently prescribed drug in America. The benzodiazepines remain an extremely popular drug, with more than a half-dozen representatives on the list of the top 200 pharmaceuticals. Unfortunately, they are also frequently associated with emergency department (ED) visits and, more than occasionally, fatal overdoses, or ME (medical examiner and coroner’s) reports.

In the mid-1950s, more than half a million patients were institutionalized in mental hospitals; with the development of antipsychotics (the first was Thorazine), residence in these institutions is currently at an “irreducible minimum”—a small number of patients who are unresponsive to treatment and thus, psychiatrists believe, cannot be released into the community. Most outpatients of mental facilities take one or more of the antischizophrenic agents, which allows them to live in the community without major disruption. The antipsychotics are not addictive (they do not cause a withdrawal symptom) and, in the doses customarily taken, are relatively safe. But antipsychotics do cause side effects, including diminished mental capacity and involuntary movements of the mouth and tongue, tremors, a shuffling gait, and repetitive rhythmic movements, like rocking back and forth. Because they do not have euphoriant effects, users do not take antipsychotics for the purpose of getting high.

Depression is a serious mood disorder that psychiatrists believe responds to antidepressant drugs. Not all observers believe the antidepressants are effective in treating severe depression; anecdotal evidence suggests that some patients have responded negatively, even suicidally, to drugs such as Zoloft, Prozac, and Paxil. It's interesting that antidepressants rank fifth among drug types that cause or are associated with overdose deaths, and that a half-dozen of them rank among the top-selling 200 prescription drugs. As with antipsychotics, the antidepressants don't get the user high and are virtually never used illicitly, on the street, for recreational purposes.

ACCOUNT: Prescription Drugs

Experience with Barbiturates

William, the author of this account, is 44 years old. His father is a successful executive, and his parents divorced when he was young. He was convicted for the manufacture of amphetamine and served 24 months of a 15-year sentence in Oklahoma, "which translates into about six calendar years." In addition, until 2003, he had a 60-year sentence to serve in Texas, for which he had already served 10 years; in that year, he was paroled. William was released from the Oklahoma penal system in 2005. He received a college degree in prison.

I committed many burglaries when I was a teenager. At a certain point in my career as a burglar, when I was 15, I began hitting doctors' offices. The first one I hit was my own oral surgeon. I knew he had good dope since he had knocked me out with it when he was operating on me. Here's how it happened. The big night arrived. I worked with one of my buddies. We dressed like ninjas. Dressed all in black. . . . Plastic bags to haul off our bounty. Mace spray cans in case we were caught. Off we go. The building was unlocked. Up the elevator, down the hallway. I went into the men's room, climbed onto the sink, got up into the hanging tile ceiling, crawled a few feet, and dropped down into the doctor's office. Apparently the doc was moving—everything was boxed up and properly labeled. Anesthetic? Load it up, set it by the door. A tank of nitrous oxide? We'd have to think about that one—after all, we're on foot. We bagged up everything

we wanted to take and set it by the office door. Ding-a-ling! The alarm went off. Arrrrggghhh!! We dropped the goods and took off running down the hall, hitting those stairs two by two. Heat racing, blood pumping. The police will be here any second! Why did I do this crazy burglary? Thoughts were racing through my mind as I reached the door to the street. Hey, wait a minute! There's no more ringing alarm, no bell, no sirens. What we heard was the bell on the doctor's door that announced to the receptionist that someone came into the office. We laughed and went back and got our dope.

At home, we checked out our haul. We had a lot of liquid Valium. Not bad. Frankly, I preferred barbs [barbiturates], not tranquilizers. Actually, we also had some liquid barbiturates—Sodium Brevital [an ultra-fast-acting barbiturate] and Sodium Pentothal [a slow-acting barbiturate], both of which have to be mixed with water. I read the instructions on how to dilute the liquid barbiturates with water. Not good enough, I thought—too diluted. I increased the barbiturate-to-water ratio suggested by the instructions by 10 times. I got the solution, one-third of a cc [cubic centimeter] into a needle and injected it. It gave me the best barb rush I ever felt! Whoosh! Up and down—total euphoria. Then, boom! I opened my eyes to find my partner in a panic. He thought I had overdosed. I gave him a quarter of a cc. His eyes rolled back in his head, he grinned, then slumped over. Eureka! I had found the right dosage. These barbs were great! Shooting barbiturates is the best rush! Better

than speed [amphetamine], better than cocaine. Eventually, I shot every kind of dope I got my hands on, and by far the barb engulfment does it best. Hard to encapsulate in words. It's warm, overwhelming, almost like a sexual orgasm.

The Sodium Brevital was a killer barb—very fast-acting, very short duration. This translates into a bigger, better rush, but it doesn't last very long—you come down quickly. When you take it, the problem was getting up to do another short. You'd wake up and the others may be awake or not. Usually they'd be laid out, dead-looking. Rig [needle] in their arm, sometimes a trail of blood running down their arm, and they'd be drooling. So you'd grab a rig, pull up a shot, and hit it again. Wham! That killer rush! After about 30–45 seconds, you'd slump out. It was like you were in a horror film—everyone was dead around you. You didn't care, you'd just look for the bottle and do it again. Once the bottle was dry, you'd pull yourself together. You'd be wiped out afterwards. Your arms would hurt bad, you'd be so disgusted, you'd swear off “Brevy” forever. Then, after a few months, I'd get that call from my customers, “Hey, you got any more?” I'll bet I was 20 before I ran out of that supply. That stuff was so good. And strange. And dangerous.

Years later, I went to someone's house to score some dope. When I got there, the guy I was dealing with was the only one awake. There were five or six people passed out in the living room. One got up, did a shot, passed back out. I asked my dealer what it was they were shooting. He brought the bottle over to me. The label called it “sleepy time.” The picture on the label showed a dog with Xs for its eyes. It was Brevital, full-strength, used to euthanize dogs! I just burst out laughing. Next time I found it, it was one of the three drugs used in the cocktail for executing prisoners in Texas.

Kinda weird, kinda sickening. I laughed because I know those poor saps on death row go out with a smile, a good rush goodbye. I wonder if any of my friends who spent a whole day jamming a needle in their arm and flopping onto the floor had any idea what the state of Texas uses to kill people with.

QUESTIONS

What do you think this user's motives were in taking barbiturates? Do you think he achieved whatever it was he was seeking? Do his experiences sound enjoyable to you? What's your guess about whether he will use the drug again? Can you imagine him using barbiturates 5 or 10 years into the future? Is this a drug that enhances sociability, or does it diminish it? Compare the social interaction described in this account with those that accompany the use of the other drugs discussed in this book. What about the effects—how do they compare? What about the parallels with alcohol? What does the use of barbiturates tell us about the people who use this drug? Think about these experiences with reference to the relative popularity of the drug. Can you picture combining the use of a barbiturate with another drug? What do you imagine the experience will be like? Is it any wonder that the medical use of barbiturates is extremely limited? After reading this account, do you wonder why societies restrict access to certain psychoactive substances and criminalize their trafficking and possession for recreational purposes? Can you imagine a society in which barbiturates were perfectly legal and freely accessible? Do you think use would rise and medical complications, including overdose deaths, would multiply?

10

MARIJUANA, LSD, AND
CLUB DRUGS

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The chemically miscellaneous substances marijuana, LSD, and “club drugs”—the last of which include Ecstasy (MDMA), Rohypnol, ketamine, and GHB—share important qualities. For one, in the United States, they are more likely to be used among persons with a more-or-less middle-class background than by persons at the bottom of the socioeconomic hierarchy. All tend to be used in conjunction with and as an adjunct to recreational activities, such as dancing, partying, and going to concerts. And all of them are, statistically speaking, less associated with the chronic, day-to-day abuse practiced by the heroin, crack, or methamphetamine addict, the alcoholic, and the cigarette smoker. Socially—the way they are used, who uses

them, and the degree of stigma attached to their use—these drugs stand somewhere in between the legal drugs (alcohol and tobacco) and the so-called hard drugs (cocaine, methamphetamine, and heroin). Because they share these similarities, I'll discuss them as a rough category in this chapter.

MARIJUANA: AN INTRODUCTION

Marijuana is composed of the resin, flowering tops, buds, and leaves of a botanical herb whose Latin name is *Cannabis sativa*. One author describes the plant as “a scrawny weed with an attitude.” Unbelievably “hardy and prolific,” it can thrive under even the harshest growing conditions (Levinthal, 2011, p. 169). So marijuana is not so much a drug as a vegetable substance that contains psychoactive chemicals.

The cultivation of the cannabis or hemp plant, and the use of marijuana as a mind-altering agent, first took place so long ago the date probably cannot be traced. Hart and Ksir's successful and supposedly authoritative drug text, *Drugs, Society, and Human Behavior*, now in its 15th edition (2013)—which contains lots of scientific-looking graphs, charts, brain scans, and models of chemical formulas—states that the earliest reference to marijuana “is in a pharmacy book written in 2737 B.C.E. by Chinese emperor Shen Nung” which recommends cannabis for “female weakness, gout, rheumatism, malaria, beriberi, constipation, and absent-mindedness” (p. 350). This yarn has been told by many authors over the years (for instance, Taylor, 1963, pp. 3, 12, 13, 188; Abel, 1980, pp. 10–11; Earleywine, 2002, pp. 10, 11, 13, 17; Brownlee, 2003, p. 184; Booth, 2003, p. 22), but 2737 B.C.E. is a bogus date and Shen is a legendary, nonexistent emperor. The earliest unified Chinese state ruled by the first true emperor dates only to the third century B.C.E., Chinese writing was not devised until about the 17th to the 11th centuries B.C.E., paper (as distinct from papyrus) did not exist until 2,200 years ago, and the guide to which these chroniclers refer, *Treatise on Medicine*, was actually written in the first century C.E. by an author whose name has been lost to history and whose sources go back only as far as the fourth century B.C.E. But the Shen Nung story is colorful and interesting, so authors keep repeating it; only sloppy scholarship keeps it going. (I would like to thank Iona Man-Cheong, a historian of China, for pointing out these historical facts that render the Shen Nung fable rather than fact.)

But human use of cannabis products is ancient; it goes back much farther than the spurious Shen Nung references. Archaeologists have unearthed Chinese pottery wrapped in hemp fibers that dates to roughly 10,000 years ago. In fact, much of the early use of cannabis was for its fiber, as sailcloth, clothes, paper, and rope, and its seeds, both as birdseed and processed into a variety of oils. And the earliest uses to which marijuana was put for its effects on the mind were as tea, as a medicine, and as a facilitator of religious ecstasy. The *Vedas*, the most ancient Hindu texts in existence, dating to between 2000 and 1400 B.C.E., describe the psychoactive properties of *bhang*, a drink made from the cannabis plant, mentioning its power to “release us from anxiety” (Abel, 1982, p. 19).

The cannabis plant contains some 400 chemicals; 61 of them, called cannabinoids, are found nowhere else. Moreover, different marijuana plants contain varying mixes of this complex brew of chemicals, and, some users claim, different mixes produce different highs.

Because so many chemicals are found in marijuana, its effects, as we might expect, are complex. The drug has been classified at different times by different observers as a hallucinogen, a sedative or depressant, a narcotic, a stimulant, and a psychomimetic (or a drug that can drive the user insane). One pharmacologist refers to marijuana as “a unique sedative-euphoriant-psychedelic drug” (Julien, 1995, p. 330). Usually, marijuana does produce sedation, but that is not one of its most noteworthy or interesting effects. At higher levels of potency, the user may experience some hallucination-like effects, but they are practically nonexistent at lower and much more frequently taken doses. Properly speaking, marijuana belongs in none of the usual drug categories and so, today, most expert observers put marijuana in its own distinct and unique category.

The most prominent psychoactive agent in marijuana among the cannabinoids is Δ -9-tetrahydrocannabinol, or THC for short. Experts agree that, in all likelihood, it is the THC that gets the user high. Different batches of marijuana contain varying proportions of THC. Marijuana from a wild or uncultivated plant growing in a field in the country might yield a batch that is less than 1 percent THC. A batch of average-potency marijuana bought on the street will assay at about 3 percent. Batches from Colombia or Hawaii might be 4 to 6 percent THC. Varieties specially grown without seeds, from California and Hawaii, called *sinsemilla* (meaning “without seeds” in Spanish), may contain as much as 8 percent. Hashish contains the resin of the marijuana flower with no leaves, and usually has a higher THC content than marijuana; 8 to 14 percent THC is common. Hashish usually comes from South or Central Asia and the Middle East; currently, in the United States, it is far less frequently sold than leaf marijuana, although it is common in Europe. “Hash oil,” a relatively rare product made by boiling hashish in alcohol, could be as potent as 50 percent THC. Most users argue that more potent pot does not necessarily get them correspondingly higher so much as it gets them high with less marijuana. Many authorities are not convinced, however, believing that more potent marijuana automatically translates into “higher” highs.

Route of administration is crucial here. In the United States, the most common route of administration for marijuana use is smoking. This fact has important consequences. Smoking is an extremely rapid and efficient means of using a drug; the same principle applies whether we are discussing tobacco, crack, or marijuana. Although some THC is lost because a proportion of the smoke drifts into the air, the smoke that is inhaled enters the lung sacs, quickly passes to their surrounding capillaries, and enters the brain, undiluted. In contrast to oral ingestion, when a substance is combusted, it releases chemicals that are more readily bioavailable in the body. Moreover, taking the fumes of a burning chemical into the lungs can have toxic effects that occur with no other mode of use. These implications take on even more significance as levels of use rise and length of use is prolonged.

Marijuana contains at least two carcinogens that are also found in tobacco: tar and benzopyrene. But, among users, marijuana also tends to be used substantially less frequently than tobacco is, when consumed by the typical cigarette smoker. Then, too, marijuana is inhaled more deeply and held in the lungs for a longer period of time than is true of cigarette smoke. However, a study of over 2,000 subjects found no association between marijuana use—or frequency of marijuana use—and lung, neck, or head cancer; even the heaviest users did not have elevated rates of any of these forms of cancer. (The research, directed by Donald Tashkin, was presented at the

May 26, 2006 meeting of the American Thoracic Society International; interestingly, the results of this study have not yet been published.) Tashkin, a leading pulmonologist, stated that these findings “were against our expectations. . . . We hypothesized that there would be a positive association between marijuana use and lung cancer, and that the association would be more positive with heavier use. . . . What we found instead was no association at all, and even a suggestion of some protective effect” (Kaufman, 2006). In contrast, compared with nonsmokers, two-pack-a-day smokers have a 20-fold increase in lung cancer. A review of 19 studies failed to demonstrate any significant empirical association between marijuana use and lung cancer, after cigarette smoking was controlled (Mehra et al., 2006). The medical consensus at this time is that marijuana does not cause cancer, while tobacco decidedly does. It is even likely, says Mark Pletcher, a medical researcher at the University of California at San Francisco, that the THC in marijuana has “anti-tumorial effects” which “inhibit the growth of a variety of cancers” (Szalavitz, 2012a).

While alcohol is metabolized and passes through the body fairly quickly, THC is stored in the body—specifically the fatty tissue—for long periods of time. The half-life (the period of time after use when half the chemical is still in the body) of THC in the blood is 19 hours, and its metabolites have a half-life of 50 or more hours. After one week, 25 percent of the THC’s metabolites remain in the body; complete elimination may take two or three weeks (Lemberger et al., 1970, 1971). The slow rate of elimination of THC and its by-products suggests that if used regularly, accumulation takes place, which may be medically harmful to the user.

Moreover, these lingering traces may have effects on human behavior, including coordination and the capacity to remember and learn. For instance, one experiment (Yesavage et al., 1985) tested pilots 1, 4, 10, and 24 hours after smoking one marijuana cigarette. Under all four conditions, their ability to perform a landing maneuver in an airplane simulator deteriorated to significantly below normal levels. Interestingly, these pilots did not feel high 24 hours after smoking, and when taking the test at that time, they felt confident that they could fly a plane as well as they could normally—but they couldn’t. Many experts feel that marijuana’s extremely slow rate of elimination could be harmful to users, especially frequent users, since, at the highest levels of use, the drug *never* disappears from the body. On the other hand, there is a positive side to marijuana’s slow absorption: Because it is released into active sites very slowly and traces of the drug remain over long periods of time, an abrupt discontinuation of the use of marijuana does not produce classic withdrawal symptoms. In contrast, heroin and alcohol, which disappear from the body more quickly, do generate clear-cut withdrawal effects.

Marijuana Production and Availability

According to the *National Drug Threat Assessment 2010*, the quantity of marijuana produced domestically, in the United States, is unknown (p. 36). It must be substantial, says the report, judging from the number of plants eradicated by authorities, both outdoors (eight million)—four million on federal lands alone—and indoors (almost half a million). More growers are establishing indoor cultivation “to produce better marijuana and avoid outdoor detection and eradication.” Cultivators “benefit from year-round

production and controlled environmental conditions such as lighting and nutrients” (p. 38). Because it has shifted its priority to fighting terrorists, Mexico has scaled down its eradication program, thereby boosting the potential supply of marijuana in the United States from this source; Colombia and the Caribbean likewise supply a substantial proportion of cannabis to the United States, especially in Florida and the East Coast. This government report paints a pessimistic picture of controlling the distribution of marijuana. The supply and availability of cannabis is likely to continue more or less unabated for some time—indeed, for the foreseeable future. Three features of marijuana cultivation make the drug virtually impossible to eradicate: (1) the enormous range and variety of its sources, (2) the adaptability of these sources, in that busting one operation opens up market opportunities for others, and (3) the cannabis plant’s resilience and hardiness. We’ll look at drug trafficking in more detail in Chapter 14.

Use of Marijuana

Worldwide, as well as in the United States, cannabis is the most commonly used illegal substance and the fourth most widely used psychoactive substance in the world, after caffeine, nicotine, and alcohol. In the *World Drug Report 2012*, the United Nations stated that: “Cannabis has been the world’s most widely produced, trafficked, and consumed illicit drug for decades. Cannabis is consumed by some 75 percent of illicit drug users—some 170 million people.” Marijuana “is consumed and grown in practically every country [in the world] and the overall amounts produced are far larger than the total production of [all] other drugs [combined]” (UNODC, p. 72). The European Monitoring Centre for Drugs and Drug Addiction estimates that in 2008, about 20 percent of persons over the age of 15 living in the European Union (EU) had used marijuana once or more during their lives (<http://annualreport.emcdda.ed.int>). In the United States, marijuana is found practically everywhere. Although regular users are not in the majority in any major social category, nearly all young people have to come to terms with the drug; 82 percent of high school seniors say that marijuana is either “fairly” or “very” easy to obtain (Johnston et al., 2013, p. 83). Marijuana is a very nearly ubiquitous substance.

Marijuana is *by far* the most commonly used illicit drug in the United States; no other illegal drug comes even close. The 2011 National Survey on Drug Use and Health (SAMHSA, 2012) found that four out of ten Americans age 12 and older (42%) have at least tried marijuana once or more in their lifetime, a total of 108 million people; about 12 percent said that they had used once or more during the course of the past year—about 30 million people; and about 1 in 14 (7%) had used during the past month—more than 17 million persons.

The story Table 10-1 narrates is remarkable. As we can see from the last line in the national household data, marijuana use in the general population was flat over the course of the 1990s; the differences between 1991 and 1998 are almost nonexistent. However, the increases in use among 12- to 17-year-olds during this period went from 10 to 14 percent for use in the past year, and a doubling for use in the past month, from 4 to 8 percent. Monitoring the Future’s survey reveals much more substantial increases during the past two decades. Between 1991 and 1998, all levels of marijuana use evidenced remarkably large increases for all grades—a tripling for last-month use for

TABLE 10-1 Percentages, Marijuana Use, 1991–2011/2012, NSDUH and MTF

Age	1991			1998		
	Ever	Year	Month	Ever	Year	Month
12–17	13	10	4	17	14	8
18–25	51	25	13	45	24	14
26–34	60	15	7	48	10	6
35+	24	4	2	29	4	3
Total	33	10	5	33	9	5

Age	2005			2011		
	Ever	Year	Month	Ever	Year	Month
12–17	17	13	7	18	14	8
18–25	53	28	17	52	31	19
26+	41	7	7	43	8	5
Total	40	10	6	42	12	7

Grade:	1991			1998			2005			2012		
	Ever	Year	Month	Ever	Year	Month	Ever	Year	Month	Ever	Year	Month
8 th grade	10	6	3	22	17	10	17	12	7	15	11	7
10 th grade	23	17	9	40	31	19	34	27	15	34	28	17
12 th grade	37	24	14	49	38	23	45	34	20	45	36	23

Sources: National Household Survey on Drug Abuse, NIDA, 1991; SAMHSA, 1996, 1998, 2012; Johnston et al., 2013.

the eighth grade, a doubling for the tenth, and an 8 percent increase for seniors. During the 2000s, however, for both NSDUH and MTF, the numbers seemed to have declined a bit and then flattened, even for MTF. What Table 10-1 says is that substantial numbers of young people are beginning marijuana use, and incorporating it into their lives, at an increasingly early age. Whereas a decade and a half ago, it was the modal, or most common, pattern for users to initiate marijuana consumption by the 10th grade, or roughly at the age of 15, the modal pattern now seems to be a year or two years earlier than that. During the 1990s, marijuana use was ratcheted up a notch. And even though use has been either fairly stable or slightly diminished since then, it has not yet fallen back to early 1990s levels.

Acute Effects of Marijuana

As we saw in Chapter 5, in the 1930s, the media emphasized—even fabricated—the acute effects of marijuana: Under the influence, the user can go crazy, become violent, and rape, plunder, and kill. In contrast, currently, it is the *chronic* effects that are the

center of researchers'—and the media's—attention. In fact, other than the high or intoxication that users find mostly pleasant, the acute effects of cannabis tend to be rather superficial: a reddening of the eyes, a slight increase in the heartbeat rate, and a dryness of the mouth. Blood-sugar levels, which regulate hunger, are curiously unchanged by the drug, despite the fact that many users report becoming ravenously hungry under the influence. As we saw in Chapter 3, the ratio between effective dose and lethal dose for marijuana is extremely wide; when it comes to death by overdose, there is an enormous “safety factor” with marijuana. Marijuana is one of the least toxic drugs known to humans. One pharmacologist states, “no overdose deaths due to marijuana have been reported” (Goldstein, 2001, p. 202). In many cities, marijuana is mentioned with a certain frequency in the Drug Abuse Warning Network's (DAWN's) medical examiner (ME) reports, but these tend not to be single-drug episodes. As we saw in Chapter 3, there is a biochemical reason for the drug's low level of toxicity: There are no receptor sites (or “locks”) in the brain that regulate breathing or heartbeat rate into which marijuana chemicals (the “keys”) fit.

Contemporary research has demonstrated beyond any doubt that marijuana deteriorates motor coordination and impairs performance on driving tests. The more complex and unfamiliar the task, the more inexperienced the subject is with marijuana, and the more intoxicated the subject is on the drug, the greater the degree of discoordination (Canadian Commission of Inquiry into the Non-Medical Use of Drugs, 1972, pp. 62–63, 131–144). One study (Barnett, Licko, and Thompson, 1985) found that levels of THC in the blood correlate significantly with lower performances on the motor tasks that are necessary for driving. In a posthumous sample of more than 400 male drivers in California age 15–34 who had been killed in an auto accident, 81 percent were found to have one or more drugs in their blood samples (Williams, Peat, and Crouch, 1985); alcohol was present in 70 percent of the cases, THC in 37 percent, and cocaine in 11 percent. THC alone was found in one of eight of these drivers. Marijuana users are significantly over-represented in fatal automobile accidents in terms of their numbers in the population; chances are, marijuana use contributes to a greater number of deaths and accidents on the highway. Marijuana consumed a day before engaging in a complex motor task still exerts a detrimental effect on coordination (Yesavage et al., 1985). Again, the discussion in Chapter 3 supplies the answer as to why marijuana impairs coordination: It binds to receptor sites in the cerebellum, which controls motor coordination. Alcohol remains the number one drug in this regard, although the additive effects of alcohol and marijuana should give anyone concern.

What about the drug's *psychic* acute effects? What does it feel like to be high on marijuana? What do users describe as the subjective effects of this drug?

The many interview studies and summaries that were published over four decades ago (for instance, Goode, 1970; Tart, 1971; Hochman, 1972) have produced a more or less consistent picture of marijuana's subjective effects; users describe pretty much the same effects today. In my interview study, the most common response was that the user felt more peaceful, more relaxed, under the influence of marijuana; 46 percent mentioned this effect spontaneously—without direct prompting or formal questioning on my part. Thirty-six percent said that they felt their senses were more “turned on,” that they were more sensitive in almost every way that was true normally. Thirty-one percent said that they felt their thoughts were more profound, deeper—that their

thoughts ran in a more philosophical and cosmic vein. Twenty-nine percent said that everything seemed much funnier than usual—they laughed much more than they did when they were straight. Recent reviews of the relevant literature (Abadinsky, 2014; Goldberg, 2013; Levinthal, 2011; Maisto, Galizio, and Connors, 2010) find very much the same thing.

What is the general impression conveyed by studies of the subjective or psychic effects of marijuana intoxication? Which experienced and described effects stand out as most common? The most obvious and dominant impression is that *users overwhelmingly describe their marijuana experience in favorable and pleasurable terms*; they like what they feel. This is not to say that they never experience unpleasant effects; for instance, studies indicate occasional feelings of paranoia under the influence in a minority of users. (Fear of arrest is based on a very real possibility.) But the pleasant effects are by far the most common. *Most users, most of the time, enjoy their marijuana experiences.*

A second impression conveyed by these descriptions is that marijuana use is largely a recreational activity. The vast majority of effects reported by users are whimsical in nature: happy, silly, euphoric, relaxed, hedonistic, sensual, foolish, and decidedly unserious. Moreover, marijuana use is commonly associated with highly pleasurable activities: eating, having sexual intercourse, listening to music, watching a film, attending a party, socializing, and so on. The most common periods of use for most marijuana smokers are specifically during these recreational moments. The high is deliberately sought as a means of intensifying enjoyable experiences. The drug tends not to be used—or is used far less—during more serious periods, such as studying or reading. Moreover, these serious activities are felt to be impaired while under the influence of the drug, in contrast to the recreational activities, which are felt to be improved by the drug's effects. For instance, in my sample, only a third said that they had ever read anything while high, and of this group two-thirds said that the experience was worsened by the drug. But 85 percent had listened to music while high, 75 percent had had sexual relations, and 75 percent had eaten food; about 90 percent of those who reported these experiences said that the drug made them more enjoyable. Marijuana is used as a means of enhancing pleasurable activities but not in conjunction with activities which require intellectual effort or precision and motor coordination.

Chronic Effects of Marijuana

Today, observers and critics worry more about the chronic effects of marijuana than about its acute effects. This fear dates back to the 1960s, when it was thought that using marijuana was largely confined to high school and college dropouts. Later, specific and concrete medical damage was added to a growing list of chronic harms. In 1974, fearing a growing “epidemic” of marijuana users in the nation, Senator James Eastland conducted a series of Senate subcommittee hearings, later published in the volume *Marihuana-Hashish Epidemic and Its Impact on United States Security*. Two dozen “experts” presented data presumably demonstrating that marijuana is a dangerous, damaging drug. Eastland assembled witnesses specifically known for their anti-marijuana stance; any researcher who had conducted a study finding that marijuana was not harmful was not invited to deliver testimony. “We make no apology,” Eastland stated, “for the one-sided nature of our hearings—they were deliberately planned that way” (Eastland, 1974, p. xv).

Some of marijuana's ravages, these witnesses claimed, were brain damage and "massive damage to the entire cellular process," including chromosomal abnormalities. The drug "adversely affects the reproductive process," causing sterility and impotence. And it causes cancer and (the only nonorganic entry in this list) a life of lethargy and sloth, called the "anti-motivational syndrome." Eastland concluded from this testimony that if the "cannabis epidemic continues to spread . . . we may find ourselves saddled with a large population of semi-zombies." Are Eastland's expert witnesses correct in viewing marijuana as medically dangerous and damaging? What is the consensus in the scientific and medical community on marijuana's long-term effects?

Contradictory Research Findings

Studies on the chronic effects of drugs are fraught with complications. There may be an empirical correlation between the use of marijuana and a certain medical pathology, but a cause-and-effect relationship may not exist at all; marijuana use may be related to a third factor that, in turn, actually causes the medical pathology. Some studies tracing the medical impact of marijuana have been shown to be faulty specifically because of this complication; the results obtained were based on experimental or measurement error. For instance, one study suggested that marijuana use may damage the liver (Kew et al., 1969). However, a later study attempted to replicate this finding and failed to do so (Hochman and Brill, 1971); its data refuted those of the original liver damage study. It turns out that the original study had not controlled for the marijuana users' alcohol consumption. When the subjects were asked to refrain from drinking alcohol, their liver functioning reverted to normal. So the abnormal livers the researchers saw in their subjects were related not to the subjects' marijuana use, but to the fact that many of them also drank alcohol, a number of them heavily. One major difficulty in tracing marijuana's medical effects is that there are relatively few marijuana-exclusive drug users. Many also smoke cigarettes, most drink, and a substantial percentage have had experience with other illicit drugs as well.

One study purported to demonstrate that marijuana causes "cerebral atrophy"—a shrinking and shriveling of the brain (Campbell et al., 1971). However, its research methodology turned out to be flawed: Its sample consisted of mental patients, all of whom were also users of more dangerous drugs as well. Two more carefully conducted studies found no indication of cerebral atrophy in marijuana users (Kuehnle, 1977; Co et al., 1977). A somewhat notorious study conducted by Tulane medical researcher Robert Heath entailed strapping Rhesus monkeys to chairs and attaching gas masks to their heads; the smoke from marijuana joints was passed into the gas masks of each monkey. The monkeys were forced to inhale the smoke; none was lost to the air. Brain damage was characteristic of the animals when they were dissected, and Heath claimed that the study demonstrated that marijuana damages the brain. An equally plausible explanation is that the monkeys suffered from asphyxia and carbon monoxide poisoning. This study was widely criticized by the medical fraternity, and is not often cited in the scientific literature. At the same time, the American Council on Marijuana, an anti-marijuana propaganda organization, on whose scientific advisory board Dr. Heath sits, distributes a pamphlet by Dr. Heath, "Marijuana and the Brain" (1981), which summarizes the monkey study.

One study purported to find that chronic marijuana users manifested a significantly lower testosterone level. Testosterone is the major male sex hormone that, if insufficient, can lead to impotence and sterility (Kolodny et al., 1974). However, soon after this study was published, another one appeared and concluded that marijuana had no connection at all to testosterone levels in the male (Mendelson et al., 1974). One study revealed extensive chromosomal damage as a consequence of marijuana (Stenchever et al., 1974). This study, one propagandist claimed, demonstrated that marijuana users exhibited “roughly the same type and degree of damage as in persons surviving atom bombing with a heavy level of radiation” (Jones, 1974, p. 210). However, another study did not bear out the original result; the chromosomes of users and nonusers turned out to be almost identical (Nichols et al., 1974). One research team produced laboratory results that indicated that marijuana users’ white blood cells demonstrated a lower capacity to fight disease; their “cellular immunity” was distinctly diminished (Nahas et al., 1974). However, this finding is challenged by later research that shows no difference between users and nonusers in the resistance of their blood cells to disease (Lau et al., 1976; Hollister, 1988).

Until very recently, the only finding that seemed not to have been refuted or seriously qualified elsewhere indicated that heavy, chronic cannabis use is related to impairment of lung functioning (Morris, 1985; Tashkin, 2005). On the surface, to most observers, this conclusion seemed to make a great deal of sense. After all, marijuana is smoked just as cigarettes are smoked, and it is inhaled more deeply and held in the lungs for a longer period of time. When cannabis and tobacco cigarettes are smoked in the same way, marijuana produces more than twice as much tar as tobacco does (Rickert, Robinson, and Rogers, 1982). Avram Goldstein says that marijuana smoke “contains more carcinogens than tobacco smoke, so lung damage and cancer are real risks for heavy smokers” (2001, p. 201). But as we’ve seen, marijuana smoking is not related in any way to lung cancer. In any case, impaired pulmonary functioning is one finding that—until the last couple of years—remained fairly “robust” when studied by different researchers.

As I pointed out, however, in 2012, a research team at several medical schools and hospitals followed a sample of 5,000 users and found *no* harm to pulmonary functioning as a result of 20 years of marijuana use (Pletcher et al., 2012), a finding remarked upon by Donald Tashkin, who told *Time* magazine that these findings were “essentially confirmatory of the findings of several previous studies,” including his own, that had found that marijuana smoke does not harm the lungs in moderate users. The study was “the largest and longest study ever to consider the issue” (Szalavitz, 2012a). In 1985, the sample, age 18–30 and healthy at the time of intake, was taken from four communities (Chicago, Minneapolis, Birmingham, and Oakland, California); nearly seven out of ten remained in the program for the 20-year term, and the research team examined them four times after intake, assessing current and past cigarette and marijuana use. The research team divided the sample into respondents who smoked tobacco only, marijuana only, and both tobacco and marijuana. The average consumption of tobacco (8–9 cigarettes per day) was substantially more than that of marijuana (2–3 joints during the past month). The result of the study indicated that lung functioning, as measured by “forced expiratory volume” and “forced vital capacity” of the lungs, was diminished in a linear fashion by cigarette smoking, but seemed to have improved at low-to-average levels of marijuana

use, though it possibly worsened at the highest levels of use. The research team's data, they say, suggests that the occasional use of marijuana "may not be associated with adverse consequences on pulmonary function. It is more difficult to estimate the potential of regular heavy use because this pattern is relatively rare in our study sample; however our findings do suggest an accelerated decline in pulmonary function with heavy use and a resulting need for caution and moderation when marijuana is considered" (Pletcher et al., 2012, p. 180).

Some researchers suggest that the reason for the contradictory findings that have turned up in most of the studies conducted is that the drug's effect on organs and functions of the body is fairly weak. When a substance exerts a weak effect, some studies will produce positive results and some will turn up negative ones—especially if different measures or instruments are used. For instance, cannabis may produce some chromosome breakage, but very little, and it is likely to be detected only in extremely sensitive tests (Morishima, 1984). Marijuana may lower testosterone functioning in males, but even the lowered rate is typically within normal limits (Harclerode, 1984). Marijuana administered to pregnant animals decreases the birth weight some in offspring, but in humans, the amount of fetal birth weight loss is insignificant (Abel, 1985), if not nonexistent (Tennes et al., 1985); moreover, young children born to marijuana-smoking mothers do not display poorer functioning on various intellectual and motor tests. The evidence that marijuana smoking lowers the body's resistance to disease and infection "remains inconclusive" (Cohen, 1987, p. 82). And smoking, in and of itself, occludes the lung's functioning, but the effect is transitory, and the long-term effect of the nicotine in tobacco is of an entirely different order of magnitude from that—if it has any effect at all—of marijuana. Since most users smoke marijuana relatively infrequently, they do not suffer any lung damage whatsoever; the few who are heavy users may very well experience a diminution of lung capacity over years of use.

Is Marijuana Dangerous?

Is marijuana a dangerous drug? Some experts believe that evidence suggests that the effects of the drug are not as innocuous as is widely believed. We know that marijuana is one of the least toxic drugs known to humanity; as we saw, it is virtually impossible to die of a cannabis overdose. We know that it does not produce the kinds of withdrawal symptoms that heroin and the barbiturates do; it is not "addicting" in the classic sense of the word. We know that many of the chronic effects that have been claimed for the drug (such as those discussed in the previous section) have not been confirmed by subsequent researchers. Nevertheless, could marijuana be harmful in some way that has not become widely known? Some researchers believe so. During the 1990s, several studies were conducted that led them to this conclusion. Several news stories have picked up on this "dangerousness" theme, confirming the conviction among most lawmakers and a majority of the public that this drug should not be legalized or decriminalized (Anonymous, 1996; Blakeslee, 1997). Here are a few of the findings of this new and possibly still evolving line of research.

As we saw in Chapter 3, the effects of a drug depend on the match or "fit" between the chemical structure of the drug and the location and function of certain receptor sites. While marijuana's chemicals do not fit with receptors in the brain stem, which is the

location of sites that regulate breathing and heartbeat, the cerebellum and the hippocampus, in contrast, are rich in marijuana receptor sites. Hence, it is highly likely to impair thinking, learning, and memory, as well as other crucial cognitive processes. (Permanently? Researchers are still working on the issue.) According to Miles Herkenham, research neuroanatomist at the National Institute of Mental Health (NIMH), “It’s completely different from all the other drugs” (Anonymous, 1996).

One team of researchers discovered that a specific chemical compound which blocks the binding of THC to the body’s receptors, when injected into rats regularly administered THC, will cause those rats to undergo withdrawal symptoms (Tsou, Patrick, and Walker, 1995). Another team of researchers discovered that the dopamine levels in rats injected with chemically active marijuana surged to a level as high as that of another group that was given heroin. The capacity of the brain to produce dopamine diminishes over time, and hence, potentiates the mechanism that is referred to as tolerance. Since dopamine is the chemical that regulates feelings of reward, and hence, reinforcement, some researchers believe that these findings suggest that marijuana may generate a dependence not essentially different from heroin and cocaine (Tanda, Pontieri, and Di Chiara, 1997; Swann, 1995). Yet another team of researchers injected rats with a synthetic form of cannabis once a day for two weeks, then administered another drug which nullified the effect of marijuana’s principal active ingredient. This threw the rats into withdrawal; they exhibited teeth chattering and compulsive grooming behavior. The levels of a particular chemical in the brain, which is commonly found when addictive drugs are withdrawn, were two to three times the normal level (De Fonseca, 1997). It is entirely possible, these researchers suggest, that not only does marijuana produce a dependence that is far higher than is currently believed, but the drug may also “prime” the brain’s pathways for harder drugs of abuse.

These research lines are still in the process of development, but so far, they have revealed nothing definitive. They concentrate almost entirely on laboratory animals rather than humans. They rely for the most part on forced administration of marijuana rather than free choice by these animals, and they administer extremely large doses of the drug rather than those that correspond with realistic doses of the drug, like those that are taken in real life. Keep in mind that studies of long-term marijuana smokers do not produce gross or major clinical, psychiatric, psychological, or social differences between users and nonusers, or between heavier and lighter users (Gruber, Pope, and Oliva, 1997). The lack of correspondence between animal experiments and human epidemiological studies probably indicates that, for some purposes, the results of lab research on nonhumans should not hastily be extrapolated to effects among human users. Today, most researchers do *not* believe that these 1990s marijuana “pathology” studies will produce convincing evidence that the drug is significantly harmful. But some investigators keep looking.

Who Uses Marijuana?

What factors and forces lead someone to “turn on” to marijuana? More important, what causes someone who tried the drug to become a regular user? It is fallacious that any behavior as complex as the use of drugs, or any one drug, can be explained completely by one factor or variable, or even a single integrated theory. Many factors, forces, and

mechanisms contribute to the use of drugs in general, to the use of a single drug, even to drug use by a specific individual. Several empirical regularities are associated with illegal psychoactive drug use generally, and marijuana specifically. These correlations apply to each and every drug in this chapter and, in all likelihood, even more broadly, to recreational, psychoactive drug use in general. They are not in doubt; they are “robust” relationships, solidly documented, independently confirmed by different researchers in different locales, and constant over time. But why? The issue is still being debated.

A team of researchers (Radosevich et al., 1980) distinguished three interrelated sets of variables that are causally related to marijuana use: (1) structural variables, which include sociodemographic factors such as age, sex, social class, race, and community or region of residence; (2) social-interactional variables, which pertain to interpersonal relationships, or the likelihood of associating with and relating to individuals with varying degrees of involvement with marijuana, or its correlates and accompaniments (an example would be one’s friends’ use of marijuana, or use patterns in one’s peer group); and (3) attitudinal variables, including behavioral factors, that point to one’s views of both the drug itself and behavior associated with its use (beliefs about whether the drug is harmful and the user’s willingness to break the law are two examples of this dimension). These three sets of variables overlap a great deal; they cannot be sharply or cleanly separated.

Age

The structural variable most strongly correlated with the use of marijuana is age. If we had to select one major characteristic to predict whether a given individual uses or has used marijuana, we could not make a better selection than age. The use of marijuana is low in the early teenage years, rises throughout the teen years, peaks in the late teens to early twenties, and declines steadily after that; it is far less likely to be used after the forties. The data gathered by the 2011 NSDUH verify this picture. The likelihood of smoking marijuana at least once during the past month skyrockets 40 times from the age of 12 (0.4%) to the age of 15 (8.9%), then nearly doubles by age 17 (16.6%), and increases again by age 20 (22.9%). But it decreases by age 22 (18.5%), and decreases again by age 25 (15.5%); in the late thirties, use over the past month is a one-in-16 proposition (6.3%); in the early sixties, one person in 100 is a current marijuana user (2.2%), and for persons 65 or older, that number falls to under one out of 100 (0.7%). As we’ve seen before, this same strongly age-graded pattern prevails with a wide range of criminal and “deviant” activities. So robust is this general pattern that some observers regard it as *invariant* across time and among societies everywhere (Gottfredson and Hirschi, 1990, pp. 124–144).

Two life circumstances that are connected with the adolescent-to-young-adult range (the mid-teens to early twenties) relate to unconventional behavior: a growing independence from adult supervision, and relative freedom from adult responsibilities. Older teenagers are in the process of discovering what it means not to be supervised by their parents as closely as before, but at the same time, they have not yet assumed the responsibility of supporting a household or raising children. A team of researchers summarized several variables that are related to the use of drugs, especially marijuana, and concluded that they have one thing in common: They all “have to do with the

degree to which a young person is under the direct influence and/or supervision of adult-run institutions. . . . Those who most avoid such influence are also the most likely to be involved in all forms of substance use,” marijuana included (Bachman, Johnston, and O’Malley, 1981, p. 67). The same explanation applies to the decline in use after the age of 20 or so. That is, while the 18- to 20-year-old age range maximizes freedoms and minimizes responsibilities, as a young person moves into his or her twenties, conventional responsibilities increase: marriage, children, full-time work. Thus, their marijuana use and the use of other illicit substances, as well as their involvement in other illegal and “deviant” activities, tend to decline as well (Bachman et al., 1997; Bachman et al., 2002).

Sex

Although there are many exceptions to this rule, in general, males are significantly more likely to use marijuana than females; this disparity becomes increasingly pronounced as level of use increases. For instance, in the MTF survey of secondary, college, and non-college youth, the male-female ratio grows from 1.2 to 1 for lifetime use to 2.7 to 1 for daily use, which the researchers define as use 20 or more times in the past month. In sum, then, males are *slightly* more likely than females to use marijuana at all, *considerably* more likely to use it regularly, and *much* more likely to use it heavily and frequently. As a general rule, the greater the level or frequency of use, the greater the male edge. Males are significantly more likely to take risks and engage in more deviant, criminal, and unconventional behavior than females are, regardless of the specific activity in question. (The few exceptions relate specifically to deviant female roles, such as prostitution.) Certainly, the male-female edge in criminal behavior, especially in violent crime, bears out this generalization. Differences in risk taking and a willingness to engage in rule violations and crime could help explain the male-female differences in marijuana use we observe, especially at the higher or more frequent levels.

Peer Influences

The term *peer pressure* seems to imply that youngsters are forced to engage in activities they find distasteful and would otherwise not have engaged in in the absence of this pressure. *Peer influence* is not the same thing as *peer pressure*. Peer influence implies a *reciprocal* or two-way relationship between a youngster and his or her friends, rather than a one-way pressuring. (It is interesting that the term “peer pressure” is almost always used to apply to activities someone who uses the term doesn’t approve of.) The use of marijuana by an individual’s friends is massively and overwhelmingly correlated with one’s own use of the drug. Adolescents report more similarity with their friends in marijuana use than in any other activity. Of all things that friends have in common—except for obvious demographic characteristics such as age, sex, and race—they are more likely to have the use of marijuana in common than anything else (Kandel, 1973, 1974). Youngsters whose best friends have never tried marijuana are extremely unlikely to have tried the drug themselves. On the other hand, young people whose best friends smoke marijuana are extremely likely to do so themselves. Almost no one becomes involved in marijuana use who does not have marijuana-using friends. This influence operates in all other aspects of one’s life, both favorable and unfavorable; it is not unique to drug use..

The fact that marijuana use flows from friend to friend, within and among social intimates, demonstrates the fallaciousness of two classic but outdated beliefs concerning the drug: (1) the “peddler” myth, that young people use drugs mainly because they are induced to do so by drug sellers, and (2) the “outcast” myth, that someone uses marijuana because he or she is frightened, lonely, isolated, or forlorn. Neither assumption is borne out by the facts. Young people are turned on by their friends, specifically because they value the opinions and activities of their friends. In countless studies on the subject, the principal motivating force underlying turning on is that the person’s friends use marijuana. Young recreational drug users tend to have more intimate friends than nonusers (Kandel and Davies, 1991).

Marijuana users tend to be “heavily involved in social networks” in which marijuana use “is prevalent and tolerated.” The marijuana use of someone’s friends (and spouse or partner) increases “dramatically” with his or her own use. In one study, 85 percent of men age 24 or 25 who used marijuana four or more times a week said that most or all of their friends were also users, as opposed to 60 percent of those who used the drug between two and three times a month and two or three times a week; 23 percent of those who used less than once a month; 16 percent of those who had used, but not in the past year; and only 7 percent of those who had never used marijuana. For women the same age, the comparable figures were 96, 68, 36, 14, and 6 percent (Kandel, 1984, pp. 205, 206). The association between friends’ use of marijuana and one’s own is remarkably strong.

Unconventionality

Researchers have located a large number of attitudinal and behavioral correlates and antecedents of marijuana use. One such commonsensical variable is the perception or belief that the drug is relatively harmless. Individuals who believe that the effects of marijuana are benign, that the drug is not likely to harm them, are significantly more likely to try it and use it than those who believe that it is harmful (Kandel, Kessler, and Margulies, 1978, pp. 12, 28).

Marijuana users have also been found to be more politically liberal than nonusers. The more politically conservative the individual, the lower the likelihood of his or her smoking marijuana; the more politically liberal or left-leaning his or her ideological views, the higher is this likelihood (Johnson, 1973, pp. 54, 60; Kandel, Kessler, and Margulies, 1978). Another powerful and enduring relationship exists between alienation from traditional religious expression and the use of marijuana. The stronger the religious belief and the more frequent the religious observance, the lower the chances of smoking marijuana; the less traditionally religious and the less religiously observant, the greater the likelihood of marijuana use (Johnson, 1973, pp. 54, 56–57; Kandel, Kessler, and Margulies, 1978). Finally, marijuana users tend to be less traditional in the realm of sexual belief and practices. They are more likely to engage in sexual intercourse earlier in their lives, to have had intercourse with a greater number of partners, and to approve of more unconventional, unorthodox sexual practices. In contrast, nonusers tend to be more traditional in the sexual arena and have sex later in their lives and with fewer partners (Johnson, 1973, p. 153f; Hochman and Brill, 1973; Hochman, 1972, p. 104). Marijuana use does not “cause” this greater sexual activity, since it frequently takes place even before the individual uses the drug for the first time.

What these attitudinal and behavioral correlates of marijuana use have in common is a broader “lifestyle” dimension. Marijuana users tend to differ from nonusers “on a cluster of attributes reflecting unconventionality, nontraditionality, or non-conformity.” They display tolerance for deviance, immorality, and normative transgression, and exhibit greater rebelliousness against rules and regulations, especially those issuing from the parental generation, and a higher expectation for independence or autonomy. Marijuana users tend to be more willing to violate the norms of the society, to deviate from conventionality and tradition in a wide range of ways. They also tend to be risk takers in comparison with nonusers. They have a greater receptivity to new experience, “to uncertainty and change as against an emphasis on familiarity and inflexibility”; they are somewhat less likely to say “I shouldn’t do that” when faced with an alternative that appears tempting but a bit risky or laden with danger (Jessor, 1998).

In sum, the use of recreational drugs generally, and of marijuana specifically, is strongly related to *psychosocial unconventionality*. Not only do these generalizations hold when comparing users with nonusers, but they also hold when comparing heavy with light users and users with nonusers; unconventionality is a continuum, not an either-or proposition. This dimension covers many different areas of life; “the use of marijuana is not an isolated behavior but is part of a larger constellation of behaviors” (Jessor, Donovan, and Costa, 1986, p. 35). This includes precocious and unconventional sexual behavior, heavier involvement with other drugs, greater aggression and delinquency, and more tolerance for unconventional and “deviant” behaviors. It also includes a lesser degree of involvement with traditional institutions. This manifests itself in a more critical attitude about conventional social norms, a lower level of academic achievement, and a weaker link with—indeed, indifference to—conventional religious beliefs and practices (Jessor, 1983, pp. 24–25). This pattern “has been shown to be relatively invariant over time” (Jessor, Donovan, and Costa, 1986, p. 37). In all likelihood, the connection between marijuana use and unconventionality will remain through the foreseeable future.

Progression to More Dangerous Drugs

Earleywine (2002, pp. 49–52) draws a distinction between marijuana as a “stepping-stone” and marijuana as a “gateway” to more dangerous drugs. Referred to as a stepping-stone, he argues, the ingestion of marijuana is regarded as a cause of the use of drugs such as heroin and crack cocaine; referred to as a gateway, marijuana use is simply a precursor or one of many factors that, statistics demonstrate, “lead to” the harder drugs. The problem, Earleywine says, is that most observers and even experts are unable to tell the difference between causality and “simple precursors.”

As we saw above, the recreational use of every psychoactive drug (both legal and illegal) is correlated with use of every other psychoactive drug (again, both legal and illegal). Individuals who take or use any given drug for pleasure are statistically more likely to take or use any other drug than is someone who does not take or use that given drug. Adolescents who smoke cigarettes and drink alcoholic beverages are more likely to go on to use marijuana in the future than those who have not and never will use tobacco or alcohol. Marijuana users are disproportionately drawn from the ranks of individuals who use legal drugs. When we ask who uses marijuana, our answer must

include drinkers and cigarette smokers as well (Kandel, 1980b). The same applies to the users of marijuana: They are statistically more likely than nonusers to use the more dangerous drugs.

The correlation between the use of marijuana and the use of all other drugs is an extremely robust one. Every researcher who has investigated the issue systematically and empirically—myself included (Goode, 1969, 1970)—has found a strong positive relationship. There is no question about its existence: Marijuana users are more likely to use any and all illegal dangerous drugs than are nonusers; and the more marijuana one uses, the greater the likelihood. Moreover, the earlier in life that one uses, the greater the probability that one will try and use a wide range of illegal drugs, including cocaine, heroin, and the hallucinogens. In addition, the more frequently one uses marijuana, and the earlier in life, the greater the likelihood of using and becoming seriously involved with other illegal drugs.

To reiterate: The evidence supporting these relationships is overwhelming, persuasive, and incontrovertible. No one in the field of drug studies questions the validity of the strong, positive, and significant correlations between the use of marijuana and the use of other illegal dangerous drugs. The only question that exists is the causal mechanism underlying the relationship. Why does it prevail? Why are marijuana users significantly more likely to use other drugs than nonusers, heavy users more likely than light users, and early users than later ones? What impels more of them to progress to other illegal psychoactive substances?

There are three schools of thought on these questions. The first could be called the pharmacological school; the second is the sociocultural school; and the third could be called the predisposition school.

The Pharmacological School

The proponents of the *pharmacological school* (Jones, 1974, pp. 236–237, 249; Jones and Jones, 1977; Nahas, 1990) argue that there is something inherent in marijuana use itself—the experience of getting high on the drug, which is caused by its pharmacology—that leads to the use of and dependence on more dangerous drugs. The causal mechanism here lies within the drug itself—or, more properly, in the interaction between marijuana and the human brain. This mechanism does not rely on the intervention of any outside factors or variables. Rather, the relationship between marijuana use and the use of more dangerous drugs is a constant, and it occurs in all social categories at a more or less uniform rate. A given number of marijuana smokers translates into another specific number of heroin or cocaine addicts after a given period of time. The correlation between marijuana use and the use of more potent psychoactive substances is, in effect, a process resembling a biochemical or pharmacological reaction.

Artificial, drug-induced pleasure, the argument goes, is temporary. When drugs are taken for pleasure over a period of time, the user becomes tolerant and therefore desensitized to the pleasurable sensations the drug normally delivers. Thus, the user must take the drug more often. The experimental, episodic user must increase his or her frequency of drug use until he or she takes the drug daily and becomes physically and psychically dependent. Still, desensitization continues, and the pleasure continues to diminish. Consequently, the user must take a drug with more potent effects. “The demand for pleasurable sensations caused by *Cannabis* will require in time larger and

larger amounts of the drug. A biological urge will develop to substitute more potent drugs for *Cannabis*, in order to reach a similar feeling of detachment from the world” (Nahas, 1973, p. 276). Hardin Jones, an anti-marijuana propagandist, claims that his “statistical computation” demonstrates that 10 percent of all daily marijuana users become heroin addicts within three years (Jones, 1974, p. 236). The mechanism? He claims that *cross-tolerance* is to blame, pointing to “some similarity in chemical action,” which is to be expected “because of the marked similarity in chemical structure between opiates and cannabinoids. . . . In my studies,” Jones states, “daily users who have transferred to heroin use do not show withdrawal symptoms,” which is, he claims, “an indication of cross-tolerance. Cross-tolerance enables cannabis users to have increased sensual effects from heroin without the unpleasant withdrawal symptoms of cannabis” (p. 237). Interestingly, Jones does not present concrete evidence either in this publication or in any other; his “studies” seem not to extend beyond his assertions.

On a more evidentiary level, two sociologists (O’Donnell and Clayton, 1982), arguing for the pharmacological or *intrinsic school*, claim that their evidence shows that “marijuana is a cause of heroin use in the United States.” They make this claim on the basis of a rule dictating that if (1) two variables are statistically associated, (2) one variable is prior to the other at the relevant time, and (3) the association does not disappear when the effect of a third variable is removed, then the relationship between the two variables is causal in nature. They hold that this is the case with marijuana use and heroin addiction, that the association between these two variables meets these three criteria. The metaphor used by the pharmacological school is that of a conveyor belt. Heroin addiction, and the heavy, dependent use of all dangerous drugs, are seen as later stages of a process that begins with experimental marijuana use. If marijuana use is halted, slowed down, or diminished, fewer users of hard drugs will be produced at the other end. (And some individuals on the conveyor belt fall off, but the process continues nonetheless.)

Laboratory evidence does not support the pharmacological, physiological, or “conveyor belt” theory of marijuana as a gateway drug. For one thing, “If marijuana created physiological changes that increased the desire for other drugs, animals exposed to cannabis would ingest other intoxicants when given the opportunity. . . . No animal experiments have found that exposure to THC increases the likelihood of using other drugs” (Earleywine, 2002, p. 51). Secondly, the likelihood of a marijuana user progressing to harder drugs is quite small. Tabulating the data from the National Household Survey on Drug Abuse, Earleywine comes up with the following statistics (p. 55):

The percentage of persons who have tried marijuana at least once in their lives who have

- used marijuana in the past year: 1 in 4 (25.5%);
- used marijuana in the past month: 1 in 7 (14.7%);
- tried cocaine at least once in their lives: 1 in 3 (33.0%);
- used cocaine in the past year: 1 in 20 (4.8%);
- used cocaine in the past month: 1 in 50 (2.0%);
- tried crack cocaine: 1 in 13 (7.7%);
- used crack in the past year: 1 in 100 (1.3%);

- used crack in the past month: 1 in 200 (0.5%);
- tried heroin at least once in their lives: 1 in 26 (3.9%);
- used heroin in the past year: 1 in 200 (0.5%);
- used heroin in the past month: 1 in 333 (0.3%).

The statistical likelihood of progressing from marijuana use to the abuse of harder drugs, which the pharmacological school predicts is high, is actually extremely rare. If the marijuana experience impels users to experiment with and become involved with harder drugs, why doesn't the epidemiological evidence bear out this claim? Moreover, the sequence of steps leading up to "hard" drugs such as cocaine, methamphetamine, and heroin begins with the *legal* drugs—not with marijuana. Just as youngsters who smoke marijuana are statistically more likely to "progress" to the use of hard drugs than those who do not, likewise, those who drink beer and wine and smoke cigarettes, especially at an early age and especially if they do so frequently, are more likely to use marijuana. Just as marijuana is a kind of "gateway" for harder drugs, the legal drugs are, even earlier in their lives, a gateway for marijuana. (Remember, for the vast majority of beginning smokers and drinkers, cigarettes and alcohol are *illegal* drugs; they began using them when they were minors and, therefore, not legally permitted to purchase, obtain, or consume them.) Drug use takes place in stages; those stages are patterned, not random; and the legal drugs, alcohol and cigarettes, are a crucial early ingredient in that pattern. But statistically more likely or not, *this progression is very rare*.

In addition, setting aside alcohol and tobacco, not all people who use more dangerous drugs "began" with the use of marijuana. Studies on drug progression show that between 1 and 39 percent of hard drug users started that use without having used marijuana first (Earleywine, 2002, p. 56). Hence, the intrinsic, "conveyor belt," or "stepping-stone" theory of drug progression is clearly false.

The Sociocultural School

In contrast to the claims presented by the intrinsic or pharmacological school, the *sociocultural school* holds that the progression from marijuana to other drugs takes place, *when it does*, not because of the physiological action of the drug itself, but because of the activities, friends, and acquaintances with whom users are involved during the course of use (Goode, 1970; Johnson, 1973). Users tend to make friends who have attitudes toward drug use that are more favorable than those of nonusers; the more one uses marijuana, the higher the proportion of one's friends who use not only marijuana but other drugs as well. Also, the more positive their attitudes toward use are, the more opportunities they offer the user to try other drugs. It is not the *physical experience* of marijuana use itself—getting high on the drug—but the *activity* of use and all of its surrounding social features that is the major factor influencing this drug progression. Associating with peers who also use marijuana alters the individual's identity as a drug user, which, in turn, leads him or her to regard accepting opportunities to use other, harder, drugs in a more positive light. Taking advantage of such an opportunity is more likely *not* to happen than it is to happen, but it is more likely to happen for someone with marijuana-using peers than for someone without them. The sociocultural school argues that the drug use by friends influences the progression from marijuana to more dangerous drugs. And it is the youngster's peers in each progressive social circle that,

for a minority, socialize him or her into the next drug that provides the “progression” to harder drugs. In addition to altering one’s values and identity, using peers also provide opportunities to use harder drugs in the form of buying and selling drugs other than and in addition to marijuana.

As you might expect from the selective interaction/socialization theory discussed in Chapter 7, the predisposition hypothesis merges with the subcultural theory, since youngsters who are predisposed to engage in unconventional behavior gravitate toward unconventional peers who, in turn, socialize one another into further unconventionality. The two theories are separable more in principle than in practice. And both regard the pharmacological theory as incorrect. It is not the experience of getting high on marijuana that provides the causal mechanism for drug progression, but who the user is and what his or her friends are doing.

Would the magical removal of marijuana from the picture eliminate a major causal mechanism impelling (a minority) of young people down the path toward the use of cocaine and heroin? This is unlikely, since the use of addicting drugs in China, Southeast Asia, and the Middle and Near East has been widespread in the absence of marijuana use. More important, would the magical removal of alcohol and cigarettes result in vastly less hard drug use? Says one drug prevention expert: “In my view, tobacco is the gateway drug. . . . [It] teaches kids how to get illegal drugs, it teaches them how to hide their behavior, how to inhale drugs to get a mood swing, how to deny what they’ve been taught since kindergarten . . . , and how to disrespect laws” (Haddad, 1996, p. 1B). Interestingly, few who endorse the stepping-stone theory consider this earlier and absolutely crucial process.

The Predisposition School

Another problem with the stepping-stone theory involves the “common syndrome” factor: The kinds of people who engage in *one* type of behavior are highly likely to be the kinds of people who engage in *another*. Hence, the *predisposition* model or school of thinking: It is not so much that behavior A (the use of marijuana) causes behavior B (the use of hard drugs), but that factor X (a certain personality syndrome, lifestyle, or orientation to life) causes them both. As I said, one theory or explanation of drug use is unconventionality or problem behavior proneness. Some youngsters, even at an extremely early age, begin to engage in unconventional behavior that is predictive of later unconventional behavior.

Youngsters who smoke cigarettes and drink wine and/or beer at an early age increase their odds of smoking marijuana at a slightly later age not so much because of the biochemical action of these drugs but because they are unconventional activities: These young people are risk takers, adventure seekers, and rule breakers. They are also more likely to be alienated from parents, school, traditional religion, and conventional rules, and to be drawn to a variety of parallel behaviors, including early sex, delinquency, and rebelliousness. The use of drugs is simply part of a whole syndrome of behaviors that includes the use of legal drugs at an early age, the use of marijuana a bit later on, and the use of harder drugs at a slightly later age. Once again, this is a statistical process, and the likelihood that it takes place is maximized the earlier each step takes place and to the extent that the drug use at each stage is frequent. What counts here is the general orientation to life that this syndrome expresses.

Andrew Morral and his colleagues subjected the data from the National Survey on Drug Use and Health to a precise mathematical model, which predicted the likelihood, given a variety of background factors, of marijuana users' progression to the harder drugs. "We've shown that the marijuana gateway effect is not the best explanation for the link between marijuana use and the use of harder drugs," Morral explains. The statistical associations we observe, he says, are a product not of marijuana use per se but of the age at which users take marijuana versus harder drugs and of differences among individuals with respect to their willingness to alter their consciousness, to take any drug. "The people who are predisposed to use drugs and have the opportunity to use drugs are more likely than others to use both marijuana and harder drugs," Morral says. "Marijuana typically comes first because it is more available. Once we incorporated these facts into our mathematical model of adolescent drug use, we could explain all of the drug use associations that have been cited as evidence of marijuana's gateway effect" (Morral, McCaffrey, and Paddock, 2002). According to Morral, the results of his study demonstrate that reducing marijuana consumption will have no impact whatsoever on reducing hard drug use, since persons who use the harder drugs are *already* predisposed to do so—whether or not they use marijuana. The Morral team argues that the gateway hypothesis is a myth.

In September 2002, after surveying the available literature, the Canadian Senate issued a report on marijuana, *Cannabis: Our Position for a Canadian Public Policy*. On the issue of the "gateway" hypothesis, the report concludes:

We feel that the available data show that it is *not cannabis itself that leads to other drug use* but the combination of the following factors: Factors related to personal and family history that predispose to early entry on the trajectory of use of psychoactive substances starting with alcohol; Early introduction to cannabis, earlier than the average for experimenters, and more rapid progress towards a trajectory of regular use; Frequenting of a marginal or deviant environment; Availability of various substances from the same dealers (p. 126).

The Canadian Senate Special Committee on Illegal Drugs rejected the "gateway" theory that the use of marijuana per se "leads to" or causes the use of harder drugs.

The evidence suggests that the claim that marijuana use *causes* the progression to harder, more dangerous drugs—the so-called *stepping-stone hypothesis*—is false.

LSD AND THE HALLUCINOGENS

LSD is another drug, in addition to marijuana, that popular mythology believes was hugely popular during the 1960s, and declined in popularity thereafter. This myth is even enshrined in a popular textbook on drugs (Hart and Ksir, 2013, p. 325) which claims that the use of LSD reached its peak in the late '60s *and declined after that. As we've seen, precisely the reverse is true*; LSD use was extremely low in the 1960s, and it increased from the late 1960s into the 1970s. A Gallup poll indicated that in 1967, only 1 percent of college students, one of the segments of the population most likely to use the drug, had taken LSD even once. A study of "retrospective estimates" found that in that same year, only 3 percent of 18- to 25-year-olds, again, a segment of the population highly likely to have taken LSD, had ever tried a hallucinogen (Miller and Cisin, 1980, p. 17). The use of LSD skyrocketed after that and remained remarkably stable for more

than a quarter-century, since MTF began its surveys of drug use among high school seniors in 1975. What did reach a peak in the 1960s was media attention, which is an altogether different matter from actual use. And of course the myths are more interesting than the reality.

Some observers believe that the “allure” of LSD and the psychedelics is making a comeback. In point of fact, as other observers argue, LSD and the psychedelics “never really went away. . . . It’s like the Disney films. . . . Every seven years they re-release them so a new generation gets exposed to them.” What has changed is the motive for use. In the 1960s, many individuals took LSD for what they described as mind expansion and “inner exploration.” Today, “it’s just another chemical in the stew” (Seligman et al., 1992, p. 67). In 2001, about one high school senior in 10 (11%) took LSD at least once in their lifetimes and a shade over 2 percent took it once or more during the past month. But in 2012, these figures had declined substantially, to 4 and 0.8 percent, respectively. The early 2000s have witnessed a waning of teenage and young adult interest in the use of “acid.”

The hallucinogens (or psychedelics) produce profound, even spectacular effects on the consciousness, mainly in perceptions of reality. This category of drugs includes LSD, psilocybin, a substance naturally contained in the so-called magic mushroom, mescaline (the main psychoactive ingredient in the peyote cactus), and a few other naturally occurring substances, such as DMT and morning glory seeds. PCP, once used as an animal tranquilizer and anesthetic, is often classified as a hallucinogen (Levinthal, 2011, Ch. 6; Goldberg, 2013, Ch. 13), but it produces practically none of the psychic effects associated with the psychedelics. MDMA or Ecstasy, likewise often so classified (Maisto, Galazio, and Connors, 2010, Ch. 12; Levinthal, 2011, Ch. 6), also does not generate the spectacular psychic effects of the LSD-type drugs. I do not regard PCP or MDMA as hallucinogens, or psychedelics. LSD (or “acid”) is by far the best-known and most widely used of all hallucinogens/psychedelics in the United States and, from the point of view of (albeit moderately) widespread use, the only one worth discussing.

The Swiss chemist Albert Hofmann first synthesized and named LSD, but did not discover its potent psychoactive properties until 1943, when he accidentally inhaled a minute quantity of the drug. Describing his experiences, Hofmann wrote: “I had to leave my work in the laboratory and go home because I felt strangely restless and dizzy. Once there, I lay down and sank into a not unpleasant delirium which was marked by an extreme degree of fantasy. In a sort of trance with closed eyes . . . fantastic visions of extraordinary vividness accompanied by a kaleidoscopic play of intense coloration continuously swirled around me. After two hours this condition subsided.” Later, after discovering it was the LSD that had caused these reactions, and after some additional self-experimentation, Hofmann wrote: “This drug makes normal people psychotic.” The Swiss chemist had inadvertently taken the first LSD “trip” in history (Hofmann, 1979).

LSD is taken via a swallowed capsule or tablet, or, at one time, was taken by means of swallowing squares of blotter paper impregnated with the drug. Even as minute a quantity as 25 micrograms of LSD is psychoactive for most people. (An ordinary headache tablet contains more than 300,000 micrograms of aspirin.) In the 1960s, the usual dose of LSD was purported to be between 200 and 500 micrograms; contemporary doses contain perhaps a quarter of this dosage. However, since black-market LSD is both frequently

contaminated (most often with amphetamine) and unstandardized as to potency, very few users of street LSD can be even remotely sure of the dosages they take, in spite of their claims. An LSD “trip” will last 4 to 8, to as much as 12, hours, depending on the dose.

Subjective Effects of Hallucinogenic Drugs

As I said, nearly all the hallucinogenic drug use in the United States is the use of LSD; taking psilocybin or mescaline is quite rare, and the use of any other hallucinogenic is practically nonexistent. Moreover, it is misleading to consider persons who take LSD as “users,” since they typically take the drug much more sporadically and infrequently than individuals who use nearly all the other drugs described in this book.

One of the most common subjective effects of LSD described by users is what drug experts refer to as *eidetic imagery*, or what users call “eyeball movies.” Under the influence of the psychedelic drugs, the subject, with his or her eyes closed, vividly “sees” physical objects, usually in motion, as sharply as if watching a film. Often these images are abstract and lacking in dramatic form. They frequently represent almost interminable repetitions of a pattern or design, much like moving wallpaper. One user I interviewed described his vision of eidetic imagery in the following words: “Closing my eyes, I saw millions of color droplets, like rain, like a shower of stars, all different colors.” Another said he saw “hundreds of fleurs-de-lis, repeating themselves, moving in several lines.”

Users also commonly mention *synesthesia*—the “mixing” of the senses, the simultaneous perception of the stimulation of several senses—as an effect of LSD: “hearing” color, or “seeing” sounds. The subjective meaning attached to a stimulus perceived by one sense is translated from one sense to another. One researcher described synesthesia’s most common form as occurring “when auditory stimuli produce changes in visual” sensations; for example, he states, “the experimenter claps his hands and the subject sees flashes of color in time to the clapping” (Klee, 1963, p. 463). An early researcher who took mescaline himself wrote: “I felt, saw, tasted, and smelled the tone. I was the tone myself. . . . I thought, saw, felt, tasted my hands” (Guttman, 1936, pp. 209, 210). “I really got into music on my trip,” says one user I interviewed. “I was traveling on the notes. I felt as if I was on an arc of fireworks—a quiet explosion. I felt as if the music was inside me, I felt as if it was making love to me. It was beautiful.”

Users mention a third effect quite frequently: the perception of a multilevel reality. “You just see things from seven different ways at once,” exclaimed a user I interviewed. Another young woman said: “I looked at any object, and it would breathe and move and also appear from all angles in one instant.” Occasionally, this multilevel perspective invades scientific realms; the diverse levels are those that a scientist might explore one at a time. A young artist put it this way: “I was sitting on a chair, and I could see the molecules, I could see right through things to the molecules.” A young woman had this experience: “I stared at my dog—his face kept changing. I could see the veins in his face, under his skin.”

Another perception beyond the range of “normal” reality was that the world was continually fluid. This perceived dynamic quality of the universe was perhaps the most commonly mentioned of any of the varied aspects of the psychedelic trip. The static universe seems to explode into a shimmering, pulsating cosmos, a world in continual flux.

“Things were oozing as if they were made of jelly,” one interviewee said. Others reported: “A brick wall wobbled and moved.” “Paint ran off the walls.” “Every physical thing seemed to be swimming in a fluid as if a whole wall had been set in liquid and was standing there before me, shimmering slightly.” “I saw wriggling, writhing images.” “I saw flowers on the window sill, blowing in the breeze. I went to touch them, but there was no breeze, and the flowers were dead.”

A fifth commonly reported psychedelic experience is subjective exaggeration, of practically anything—an object, an event, a mood, a person, a situation—a kind of baroque rendering of the world outside. The exaggeration may be in sheer number—perceiving more things than are there; or it may be the dramatization of a single characteristic of the stimulus, or an allegory on the nature of its essence. Some users “see” extravagant and detailed visions. A female college student told me: “One pillow turned into 50 million pillows—all the pillows in the world.” Another said: “The mind is very suggestible. Sudden appearances of things take on strange forms. A towel falling off the edge of my tub looked like a giant lizard crawling down. The mind works faster, and is more suggestible.” A young man had this experience: “When my girlfriend was peeling an orange for me, it sounded like she was ripping a small animal apart. I examined it carefully. It seemed to be made up of tiny golden droplets stuck together. I’d never seen an orange before. My girlfriend was eating scrambled eggs, and it was as if I was watching a pig with its face in a trough of garbage. A few bits of egg clung to her teeth, and it seemed as if globs of garbage were oozing down her face and out of her mouth. But I knew I was imagining it.”

This experience of subjective exaggeration of the things around one shades over into what some clinicians call the “eureka experience,” the feeling that what is usually seen and thought to be quite ordinary takes on extraordinary and even epic proportions.

The full-blown, authentic hallucination—the perception of a materially nonexistent physical object created out of whole cloth and felt by the subject to be actually there—is a relative rarity under the influence of LSD. Usually, trippers know that the things they are seeing do not really exist. And often some sort of “actual” stimulus touches off the sensation. Perhaps *pseudohallucination* or *virtual hallucination* would be a more appropriate term for these sensations. One very common variety is the perception of one’s own body in various unusual and never-before-seen states. Sometimes this occurs before a mirror; often the user subjectively introduces a dynamic element into the perception and sees himself or herself over time or repeated in space. A college student said: “I saw myself, my face in the mirror, developing from 5 years old to 40 years old.” Another said: “In the mirror, I saw my clothes change into costumes from different periods of history.” A young man had a similar sensation: “I could see 10 images of myself on each side of me, like a tuning fork.” Sometimes the body appears transmuted into a state that is both horrible and fascinating at the same time. An artist reported: “The first thing I noticed was that my arm was made of gold. This held my attention for a long time. It was beautiful.” A young woman said: “I saw myself in the mirror with one eye. It was disturbing, but not horrible.” Another subject exclaimed: “My eyelashes grew and became like snakes.”

Unlike marijuana, which most users describe as being pleasurable most of the time, LSD seems to elicit a formidable sense of ambivalence. Users experience both good and bad sensations during the same episode of use, sometimes at the very same moment in time.

A given trip may be described as horrifying, ecstatic, depressing, rapturous, frightening, and uplifting. Sensations of every conceivable sort seem to rush in on the user, pulling him or her in contrary directions. Emotional inhibitions are lowered with LSD. Everything is sensed as much more extreme than it normally is. This means that what is felt as pleasant will seem to be ecstatic, a magic voyage of the gods. And what is normally experienced as simply unpleasant will become dreadful—the absolute pit of hell. Both may occur during a given trip, sometimes even simultaneously. One of English writer and novelist Aldous Huxley’s books describing his mescaline experiences was entitled *Heaven and Hell*—testimony to the very powerful ambivalence most users experience during a trip on a hallucinogenic drug. Most of us do not find such extremes to our liking. Extreme mood swings can be unsettling. Nearly everyone who emerges from a strong psychedelic experience, whether he or she likes it or not, is struck by this basic characteristic. After a given LSD trip is over, users are rarely able to describe their feelings about it in fully positive or fully negative terms; typically, these descriptions are shot through with feelings of ambivalence.

Another commonly described effect of LSD-type drugs is *sensory overload*. Hallucinogens do not necessarily sharpen the senses, but they do open up the psyche to receive sensations. Our normal psychological inhibitions enable us to limit what we see around us, to “attend” to a very narrow range of sensations. There is a particular structure in the brain referred to as the “reticular formation.” It governs our ability to filter out the many sensations bombarding us every moment and allows us to focus on a small number of relevant stimuli. Without it, minute-to-minute existence would be fraught with overwhelming complications. LSD interferes with the functioning of the reticular formation. Under psychedelics, the mind is overloaded with sensory input, including the many irrelevant impressions and sensations we normally filter out. One individual I interviewed, a lawyer in his twenties, was under the influence of LSD and received a call from someone who said he was in Queens. He answered by muttering the word, “Queens . . . , Queens . . . ,” over and over again. The many associations of the word crowded in on his mind—the borough of New York, female monarchs, effeminate homosexuals, a spectacularly desirable woman—and he was unable to formulate a single coherent thought in response to the caller. Finally, he handed the phone to his companion and said, “Here, you take the phone; I just can’t deal with it right now.” These effects of LSD and the psychedelics have become fixtures in the contemporary literature on the subject (Abadinsky, 2014; Maisto, Galizio, and Connors, 2010; Goldberg, 2013; Levinthal, 2011).

The issue of the generation of psychotic episodes, panic reactions, or extreme emotional disturbances by LSD and the hallucinogenic drugs was a major segment of media fare in the 1960s. Some observers went so far as to say that all experiences with the drug were, by their very nature, a temporary psychosis or a psychosis-like state. Although the temporary psychosis was rare, it does occur in a certain proportion of episodes with the drug.

According to DAWN’s data, in the year 2010, only 4,819 out of roughly 2.4 million untoward drug episodes tabulated (and 4.5 million drugs mentioned) resulting in a visit to the emergency departments of the country’s hospitals with an emergency room involved the use of LSD. In comparison, cocaine caused or was associated with over half a million such episodes, more than 100 times as many, and methamphetamine, 70,000, or 20 times

as many. Based on NSDUH's figures on LSD use in 2011, of roughly 5 million LSD "trips," roughly one out of 1,500 results in an experience sufficiently serious to require emergency department intervention. Whether this represents a great many or very few depends on one's perspective, but it is clear that the drug is vastly safer than was indicated by the biased media stories of the 1960s. The fact that the 2010 DAWN data are much more comprehensive and representative than its 1990s data also indicates that a decline may have taken place in LSD-related untoward effects. And LSD is not toxic; as with marijuana, it is virtually impossible to die of an "overdose" of LSD, since its chemical structure does not interlock with the body's receptor sites that control breathing and heartbeat rate.

LSD and Genetic Damage

The Hype

In Chapter 5, on drugs in the media, we've already encountered this case of a moral panic: exaggerated fear of the harm that a psychoactive substance supposedly causes. In March 1967, the prestigious scientific journal *Science* published an article by Maimon Cohen, a physician and geneticist, and two associates, reporting that when human blood cells were placed in a culture containing LSD the cells underwent chromosome breakage. In addition, one schizophrenic mental patient treated with LSD 15 times in a therapeutic setting was found to have a higher degree of chromosome damage than was typical or normal (Cohen, Marinello, and Back, 1967). As we saw in Chapter 5, these rather flimsy findings touched off a huge, nationwide moral panic. Within 24 hours, the news of this study swept the country. These findings from an inadequately controlled study immediately became an inescapable "fact" that LSD damages one's offspring. People were led to believe that uncountable generations of infants would be born deformed if one took LSD. The thalidomide disaster of the early 1960s was invoked as a parallel. Popular magazines published articles on LSD, showing photographs of distorted babies and explaining that "if you take LSD, even once, your children may be born malformed or retarded." Just below the title of one such article was this statement: "New research finds it's causing genetic damage that poses a threat of havoc now and abnormalities for generations yet unborn" (Davison, 1967, pp. 19–22). Drug propaganda campaigns rarely fail to mention LSD's supposed "monster-producing" properties. The National Foundation–March of Dimes distributed a leaflet containing photographs of deformed, legless, or armless children pitifully attempting to perform simple tasks such as writing or picking up toys with their "flippers," artificial arms, or toes. The text contains the warning that "there is evidence that LSD and other similar drugs may cause chromosome breakage." Although the leaflet adds the qualification that "there is no proof yet that chromosome breaks cause birth defects in humans," the impact of the photographs is so devastating that the caveat is completely lost. The leaflet ends with the injunctions "Learn about birth defects" and "Speak up to help replace myths and superstitions with the facts." What are the facts on LSD and chromosomes?

The Reality

In an exhaustive study of the available findings reported in nearly 100 scientific papers, four researchers concluded that in moderate, or "trip," doses, LSD does not

appear to induce genetic damage, and that only in massive dosages (never ingested by humans) do any mutagenic (or gene-altering) effects occur: “We believe that LSD is, in fact, a weak mutagen, effective only in extremely high doses; it is unlikely to be mutagenic in any concentration used by human subjects.” The researchers conclude that “there is no evidence that pure LSD is teratogenic [meaning that it causes malformations in embryos] in man [and woman]” (Dishotsky et al., 1971, p. 439). Since this report was published, decades ago, no researchers have risen to challenge its conclusions.

In sum, LSD does not appear to damage genes or chromosomes or to produce birth defects. That erroneous view was disseminated and accepted because there was a strong tendency to believe that a drug with such powerful and undesirable effects must inevitably harm the body in a wide range of ways. If the same mistaken research findings had been published (if, indeed, they would ever have been published) concerning the effects of a commonly used and widely accepted substance, this would not have been accepted as true by the public. Our prejudices and preconceptions shape our view of reality and truth. The hysteria that exploded in the 1960s over the issue of LSD’s supposed harmful effects on human chromosomes illustrates the principle that, during moral panics, the media, the public, agencies of social control, and even scientists are sensitized to the potential harm that an agent which is seen to be threatening can cause.

The fact that it was LSD, a new and presumably scary drug, that supposedly caused chromosomal breakage made the story newsworthy, threatening, and believable. Even today, many people still believe that LSD is a mutagenic agent. On the first day of class in a course on alcoholism and drug abuse that I was teaching, 91 percent of the students erroneously agreed that this statement is true: “Women who take LSD during pregnancy, even once, have a significantly higher likelihood of bearing children with birth defects than women who do not take LSD.” Some myths, it seems, never die. The lesson of the hysteria surrounding LSD’s supposed role in generating birth defects illustrates the importance of the contrast between drug use as an essentialistic phenomenon, with concrete, materially real properties, and drug use as a constructed phenomenon whose reality exists on the airwaves, on the pages, and in the minds of observers. LSD was constructed in a certain way by the culture of the 1960s; to some extent, some elements of this social construction have survived to this day. As careful students of the world of drug use, we must be careful to distinguish these two ways of looking at drugs.

LSD: Continuance Rates and Frequencies of Use

Users of LSD hardly ever take the drug frequently, chronically, or compulsively. It tends to be used episodically, on a once-in-while basis. “The most important fact about chronic or long-term psychedelic drug use is that there is very little of it” (Grinspoon and Bakalar, 1979, p. 176). As we saw earlier, of all drugs, alcohol attracts the greatest user loyalty; roughly two-thirds of all individuals who have used alcohol at least once in their lives have also used it within the past month. In this respect, LSD ranks very low in user loyalty. Only one-half of one percent of all “at least one time” users of LSD in the general public said that they took the drug within the past month.

LSD is not even remotely addicting in the physical sense, nor does the drug produce psychological dependence. Judging by their behavior, laboratory animals avoid taking LSD if they can. The drug thus does not have the “immediate sensual appeal” of cocaine, heroin, and the amphetamines. LSD is very rarely a drug of frequent use, no matter what sort of myth may be used to explain its use. In fact, the concept of psychological dependence has less relevance to a discussion of the hallucinogens than it does for any other drug or drug type. It is extremely difficult to have a psychedelic drug “habit.”

There are at least three reasons why the hallucinogens almost never produce a dependency in users. First, the body builds up a tolerance or resistance to hallucinogens extremely rapidly—faster than for any other drug or drug type. Unlike all the other drugs under consideration, LSD does not allow one to be high all of one’s waking hours, day after day, for a long period of time. And cross-tolerance sets in for the various psychedelics, so getting high on one will diminish one’s ability to get high on another.

Second, the LSD experience requires a substantial effort. To get through eight hours of an LSD high—including sensory bombardment, psychic turmoil, emotional insecurity, alternations of despair and bliss, one exploding insight upon the heels of another, images hurtling through the mind as fast as the spinning fruit in a slot machine—is draining and exhausting in the extreme. Most experienced marijuana users claim to be able to “get straight” during the marijuana high in the event of an emergency. They say they would be able to go to work or to classes stoned without being detected, and to function in a reasonable manner. Perhaps this is possible; it depends on the individual. But almost no one claims to be able to do this with LSD. Users report that it is impossible to function normally, to “come down” at will. “You really are in another world,” explained one heavy marijuana smoker about the LSD experience.

A third reason why LSD-type drugs are rarely taken on a frequent, compulsive basis is that, more than any other drug used on the street, LSD has extremely inconsistent effects; the experience varies markedly from trip to trip. One trip might be ecstatic; another might be horrifying; a third might be relatively uneventful. Most drugs are taken for some aspect of intoxication, to achieve a certain kind of high. Few users who seek a specific experience would take a drug as unreliable as LSD on a day-to-day basis.

CLUB DRUGS

Club drugs is an informal name given to a group of illicit substances that are commonly consumed in night clubs; at parties, raves, and concerts; and at other gatherings where teenagers and young adults gather to have a good time and alter their consciousness. The term is not scientific, but the drugs that are most commonly included in the category include Ecstasy, Rohypnol, ketamine, and GHB. All became at least modestly popular only in the 1990s; the MTF survey added Ecstasy and Rohypnol to its questionnaire in the 1990s; in 2000, it added ketamine and GHB. These four drugs make up a chemically and pharmacologically diverse lot: Rohypnol is a sedative-hypnotic similar to lorazepam; GHB is analogous to an extremely

concentrated form of alcohol; ketamine is most similar to PCP, although with milder effects; and Ecstasy is an empathogen, in a category by itself. All are synthetic chemicals.

During the 1990s, the use of club drugs increased substantially. Fearful that taking what he referred to as “designer drugs” would become epidemic in his state, Florida governor Jeb Bush gathered a team of drug experts to search for proof that these deadly drugs were “stalking nightclubs and the rave scene.” In 2000, in the state capitol, Jim McDonough, the state’s chief of The Office of Drug Control, announced the team’s report, “a very thorough, autopsy-by-autopsy review” of club drug–caused deaths. Club drugs, they said, “were killing many more youngsters than anyone had suspected.” The report’s tally of rave drug deaths in the state of Florida since 1994 was given as 254.

The claim, it turns out, was bogus. A few months after the report’s unveiling, *The Florida Sentinel* ran a story by reporter Henry Pierson Curtis that examined each of the 254 supposed club or designer drug–related deaths. The reporter found at least half the claims of a club drug connection completely unfounded. The flaws in the report were myriad. To begin with, the study included a remarkably broad total of 20 drugs in its definition of “club drugs,” including fentanyl, a narcotic; nitrous oxide, or “laughing gas”; and amphetamine, a stimulant. And many of these deaths had little or no connection to what the research team referred to as designer or club drugs. Rose Pope, age 82, of St. Petersburg, died eight days after being hit by a car; she was included among the club drug deaths. A 74-year-old cancer patient in Miami–Dade County Hospital was administered an overdose of morphine; he too was also included in the tally. A 41-year-old Orlando man who shot himself after losing his job tested positive for amphetamine; he was included as well. Tavani Smith, a four-year-old, had a day-long headache, so his mother took him to the hospital; he stopped breathing after being administered a dose of sodium brevital, an ultra-fast-acting barbiturate, and ketamine. In some states, sodium brevital is used to euthanize dogs and to execute death penalty prisoners. Ketamine does happen to be a club drug, and so, Smith’s death too was included.

When the flaws of this study were revealed by the press, McDonough, Florida’s “drug-fighting chief,” asked “why a reporter would question shortcomings in the research instead of helping his staff fight drug abuse. . . . We are trying to get the facts,” he added. “We’ve discovered that we have a club-drug problem in this state that is immense, and we want to do something about it” (Curtis, 2000).

GHB, a sedative, once prescribed as a sleep aid and an anti-anxiety agent, produces a state of relaxation and drunkenness without the hangover. It is also used by some bodybuilders to help increase muscle mass. At higher doses, like alcohol, it inhibits breathing and heartbeat and can starve the body of oxygen. In 2000, the federal government classified GHB as a Schedule I drug.

Ketamine (trade names, Ketelar, Ketajet, Ketaset, and Vetelar) is, like PCP, a “disassociative anesthetic” and, also like PCP, began its career as a drug for both humans and animals. It works as a painkiller without inhibiting breathing. During the Vietnam War, ketamine was used in battlefield medicine, but patients complained of hallucinations and “bizarre thoughts”—the very qualities that make it popular as a recreational drug (Gahlinger, 2001, p. 187).

Rohypnol (generic name, flunitrazepam) is a sedative drug, a benzodiazepine like Valium, Librium, and Xanax. Benzodiazepines are anti-anxiety agents and muscle relaxants, but Rohypnol is roughly 10 times as potent as Valium and, in high doses, can cause unconsciousness and short-term paralysis and amnesia—all effects that make it a sometimes-used “date rape” drug.

Not only is the use of club drugs recent, it is confined to a fairly small—and declining—minority of teenagers and young adults. In 2001, 9 percent of high school seniors used Ecstasy during the past year; in 2012, only 3.8 percent did so. The percentage using it in the past month was 3 percent in 2001 and 0.9 percent in 2012. For Rohypnol, in 2011, the number was too small to calculate; ketamine and GHB did not even appear in the 2011 MTF’s tables, indicating that use for these drugs had dropped below one-half of one percent. The latest indication is that club drugs, which became popular in the 1990s, had faded from prominence by the first half of the first decade of the twenty-first century.

Ecstasy was synthesized early in the twentieth century and patented by Merck as a possible appetite suppressant, then lay on a shelf for decades. Then the army tested it in 1953. In large doses, it turns out, MDMA kills animals. Because of its mind-altering properties, most notably, its capacity to induce empathy and a sense of “newness” in subjects, quietly, during the 1970s, psychiatrists began using it on their patients as an adjunct to therapy; according to one estimate, at that time, some 30,000 doses were being administered per month (Klein, 1985, p. 42). By then, it had attracted the attention of authorities. Though it was originally used in psychotherapy, in 1985, the FDA provisionally classified it as a Schedule I drug; in 1988, this classification was finalized. Anyone selling the drug could face a 15-year prison sentence. Classifying MDMA as a Schedule I drug, says one observer, “may well have been one of the most criminal acts of our recent U.S. government” (Stafford, 1989, p. xxii). Not all experts agree.

Ecstasy, also referred to as “XTC,” “Adam,” or simply “E,” is MDMA, a synthetic analog of the amphetamines. While it has some effects that are similar to those of the amphetamines, such as jaw clenching and tooth grinding, many observers classify Ecstasy as a psychedelic or hallucinogen. Actually, as I pointed out, this designation is misleading, since the drug has none of the major effects of the hallucinogens. For instance, its effects lack the powerful visual imagery, and hallucinations (true or pseudo) never make their appearance. Some observers prefer to refer to Ecstasy using the term “empathogen” (Eisner, 1989, pp. 3, 33ff)—a drug that facilitates empathy or a close emotional bonding with others. “I love the world and the world loves me” says one user (Gahlinger, 2001, p. 340). Several experts object to the term “Ecstasy” to refer to MDMA, arguing that the drug produces not ecstasy in users, but empathy, “an ability to feel trust, a lowering of psychological barriers” (Seymour, 1986, p. 9); serenity; a feeling that all is well with the world; openness; peacefulness; euphoria; and a “noetic” feeling—the experience of seeing the world in a fresh way, as if for the first time” (Eisner, 1989, p. 3).

In a series of experiments on rats and guinea pigs, psychopharmacologists Lewis Seiden and Charles Schuster discovered that Ecstasy may cause long-term, possibly irreversible, damage to the brain. A neurotransmitter, serotonin, which helps to send signals to various organs of the body and regulates sleep, sex, aggression, and mood, was found to be at “alarmingly low levels.” The brain had been depleted of its supply

of serotonin, and eight weeks after the conclusion of the experiment, the researchers saw no indication of its return. Based on their animal experiments, Seiden and Schuster conclude that doses harmful to the brain are only two to three times those taken on the street (Roberts, 1986, p. 14).

In another experiment, doses of ecstasy were administered to monkeys and baboons, and the primates suffered damage to the cells that produce dopamine, a neurotransmitter that regulates coordination, pleasure, and emotion; 2 of the 10 monkeys and baboons died of heatstroke (Ricaurte et al., 2002). Critics charged that the dosages of Ecstasy that were administered to the primates were many times higher than the doses that are taken by users on a recreational basis. Una McCann, a coauthor of the study, denied the charge, claiming that their doses were “actually slightly less” than a human would take (McNeil, 2002). But a year later, *Science* magazine, where the findings of this study were originally reported, made a shocking revelation: Somehow, the samples of Ecstasy administered to the primates in the experiment had been switched with methamphetamine, making the conclusions of the study completely invalid. *Science* retracted the results of the study, forcing Ricaurte, its senior author, to withdraw four other papers whose drug samples were also switched. As of this writing, there is no scientific evidence that Ecstasy causes brain damage in humans (McNeil, 2003). Still, the controversy is likely to be with us for the foreseeable decades to come.

Out of roughly 2.4 million drug-related emergency department visits reported (and 4.5 million drug mentions [A *drug mention* is each time a particular drug is mentioned in DAWN.]) in the United States in 2010, the club drugs rarely appeared as a cause of the untoward episode. GHB was mentioned in 2,000 instances and ketamine, in 1,500. MDMA, a much more frequently taken drug, was mentioned in 22,000 episodes. (The figures for Rohypnol seem to be so incomplete that they were not recorded.) With respect to causing or being associated with a state that is so medically or psychologically problematic as to cause a user to present at the emergency room of a hospital, the club drugs appear to be remarkably safe. They rarely cause seriously untoward effects and, for all practical purposes, never cause a death by “overdose.”

SUMMARY

Marijuana, internationally known as cannabis, is highly variable with respect to potency; hence, its effects are likely to be very different according to the strength of the batch that is used. The drug is usually smoked, so its effects are tied in with this particular route of administration. The principal psychoactive ingredient in marijuana is THC, which is an extremely slowly metabolized chemical; the half-life of its metabolites is more than 48 hours, and traces remain in the body for several weeks after use. This crucial fact has important consequences: These traces may have lingering effects, for instance, on motor coordination and intellectual competence.

Marijuana is by far the most widely used illicit psychoactive drug in the United States as well as in the world. Four out of 10 of the American population age 12 and older have at least tried the drug, and roughly one American in 15 used it in the past month. The use of marijuana increased dramatically among teenagers between the mid-1990s and 2000—by some measures, a doubling or a tripling. Although the figures have leveled

off or dropped slightly since then, they remain higher than they were in the early 1990s. Many experts fear that this increase could translate into a wide range of harms, such as increased fatalities on the highway and increased use of more dangerous drugs a few years down the road.

All observers agree that cannabis is one of the least toxic drugs known; it is practically impossible to die of a marijuana overdose, and it is likely that not one has ever occurred. Marijuana does, however, impair motor coordination and cognitive performance. The subjective effects of marijuana are more interesting than its objective effects. Under the influence, users report feeling more peaceful, more “turned on,” more sensitive and perceptive; they report having more “profound” thoughts, being more amused by many more things than normally, feeling more emotionally open or sensitive, and sensing that time is slower, more stretched out; they say they feel more incapable of concentrating and more lethargic; and they say they are more incapable of remembering things that are happening. It is clear that marijuana use is a euphoric, pleasurable, unserious, hedonistic, somewhat foolish activity, compatible with recreation and incompatible with precise movements and serious, sustained intellectual effort.

It is the topic of the long-term or chronic effects of marijuana that has preoccupied much of the medical research on the drug that has been conducted over the past two or three decades. A number of findings that were reported by the earliest researchers, which seemed to indicate that marijuana caused a wide range of pathologies—including brain damage, liver damage, a diminished testosterone level, chromosomal damage, a diminished capacity of the white blood cells to fight disease, and so on—were not confirmed by later researchers. It is possible that marijuana does have an impact on the organs or functions that were studied, although an extremely weak one. One pathological finding that had been sustained independently by several researchers until recently was impaired pulmonary functioning; more recent findings cast doubt on the validity of this generalization. Independently, numerous researchers have confirmed that marijuana does not cause lung cancer. It is conceivable that that one of the drug’s chronic effects is a long-term impairment of mental performance, but, aside from the fact that long-term marijuana users are less achievement oriented than average, no researcher has yet published conclusive evidence of this effect.

Marijuana use is patterned by a number of sociological variables. Of these, age may be the most potent; use is low in the early teens, rises, reaches a peak during the late teens to the early 20s, and declines thereafter, sharply so after the age of 35. It is likely that two factors influence this pattern: simultaneous freedom from adult supervision and freedom from adult responsibilities. Males are significantly more likely to use marijuana than females; as marijuana use increases, so too does male overrepresentation in use. This pattern is parallel to most (but not all) deviant and/or criminal activities, in which males are more likely to participate.

Peer influences are strong and pervasive; the more that one’s friends use, the greater is one’s own use of marijuana. Marijuana is also part of a pattern of psychoactive drug use generally; users are more likely to be drawn from circles of young people who have had experience with alcohol, and are more likely to “go on” to the use of more dangerous drugs, such as cocaine, amphetamine, and even heroin. This does not mean that all marijuana users progress in this way—actually, very few do—only that smoking

marijuana increases one's statistical likelihood of doing so. Marijuana use is also related to unconventionality; the greater one's tolerance for and participation in deviance and nonconformity before use, the greater the likelihood one will eventually use marijuana. The more risks a youngster accepts and takes, the greater the likelihood of using marijuana.

No researcher questions the correlation between the use of marijuana and the use of more dangerous drugs; it is a robust relationship that every study ever conducted has turned up. What is the causal mechanism here? *Why* this strong and consistent relationship? Three schools of thought attempt to explain it.

The first is the pharmacological school, which argues that drug use is much like a conveyor belt, with users moving almost inevitably to increasingly dangerous drugs. The cause, its adherents argue, can be found in marijuana itself and in the brain's neurological pathways, in the experience of getting high, more or less unmodified by social and personality factors. Several lines of evidence suggest that the conclusions of this school of thinking are incorrect.

The sociocultural school, in contrast, argues that it is not getting high in and of itself that causes a higher proportion of users to "go on" to stronger drugs. Instead, the progression is most strongly influenced by the personal associations one forms when one uses, the social networks in which one is enmeshed. The very fact of use entails forming friendships with other users, who are more likely both to endorse the use of other drugs and to provide opportunities to use them. The fact that persons who use marijuana and have very few marijuana-using friends are unlikely to progress to the use of more dangerous drugs suggests that the sociocultural model may be more valid than the pharmacological school.

The predisposition school argues that the kinds of people who use marijuana are the kinds of people who have a higher statistical likelihood of using harder drugs than is true of the kinds of people who do not use marijuana. They tend to be unconventional in a variety of ways, more likely to take risks and engage in "deviant" activities. Marijuana use is merely a stand-in for a certain type of predisposition. Since taking harder drugs is a more extreme activity than taking marijuana, only a minority of marijuana users will "progress" to the harder drugs, but the statistical relationship holds nonetheless. It is not the experience of getting high that is primary here, but the type of person who has the impulse to engage in such an experience.

A commonly believed myth about LSD is that it was widely used in the 1960s and thereafter, its use declined. Actually, the use of LSD was quite low during the 1960s, although it grew explosively at the end of that decade, and it continued to grow throughout the 1970s. In 2000, the recreational use of LSD today was about where it was in 1975, when the MTF survey began research on high school seniors. The use of LSD declined into the early 2000s, and today is less than half of what it was a half-dozen years before.

Some common experiences of LSD and the psychedelic or hallucinogenic drugs include these: eidetic imagery (seeing bold, stark visions with one's eyes closed); synesthesia (the feeling that one of the five senses translates into another, such as "seeing" sounds or "feeling" colors); sensing phenomena to exist on a variety of dimensions or levels of reality; seeing the world as eternally fluid or in motion; sensing an emotional exaggeration of phenomena; a sense of timelessness. "True" hallucinations, or seeing

things that one thinks are real but aren't, are relatively rare. More common is the "virtual" hallucination, the vision one knows isn't really there but is caused by the drug.

The incidence of psychotic episodes caused by LSD ingestion was hugely exaggerated by the media; in the '60s, it was depicted as commonplace. In any case, relatively rare as "freaking out" on LSD was in the 1960s, its incidence declined in the 1970s and 1980s. Some observers believe that panic reactions and other untoward effects of the LSD-type drugs were strongly influenced by cultural interpretations of the unusual psychic states generated by them and not the intrinsic effects of these substances.

Like psychotic episodes, genetic damage was a supposed effect of LSD that was seized upon by the media but turned out to be completely untrue. LSD is an extremely weak agent of genetic alteration; later research demonstrated that the supposed "monster-producing" impact of LSD turned out to be untrue. The hysteria generated by the use of LSD demonstrates the importance of sensitization during a drug panic: The media exaggerated the harmful effects of a new and different drug, the public came to believe the exaggeration, and any and all manner of evidence became used to demonstrate the harms that were believed in the first place. By the 1970s, the fear and hysteria that LSD had whipped up only a half-dozen years earlier had dissipated. Eventually, the psychedelics became simply yet another illegal substance that was added to the recreational drug stew.

Perhaps the most important fact about LSD and the LSD-type drugs is that they are used extremely infrequently and episodically. They are not drugs of chronic or compulsive use. Among recreational drugs, their user loyalty is among the weakest; not only are those who use them unlikely to take LSD-type drugs more than once in a while, a very high percentage use them experimentally once or twice, then discontinue their use altogether. There are at least three reasons: (1) tolerance builds up rapidly; (2) the effects of these drugs are powerful and disruptive enough to discourage frequent use; and (3) the effects are inconsistent and variable. There is no such thing as an LSD "addict," as there is for alcohol, tobacco, heroin, and cocaine.

The so-called club drugs—for our purposes, Ecstasy, ketamine, Rohypnol, and GHB—make up a chemically and pharmacologically miscellaneous group of substances that have attained at least moderate popularity as recreational or street drugs only within the past decade or so. Some scientists and medical figures fear that Ecstasy (MDMA), chemically related to the amphetamines and regarded by some experts as an "empathogen" or generator of close bonding with others, permanently depletes the brain of serotonin, a crucial neurotransmitter that regulates emotion, anger, mood, impulsivity, the sex drive, hunger, and other crucial functions of the body. More recent research suggests that the supply of dopamine, another crucial neurotransmitter, may also be a victim of Ecstasy use. Ketamine ("special K"), a close relative of PCP, which was previously a popular street drug, is a "disassociative anesthetic"—a sedative that induces a hypnotic state sometimes accompanied by hallucinations. Along with Rohypnol and GHB, ketamine has been accused of having been used as a "date rape" drug, of rendering women incapable of resisting or unconscious. These four drugs are used, in addition to methamphetamine, LSD, and other drugs, by young people in clubs and at parties, raves, and concerts, to enhance good times. Considering its relative recentness and rarity, GHB has generated a sizable number of untoward acute effects. Since 2000, both the use and the untoward effects of club drugs have declined.

ACCOUNT: Marijuana, LSD, and Club Drugs

Raving

At the time of contributing this account, Jim was a 20-year-old college junior. Here, he explains the subculture of raving, which is usually accompanied by the use of club drugs, most prominently Ecstasy.

A modern-day Woodstock, called a “rave,” is the outlet for today’s youth of America. A rave is basically a huge, usually outdoor, illegal party where hundreds, thousands, and in some cases, as many as 10,000, ravers gather to not only enjoy each other but to bathe in the music throughout the night and well into the next day—with the help of some psychedelic substances, of course. No folk rock or Bierkenstocks here. It’s techno, the underground club music that sends ravers to the hills, beaches, stadiums, warehouses, and even vacant airplane hangers. Some of these kids may even look like hippies. A real rave is like Woodstock gone techno with lots of lasers, enormous sound systems, and thousands of people coming together with one thing in mind—to have fun. . . . People of all races and colors join together as friends to dance and party for days on end, tripping out on acid and Ecstasy. A nation’s youth culture has come together to create a scene so strong that authorities can do nothing about it. The atmosphere created by special people is enhanced by mind-blowing visuals and lasers; mind, body, and soul ascend into a state of bliss.

Because of the illegal, underground nature of these parties, a strong sense of unity and loyalty develops among those present. Kids willingly drive hundreds of miles to attend raves set in remote locations. Often, busses are hired to bring in those who have purchased combination bus-rave tickets. People want to be there. They are drawn to others who simply want to have fun together. The vibe is entirely positive, and at times almost overwhelming. There is enormous energy created by the music, energy, and setting. . . . The music is at the heart of any rave—hardcore techno—a form of

music that can be matched by no other in creating the energetic atmosphere and mind trip to make the scene work.

Ravers have to put up with a lot. The anti-rave hysteria created by the press years back—about Ecstasy-crazed kids, mass orgies, and total chaos—nearly killed off the rave scene altogether. The police have closed down many raves due to pressure from the tabloid-reading public. In LA there is even a special police force assigned to seeking out and dispersing raves. . . . Some rave organizers have begun to work with the police, but they complain that they can’t have their sound systems loud enough for the audience to feel the pressure of the music—which is the key. Other ravers have stated that the police simply hate seeing anyone having a good time, so they keep seeking out new sites, thus maintaining the standards of raving their crowds have set. . . .

I consider myself lucky to have experienced this incredible feeling. Having used mescaline, acid, and Ecstasy, I personally, as well as do most other ravers, prefer to take Ecstasy at raves because of the calm high it gives you, the sensitivity and insight. It’s a lot better than taking acid, which typically produces much more disassociation and disorientation, as well as more anxiety reactions. Ecstasy has been called the “love drug” and even the “sex drug” among ravers because it produces a sensual euphoria that goes perfectly with the rave scene. Having had experiences with the drug, including, once, with my two brothers (age 19 and 21) and my girlfriend, a sense of insight and bonding with others seems to take place that one wouldn’t feel unless they take the drug themselves. I hate to say that a drug could actually open your eyes to life but that is what it does. People who have never taken Ecstasy will never know this “sixth sense” one feels when taking it. If you tell them that, they’ll just ridicule you, just as people who have never raved will do if you tell them about how great raves are.

Drugs give you an energy to rave all night and not get tired. Any real raver will tell you that. The people who condemn it are ignorant about what it is and what it's like. There's a sensation, a sixth sense you get when you rave. . . . I only use acid and Ecstasy moderately, and then only if the time and place are appropriate. I never do it just for the hell of it. If you are at a rave, you will see people with dilated pupils, hugging each other. Raving is a state of mind. People don't go to them to show off their fashionable clothes or fancy dance steps. Raving takes over your life. It's not something you go to on a weekend to forget your boring life. It's not somewhere you go to look down on someone who's not wearing the same clothes as you. Everyone is on a trip and that trip is trance-dancing. If we can't have world peace, what's wrong with going to a rave where there is love, peace, and unity, even if it doesn't last? I consider ravers to be the luckiest people around because we can escape from a cruel world and enjoy the friendliest gathering in the country in a way only we know how to do.

QUESTIONS

Do you accept Jim's rationale for drug use at raves? Are Ecstasy and the other club drugs as safe as he says? Are ravers "the luckiest people around"? Are raves as peaceful and loving as Jim claims? Are non-ravers missing out on a wonderful experience, as Jim argues? If we accept Jim's statements as true, shouldn't we all be taking Ecstasy and attending raves? Is the rave culture unfairly persecuted? How would you characterize the social composition of ravers? How does it differ from that of users of other drugs, in other scenes? What is it about the characteristics of users of certain drugs that attract them to those particular substances? More than a dozen years ago, the typical user of Ecstasy was a youngish middle-aged professional (Beck and Rosenbaum, 1994); why do you think the age composition of the users of this drug has changed?

STIMULANTS

*Amphetamine, Methamphetamine,
Cocaine, and Crack*

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Amy, a college student, takes Adderall to cram for exams. Melanie uses Concerta to keep her alert through her night-shift waitressing job.

During the week, Jimmy wakes up at 5:30 a.m., breaks a 5 milligram tablet of Desoxyn in two, and takes a half-tab each morning to stay sharp at work.

Doug is 38; he makes his living as a writer. “When I snort cocaine,” he told me, “I feel powerful. Smart, sharp, suave, articulate—and *unbelievably* sexy. I feel I can do anything I want, including make love to every woman on Earth. There’s really nothing I’ve had any experience with that’s anything like it. It’s very hard for me to limit my use of this seductive, alluring drug to just once in a while. Maybe I have a habit,” Doug wondered, “I’m not sure.”

Mike, 27, a university instructor, told me about an experience he had had with amphetamine. He spent most of the evening engaged in a heated marathon argument with his on-again, off-again girlfriend. By the time he managed to convince her to go to sleep, at three in the morning, he realized he hadn’t prepared the lecture he had to deliver just a few hours later, concerning a subject about which he knew virtually nothing. Taking two 10-milligram capsules of Dexedrine and staying up the rest of the night, Doug read what he could on the topic of the lecture, took notes, and typed up what he wanted to say. Swallowing two more capsules just before his class at nine, he walked in and began lecturing. “I was masterful, knowledgeable, articulate, charismatic, clever, and charming,” he told me. When the class was over, half a dozen students surged forward and congratulated him on his wonderful lecture. “Amphetamine is just great,” Mike told me. “I wonder if maybe I ought to lecture that way more often,” he mused.

Pharmacologist Avram Goldstein refers to the use of cocaine and the amphetamines (including methamphetamine), the two principal and strongest stimulants, as “the wild addictions” (1994, p. 155). The immediate subjective effect of these drugs is euphoria and a sense of confidence and well-being. Of all known drugs or drug types, cocaine and the amphetamines are the two with the greatest *immediate sensual appeal* (Grinspoon and Bakalar, 1976, pp. 191–194). If researchers administer them to subjects who do not know what drug they have been given, in comparison with other drugs, the subjects enjoy the effects of cocaine and amphetamines the most and are most likely to say that they want to take them again. And of all drugs, cocaine and amphetamine produce the most powerful psychological dependence.

In experiments, rats, mice, and monkeys will self-administer cocaine in preference to food, and they will even starve themselves to death to self-administer cocaine. If experimental animals receive cocaine as a result of engaging in an activity, like pushing a bar, and the researchers then discontinue administering the drug, these animals will continue engaging in that previously rewarded activity—thousands of times an hour—at a higher rate and for a longer period of time than will animals deprived of any other drug they’ve previous self-administered (Johanson, 1984). In psychological terms, then, cocaine and the amphetamines are powerfully *reinforcing*; taking them generates the impulse to take them over and over, regardless of the obstacles, pain, or cost. In popular or lay terms, they are pleasurable. It should come as no surprise, therefore, that these two drugs are widely used for recreational purposes—for the purpose of getting high.

Stimulants speed up signals passing through the nervous system; they activate organs and functions of the body, heighten arousal, increase overall behavioral activity, and suppress fatigue. In low doses, stimulants can heighten the body’s sensitivity and improve mental and physical performance. At higher doses, however, many of these functions

seem to go haywire. Behavior becomes unfocused, hypersensitivity morphs into paranoia, and mental and intellectual performance becomes uncontrollable, ineffective, counterproductive, and often compulsively repetitive. Adolph Hitler's deranged behavior may have been due in part to an immoderate amphetamine consumption (Robson, 1994, p. 59); Sigmund Freud's peculiar theories, some argue (Thornton, 1984; Streatfeild, 2001, pp. 105–116), could be due to his early cocaine abuse; and Robert Louis Stevenson wrote his bizarre novel, *Dr. Jekyll and Mr. Hyde*, in three days under the influence of cocaine. Arthur Conan Doyle made his famous fictive detective Sherlock Holmes a cocaine addict. *The Seven-Percent Solution*, by Nicholas Meyer—a take-off and pastiche of the Sherlock Holmes stories, made into a movie in 1976—depicts Holmes seeking psychotherapy from Sigmund Freud because, added by his cocaine habit, he fantasizes an imaginary threat from the evil Professor Moriarty.

THE AMPHETAMINES

The amphetamines and amphetamine-like drugs include Dexedrine, Desoxyn, Dexamyl, Methedrine, methamphetamine, Biphetamine, Benzedrine, and Adderall. (Some of these brand names are no longer available as prescription drugs.) Over the years, they have gone by the street names of “speed,” “ups,” “uppers,” “crank,” “splash,” “pep pills,” “meth,” “crystal,” “bennies,” “dexies,” and “ice.” Amphetamine was first synthesized in a laboratory in 1887; the initial commercial product from the drug was marketed over the counter in the United States in 1932 as an inhalant for nasal decongestion. (The Food and Drug Administration banned its use for this purpose in 1959, but, because of loopholes, the ban did not become effective until 1971.) During World War II, substantial numbers of American, Japanese, and German soldiers were issued Benzedrine to make them more effective and alert fighting machines. Amphetamines have been used to treat narcolepsy (falling into compulsive and involuntary sleep); depression; alcoholism; schizophrenia; obesity; Attention Deficit Disorder, or ADD, and Attention Deficit/Hyperactive Disorder, or ADHD (amphetamines, as with Ritalin and Folcalin, seem to have the paradoxical effect of calming down hyperactive children); Parkinson's disease; fatigue; nicotine and caffeine addiction; seasickness; and bed-wetting. But it became known fairly quickly that amphetamine drugs have a number of side effects, including euphoria, that make them attractive for recreational use. Throughout the 1940s and 1950s, prescription amphetamines were increasingly diverted into illegal channels. By the 1960s, amphetamine had become one of the half-dozen most popular street drugs. In addition, amphetamines were used extra-medically for instrumental purposes—to combat fatigue and drowsiness.

Amphetamines are used therapeutically in tablet or capsule form; 2.5 to 10 milligrams constitutes a typical dose. In such low doses, the typical bodily and mental effects of the amphetamines are (1) a heightened competence in motor skills and mental acuity; (2) an increased alertness, a feeling of arousal or wakefulness, a diminution of drowsiness and fatigue; (3) a feeling of increased energy; (4) a stimulation of the need for motor activity, such as walking about and talking; (5) a feeling of euphoria and an inhibition of depression; (6) increased heartbeat; (7) an inhibition of appetite; (8) constriction of the blood vessels; (9) dryness of the mouth; and (10) a feeling of confidence and even grandeur.

Trends in Use

Amphetamines were popular from the 1950s to the mid-1970s as prescription diet pills. The drug does inhibit the appetite, but studies have shown that weight loss tends to be modest and temporary; physicians concluded that amphetamine was an ineffective long-term means of losing weight. In addition, there came to be a growing awareness that the immoderate use of amphetamine can be dangerous. Because of the growing consensus that the drug was neither effective nor safe, a diminishing number of physicians prescribed amphetamine for weight loss. As a result, many overweight (and not-so-overweight) patients, mainly women, sought out amphetamine through underground channels, either on the street or in the offices of unscrupulous physicians. The nonprescription use of amphetamines for weight loss represents only one of a great number of illegal instrumental uses of the drug. Other familiar instrumental users include truck drivers staying up all night for several nights running to transport cargo cross-country, students pulling “all-nighters” to cram for exams, athletes seeking alertness and quickness on the playing field, and a wide variety of ordinary people using the drug so that they can face life with a less depressed, more positive mood. These users are taking the drug not to get high but to achieve certain goals of which society approves, such as working at a job, doing well in school, and socializing with others. For the most part, such illegal instrumental users tend to keep their use to specific occasions and limit the amount they take when they do use (usually 2.5 to 10 or 20 milligrams). Today, the instrumental use of the amphetamines still takes place, but stringent controls on these drugs have diminished the frequency and extent of their use.

Because of self-imposed restrictions by physicians, an awareness of the drugs’ dangers, and legal controls, between 1971 and 1986, the number of prescriptions written for the amphetamines declined by 90 percent; the medical use of these drugs literally dropped off the charts. This decline continued throughout the 1980s and into the 1990s, and continues to do so into the twenty-first century. Today, the amphetamines have very few widely accepted medical uses. Reference guides such as the *PDR (Physician’s Desk Reference)* usually list them as having medical and psychiatric utility only for narcolepsy (involuntarily falling asleep during inappropriate moments), attention deficit and hyperactive disorder (ADHD), and short-term weight loss for obese patients. None of the amphetamine derivatives introduced in the first half of the twentieth century has appeared on the list of the country’s top 200 prescription drugs for more than 30 years. (The generic equivalent of Ritalin, methylphenidate, which is a stimulant, dropped from 178th in sales in 2001 and fell off the chart by 2004; it is prescribed for ADHD.) However, Adderall, a mixture of four amphetamines, introduced in 1996, proved to be a commercial success. In 2011, Adderall’s generic, amphetamine salts, appears at number 143 in the top 200 drugs. Its manufacturers claim that this multiple-amphetamine blend produces smoother, more gradual, and less abrupt effects. A survey by William Frankenberger at a public university in Wisconsin indicated that 14 percent of the students who responded had taken the drug during the previous year as a study aid (Twohey, 2006)—an unauthorized and technically illegal act.

In addition to being used instrumentally, the amphetamines are also fairly widely used recreationally, by multiple drug users, who combine it with alcohol, marijuana, barbiturates, and/or a benzodiazepine. A recreational multiple drug user might take two to four 10- or 20-milligram tablets or capsules at a time. The data from the MTF’s study

indicate a peak for the recreational use of amphetamines during the early 1980s, with an annual prevalence rate for seniors of 21 percent (in 1980), a decline into the early 1990s, with an annual rate of about 8 percent, with small fluctuations, between 1993 and 2012. Though currently lower than its peak years, however, amphetamine use among the young does not seem to be disappearing: Between 2000 and 2012, more high school seniors took amphetamine during the prior year than took cocaine—with annual rates of 8 versus 3 percent. Nevertheless, the nation's youth does not seem to be “swamped” with the use of stimulants. The national household surveys show lifetime figures for the nonmedical use of stimulants for the population as a whole of 9 percent for 1979 (Fishburne, Abelson, and Cisin, 1980, pp. 85–87); 9 percent for 1982 (Miller et al., 1983, pp. 59–61); 9 percent for 1985 (NIDA Capsules, 1986); 7 percent for 1991 (NIDA, 1991, p. 61); 7 percent for 2000 (SAMHSA, 2001, p. 132); and 8 percent for 2011 (SAMHSA, 2012). The use of the drug persists, but in comparison with marijuana, on average, it is used at a much more moderate level and on a less widespread basis.

Physical and Psychological Effects

Is amphetamine harmful? A pattern of heavy, compulsive amphetamine abuse inevitably has a dramatic impact on the user's life, mind, and body. Taking substantial quantities of a strong stimulant, combined with chronic sleeplessness, produces a state of hyperactivity and hyper-excitement. Amphetamine is a vasoconstrictor, which means it shrinks the diameter of and flow through the blood vessels. Hence, blood pressure is elevated and the heart has to work harder to maintain a constant supply of blood in the body. Researchers believe that the “amphetamine psychosis” is an *inevitable* accompaniment of high-dose amphetamine abuse. Its features include paranoia, fearfulness, a tendency toward violence, a schizophrenia-like psychosis, hallucinations, delusions, disordered thinking, mania, and wild mood swings. One medical observer has noted that “anyone given a large enough dose” of amphetamine “for a long enough period of time will become psychotic” (Kramer, 1969, p. 10).

Another feature of heavy amphetamine use is the development of certain behavioral fixations, which are repeated over and over again, such as picking at bits of dust in a rug or spending a whole night counting the cornflakes in a cereal box. This repetitive activity is called “punding” (users refer to it as “getting hung up” on something); it can be induced in laboratory animals. One “speed freak” (as compulsive, high-dose users of amphetamines were called) I interviewed told me of a fellow user who had spent two years engaged in covering an entire wall with heads of George Washington, carefully cut out from cancelled postage stamps; supposedly, he had pasted 60,000 of these figures on the wall. Punding is also related to compulsive jaw and teeth grinding, which can result in extensive dental damage if use is prolonged. In addition, some chronic, compulsive users feel the sensation of bugs crawling under their skin; some feel so disturbed by this that they tear open their skin to get at the nonexistent bugs.

Is amphetamine addicting? Does it produce a physical dependence the way that the narcotics and the sedatives and alcohol do? Discontinuing the use of amphetamine after taking it in quantity over a period of time produces withdrawal symptoms, but they do not closely resemble those associated with withdrawal distress from using heroin or the barbiturates. The amphetamine withdrawal consists of severe depression—often to

the point of becoming obsessed with suicide—as well as anxiety, fatigue, lethargy, lassitude, sleeplessness, nightmares, irritability, fear, and even terror (Grinspoon and Hedblom, 1975, pp. 153–160). Whether or not a given drug such as amphetamine, which does not produce a classic withdrawal syndrome, is addicting seems in part a semantic question. Moreover, amphetamine, especially if smoked or taken intravenously, is *strongly* reinforcing and, thus, causes a powerful psychological dependence that is nearly as great as cocaine's. Consequently, the question of whether amphetamine is literally physically addicting may be irrelevant, since heavy, chronic users display a pattern of *behavioral* dependence that seems to be identical to that of persons who are physically addicted, to drugs such as heroin or the barbiturates. It seems to make little difference that users are physically addicted in the classic sense.

METHAMPHETAMINE

An Introduction to Meth

Methamphetamine is a more potent sister of the amphetamines. Since it is more reinforcing, methamphetamine use is more likely than amphetamine use to escalate—and more rapidly—to high-dose, compulsive abuse. This may be less a function of the direct action of these two drugs than of their route of administration: The amphetamines are most likely to be taken orally via capsule while methamphetamine, in powder form, is injected, snorted, or smoked. At one time, a type of methamphetamine was prescribed under the brand name Methedrine; it is no longer legally manufactured in the United States. (Another methamphetamine is currently marketed in pill form under the brand name Desoxyn.) In the 1960s, Methedrine was injected intravenously in high doses; a sizeable “speed scene” developed, which involved tens of thousands of youths taking huge doses day in and day out. Use peaked around 1967 and declined sharply after that.

In the late 1980s, the heavy use of methamphetamine (now nicknamed “ice”) made a comeback, beginning in Hawaii and spreading to California. The current form of methamphetamine is considerably more potent than its older version. (Its manufacture involves an additional chemical process in which manufacturers use ephedrine, a heart and central nervous system stimulant.) Its effects are fairly long, lasting up to 12 hours; its half-life is at least as long, and it takes two days to be totally eliminated from the body. Its relatively slow breakdown rate means that if it is taken daily, accumulation occurs. This both boosts the effect of each subsequent dose and potentiates serious organic harm. Unlike the 1960s version, which was injected intravenously, methamphetamine is currently most often smoked.

As we saw in Chapter 5, every decade or two, a particular drug or drug type has been designated by the media as, in the words of criminologist Ronald Akers (in an unpublished paper) the “scary drug of the year.” A panic or scare erupts about its use, and headlines scream out the danger its use poses. A tidal wave of abuse has hit or is about to hit our shores, these stories assert, and we should be prepared. In the 1930s, that drug was marijuana; in the 1960s, it was LSD; in the late 1970s, it was PCP; in the 1985–1990 era, it was crack cocaine. Just as the crack scare had begun to die down, a terrifying “demon” emerged: methamphetamine. In every case, the headlines were exaggerated. Experts do not doubt the dangers attendant upon compulsive drug use, but they

do argue that the “scary drugs” are not nearly as deadly, nor are they likely to be used as compulsively, or as widely, as most of these headlines claimed. Today, we regard the 1930s proclamations that smoking marijuana causes a frenzy of violence and insanity as fanciful, even laughable. Evidence eventually revealed that that, contrary to claims made in the 1960s and the 1980s, neither LSD nor crack use by expectant mothers produced birth defects in their babies; the vast majority of episodes of PCP use did not result in self-destructive or violent behavior, and very few crack users were hurled into the “inferno of addiction” that was described in the press.

Is There an “Ice” Epidemic?

What of methamphetamine? *Is* the country awash in “ice”? Has crystal meth become the drug of choice for our younger generation? Is it as dependency producing as the headlines proclaim? What evidence do criminologists, epidemiologists, and sociologists have of the use of this powerfully reinforcing drug?

To begin with, according to the *National Drug Threat Assessment*, published in 2010, seizures of methamphetamine in the United States remained remarkably stable between 2005 and 2009, at roughly 6,500 kilograms. The price per pure gram of the drug dropped from \$207 in 2006 to \$127 in 2009, and the purity rose from 37 percent to 69 percent. This report indicated that there has been an increase in the number of labs in the United States producing methamphetamine. At the same time, by late 2009, nearly all states had criminalized ephedrine and pseudoephedrine, the precursor chemical necessary to manufacture meth. What we see is that efforts to suppress methamphetamine production and distribution have not been entirely successful; production is up, the number of labs continues to grow, price is down, purity is up, and yet demand seems to be diminishing.

As we saw from the ADAM II (Arrestee Drug Abuse Monitoring) figures in Chapter 6, the use of “ice” is highly regionalized, *much* more so than for any other drug. Arrestees in Hawaii and California (and a few other cities where dealers have begun distributing the drug) frequently test positive for methamphetamine, but its use is extremely rare, even nonexistent, in most other locales around the country. In 2011, a third of Sacramento’s (39%) and a quarter of Portland’s (23%) arrestees tested positive for meth, but 0.2 to 6.6 percent of arrestees in ADAM II’s Midwestern cities (Denver, Minneapolis, Chicago, and Indianapolis) did so, and a fraction of 1 percent of its Eastern cities, New York and the District of Columbia. For most of these cities, these figures represent downturns from 2003 and 2007. In sum, methamphetamine has remained a substantial problem for the West Coast cities, a minor one for the Midwest, and a practically nonexistent one for the East.

In addition, the MTF study does not demonstrate widespread use of methamphetamine. The *lifetime* prevalence figures for “ice” for high school seniors in 1990, when this study began asking questions about “ice,” was 2.7 percent; in 2012, this figure stood virtually in place, at 2.7 percent. For *annual* prevalence, the figures were 1.3 and 1.1 percent, respectively. The percentage of high school seniors who took ice during the previous month (“current” use) was 0.6 percent in 1990 and 0.5 percent in 2012. (The figures researchers obtain are slightly different if MTF asks about “methamphetamine” instead of “ice.” MTF only began asking about “methamphetamine” in 1999.) Only 4.6 percent of SAMHSA’s 2011 National Survey on Drug Use and Health said that

they had used methamphetamine once or more during their lives; only 0.4 said that they had done so in the past year; and 0.2 percent, in the past month. The last of these figures represents about 600,000 people. It is entirely possible, however, that heavy, chronic methamphetamine abusers did not fall into SAMHSA's sample.

As we saw from Table 6-4 on drug-related mortality, DAWN did not tabulate amphetamine and methamphetamine separately, but lumped them together in a category it labeled "stimulants." Medical examiners (MEs) in the limited areas recorded by DAWN found that the amphetamine-type stimulants ranked fairly low on the hierarchy of substances causing drug-related deaths (or death by a drug "overdose"). Only 5 percent of the causes of all of the 2010 deaths MEs determined were drug-implicated stimulants; methamphetamine is a subset of this fairly small statistic. In contrast, on the "top five" chart, narcotics (or "opiates") were implicated in over four in 10 drug-related mortalities (44%); alcohol and the benzodiazepines in about one out of seven each (15%); and cocaine in nearly one out of eight (12%). Even antidepressants outrank amphetamine-type drugs in being associated with ME reports of drug-related deaths (9%). Stimulants generally, and methamphetamine specifically, do not loom large among the drugs causing drug-related overdoses.

Systematic evidence simply does not indicate that the nationwide epidemic predicted for methamphetamine abuse (Lerner, 1989; Young, 1989; Labianca, 1992) has yet materialized. No evidence shows that the country as a whole is "awash" in meth, although the abuse of "ice" is the most serious drug problem in many communities and in certain regions of the country. Let's be clear about this point: Methamphetamine is an extremely dangerous drug. Many users become dependent on it, and its use causes or is associated with a wide range of medical pathologies. But most regions of the United States are not experiencing a methamphetamine "epidemic"; most social categories in the population have little or no experience with the drug; nowhere is it causing as many deaths as the "big five" drugs (opiates, cocaine, alcohol, benzodiazepines, and antidepressants); and nationwide, the use of meth is not increasing over time. It is true that amphetamine and methamphetamine, added together, generate slightly over 170,000, or about 6 percent, of all drug-related emergency department visits; but that is only a third of the figure for alcohol (577,521) and cocaine (548,608). Some journalists have asserted that meth is the greatest current drug threat in America, but an examination of the data suggests that it is not the nation's most dangerous drug, nor even among the top three. Dangerous, yes; the most dangerous, certainly not.

COCAINE

Of all drugs, cocaine's acute or immediate effects are most similar to those of amphetamine; actually, in laboratory studies in which one or the other is injected, experimental subjects cannot tell the difference between the effects of the two (Goldstein, 2001, p.180; Van Dyke and Byck, 1982, p. 128). Cocaine's effects, however, are more transient; they last no more than half an hour, whereas the effects of a sufficiently large dose of amphetamine will last several hours. It should come as no surprise, therefore, that cocaine is broken down in the body much more swiftly than amphetamine; its half-life is roughly an hour. Cocaine's effects are also said by users to be more subtle; it is more of a "head"

drug, whereas amphetamine is described as more of a “body” drug. Unlike amphetamine, however, cocaine is a local or topical anesthetic. This means that it kills pain upon contact with organic tissue. It can be useful in conjunction with operations on organs with extremely delicate, sensitive nerves, such as the human eye. Since cocaine’s role as a recreational drug has become clear to physicians, another drug, usually lidocaine, which has cocaine’s anesthetic but not its psychoactive property, has typically been used for this purpose. Because of its potential as a topical anesthetic, in spite of its extensive abuse, cocaine remains a Schedule II drug.

A Brief History of Cocaine

The use of cocaine, at least in its natural form, coca leaves, dates back at least 2,000 years, and possibly as much as 5,000 years (Van Dyke and Byck, 1982, p. 128). The coca (not cocoa) plant grows in the Andes Mountains of South America, and its leaves contain from less than 1 percent to as much as 1.8 percent cocaine (p. 130). Indians living in the region chew the leaves of the coca bush to offset fatigue and hunger, and they can work long hours without stopping as a result of the drug’s effects. The ancient Incan civilization regarded the coca plant as divine; one of the gods they worshipped was “Mama Coca.”

In its indigenous context, because the drug was taken in a natural and extremely low-potency form, its effects were largely beneficial. There is no archaeological or anthropological evidence that this practice did any harm to the native Andean peoples who engaged in it. The Catholic Church regarded coca’s worship and even its use as an abomination and tried to stamp out both. However, beginning in the mid-1500s, the Spanish crown recognized that Indians refused to work in the silver mines unless they were paid in coca leaves. In order for the king to earn his fifth share from the silver mining profits, the use of coca had to be tolerated. Hence, the church’s appeal to ban the drug fell on deaf ears (Streatfeild, 2001, pp. 28–36). Coca leaves made their way to Europe, where scientists and physicians studied their effects; they extracted cocaine from coca leaves about 1860. (The exact date and the scientist who first achieved this feat are in dispute.) Much of the medical profession hailed cocaine as a wonder drug. Sigmund Freud recommended it as a cure for digestive disorders, anemia, typhoid fever, narcotic addiction, alcoholism, asthma, and sexual unresponsiveness, but he soon regretted his endorsement of the drug: His close friend Ernst von Fleischl-Marxow became a cocaine addict as a result of Dr. Freud’s medical care. “Unwittingly, Freud had created the first cocaine addict” (Streatfeild, 2001, p. 85).

Cocaine, in the form of coca leaves, formed a major ingredient in many popular beverages sold in the late nineteenth and early twentieth centuries. Mariani’s Coca Wine was one of the most popular of these; its manufacturer published 13 *volumes* of testimonials by prominent users (including President William McKinley, Thomas Edison, Pope Leo XIII, Pope Pius X, Oscar II of Sweden and Norway, and writers Jules Verne and H. G. Wells) singing the praises of the beneficial effects of this concoction. Coca-Cola, too, contained the extract of coca leaves until the early twentieth century, when it was removed because of pressure applied “by Southerners who feared blacks’ getting cocaine in any form” (Ashley, 1975, p. 46). Extracts of coca leaves still make up one of Coca-Cola’s many ingredients—but only after the cocaine has been removed.

A major reason for cocaine's legal downfall in the United States, some observers argue, was racism. Although there is absolutely *no* reliable information documenting that African Americans were more likely than whites to use cocaine at the turn of the century, some whites feared that this was so—and that blacks were especially dangerous and violent while under the influence. The fact that this myth was believed by certain elements in the white majority brought the drug under state and federal control. In the beginning of the twentieth century, magazines and newspapers published numerous articles claiming that cocaine stimulated violent behavior in African Americans. In 1903, *The New York Tribune* quoted one Colonel J. W. Watson of Georgia as saying that “many of the horrible crimes committed in the Southern States by the colored people can be traced directly to the cocaine habit.” Dr. Christopher Koch asserted, in an article that appeared in the *Literary Digest* in 1914, that “most of the attacks upon white women of the South are a direct result of a cocaine-crazed Negro brain.” Even the staid *New York Times* published an article on February 8, 1914, entitled “Negro Cocaine Fiends Are a New Southern Menace,” which detailed the “race menace,” “cocaine orgies,” “wholesale murders,” “hitherto inoffensive” blacks, “running amuck in a cocaine frenzy” (Ashley, 1975; Grinspoon and Bakalar, 1976; and Musto, 1999). Such claims were based on racist fantasies, but they reflected the wave of panic, fear, and racial hostility that led to the inclusion of cocaine as a narcotic in the Harrison Act of 1914.

“All the elements needed to insure cocaine's outlaw status were present by the first years of the twentieth century,” says Ashley. “It had become widely used as a pleasure drug . . . ; it had become identified with despised or poorly regarded groups—blacks, lower-class whites, and criminals; it had not been long enough established in the culture to insure its survival; and it had not . . . become identified with the elite, thus losing what little chance it had of weathering the storm” (1975, p. 74). By the time of the Harrison Act, 46 states had already passed laws attempting to control cocaine (only 29 had done so with the opiates). This indicates that cocaine was seen by many legislators as the major drug problem at that time. It seems almost inconceivable that a force behind this legislation was not at least partly related to racial hostility toward African Americans on the part of the white majority. Such images as were expressed in the media at the time could not have taken root had racial prejudice not already been ingrained among a substantial proportion of American whites.

It is impossible to know with any degree of certainty or accuracy just how frequently cocaine was used in the years following its criminalization. We have anecdotes and often hysterical magazine and newspaper stories, but no reliable information. Writers frequently mention cocaine as the drug of choice (after alcohol) among rarified, elite social circles in the 1920s. But after that came “The Great Drought.” “Virtually every source I have consulted,” wrote Ashley, “agrees that cocaine use was insignificant during the 1930s” (p. 105). Most other observers agree; Dominic Streatfeild (2001, pp. 174ff) entitles his chapter on cocaine's use in the 1930s “Down . . . But Not Out.” Indicators suggest that its use remained confined to a very tiny number of Americans more or less into the 1960s.

During the 1960s, as we've seen, the cocaine explosion occurred—paralleling the marijuana explosion, though on a much smaller scale. Use rose from 1960, when there was a 1 percent lifetime figure for young adults age 18 to 25, to a 28 percent lifetime figure for 1979 and 1982. The 30-day prevalence figure for young adults in 1974, the first year when that statistic was tabulated and published, was 3 percent; by 1979, it

had tripled, to 9 percent, but in the 1990s, it declined to between 1 and 2 percent. Tables 11-1 and 11-2 detail the rise and decline of cocaine use among 18- to 25-year-olds and high school seniors. Without much exaggeration, it is fair to say that there was something of a cocaine “epidemic” between the late 1970s and the mid- to late 1980s; it subsided by the early 1990s, and by 2012, the yearly and monthly figures stood at lows that had not been not seen since systematic surveys began. (Recall that the 1960–1977 young adult figures [in Table 11-1] were reconstructions from retrospective guesstimates by respondents in a 1979 survey.)

TABLE 11-1 Use of Cocaine Among Young Adults (18–25), 1960–2011, Selected Years

	Lifetime	Yearly	Monthly
1960	1	*	*
1967	2	*	*
1972	9	*	*
1974	13	8	3
1977	19	10	4
1979	28	20	9
1982	28	19	7
1985	25	16	8
1991	18	8	2
1995	10	4	1
1998	10	5	2
2000	11	4	1
2005	15	7	3
2008	15	2.3	1.5
2011	12.4	4.6	1.4

Source: National Institute on Drug Abuse (NIDA) for the relevant year; 1960 and 1967 figures, Miller and Cisin, 1980, p.17.

Note: In 2002, the National Survey on Drug Abuse and Health changed its survey methodology; hence the figures after that year are slightly higher than in prior surveys.

*figure not tabulated

TABLE 11-2 Use of Cocaine Among High School Seniors, 1975–2012

	Lifetime	Annual	30-Day
1975	9	9	2
1980	16	12	5
1985	17	13	7
1990	9	5	2
1995	6	4	2
2000	9	5	2
2005	8	5	2
2008	7	4	2
2012	5	3	1

Source: Johnston, O’Malley, Bachman, and Schulenberg, 2006; Johnston et al., 2013.

Route of Administration and Effects

Most users of powdered cocaine sniff or “snort” the drug. Often, they chop the drug into fine lines with a razor blade or a credit card on a smooth surface and sharply inhale each line, usually one to a nostril, through a straw or a rolled-up bill, or by scooping up the powder with a tiny “coke spoon,” placing it directly under the nostril, and snorting the powder out of the spoon. Occasionally, users with at least one long fingernail will scoop up the powder on that nail, convey it to the nostril, and snort it off the nail. Some users snort cocaine off the crook between their thumb and the index finger.

In the 1980s, two methods aside from snorting became more common: freebasing and injecting. Freebase is a substance that is the product of dissolving cocaine in an alkaline solution and boiling it; a volatile chemical such as ether is also used. What remains is a purer, more potent form of the drug. More specifically, what is referred to as “pure” cocaine is really cocaine hydrochloride; freebase is actually pure cocaine, with the hydrochloride salt removed. (Cocaine hydrochloride is more stable than pure cocaine and, hence, has a longer shelf life; freebase is more volatile and unstable.) Freebase cocaine is smoked or, more properly, heated, and then the vapors are inhaled. Freebase declined in popularity after 1985, when the use of “crack” became widespread. Chemically, crack is very different from freebase, although both are smoked. Cocaine hydrochloride can be smoked, but the temperature required for its vaporization is higher than is the vaporization temperature for crack cocaine and hence, the practice is less common.

At this point, it is necessary to refer back to our old friend, route of administration. The South American Indians who chew coca leaves have a vastly different (and far safer) experience with cocaine than the North Americans who snort cocaine; likewise, persons who inject or smoke the drug, again, are having a very different drug experience. Both injecting and smoking cocaine, as we already know, are far more efficient and effective means of delivering a drug to the bloodstream than snorting. With smoking, the high hits 6 to 8 seconds after inhaling; with injecting, the time lag is 12 to 15 seconds. Both produce an intense “rush,” a flash of extreme orgasmlike pleasure that is even more powerful than taking cocaine intranasally. Injecting and freebasing cocaine are not only dangerous in themselves but are also more likely to generate frequent, heavy, chronic use. Two experts argue that snorting cocaine results in “a pattern of continued use while supplies are available and in simple abstinence when supplies are lacking. . . . It may interfere with other activities but it may be a source of enjoyment as well.” In stark contrast, injecting or smoking coke can often lead to “almost continual consumption and drug-seeking behavior, destructive to personal competence and productivity” (Van Dyke and Byck, 1982, p. 140).

What is the appeal of cocaine? Both users and researchers assert that cocaine’s appeal is greater than that of any other drug, licit or illicit. There is a feeling toward cocaine among many recreational drug users that borders on reverence and awe; cocaine has been referred to as “the champagne of drugs,” the “caviar among drugs.” Poet Michael McClure dubbed it “The Ace of Sunlight.” As we already know, the cocaine intoxication is extremely pleasurable; behavioral psychologists refer to it as reinforcing, more so than for any other known drug, including heroin. As I’ve noted, laboratory animals will give up food, sex, and water for self-administered doses of cocaine, and they will even starve themselves to death to continue receiving cocaine instead of food.

These experiments were conducted on laboratory animals, not humans, who, presumably, are governed by a more conscious will than are other species, so we should not, in Wilbanks' terms (1992), rigidly adhere to the *monkey model of addiction*. Moreover, humans do not necessarily take cocaine via the same route of administration as that forced upon laboratory animals—intravenously—and, as we know, route of administration strongly influences a drug's effects. The responses of lab rats to cocaine notwithstanding, humans will not necessarily take it the same way. But from these studies, we have a clue that, even among humans, cocaine has a strong *potential* to generate a strong psychological dependency—in all likelihood, more so than for any other drug. (Remember, laboratory animals generally refuse to become intoxicated on alcohol, and yet this experience is extremely popular among humans.) All this being said, cocaine is extremely reinforcing for both humans and animals; its principal effects are exhilaration, elation, euphoria—a voluptuous, joyous feeling accompanied by grandiosity. William Burroughs, a novelist who was once addicted to heroin and who has tried just about every drug known to humankind, described taking cocaine as “electricity to the brain.”

A second common effect of the drug is confidence—a sensation of mastery of and competence in what one does and is. A third effect is increased energy and a suppression of fatigue, causing stimulation of the ability to continue physical and mental activity more intensely and for a longer time. As we saw, Indian workers in South America can endure ordinarily exhausting conditions without food or rest for days on end because of the effects of the coca leaves they chew. We've also seen that Robert Louis Stevenson, a sickly man, wrote *Dr. Jekyll and Mr. Hyde*, a 60,000-word novel, in just three days under the influence of cocaine. (To be more exact, he wrote one version in three days, was dissatisfied with it, tore it up, and wrote another version in three days.) And users frequently assert that in small doses, cocaine is an aphrodisiac for them; however, if it is taken in large doses or used frequently over long periods of time, the sexual urge is inhibited, not stimulated.

Origin, Quality, Availability, Price, and Usage

The United Nations Office on Drugs and Crime (UNODC) publication, *Coca Cultivation in the Andean Region: A Survey of Bolivia, Colombia, and Peru*, published in 2010, states that virtually all of the coca grown in the world originates from coca bushes grown in Bolivia, Colombia, and Peru. Although some authors have stated otherwise (Fulton, 2007), and although “low levels” of coca cultivation have been identified in Ecuador and “marginal” levels on the Venezuelan-Colombian border, the UN has stated that there is no large-scale coca cultivation outside the three main coca-growing countries (UNODC, 2012). Typically, growers pluck the leaves from the coca bush, dry them, soak them in a weak solution of sulphuric acid, mix and mash them for four days, then add lime, gasoline, ammonia, and potassium permanganate to the liquid to produce a coca base; labs add hydrochloric acid to produce cocaine hydrochloride (White, 1989), which is about 90 percent pure and far more chemically stable than pure cocaine. Today, these processes are done in the plant's country of origin. Traffickers bring cocaine into the United States most often through Mexico, although a substantial quantity sold on the East Coast comes from South America either directly by air or indirectly, through the Caribbean.

Cocaine's availability and cost have fluctuated over the years. In 2001, a research group called the Abt Associates estimated that the average price of a gram of cocaine in 1981, at the less-than-gram-level purchase, declined from \$423 nationwide to \$211.70 in 2000 (at 2000 prices). In that same 20-year period, the purity of that gram purchase increased from 36 percent cocaine to 61 percent. While the purchase price of a gram of cocaine in 2000 was one-half of what it was in 1981, its purity had increased by about 70 percent (Rhodes, Johnston, and Kling, 2001, p. 43). But, according to the Department of Justice (DOJ), these trends have been reversed: Between 2006 and 2010, the price of a pure gram of cocaine increased from \$94.73 to \$164.91, while its purity decreased from 68 to 47 percent. Again, according to the DOJ, "a combination of factors, including increased law enforcement efforts in Mexico and the transit zones, decreased cocaine production in Colombia, high levels of cartel violence, and cocaine flow to non-U.S. markets, likely contributed to decreased amounts being transported to the U.S.–Mexico border for subsequent smuggling into the United States." The disruption of traditional trafficking routes, the seizure of large quantities of cocaine in Mexico and Colombia, and the inability of Peruvian and Bolivian traffickers to fill the void were, according to a 2011 Department of Justice report, "followed by an unprecedented decline in cocaine availability," which "initiated the first reported cocaine shortages." It is also possible, the DOJ reported, that a rising demand for cocaine in Europe as well as South America siphoned off a substantial quantity that would normally have gone to the United States. Have the higher price and lower availability of cocaine translated into changes in the patterns of use of cocaine?

According to the data collected by the MTF survey, the peak year of cocaine use among high school seniors was 1985, when lifetime prevalence reached 17 percent, annual prevalence was 13 percent, and 30-day prevalence was a remarkable 7 percent. By 2012, the figures had diminished considerably—5 percent, 3 percent, and 1 percent respectively. Likewise, the NSDUH shows a decline for all categories in the population in cocaine use between the 1980s and the early twenty-first century. In 1985, the NSDUH estimated 5.7 million current cocaine users (who used within the past month) in the population, while in 2012, it estimated this figure at 1.4 million. (In a study for the Office of National Drug Control Policy, an agency of the White House, the Abt Associates estimated that there are 2.8 million chronic cocaine users in the United States.) There has been a significant decline in the recreational use of cocaine in the American population between 1985 and the early twenty-first century. Interestingly enough, the national survey also warns that, since 1985, the frequent use of cocaine (use on more than 50 occasions over the past year) remained stable or even increased somewhat. And as we've seen, the national survey is likely to miss and therefore underestimate the number of heavy, chronic users of cocaine and heroin, since they often do not live in households.

We're already familiar with DAWN, the Drug Abuse Warning Network, which tracks both nonlethal and lethal drug-related episodes over time; specifically, the two types of episodes on which data are gathered are emergency department (ED) episodes (such as suicide attempts and untoward psychic effects) and medical examiner (ME) reports (deaths in which drugs are a direct causal or contributing factor). We've learned that DAWN's data are unstandardized with respect to a number of factors and, hence, should be used with great caution (Caulkins et al., 1995, 2005). In 1996, DAWN issued a report on ED episodes which standardized its databases, which means that we can be fairly

confident that the yearly trends it reports are valid. From 1978 to 1994, cocaine-related ED episodes increased almost astronomically, from 3,400 to 142,900. At latest tally (2011), this figure was 505,224, a tripling since 1994—but remember, as we saw in Chapter 6, that DAWN’s 2011 ED data are much more complete than in any earlier year, so the increase is certainly an artifact of improved data collection. Still, the trend line during this period has continued to move almost uniformly and sharply upward.

Although DAWN has not at this writing performed the same data standardization for this entire period for lethal overdoses, or medical examiner reports, it did provide these figures for 1991 to 1995. In the areas studied, in 1991, 2,938 dead bodies were found in which cocaine was believed to be a cause of or a contributing factor in the death; in 2002, in DAWN’s catchment area, 4,024 people died directly or indirectly as a result of ingesting cocaine. Since then, DAWN has substantially expanded its coverage of drug-related ME reports. According to DAWN’s ME report for 2010, its data drawn from hundreds of jurisdictions around the country, including 12 complete states, which represent a third of the American population, show a total of 25,000 deaths that were caused or related to the top five drugs. As we saw in Chapter 6, the opiates or narcotics make up the top category in causing or being related to drug-related deaths, with just over 10,000. Cocaine appeared in fourth place, after alcohol and the benzodiazepines, with 2,786 drug-related deaths. (Again, how this reflects on the country as a whole is not clear.) Since DAWN’s catchment area is unstandardized from year to year, it’s almost impossible to know whether cocaine is causing more or fewer drug-related deaths than in the past. Nonetheless, it stands at number four on the list of most lethal drugs, and so, obviously, the “Ace of Sunlight” is not a safe drug.

Is Cocaine Addicting?

Cocaine is similar to amphetamine in that it does not produce what is referred to as a “classic” drug addiction; there are no heroin-like physical withdrawal symptoms upon discontinuation of heavy, long-term use—nausea, vomiting, severe aches and pains, muscular twitching and spasms, and so on. However, psychological consequences, including depression, irritability, restlessness, agitation, fatigue, and craving, usually follow discontinuing the use of this drug. Some observers suggest a biochemical basis for this syndrome (Wesson and Smith, 1977). Many users claim that cocaine is a safe, extremely nontoxic drug. This is partly true and partly false. Cocaine, if taken occasionally (let’s say, less than weekly), in moderate doses, causes little if any physical or mental damage (Van Dyke and Byck, 1982). However, this pattern of use, and its attendant relative safety, has mainly to do with the drug’s cost, according to many contemporary experts. The regular use of cocaine represents a substantial financial investment. Some heavy users can go through an ounce or more of powder cocaine in a week; they find its effects so pleasurable that taking cocaine once in a while is not enough—they want to take it again and again. Using it more than occasionally is prohibitively expensive for the average recreational user, and thus its cost, in all likelihood, keeps its heavy use down.

In sum, when we consider cocaine’s addicting or dependency-producing properties, we should not get hung up on semantics—what words mean—and lose sight of what is happening in the real world. What do we mean when we ask whether cocaine is addicting? Are we asking if cocaine produces the same withdrawal symptoms as heroin?

The answer would have to be *no*, cocaine is not addicting. On the other hand, if we ask whether it is possible for a sizable proportion of users to develop a craving so intense that they will give up many of the things they value—money, possessions, relationships, jobs, and careers—in order to continue taking the drug, then the answer is an emphatic *yes*, cocaine is addicting. To put it in more precise current terminology: Many users develop a *behavioral dependence* on cocaine which is as strong as for drugs that are physically addicting, such as heroin and alcohol. This does not mean, however, that it is cocaine's biochemistry, and that alone, that determines the user's patterns of use. The social and personal characteristics of the user also make a great deal of difference.

As David Smith, a physician and founder of the Haight-Ashbury Free Medical Clinic whom we've quoted earlier on drug dependence, says: "What you're taking does not matter as much as who you are. Some people will take the drug—any drug—and not get addicted. Others will take it once and be inexorably drawn to it. The drug is the same, the people are different . . . Interestingly," Smith adds, "the person who is addicted to cocaine responds differently the very first time he [or she] uses it. Later he'll [or she'll] use terms that are qualitatively different from those that others use to describe the experience of taking cocaine the first time: 'This is the greatest thing that's ever happened to me,' or words to that effect." Smith estimates that the proportion of more or less regular users of powdered cocaine who become behaviorally dependent on the drug is roughly one in 10, the same as with alcohol. In addition, Smith estimates that 30 to 40 percent will experience at least one episode of dysfunction—a seizure, a coke binge that makes them sick, or some other serious adverse reaction. All of this means that some people "can experiment with the drug and not abuse it." Smith is quick to add, however, that this is an extremely dangerous experiment, certainly not worth the odds (Gonzales, 1984, p.114).

Ronald Siegel, a psychologist who conducted an eight-year study of cocaine users, agrees, but with one crucial qualification. He distinguishes between cocaine that is taken in powdered form intranasally and cocaine that is smoked. One of Siegel's most remarkable findings was how closely method of consumption and quantity of use were related. It would be naïve to say that the way a drug is used determines how much is used; after all, the quantity an individual uses may influence his or her choice of what method to use. Still, it's possible that it works both ways. Intranasal users averaged 20 milligrams per administration if a coke spoon was used and 50 milligrams if "lines" were used; taken together, users who employed one or both of these methods averaged between 1 and 3 grams per week. In contrast, smokers averaged 100 milligrams per administration (or "hit") and 1.5 grams per day, nearly seven times as much. The temporal spacing of hits, the total duration of a smoking episode, and, hence, the total quantity of use, varied enormously for smokers. For some, hits were taken every five minutes for periods ranging from a half-hour to four days straight. Consumption ranged from 1 gram to 30 grams during a 24-hour period; one subject in the study consumed 150 grams (roughly a third of a *pound*) in a 72-hour period! For compulsive users, smoking continued until supplies of the drug were depleted or the user simply fell asleep from exhaustion (Siegel, 1984, p. 100). In spite of smoker variability in use, however, smokers nearly always consume more cocaine than snorters.

For social-recreational users, negative effects of use were reported in 40 percent of episodes; they included restlessness, irritability, perceptual disturbances, an inability to

concentrate, fatigue, lassitude, and nasal problems. Smokers reported one or more of these reactions in over 70 percent of their episodes of use. And in roughly 10 percent of the smokers' intoxications, severe toxic reactions were experienced, including chest pains, nausea or vomiting, difficulty in breathing, seizures, convulsions, a loss of consciousness, and hallucinations with "violent loss of impulse control." In addition, psychomotor agitation, depression, and paranoia were extremely common (p. 102). Nonetheless, Siegel reports, most of the social-recreational cocaine users "do not change their long-term pattern of use and do not appear to develop toxic crisis reactions." Social-recreational users tended to maintain "relatively stable patterns of use [even] when supplies were available." The hypothesis that "long-term use of cocaine is inevitably associated with an escalating dependency marked by more frequent patterns of use is not supported by these findings" (pp. 105, 106). If the drug were less expensive, however, it is highly likely that it would be used with considerably greater frequency.

In another study (Waldorf, Reinerman, and Murphy, 1991), the researchers interviewed 19 cocaine users in 1975 and again 11 years later, in 1986. (The original study included 27 users, but not all of them could be located for the follow-up.) They had been using the drug for an average of three years when the study began; all were social-recreational—in the words of the researchers, "controlled"—users at that time. What happened to their use of cocaine in the intervening 11 years? All began by snorting cocaine and, for the most part, stuck with this route of administration. Five of them injected cocaine less than a half-dozen times, and three freebasing, but they returned to snorting because they recognized that by freebasing, they could fall into compulsive, uncontrolled use patterns. Six were controlled users throughout the 1975–1986 period. Seven were heavy users during most of the time between the two interviews, but they had eased into a controlled pattern by 1986. Two were controlled users through most of that time but ended up abstainers, and three were heavy users who also became abstainers. Only one was a heavy user throughout (Waldorf, Reinerman, and Murphy, 1991). While the sample was small, its findings are suggestive.

We cannot know if this study represents cocaine use generally. However, while the proportion of users among the public at large who are in the categories occupied by the researchers' interviewees (heavy, controlled, snorting, injecting, and freebasing, and so on) is likely to be quite different from those in this study, the study does point out the inescapable fact that cocaine use does not always or inevitably lead to addiction. "Despite what the popular press would have us believe, there is not *one* inevitable result of beginning to use cocaine—that of inevitable 'addiction' or dependence. . . . Continued and uncontrolled cocaine use is, however, a possible outcome, but so is controlled use" (Murphy, Reinerman, and Waldorf, 1989, p. 427). The authors use the findings of their study to question what they call "pharmaco-economic determinism"—and what I referred to as the *chemicalistic fallacy*—the assumption that "users become powerless before or lose control over their use of a consciousness altering drug" (p. 436).

A very different perspective is presented by research based on treatment populations or callers to cocaine hotlines (Chatlos, 1987), which includes mainly or almost exclusively people who are experiencing or have experienced difficulty as a result of their drug use. Consequently, they are unlikely to be typical of users generally. This type of study supports the "inevitability" model the Waldorf-Reinerman-Murphy team is arguing against. Rather than claiming that drug use sets in motion a kind of inevitable

progression in which all experimenters become regular users who, in turn, become heavy, chronic, and dependent abusers, what makes more sense to these authors is to see the process as a *tendency*: For some, there is a tendency to escalate to heavier use and more dangerous drugs; for most users, in contrast, this tendency does not exist. Seeing addiction as an inevitable outcome of use, they add, denies the existence of the power of free will (Waldorf, Reinerman, and Murphy, 1991).

Whereas today it is necessary to warn the public about inaccurate exaggerations of cocaine's harm and addictive potential, interestingly, two decades ago, something of the reverse was the case; in the 1970s to the early 1980s, the dangers of cocaine were hugely *underplayed* by many observers, including some medical experts. Said Richard Ashley: "No lethal reactions have been reported among illicit users in modern times." He adds that "there appears no good reason and even less evidence to suggest that cocaine is an especially dangerous drug" (1975, pp. 165, 173). As for dependence, he claims, when the "typical" user discontinues taking cocaine, there is no more "discomfort . . . beyond that which everyone feels when something they like is no longer available." They take the drug "on special occasions—in much the same way as those who regularly drink wine with their meals will occasionally treat themselves and their guests to a fine vintage Bordeaux" (p. 173).

In the same vein, in a review of the literature conducted in a prestigious scientific journal three decades ago (1982), Van Dyke and Byck declare: "Medically cocaine is a relatively safe drug" (p. 141). The pattern of using powder cocaine intranasally when it is available, and abstaining when it is not, they say, "is comparable to that experienced by many people with peanuts and potato chips" (p. 140). Peanuts? Potato chips? Given the proportion of users who abuse cocaine (roughly one in 10) and the likelihood of immediate harmful consequences (heart palpitations, heart failure, high blood pressure, tremors, seizure, paranoia, and stroke), most contemporary informed observers would find Ashley's and Van Dyke and Byck's assessments excessively and unrealistically charitable (Gahlinger, 2001, pp. 256–261). And what are we to do with the hundreds of thousands of emergency department visits that cocaine users make yearly in the United States to treat their untoward experiences and the two to four thousand cocaine-associated deaths amassed yearly? Ashley and Van Dyke and Byck made their statements before DAWN began reporting the full extent of drug harms; nonetheless, these authors should have been less naïve about the danger of this charming, seductive, alluring drug before its full potential became clear to us all.

Scholars in the '70s and early '80s reflected a widespread view that cocaine, if snorted in powdered form and taken in moderation, was not a terribly dangerous drug and had few if any harmful effects. Moreover, coke had acquired a certain allure, an aura of glamour. In 1974, *The New York Times* declared that "hedonists from Hollywood to Wall Street had turned cocaine into the Champagne of drugs." Tom Feiling, author of *Cocaine Nation*, explains that because most users never became addicted and carried "upper-class cachet," the drug's resurgence in the '70s "was at first greeted with a shrug by government." Gerald Ford's White House observed that cocaine "does not usually result in serious social consequences, such as crime, hospital emergency room admissions or death" (Feiling, 2010; Perkinson, 2010, p. 21).

At the dawning of the 1980s, cocaine's image was about to undergo an ugly and revolutionary facelift: from the champagne of drugs with relatively benign effects to an

all-consuming monster of devastation. And the realization that, with a chemical tweak or two, cocaine hydrochloride could be transmogrified into one of the most addicting drugs known to humanity, proved to be the catalyst in this conversion.

Current research shows that cocaine is both far more dangerous (in DAWN's most recent tally, cocaine was implicated in more deaths than any other illicit drug except for the opiates and the benzodiazepines) and more dependency producing (it may rank first in this respect) than these decades-old judgments claimed. There is an object lesson to be learned from the example of cocaine: While it is rash to declare a drug dangerous before the evidence is in, it is equally erroneous to claim that a drug is safe before we know the full story of its effects. Many critics choose to err on the safe side and assume a recreationally used drug is guilty (harmful) until proven innocent (safe). Others believe that the only recreational drug that should be legally permitted—and then, only to adults—is alcohol, and that *all* currently controlled substances are by definition guilty; an illicit drug's harmful effects, even if relatively rare, only contribute to society's problems. In contrast to both, the skeptic, the empiricist, the pragmatist, the progressive, the reformer—all adopt a “show-me” attitude toward drug effects and drug reform. With cocaine, clearly, the judgment of today's experts is “guilty as currently charged.”

CRACK

An Introduction to Crack

In the United States, the widespread use of crack emerged in 1985. Like freebase, crack is a crystalline form of cocaine. Also like freebase, crack is smoked. (Or, as I said earlier, it is heated and the vapors are inhaled into the lungs.) But crack is not freebase. As we saw, what is sold on the street as cocaine is actually cocaine hydrochloride (with impurities); freebase is pure cocaine—more volatile, more combustible. Between 1970 and 1985, as many as one regular cocaine user in 10 smoked freebase, and as frequency of the use of cocaine increased, so did the likelihood of using freebase. (And vice versa.) With the appearance of crack in 1985, the availability of freebase cocaine declined along with the number of its users. In contrast to freebase, crack cocaine is made by soaking cocaine hydrochloride and baking soda and then applying heat. The crystals that are precipitated from this solution are what is called crack or crack cocaine. (Baking soda causes a crackling sound when heated and smoked; presumably, this is the origin of the name.) Unlike freebase, which (without adulterants) is pure cocaine, or cocaine “freed” from its adulterants, crack is impure by its very nature, containing only 30 to 40 percent cocaine. Most of what's in crack cocaine is baking soda (sodium bicarbonate).

In New York in the 1980s, a \$50 gram of powdered cocaine yielded enough crystals for 15 vials, which could have been sold for \$3 to \$10 each (and up to \$40 in small cities); this was a substantial incentive for a dealer to sell crack instead of powder cocaine. Since crack is smoked—it enters the lungs as a vapor—it is used by means of a highly efficient route of administration. Thus, using crack is much more reinforcing than sniffing powder cocaine. There is no special magic in crack as opposed to powder cocaine that makes it vastly more addicting; the two drugs are essentially the same. The difference between them lies not in their biochemistry but in their route of administration. Taking powder cocaine intranasally produces a high that takes roughly three minutes to

occur and lasts perhaps a half-hour; there is no real rush. As we've seen, injecting the drug produces a high that takes only 12 to 15 seconds to appear, and the rush is a major attraction of IV administration. However, when cocaine is smoked, in the form of either freebase or crack, the onset of the rush is even faster, some 6 to 8 seconds, and produces an intense, orgasmlike high. This rush lasts for perhaps two minutes, followed by an afterglow that lasts 10 to 20 minutes. The euphoria achieved as a result of this rush is extreme and intense, and it impels many users to want to take the drug over and over again. Many resist its blandishments; some do not. As I said earlier, the reason the rush is quicker and more intense via smoking is physiological: The drug enters the lungs; the lung sacs are surrounded by capillaries, which convey the drug immediately, and undiluted, to the brain. In contrast, when a drug is injected IV, it enters the bloodstream and is conveyed to the heart, where it is mixed with fresh blood which does not contain the drug. As a consequence, while both methods are efficient and effective means of getting high, smoking has a slight edge over IV administration.

Although crack has been used on a small scale on the West Coast since the early 1980s, and freebase has been smoked at least as far back as the early 1970s, the large-scale, widespread use of crack is more recent. As of mid-1985, its use was still extremely rare. One indication of that fact is that the national hotline for cocaine information and help (1-800-COCAINE) received no calls whatsoever about crack cocaine from its founding until mid-1985, out of a total of one million calls reporting problems with powdered cocaine. Just a year later, *half* of all its calls dealt with crack (Chatlos, 1987, p. 12).

Crack: Myth Versus Reality

In spite of the fact that crack cocaine's use virtually exploded within an extremely short period of time, when its use was growing, the *extent* of its use was hugely exaggerated by the media. This pattern, as we saw in Chapter 5, is typical when new drugs suddenly burst onto the national scene; the same thing happened in the 1930s with marijuana, in the 1960s with LSD, in the 1970s with PCP, and in the late 1980s and beyond with methamphetamine. Some of the more sensationalistic newspaper headlines and television news programs implied that all teenagers in the country either used crack or were in imminent danger of doing so, and that every community in the country was "saturated" by the drug. These were gross overstatements. While crack is, indeed, a frightening drug, the facts on the scope of its use are considerably less unsettling than the news media would have us believe.

The MTF study verifies the fact that, among eighth-, tenth-, and twelfth-graders at least, the national incidence of crack use remains at a fairly low level. (But keep in mind that MTF cannot study dropouts or absentees, whose drug use is likely to be higher than that of students currently enrolled in and attending school. Moreover, drug use is always higher in some communities than in others; the MTF survey looks at averages, not extremes.) In 1987, 5.3 percent of all high school seniors had tried crack; in 1991, this lifetime prevalence figure had declined slightly to 3.1 percent; and in 2012, it stood at 2.1 percent. The comparable figures for annual prevalence, or use once or more during the previous year, were 3.9 for 1987, 1.5 for 1991, and 1.2 in 2012. And the 30-day prevalence figures—use once or more during the past month—were 1.3, 0.7, and 0.6 percent, respectively. The numbers for crack use remain minuscule. And they are

lower today than they were at their height in the mid- to late 1980s. Only a small minority of American youth has even tried crack, and an extremely tiny minority does so regularly. This is not to deny that its use has been a serious problem in some communities.

“Try it once and you’re hooked for life!” “Once you start you can’t stop!” Slogans such as these are repeated about crack so often that they take on a kind of reality of their own. If we look at the actual patterns of use among crack users, these messages are immediately seen as a serious distortion of the truth. A Miami study of 308 heavily involved juvenile drug users age 12–17 (obviously, an extremely narrow and skewed sample of the teenage population as a whole) found that 96 percent had used crack once or more; 87 percent used it on a regular basis. Yet, of those who used crack, a minority (30%) used it daily, and half used it once or more a week but not daily. A majority of even the daily users limited their consumption to one or two “hits”—“hardly an indication of compulsive and uncontrollable use. Although there were compulsive users of crack in the Miami sample, they represented an extremely small minority” (Inciardi, 1987). Inexpensive as crack was at the time of this study—\$5 to \$10 a vial—it is highly likely that, if the drug had been more freely available, it might very well have been used with more frequency. Keep in mind, however, that the inexpensiveness of crack is deceptive, since each high lasts for a very short period of time. Dose for dose and dollar for dollar—ignoring the fact that crack smokers achieve an intense rush, while the powder cocaine high is less intense and more subdued—the high from powdered cocaine is a longer-lasting bargain than that achieved by smoking crack.

In spite of the fact that the crack cocaine use “problem” is not nearly as horrifying as the media depict, the drug is far from innocuous. During the late 1980s, ED treatment of crack overdoses became increasingly common, and fatal reactions took place. And as we saw, with the more immediate, intense, and reinforcing effect of the drug that results from a combination of the pharmacology of cocaine and smoking as a chosen route of administration, there is a substantial likelihood of behavioral dependence. Moreover, many of the same medical, psychiatric, and social consequences of the heavy use of powder cocaine also result from an immoderate use of crack cocaine: paranoia, violence, heart problems, impotence among men, sexual unresponsiveness among women, black-outs, dizziness, insomnia, tremors, convulsions, and depression (Chatlos, 1987, p. 55).

Still, much of the public fear that arose in the mid- to late 1980s concerning crack cocaine proved to be baseless. The majority of crack users remained (so far) “once in a while” users, avoided compulsive abuse, and did not experience these undesirable medical complications. As I explained above, once in the body, crack breaks down into the same drug as powder cocaine; the only difference between them is route of administration. It is important to stress the fact that crack is not a magical, demonic substance with a unique hold over the user, or with uniquely destructive powers. To say, as *Newsweek* did at the height of the crack hysteria (June 16, 1986, p. 18), that using crack immediately hurls the user into “an inferno of craving and despair” is the kind of hysterical sensationalism that can only contribute to the drug problem.

All the indicators for crack consumption among young recreational drug users have declined since the late 1980s. Said ethnographer Terry Williams in the early 1990s, “I’m seeing . . . a movement away from crack. . . . Right now, it’s certainly clear that that’s happening at the street level. . . . The average crack addict is now in the mid- to late 20s. . . . At the beginning of the epidemic [in the mid-1980s], the average age was 18.”

Says Ansley Hamid, another anthropological researcher studying street-level drug use: “Young people are ridiculing crack-heads in their neighborhoods.” Recently, Hamid visited a crack house where sex was exchanged for crack. “All these girls were coming out of the woodwork, looking like the brides of Dracula,” he said. “Not a single one of them had started using crack later than . . . 1985.” Summarized Philippe Bourgois, another drug ethnographer: “There is most definitely a strong awareness in the youngest generation that crack is a loser’s drug” (Kolata, 1990, p. B4). These conclusions are backed up by observations made by researchers and the police that there is a decline in the crack traffic, again, especially in New York City. Said the state’s Division of Substance Abuse Services, in a 1990 report: “The six- or seven-person crews, which had been common in medium and heavy drug-copping locations, have largely disappeared.” Said Ansley Hamid: “Where you had maybe 15 to 25 people selling [crack] on a block [in New York City in 1989], now you have three” (Treaster, 1990). Although crack abuse has not disappeared, it does not represent the substantial social problem it did two decades ago.

SUMMARY

Stimulants speed up signals passing through the central nervous system, the brain and the spinal column. The two major stimulants are amphetamine (and its sister drug, methamphetamine) and cocaine, along with crack cocaine. Of all drug types, the stimulants possess the greatest immediate sensual appeal: In comparison with other drugs or drug types, persons administered them for the first time enjoy their effects most and are most likely to say they want to take them again. In small doses, stimulants increase concentration, mental acuity, and physical performance. In moderate to high doses, however, mental processes go haywire and physical activity becomes counterproductive and compulsive.

Amphetamines and their sister drug, methamphetamine, are called “speed,” “ups,” “pep pills,” “crystal,” “glass,” and, most recently, “ice.” The amphetamines stimulate arousal and alertness, cause a diminution of fatigue, and inhibit sleep. They have been used for a variety of medical and psychiatric ills; they were overprescribed in the 1960s, but today, the pharmaceutical use of the amphetamines is approved for only an extremely narrow range of ailments. Although amphetamine use among the young outstrips that of cocaine, it remains vastly below marijuana with respect to the number who use and its total volume of use. The peak years for the amphetamines were in the early 1980s; their use declined in the 1990s, and during the 2000s, amphetamine use has remained more or less stable, with slight variations from year to year. To be more specific, except for Adderall, a compound introduced in 1996, and its byproduct, amphetamine salts, the legal pharmaceutical use of amphetamines has declined precipitously. Likewise, the illegal recreational use of amphetamines has substantially declined, but their illicit, instrumental use (for example, on college campuses, by students who are staying up all night to study for an exam) has sharply increased.

There are several somewhat different street or illicit amphetamine “scenes.” One is the illegal instrumental use of speed—for instance, staying up all night to study for an exam. Another is recreational multiple drug use—using amphetamine along with other drugs, such as alcohol, the club drugs (including Ecstasy), LSD, and marijuana. And the

third is the high-dose use of methamphetamine. In the 1960s, “meth” (Methedrine) was injected; from the late 1980s into the 2000s, it (methamphetamine) has usually been smoked. Today, the use of meth remains regionalized; evidence suggests that it is quite rare in most large cities of the eastern United States. It is not a major drug of use among schoolchildren, including high school seniors. Although its use represents a serious drug problem in much of the West and Midwest, the predicted nationwide epidemic of “ice” abuse has not yet come to pass. The heavy, compulsive use of amphetamine and methamphetamine leads to paranoia, psychosis, behavioral fixations, and behavioral dependence, in addition to the medical harm that results from the lifestyle in which speed freaks indulge.

The amphetamines and cocaine have similar effects; cocaine is a much faster-acting drug, however, and its effects are more transient. Cocaine in its natural form has been used for thousands of years; the Inca worshipped coca as a god. Cocaine was extracted from the coca leaf in the 1860s. For a time, the drug’s effects were thought to be benign, entirely beneficial; cocaine in one form or another could be found in a variety of tonics, concoctions, and pseudo-medicines. It is believed that public sentiment favoring the earliest laws against cocaine, passed in the United States in the early twentieth century, resulted from the fear among many whites that African Americans would become violent under the influence and might commit crimes against whites, especially white women. These fears were completely groundless, but they were instrumental in the passage of anti-cocaine laws early in the twentieth century.

Cocaine is either sniffed or snorted, in its powdered form, or smoked, in its crystalline form. (Some users also inject cocaine IV.) Smoking is an extremely efficient and effective form of using cocaine and produces a rapid, intense “rush” that is highly reinforcing and often leads to behavioral dependence.

The use of cocaine rose sharply between the 1960s and the late 1970s and declined from the early to the late 1980s; today, its use is substantially below what it was at its peak. Disruptions of the cocaine trade in Mexico and Colombia have made the drug more expensive and less pure than in the past. However, the figures supplied by DAWN (the Drug Awareness Warning Network) indicate that emergency department episodes and medical examiner reports involving cocaine have increased sharply since record keeping began; in all likelihood, this is because DAWN has enormously expanded its coverage of drug overdoses. This may also indicate a stable or possibly increasing population of heavy users (as opposed to more typical, less compulsive recreational users, whose numbers have declined) and the fact that cocaine users are aging and, hence, becoming more vulnerable to the ravages of the drug.

Although cocaine does not produce the “classic” picture of addiction and, hence, withdrawal, the abstinence syndrome associated with cocaine use indicates a dependency nonetheless. In any case, the drug generates behavioral dependence, the desire to take it over and over again regardless of personal and financial cost. However, most users do not become behaviorally dependent; who one is determines dependence far more than the nature of the drug one is taking. Patterns of use among a broad spectrum of users indicate there is no single or stereotypical cocaine user, and no inevitable result of using the drug.

In the 1970s, a number of expert judgments about cocaine’s effects tended to underplay its harmful potential; today, many experts, as well as—even more so—the media, see it as far more harmful than it actually is, at least in the typical case.

Crack is a crystalline and impure form of cocaine that is smoked. The difference between powder cocaine and crack is not so much the composition of these two substances but the route of administration. Crack became extremely popular in mid-1985. The media emphasized the drug's addictive potential and its spread into all communities in the nation, publicizing the horror the use of this drug produced, thereby creating something of a moral drug panic. Crack never became widely used on a national basis, and its dangers were greatly exaggerated. By the early 1990s, the crack "epidemic" began to abate. Although the drug is less dangerous than the public believes, it is far from a safe drug; its use left harm in its wake which will continue to be felt well into the twenty-first century. Still, the percentage of schoolchildren who use crack today is minuscule.

ACCOUNT: Stimulants: Amphetamine, Methamphetamine, Cocaine, and Crack

Using Crack Cocaine

At the time of this interview, Winston was "knocking on the door of 50." He served in the military for five years, was married twice, and has five children. Currently, he lives with his mother and sleeps on her living room couch. Although a high school graduate, trained in computer technology, and once stably employed, these days, Winston is unemployed or casually employed.

Running the street and getting high was my thing. But in the '70s, I stopped for a minute. I had a wife and three children to support. At this point, I only had my high school diploma, so I enrolled in computer school and graduated. In the '80s, I was a bookkeeper for a major chemical plant. Then I moved on and became senior technician for a check distribution company. I worked there 14 years. I was making 52K. Still frequenting the marijuana and heroin until freebase came along. Mid-'80s, freebase would become my drug of choice and my means of destruction.

Today, I smoke crack. I would spend my last dime on it. I drink beer—sometimes hard liquor—and I don't smoke marijuana any more. Those drugs don't do what crack does [for me]. The sensation is like no other, rating right up there next to an orgasm. Even the taste is appealing. It's my

escape from reality, the struggle, the pain, and life. I don't feel the pressure when I'm high. See, I have always considered myself a loner by nature. I don't like to talk to people about my problems. I don't want anyone to hear me whine. If someone sees me or calls the house, I may be down, if they pick up on it, I change. I put more pep in my step and in my voice, and a smile is always on my face. If I'm around other people, I always try to make them laugh. I'm the joker with no worry in the world. That's how I want others to perceive me.

When I worked for the check distribution company, I used my intelligence and conniving ways to my advantage. I started my little operation on the side. It was '93, and I was remarried with two more children and this scheme provided me with more than enough money to keep my wives happy and my habit happy. Check this out. A get-high buddy of mine and I had an idea. The checks I wrote courtesy of my job, whose clients' names I used as the companies that would issue the checks, would be deposited in accounts, then withdrawn. The banks wouldn't dispense all the funds at once because the checks were at least \$10,000 a pop. So every three days after the checks sat for a week, my partner would write out a check for cash and cash it at the bank. The operation was going smoothly for over six months. Every time we

opened a different account, we would cash the checks at different banks.

But one afternoon, my partner was supposed to take out \$8,000, but instead, he wrote a check for \$800. So the teller asked him, how would you like your \$800, in big or small bills? He realized he had forgotten a zero, so he asked the teller for the check back to do it over, and the teller got suspicious. Three days later, next time he tried to make a withdrawal, the cops were waiting for him. Operation fell apart at this point in time. I think that even before they could get the handcuffs on my partner, the police were walking through the door where I was staying. My second wife and I had been separated, and I had my own little apartment around the way. This white chick I was frequenting had just left the apartment, and I had told her to leave the door open so that when my partner came back from the bank, he could let himself in. Before I knew it, three police officers had let themselves in and were standing, guns drawn, one on either side of the bed and one at the doorway. All I saw was the guns, really, and I remember saying to them, "Are you going to shoot me?"

My partner sang like a bird. There was no way I was getting out of it. I had to cop to a plea of five years on 14 counts of fraud, theft by deception, and embezzlement. During the six months of [our little caper], we went through a little over \$100,000. All that went to buying crack and partying. The judge saw that I had a clean record and that I was capable of holding a job for 14 years in a white-dominated profession. I represented myself well during the plea arraignment, and so she lowered my sentence to three years. I was paroled after serving only six months of that behind bars.

After this melting point in my life, it was hard for me to get a job. It was so much easier to do nothing. But I had a habit to feed, plus five children who are being raised by their mothers. I never got back in the [employment] game after that hit. I just couldn't get a job. Shit, I'm a black man with intelligence and numerous skills, but I have a record for embezzlement and a \$100-a-day [crack] habit. All things said and done, hard as

it was, I did go out and I found a legitimate job. I couldn't find a job that paid more than \$12 an hour, though, and what I did make went to my children and crack. Then, slowly but surely, it was all going on crack. I lost my job because I got high late at night and didn't make it to work in the morning. They weren't paying me enough anyway. It's easier to get high late at night because I don't have to worry about anybody having to go to the bathroom and interrupting me. [Winston lives with his mother and sleeps on the living room couch. His sister and her three children live there as well.] I get high in my house, in the bathroom, or even in the living room if everyone's asleep. [Also], the dealers are easier to get at night because there's less traffic and not as many people outside watching. You beep your dealer and they come over. Or you go there and pick it up. On some occasions [your dealer] may be hanging out by the corner store or in the building, so you walk right up to him and make your transaction. The 'hood has cameras and nosey people who call the cops, but you try to avoid areas in which you know the camera is pointing or [where there are] people who would rat.

I support my habit by doing things for people around the 'hood—family and friends. I paint houses, fix and program computers, fix television sets. Hell, I could lay down wood. I could build you a deck if you wanted me to. I cook for people and bake cakes. Anything, really. I'm the go-to guy when something needs to be done, from moving furniture around the house to helping you pack to move. . . . I never stole or robbed from anybody or anything, that isn't my thing. . . . I borrow from my family, with the hope to pay them back. But basically, it's begging for money whenever I need it. . . .

The life I live now is the life I choose to live. I only regret not being able to live two lives at once. I love getting high and I wouldn't trade it for the world. I would just like for there to be some balance and stability in my life. I know I'm not able to hold down a job and continue to do the things I do. It's hard having your cake and eating it too and I guess I had to find that out the hard way.

QUESTIONS

What do Winston's experiences tell us about using crack? More generally, about using any and all illicit drugs? Do you think that Winston's difficulties with crack are related to the sort of person he is—or to getting high on this seductive drug? Could he have used less compulsively and achieved more in his life? If given the chance, would most people prefer to get high and fail to achieve most of life's more

conventional goals—or abstain and take the path of mainstream success? Are compulsive drug use and success incompatible? Are some people able to achieve both? Are Winston's compulsive drug use, his failure as a husband and father, and his inability to hold a good job all related to the same factor—a lack of self-control? How much control did he have in making life choices—or was his path in life preordained?

12

HEROIN AND THE
NARCOTICS

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For decades, heroin was most feared, the most dreaded, the “hardest” drug (Kaplan, 1983); it virtually defined the drug problem. In spite of being overshadowed in the mid-1980s by crack,

and, since the late 1980s, by both methamphetamine and crack, heroin probably remains the substance the American public is most likely to think of as an example of a dangerous drug. Until fairly recently, disapproval of heroin use had been greater than for any other drug. And heroin addicts were the most stigmatized of all drug users. Heroin is the epitome of the illicit street drug. Its association in the public mind with street crime, even today, is probably stronger than for any other drug. The stereotype of the junkie is that of a lowlife, an outcast, a “deviant,” an unsavory, untrustworthy character to be avoided at all cost. And, even though heroin ranks nearly last in use among well-known illicit drugs—its volume of use is one-tenth that of cocaine—its parent category (narcotics) remains in the number one spot with respect to causing or being implicated in overdose deaths. These facts both make heroin immensely fascinating and make its study urgently importunate. Another reason to take a close look at heroin: It belongs to the same category as the medical opiates—oxycodone and hydrocodone—whose use is wreaking such havoc in many of the rural communities of the Southeast and Midwest. The narcotics constitute a major, widely abused drug type that any student of substance abuse is obligated to investigate.

NARCOTIC DRUGS: AN INTRODUCTION

The term “narcotic” refers to psychoactive, addicting, mind-clouding drugs with a strong analgesic or pain-killing property. As it has been used, the term “opiate” refers to all the narcotics that are derived from opium—in addition to opium itself, morphine, codeine, and heroin (diacetylmorphine). The term “opioid” refers to the artificial narcotics that are opiatelike in their effects, such as dilaudid, Darvon, fentanyl, meperidine (Demerol), methadone (Dolophine), oxycodone (Percodan, Percocet, and OxyContin), hydrocodone (Vicodin and Lortab), and Talwin. Some authors (Hart and Ksir, 2013, pp. 296–317) use the term “opioid” to refer to all the narcotic drugs; others (Hanson, Venturelli, and Fleckenstine, 2012, pp. 251–283) use the two terms, “narcotic” and “opioids,” interchangeably. Still others use the terms “narcotics” and “opiates” as synonyms. I prefer to use the term “narcotic” for the general drug type, to restrict the term “opiate” to opium-derived narcotics, and to use “opioid” to refer to the artificial narcotics—but even informed observers are not consistent in their use of these terms.

In 1804 (the exact date varies from one source to another), Friedrich Sertürner (1783–1841), a German pharmacist’s apprentice, isolated morphine from opium—the first time that anyone managed to isolate an alkaloid from a plant substance. Sertürner discovered the drug’s analgesic properties, not to mention its soporific effect, by experimenting on himself; the young man named the drug after Morpheus, the Greek god of sleep. By weight, opium is 10 percent morphine. In 1874, C. R. Alder Wright (1844–1894), an English chemist, working with the morphine molecule, created heroin, which he named diacetylmorphine. Wright sent a sample to F. M. Pierce, a physician and surgeon working in a Manchester hospital, who injected a solution of it into dogs and rabbits, which, he reported, lowered the animals’ heartbeat rate, body temperature, and coordination; it also induced emesis, or vomiting. Diacetylmorphine was ignored for nearly a quarter-century, when Felix Hoffmann (1868–1946), a chemist working for a pharmaceutical firm that became the Bayer Laboratories, independently produced the chemical; Hoffmann and his coworkers named the drug *heroin* (in German, *heroisch*) for its “heroic” analgesic properties: It was two or three times as potent as morphine.

Interestingly, that same year (1897), Hoffmann also discovered aspirin, a much milder analgesic. In 1898, Bayer patented and marketed heroin as a non-addicting morphine substitute as well as a cough suppressant; it took a dozen years for physicians and pharmacologists to agree that heroin, like morphine, built a powerful physical dependence. By the dawn of the twentieth century, there were between a quarter of a million and three-quarters of a million narcotic addicts in the United States (estimates vary), most of them as a result of medical misuse. In 1914, the United States government passed the Harrison Act, which attempted to regulate the distribution of the drug, and in 1924, Congress banned all manufacture, sale, and importation of heroin; today, the drug is classified as a Schedule I substance—harmful and without medical utility.

Where does illicit heroin come from? The United Nations Office on Drugs and Crime (UNODC) makes estimates based on information provided by dozens of governments and agencies, and issues regular reports on illegal drug production; it seems almost superfluous to say that these estimates are only educated, semi-informed guesses, but they are the best we have. In its *2012 World Drug Report*, The UNODC estimates that the total world “potential opium production” in 2011 was about 7,000 tons, of which 3,400 was consumed as raw opium and the remainder converted into heroin, which produced 467 tons of heroin. About two-thirds of the world’s opium poppy is cultivated in Afghanistan, about 20 percent in Southeast Asia (mainly Laos and Myanmar), and not quite 10 percent in Central and South America. (The UNODC figures exclude potential growing countries for which the organization has no available data, such as India and Guatemala.) Most of the heroin consumed in the United States had its origin in Mexico (a large and increasing source), Colombia (a diminishing source), Central America, or Southeast Asia. Increasingly Mexico, once the primary source of “black tar” heroin bound for California, has been processing white powder heroin destined for the American South and points north. Since most heroin from Afghanistan is shipped to Europe, Russia, China, and Africa, its availability in the United States is “limited.” Hence, we see something of a sharply *bifurcated* global market for heroin, with two prongs: one, production in Latin America, mainly for consumption in the Western Hemisphere, and two, production in Afghanistan, mainly for consumption in the Eastern Hemisphere; opium grown in Southeast Asia is processed and shipped to both markets. To repeat, the UN and government authorities have only a rough idea of where heroin comes from and where it goes, so the picture I’ve just drawn is only approximate; later, more definitive intelligence may alter this portrait. Note that at least one critic, Stewart Patrick (2011) calls the UNODC’s drug report “half-baked” because he doesn’t like the fact that it seems to support prohibition as a means of reducing drug use. Likewise, a consortium of critics of the drug laws—including some who feel that people should have the right to enjoy their drug of choice, whatever that may be—have published a volume entitled *The Alternative World Drug Report: Counting the Costs of the War on Drugs*, which critiques the assertions in the UN’s report (Rolles et al., 2012).

Properly speaking, narcotics are painkillers or *analgesics*, and most are used in a legitimate medical context for this purpose. These drugs reduce sensory feeling and sensitivity of all kinds—to pleasure as well as pain. There are several widely used over-the-counter (OTC) painkillers that are not classified as narcotics, of which aspirin,

acetaminophen, and ibuprofen are the best-known; they do not produce a high, mental clouding, or dependence, and are far safer with respect to overdosing than the narcotics. Still, thousands of Americans do overdose on these OTC painkillers each year; for instance, each year, DAWN tabulates more than 20,000 nonlethal emergency department (ED) acetaminophen-related episodes in the United States; 18,000 such episodes involve ibuprofen; and over 10,000 occur as a result of taking aspirin. (Most of these episodes were failed suicide attempts.) Since they are used so often by so many people, on a user-for-user, dose-for-dose basis, the non-narcotic analgesics are extremely safe. In contrast, the recreational use of the narcotics, especially heroin, is extremely dangerous. The problem is, *as analgesics*, narcotics are completely without peer; they are quite simply vastly more effective and efficient painkillers than the non-narcotic varieties, and they are therefore of immense therapeutic value. To protect a patient from the pain during and following a surgical operation, physicians administer a narcotic—not aspirin, which is too weak to be effective. In fact, for many purposes, aspirin, acetaminophen, or ibuprofen simply will not do and so, the physician must reach for morphine, methadone, oxycodone, hydrocodone, Vicodin, Darvon, Percodan, or Demerol.

Aside from their analgesic property, narcotics also generate *euphoria*. Following the IV injection of a narcotic, the user feels a flash, a rush, which is felt as an intense voluptuous, orgasmlike sensation. Next come feelings of well-being, tranquility, ease, and calm—the sensation that everything in the user’s life is just fine. Tensions, worries, problems, the rough edges of life—all seem simply to melt away. Few drugs or drug types generate this feeling of voluptuous well-being as effectively as the narcotics, and heroin seems to do the job best of all.

A third quality of narcotics is that they are soporific—they induce drowsiness, mental clouding, lethargy, even sleep. (Morphine is named after Morpheus, the Greek god of dreams, and the scientific name for the opium poppy is *Papaver somniferum*, named for its quality of inducing somnolence or sleepiness.) After the rush of euphoria, the addict seeks to achieve this dreamy, sleeplike state.

Narcotic analgesics are also—and this is their fourth characteristic or property—without exception, *physically addicting*: They generate a physical dependence. They are also highly reinforcing—they generate a very strong psychic or *psychological dependence*, second or third only to that of cocaine and the amphetamines. (With respect to the relapse rate, the nicotine in cigarettes is probably the most “addicting” drug known.) And the narcotics are capable of generating a strong behavioral dependence. However, the belief, “One shot and you’re hooked for life” is completely false; of the total universe of all people who have used heroin at least once, the majority are not even currently using the drug, and of those who are, most are sporadic, occasional, infrequent heroin users rather than addicts.

Heroin and the other narcotics are dangerous in large part because the range between their effective dose (ED) and lethal dose (LD) is fairly narrow: The quantity that can kill a user is only 10 to 15 times the amount that can get him or her high. Thus, it is fairly easy to die of an overdose on any of the narcotics, and especially heroin. Taking huge doses of a narcotic is an almost certain way to kill oneself. As do alcohol and barbiturates, an overdose of heroin causes respiratory paralysis, resulting in oxygen starvation of the brain.

THE USE AND ABUSE OF NARCOTICS TODAY

Rates and Patterns of Use

It is remarkable that heroin is such a well-known and almost universally dreaded drug, since it attracts fewer users than almost any other major illegal drug or drug type. However, the small number of heavy heroin users inflicts a great deal of damage on the rest of society—and in turn, the rest of society inflicts a great deal of damage on them.

There are two fundamental facts we need to know about heroin use. The first, as I said, is that it is one of the least-often-used drugs in the United States. And the second fact is that—in spite of its extreme infrequency in use—it shows up with remarkable frequency in the Drug Abuse Warning Network's (or DAWN's) overdose statistics, indicating that, on a dose-for-dose, person-for-person basis, it is an extremely dangerous drug. According to Monitoring the Future's (MTF's) data, except for a few obscure and "has-been" drugs (specifically, methaqualone and Rohypnol), heroin ranks last in popularity among all drugs asked about. In 2012, only 1.1 percent of the high school seniors surveyed said that they had ever tried heroin, even once in their lives, and only 0.6 percent had used it in the past year. Likewise, the latest National Survey on Drug Use and Health (NSDUH) in 2011 estimated the number of heroin users during the past month at 281,000, or 0.1 percent of the population. Of all persons who had used at least one illegal drug once or more in their lives, fewer than 2 percent had tried or used heroin. Only a small fraction of one percent of all episodes of illegal drug use involves heroin. MTF supplies a possible explanation for its lack of popularity: 90 percent of seniors perceive that the regular use of heroin is harmful. As we'll see, there's a new narcotic on the block that's now crowding heroin off the stage, and it is legal—for medical purposes in any case.

Consider, however, the methodological warning I issued in Chapter 6: Surveys are a questionable method of calculating the total number of heroin users because they fail to capture a substantial proportion of this category in the population. Students who use heroin are highly likely to drop out of school and, hence, unlikely to appear in a survey based on the student body. In addition, many heroin users do not live at a fixed address and, hence, are disproportionately unlikely to appear in a survey based on a sample of American households. As we saw, the Abt Associates, basing their figure on a wide range of different indicators, estimates the number of "hard core" users of heroin in the United States in 2000 at 900,000. In contrast, based on its sample of households, the 2012 National Survey on Drug Use and Health estimated that only 281,000 persons used heroin in the prior month. The disparity between these two figures should forcefully strike all observers, leading us to consider the fallibility of the data on which these two estimates are based. The Abt Associates estimated that, during 2000, 13 tons of heroin were consumed in the United States, while, in contrast, 259 tons of cocaine were used—20 times as much. In spite of these discrepancies, it should be clear that the total volume of heroin used in the United States is extremely small relative to several other well-known drugs, cocaine most notably.

Heroin is not the only narcotic that is used for recreational or nonmedical purposes. In MTF's 2012 survey of high school seniors, all the other narcotics (heroin excepted), added together, were used by nearly *ten times* as many individuals as heroin was—for lifetime prevalence: 13 percent for the non-heroin narcotics versus 1.6 percent for heroin.

NSDUH estimated that, while only 4.2 million Americans had used heroin at least once during their lives (as we saw, 1.6% of the population), 34.9 million (13%) had used one or more of the narcotic analgesics (or “pain relievers”) for a nonmedical purpose. Given its DAWN record on fatal overdoses, along with its small number of users, it becomes clear that heroin is a very effective death-delivery system.

On a dose-by-dose, user-by-user basis, heroin remains by far the most dangerous in the circle of the six or eight recreationally used narcotics. And among street users and abusers of narcotics, heroin is the drug of choice. Street addicts will ingest any narcotic that is available at a particular time. Although they prefer heroin, it may not be as readily available as some of the other narcotics, such as codeine, methadone, Dilaudid, Percodan, or Darvon. Consequently, they will use other narcotics until heroin becomes available. However, in some communities, oxycodone (one brand name: OxyContin) is being used even in preference to heroin. According to NSDUH, substantially more Americans have used OxyContin—only one among an array of prescription painkillers—in the prior month (434,000) than have used heroin (281,000).

A New Heroin Epidemic?

Beginning in the mid-1990s, media sources began reporting that a new heroin “epidemic” was gripping America, that this drug, which had become unfashionable in the 1985–1995 period, was coming back into frequent use. Did this actually happen? What evidence do we have of a fresh resurgence in heroin use at that time? First, we already know that heroin is a relatively rare drug of abuse; it is a drug that ranks near the bottom in illicit use in America. Thus, in a given year, if only, say, one-tenth of a percent more of the population began using heroin, this would represent a massive increase in heroin use, statistically speaking. Second, the “hard core” comprising the heroin addict population may have slipped a bit in size over the decade or so; as we just saw, depending on the source, it may be as low as a quarter of a million or as high as close to a million. (Remember that the criteria defining a heroin addict vary from one expert to another and, thus, the number of addicts would magically “grow” or “shrink” accordingly.) Third, to know how much heroin use takes place in a given year, we must rely on concrete indicators, reliable measures of use that point to its extent in a given year. What indicators or measures do we have?

The Arrestee Drug Abuse Monitoring Program (ADAM II) points to a fairly low percentage of positive drug tests for heroin among arrestees in the United States. In 2011, as we saw, ADAM II drug tested arrestees in five cities; positive tests turned up for opiates in general at a median of 10 percent, which represented an increase for all but one city. The report did not indicate how much of that figure was made up of heroin specifically, as opposed to prescription narcotics.

At one time, the drug of choice of inner-city criminals *was* heroin; following that, it was crack cocaine. Today, it is marijuana. Johnson, Golub, and Dunlap (2000; Golub and Johnson, 2001), relying on interview data from Drug Use Forecasting (DUF) and ADAM, argue that drug use among arrestees can be divided into three more or less distinct eras. The first is the heroin injection era, which peaked between 1960 and 1973; its members were born between 1945 and 1954—they were 15 to 28 years old when this era was at its height. The second era, the crack/cocaine era, grew in the 1970s and peaked

from 1984 to 1989, when its members, born between 1955 and 1969, were between the ages of 15 and 34 at its peak. And lastly, there is the marijuana/blunt era, which began in 1990 and is still ongoing, the members of which were born beginning in 1970. Today, in sharp contrast to heroin and cocaine, marijuana ranks number one as the drug of choice of urban arrestees.

For each generation we see huge clusters of individuals who used during each specific era. Among persons born between 1945 and 1953, a huge majority said that they had used heroin. But among those born after 1953, the percentage saying that they had used heroin declined sharply. Likewise, for persons born after 1954 but before 1970, there was a huge cluster saying that they had used crack cocaine—but very few born after 1970 had done so. It seems that each succeeding generation burns itself out. It's not so much that members of each generation stop using their drug of choice as that its members age and recede into the background and, eventually, die. They are no longer members of the most prominent drug-using generation, nor are they the most active among criminal populations; as they age, their criminal behavior declines, and they begin to die out. Those who are left are part of a smaller and smaller community which, because of higher mortality rates among older users, harbors a dwindling number of members. The same persons do not switch from one drug to another. Instead, a new drug comes along, recruiting new (and younger) members into its ranks of use (Johnson, Golub, and Dunlap, 2000). Heroin is used by a shrinking percentage of arrestees as their ranks age.

In contrast, our second measure of use over time, DAWN's overdose statistics, shows indicators of a consistent increase in heroin abuse in recent years. In the decade between the late 1970s and the late 1980s, heroin overdoses grew alarmingly. As we know from our discussion of DAWN data in Chapter 6, trends in drug complications over time could involve a number of factors—an increase in the purity of the drug, an increase in the frequency of use among the same number of users, the greater tendency for users to take the drug in combination with other drugs, its use by means of more potentially lethal routes of administration (injecting, for instance, instead of snorting), and so on. It is entirely possible that the increase in lethal and nonlethal heroin overdoses between 1979 and the late 1980s came about while the number of heroin abusers was actually declining. In addition, there are serious methodological problems with DAWN's data, among them the lack of standardized procedures by which its data are collected from year to year and one jurisdiction to another, in addition to the fact that some jurisdictions inexplicably float into and out of the total tallies from one year to the next. However, from time to time, DAWN issues a report which standardizes its data. Two reports (Adams et al., 1989; DAWN, 1987) indicate that roughly between the late 1970s and the mid- to late 1980s, depending on the exact years tallied, heroin-related emergency department visits increased between 50 percent and 300 percent, while medical examiner reports increased between 25 percent and 200 percent. In 1991, there were just over 63,000 heroin-related emergency room visits; in 2002, the number was just a shade over 93,000, an increase of less than 90 percent. In 2003, DAWN changed its procedures for inclusion of cases in the program; hence pre-2003 data are not comparable to post-2003 data. Still, in 2011, we see a total of 2.4 million observed drug-related ED visits for all drugs, of which almost exactly a quarter of a million (258,482) entailed heroin. Again, DAWN changed its procedures and expanded its catchment area, so comparability from year to

year cannot be made; still, it is important to note that in the most recent DAWN ED report, one in 10 nonlethal drug problems that are sufficiently serious to send a user to the hospital entail heroin.

In 1991, there were slightly fewer than 3,900 heroin-related mentions in lethal medical examiner (ME) reports; in 2003, as we saw, there were only 3,264, which may represent a decline during the 1990s and into the 2000s. Unfortunately, in 2004, DAWN's program began lumping heroin with the other narcotics, making it impossible to determine that drug's specific contribution to drug-related deaths. In any case, as we saw, in 2010, DAWN tabulated over 10,000 overdose deaths entailing the use of opiates, including heroin; this made up 44 percent of all "top five" drug-involved, DAWN-tallied drug-related deaths in the designated catchment areas studied. For cocaine, these figures were roughly 2,800 and 12 percent, respectively; for alcohol, about 3,600 and 15 percent; for the Valium-like benzodiazepine drugs, about 3,500 and 15 percent; and for the antidepressants, just under 2,000 and 9 percent. Drug deaths drop off sharply with the sixth, seventh, and eighth drugs listed. Opiates represent the number one drug problem with respect to death by overdose, both absolutely and on a dose-by-dose basis.

According to the Department of Justice (DOJ), the availability of heroin increased enormously during the first decade of the 2000s. As we've seen, the Associates estimated that users consumed 13 tons of heroin in the United States in 2000. In its *National Drug Threat Assessment 2011* (unfortunately, due to budget cuts, the DOJ's last publication of its kind), the Department of Justice estimated that in 2009, 50 tons of pure heroin was available in Mexico. Clearly, the potential production and availability of heroin is not identical to actual use. Moreover, the "drug wars" raging in Mexico, taking the lives of tens of thousands of sellers, distributors, growers, competitors, and innocent bystanders, make getting that product across the border extremely problematic and chancy. Still, traffickers hold an enormous supply of heroin in wait for the right opportunity to move it into the United States and into the arms of eager junkies. Consider this: In 2004 and 2005, the available Mexican supply of heroin was only 8.6 tons and 8.0 tons, respectively. In 2006 and 2007, it was 13.0 tons and 18.0 tons, respectively. In 2008, it was over twice that—38 tons—and in 2009, as we saw, 50 tons. Did that tonnage get through? Will the drug wars ease up, moving into peace and cooperation among the Mexican drug lords so that that 50 tons will find its way to the streets of St. Louis, Los Angeles, Chicago, and Baltimore? Stay tuned.

What of the survey data? Do they indicate an increase in heroin use in recent years—specifically, between the early 1990s and today? Let's keep in mind the warning I issued at the beginning of this section: Surveys represent an imperfect method of estimating the number of heroin users, since so many of them are not to be found in the two locales surveys are most likely to use to contact interviewees: schools and stable households. Still, what do the surveys say about heroin use in the past decade or so? Does MTF data indicate a recent heroin "epidemic" among schoolchildren? During the 1990s—between 1991 and 1999—we find a doubling of heroin use among eighth-, tenth-, and twelfth-graders: in 1991, for lifetime use, the figures are 1.2, 1.2, and 0.9 percent, respectively, for the three grade levels; in 1999, they are 2.3, 2.3, and 2.0 percent. The figures are tiny, true, but remember, heroin is an extremely dangerous drug, and each user and abuser can cause major havoc in his or her life and in the lives of others. However, the

1999–2012 period is more encouraging. We see a decline by the latest year; the 2012 lifetime figures stood at 0.8, 1.1, and 1.2, respectively, roughly at the 1991 level of use. The yearly and monthly figures tell the same story, except at lower levels. Use in the prior 30 days stood at only 0.2, 0.4, and 0.3 percent for the three grades, respectively, a major decline from 1999. Whatever “mini-epidemic” pundits discerned in the 1990s seems to have subsided.

Most recently, some journalists have claimed that, in the second decade of the twenty-first century, heroin is making a deadly comeback. In the small cities of Northern New England—specifically, in Maine, Vermont, and New Hampshire—experts observe increases the likes of which they “haven’t seen in many years.” Three times as many people died of an overdose of heroin in 2012 (21) as in 2011 (7), and New Hampshire recorded 40 deaths during that latter year, a huge increase from a decade earlier (7). Vermont reported that 914 people were treated for heroin abuse in 2012, a 40 percent increase over the year before (654). The increases are ascribed to purer heroin as well as to the switch by many narcotic-dependent users from prescription painkillers, which authorities have begun to restrict and prohibit. “We had a bad epidemic,” said one authority, “and now we have a worse epidemic” (Seelye, 2013, p. A11). These numbers are small, and what these observers are seeing may be a regional phenomenon, but it is possible that the national trend may soon follow. This is a development that bears close watching.

As of early 2014, the “heroin scourge” seems to have become endemic in certain rural counties, mainly in Vermont and New Hampshire—a region of the country that ranks high on the Gallup polls’ “well being” index (Seelye, 2014). Clearly, among a segment of this population, all is most decidedly not well.

WHY TURN ON? THE USER’S PERSPECTIVE

Given the obvious social and medical pathologies associated with heroin use and addiction, the question that immediately comes to mind is, Why should anyone want to become involved with narcotics? Why should a young person—with the facts staring him or her in the face—wish to experiment with heroin? It is extremely easy for the more conventional members of society to apply their own standards of evaluation to an activity. They offer commonsense explanations in an attempt to justify their views by attributing a negative cause to something that is socially condemned. Thus, heroin addiction—“evil” in the public mind—has to have an evil or negative cause. Yet commonsense explanations are often wide of the mark; common sense, after all, is what tells us the world must be flat. Most explanations of drug experimentation are little more than an effort to inform the public that it is bad, and they nearly always ignore the most important source of information: users themselves. Typically, theories about drug use and addiction are based on virtually no firsthand acquaintance with the addict, the user, or the drug experimenter. Such theories are necessarily cut off from the drug *experience*—which only the user is capable of conveying. It is an easy matter for us, removed from the drug scene, to declare what the user “should” feel, what he or she inevitably “must” experience. Yet how can we possibly know unless we go directly to the source?

In the past, the majority of the works on addiction adopted an externalistic and objective posture toward the addict. (There were a few outstanding exceptions to this rule, however.) Obviously, the method we select to study the addict influences what

we see. Many studies relied on addicts in prison, or on those who came to the attention of psychiatrists, a highly skewed segment of the addict world. But the prison is not the street, and by relying on prison addict populations, researchers inevitably distort the reality of the drug scene. Data collected from caught criminals are biased and hence, heavily suspect. Ideally, a reliable and valid study of drug use would utilize information secured outside an institutional context. Fortunately, some researchers have attempted to understand addicts by getting out into the street with them, into their world, their natural habitat (Gould et al., 1974; Hanson et al., 1985; Johnson et al., 1985).

In a detailed account, a 22-year-old college senior described to me her involvement with heroin. Although the details of her experiences are unique, most of the main features of what she said widely apply. While no one else has undergone quite the same experiences, many of the broad features of what she did and felt are shared by many middle-class college heroin users. Although she never became addicted, and stopped using heroin about a month before she wrote her account, she was a weekly user for almost two years. Heroin use, especially one's initial experience, and particularly for women, is almost exclusively a group phenomenon. "I did it because my boyfriend did it," she explains. "He did it because his two closest friends did it." Coming back from a vacation with her family, my informant writes, "My boyfriend had a surprise for me. He said he had shot heroin. Suddenly, all of the conventional stereotypes were forgotten. I was more mad about not being there when the first shots were fired than anything else. Instantly, I said I wanted to try it too."

It should be reiterated that most people are first "turned on" to a drug, whether it is heroin or marijuana, by friends rather than drug dealers. It is precisely because drugs are initiated, used, and circulated among intimates that their spread is so difficult to stop.

A kind of bizarre ranking system seems to have emerged among many drug-oriented youths today. My young heroin informant writes that there was in her group

an unofficial competition, usually un verbalized, concerning who could do [take] the most drugs. . . . I was taken over to the house of a friend who . . . was given to stating that he intended to be the most outrageous drug addict in town, no matter what the drug was. (He was one of the few who talked openly about the competition.) As an example, the best show I ever saw him put on was the night he swallowed some LSD, and shot a couple of bags of dope [heroin], after which he *shot* several more LSD trips, shot at least four more bags of dope, smoked hash [hashish] all night, and took some amphetamines as a nightcap.

This case is obviously extreme. Still, there seems to be no question that, among a certain proportion of today's youth, experience with, and ability to handle, various types of drugs has formed a new ranking system, partially replacing athletics, schoolwork, sex, or the ability to "hold your liquor" among some young men who require affirmations of their masculinity. Thus daring and bravado play some part in the lure of many drugs, although certainly not all.

It is a cruel irony that many of the values of the drug subculture appear to be almost a mirror image, somewhat distorted to be sure, of some of the most sacred tenets of mainstream America. Thus the values of success and competition, evidenced by these quotations, can be poured into molds of many different shapes. A country that urges its adolescents to get ahead, to do better than their classmates, and to attend a prestigious college is going to be a country with a competitive drug subculture, with such exotic specimens as these.

Often the user will explain his or her use of a drug by contrasting the excitement of the drug world with the banality of the “straight” world—particularly that of his or her parents. My informant writes:

I tend to think that the primary target of my striving for deviance is possibly the sterility and blandness of the life I had always been exposed to. . . . My parents . . . gave me a life devoid of real, deep, feeling. I wanted to feel! I wanted to play in the dirt. I wanted to transgress those lily-white norms, break those rules designed to make me a good little Doris Day. And when the first transgression was followed not by the wrath of God . . . but by feeling of being alive, and free, and different, that I had never known before, then I guess after that, all rules and norms lost their meaning and power over me. . . . I knew that there was a way for me to declare my independence from the straight, conventional, and BORING! life my mother wanted me to lead. . . . When I shot up, I felt so superior, so wicked, so unique. . . . I thought I had found the ultimate rebellion, the most deviant act possible. I was drawn to it because it set us apart from, and above, everyone even the other drug users, the “soft” drug users. . . . I was . . . irresistibly attracted to and proud of the deviance and antisociability of the act. . . . The “badness” of shooting heroin was precisely why I did not hesitate to do it.

It has been conventional wisdom among drug experts for some time that drug effects are not inherently pleasurable, that users do not experience euphoria the first time they take a given drug, and they have to learn to enjoy the effects that they do experience. As a generalization, this is fairly sound, but it is far from universally true. While many marijuana smokers do not even become high the first time they smoke, when novices experience the effects of the drug for the first time, they have already been socialized to know what to expect and to define what they do experience as pleasant. Certainly alcohol’s effects are not always pleasurable to all drinkers, and animals tend to avoid taking it in the laboratory setting. However, as we’ve seen, amphetamine and cocaine seem to be a different matter; without knowing what they are taking, human subjects usually enjoy the effects of these drugs and want to take them again. Animals seem to enjoy these two stimulants, too, and will do almost anything to continue taking them over and over again; they possess an intrinsic immediate sensuous appeal.

What about the narcotics, especially heroin? Many individuals who take heroin for the first time do not enjoy its effects. But this is not always the case. A summary of a number of studies of individuals’ first experience with heroin found that about two-thirds of future addicts felt euphoria on their first trial; among nonaddicts, the comparable figure was 31 percent (McAuliffe, 1975, p. 379). Thus, what is often stated in the form of a universal truth should be qualified: Many individuals, including some future addicts, do not experience euphoria the first time they take heroin. Not a few describe the experience in extremely negative terms; it is experienced as distasteful and unappealing. But often the negative aspects are explained away. Part of the potential addict’s learning experience is an arsenal of rationalizations and justifications.

My informant described to me her first shot, taken with her boyfriend, who had tried the drug before. When her boyfriend took his shot first, “the rush was so powerful that he almost fell down. He turned white and began to sweat profusely.” After her injection, she writes,

I, too, began to sweat and tremble. If anyone had seen . . . us walking out of the house, he would have called an ambulance. . . . We could barely walk. For some insane reason, we had

decided to drive home immediately after shooting up. . . . I had to keep pulling over to throw up on the side of the road. . . . I am truly surprised that we both didn't die that very first night. I was more physically miserable than I had ever been before. The whole night was spent vomiting. The thing that surprises me is that we didn't forget about heroin right then and there. It was horrible! *But we later decided that our dear friend had given us too much. So I decided to give it another chance.* . . . My friends were all doing it, and it had become a question of prestige within our small group [italics added].

Heroin users and addicts paint the pleasure and pain of the drug experience as the most exaggerated that life has to offer. Because of the either-or, black-or-white nature of the drug controversy, antidrug propagandists feel obligated to denounce what might be considered positive traits in illegal drug use: Even so primrose an experience as euphoria becomes reinterpreted as something insidious, false, and artificial. Drug abuse and addiction are bad; ergo, even the positive aspects of the drug experience must be painted in a negative light.

Extreme pleasure, then, is a self-reported feature of a large proportion of heroin experiences. My informant described her first few experiences, after the first shot, in these terms: "I can't describe the rush to you. . . . At the time, *it was better than orgasm*" [italics added]. Sexual imagery and analogies are prominent in the descriptions by junkies of their drug experiences. The stiff, rigid needle being inserted into the soft, yielding flesh, the wave of ecstasy flooding the body just after the injection, the feeling of calm satisfaction and well-being after the initial period of euphoria—all these have sexual overtones; indeed, for many junkies heroin becomes a substitute for sex. (Addiction to heroin produces a reduced interest in sex and often temporary impotence in men.) In evaluating the appeals of heroin, one cannot omit its hedonistic component. I have been told by heroin addicts and experimenters that the euphoria occurring upon injecting heroin into the vein is far more glorious and pleasurable than anything the nonaddict could possibly experience.

HEROIN ADDICTION

The linguistic categories used in a particular subculture to typify various forms of behavior and conditions often capture the flavor of the attitudes that participants have about them. Both heroin addicts and marijuana smokers employ the term *straight* to describe pharmacological states (as well as to describe someone who does not use drugs), but the term refers to precisely the opposite states for these two drug users. Heroin addicts say that they are straight when they have just averted withdrawal sickness and are back again on an even keel, under the influence of the drug. Marijuana users say that they are straight when they are *not* under the influence of the drug. This linguistic distinction reveals the radical contrast between addiction, which becomes an entire way of life (the drug state being a state of "normalcy" toward which all other aspects of life are directed), and the occasional use of a recreational drug, which is typically little more than a hobby, an amusement that is somewhat outside the routine of the everyday. For the heroin addict, heroin is precisely "the everyday."

Evaluations of heroin vary according to one's attitudes and social location. Addicts attribute magical powers to the drug. Far from viewing continued administration of heroin

as stupid and senseless, the addict sees abstinence as stupid and senseless. In abstinence there is pain and misery; in taking the drug there is well-being, comfort, and security. The addict's view of heroin as a magic potion arises from both the euphoric rush achieved upon administration and its wondrous ability to allay withdrawal sickness. "We are in the realm of myth," Seymour Fiddle writes, "with heroin as a divine or heroic substance" (Fiddle, 1967, p. 66). This mythic attitude extends even to the nonuser, who describes the drug in quite similar terms but evaluates it in precisely opposite terms. Nonusers often credit heroin with demonic powers, with a kind of black magic hold on the addict.

It is difficult for a nonaddict to understand the almost religious quality of addiction; to someone enmeshed in the narcotic addict subcommunity, heroin is an absolute, something that transcends utilitarian calculation. Every conceivable aspect of life becomes translated into the heroin equation. It is beyond rational cost accounting. Something becomes relevant only insofar as it is related to the acquisition and use of dope. Everything else must be subordinated to it. A choice between heroin and anything else is no choice at all. A journalist quotes an addict on the value of heroin versus the value of money: "A good stash is a lot better than money. Money is phony stuff. . . . It's not a commodity. But heroin's a real commodity. Get a couple of kilos of clean, pure heroin and you've got lifetime security. Better than gold. You've got gold, you've got to spend it to get dope—if you can get it. You've got dope, you've got everything you need. Gold you can always get if you've got dope" (Keating, 1970, p. 30).

Another aspect of addiction often distorted by public stereotypes and misunderstood by nonusers is the role of the heroin seller, or dealer. Public wrath is reserved for the peddler who profits from human misery by selling heroin to the junkie. Laws designate sentences ranging up to death for the pusher. He is, it seems, one of the most insidious characters in the current popular demonology. But the problem is that the addict does not view the dealer in this light. Far from viewing the dealer as a source of misery and pain, the junkie sees him as a kind of savior—a faith healer, a medicine man. Without his supply, the addict would undergo the agonies of withdrawal. The peddler is his lifeline. (To be even more precise, the addict has an ambivalent or love-hate relationship with the dealer, who has something the addict desperately wants, and is often unreliable about supplying it.) From this limited—and obviously distorted—perspective, it is possible to view the dealer in positive terms.

Kicking Heroin

Not all individuals who are referred to as addicts or junkies are literally physically dependent on heroin. Most find this drug so immensely *psychologically* reinforcing that they want and try to take it again and again. For them, discontinuing the use of the drug is painful not so much as it might entail withdrawal symptoms but because they would be deprived of an experience that has been so euphoric for them in the past. At the same time, we should keep in mind that the narcotic user or addict is enmeshed in a social network of other users, and kicking the habit is extremely difficult for that very reason. If "turning on" is a group phenomenon, so is turning off—or failing to do so. My college informant writes:

Whenever I saw my friends, they were shooting up too. . . . The problem with kicking heroin . . . is that all of your friends aren't kicking at the same time. . . . A three months' abstinence was

accomplished only by almost total isolation from friends in the drug world. . . .

One guy . . . sat there praising my boyfriend for being the only one who managed to avoid getting a habit, telling him to “keep it up.” My boyfriend said something like, “We couldn’t shoot up if we wanted to, we haven’t got a spike.” Immediately this guy gets a brand new needle and says, as he hands it to my boyfriend, “I hate to think I’m knocking down one of the barriers that keeps you away from dope.” He then proceeded to offer my boyfriend a free shot.

In her autobiography, *The Fantastic Lodge*, published under the pseudonym Janet Clark, a young woman heroin addict (who died of an overdose of barbiturates) explains the pressure that others place on the user to continue taking heroin:

When you hear about them kicking, how does the junkie friend feel about his junkie friend who’s kicked, supposedly, and is really cool, making some steps toward improvement in a hopeful manner? He hates his guts. For one thing, he’s envious, deeply envious that the friend can get out of the morass, and not him. . . . But for another thing, it gives him a feeling of panic, like, are they fleeing the scene? Am I going to be left here alone? I have to have these people. (Hughes, 1961, pp. 143–144)

Lest we become unduly pessimistic about the addict’s chances of getting off heroin, we need only remind ourselves of the remarkable success rate of returning Vietnam veterans who were addicted to heroin. Of all the Army enlisted men who returned to the United States in September 1971, more than one in 10 tested positive for narcotics, amphetamines, or barbiturates. Almost 9 out of 10 of the men who tested positive for narcotics were actually addicted—had one or more signs of physical dependence: They designated themselves as addicted, had used a narcotic regularly for more than a month, experienced withdrawal lasting two days or more, experienced two or more of the “classic” symptoms of withdrawal, and preferred injecting or sniffing narcotics to smoking them. Three out of four of the narcotics-positive men had three or more of these signs of dependence.

These men were interviewed 8 to 12 months after their return to the United States. Only 2 percent of the total sample told the interviewers that they were currently using narcotics; urine samples collected at the interview were positive for only 1 percent of the sample. Half of the men who were dependent on narcotics stopped use entirely on their return, only 14 percent became re-addicted, and the rest used sporadically. Entering a treatment program had nothing to do with this success rate—only 5 percent had enrolled in such a program since their return. A high proportion of the men who had become heroin addicts did not continue their habit upon their return to the United States. In spite of the extraordinarily high rate of narcotic use and addiction in this population during their service in Vietnam, a year or so after their returning to the United States, these servicemen reverted to their pre-Vietnam levels of drug use—as if they had never used drugs in Vietnam in the first place! Simply being an addict does not force the individual to continue using (Robins, 1973). Instead of the cliché “Once an addict, always an addict,” what seems to be true in this case is, “Once an addict, seldom an addict” (Johnson, 1978).

Heroin Addiction: Myth and Reality

It is a simple matter to apply conventional judgments and evaluations to the world of the addict. Thus psychiatrists will proclaim that the addict is immature and irrational, and that he or she has a compulsion to avoid responsibility. An earlier tradition of

sociologists also built an entire theoretical edifice on the assumption that addiction (this is often stretched to include all illegal drug use) is a *retreatist* adaptation to the problem of social adjustment and that addicts are attracted to their drug because they are “double failures” (Cloward and Ohlin, 1960, pp. 178–184). These views have built into them the biased assumption that to conform to society’s expectations is “normal” and that to do otherwise requires an explanation invoking a pathology or a dysfunction of some kind.

To look at the behavior of the addict from the perspective of the addict subculture is to judge the behavior radically differently. Indeed, from conventional society’s point of view, addict behavior is irresponsible, because addicts generally do not act in ways that society defines as responsible. Thus the validity of the retreatist conception of the addict is based on the value assumption that he or she should want the things that society (as well as the researcher) has decided are appropriate for him or her. However, the addict will have a different definition of what constitutes responsible behavior. From the addict’s point of view, responsibility rests in being able to hustle the money necessary to maintain a heroin habit. Admiration is reserved for those addicts who are able to succeed gracefully at these demanding requirements: “Prestige in the hierarchy of a dope fiend’s world is allocated by the size of a person’s habit and his success as a hustler” (Sutter, 1969, p. 195). Addicts are acutely aware that they are masters of forms of behavior at which the “square” would be a hopeless failure. The difficulty of treating heroin addiction, as with all other forms of drug abuse, is rooted precisely in these alternative definitions of reality. To the extent that compulsive drug users define the reality of drug use in positive terms, it will be difficult for a treatment program to convince them to stop; to the extent that a treatment program does not understand such an alternative definition of reality, it will be a failure.

The public image of the addict derives in part from the Chinese opium smoker of a century ago. He is seen as existing in, or retreating into, a state of dreamy idleness, a euphoric temporary death. This state of oblivion does, indeed, typify a certain temporary slice of the addict’s day and is known as “going on the nod.” (Its occurrence is, however, dependent on the quality of the heroin administered.) But it is only a small portion of the addict’s daily life—the climax, so to speak—and the hectic hustle and bustle of the day is oriented toward this brief moment of transcendence. Far from taking the addict out of contact with the world, addiction “plunges the newly recruited addict into abrasive contact with the world” (Lindesmith and Gagnon, 1964, p. 179). Fiddle calls the kind of life the typical street addict lives a “pressure cooker universe” (1967, pp. 55–63). Paraphrasing the addict’s views on rejecting the “retreatist” theory of drug addiction, Fiddle writes: “Could a square survive . . . in the kind of jungle we live in? It takes brains, man, to keep up a habit that costs \$35 to \$40 a day—every day in the year” (1967, p. 82).

A sensitive and informative account of addiction written by an anthropologist and an economist, “Taking Care of Business” (Preble and Casey, 1969), neatly summarizes the aggressive, rather than retreatist, orientation of addicts’ lives:

Their behavior is anything but an escape from life. They are actively engaged in meaningful activities and relationships seven days a week. The brief moments of euphoria after each administration of a small amount of heroin constitute a small fraction of their daily lives. The rest of the time they are actively, aggressively pursuing a career that is exacting, challenging, adventurous, and rewarding. They are always on the move and must be alert, flexible,

and resourceful. The surest way to identify heroin users in a slum neighborhood is to observe the way people walk. The heroin user walks with a fast purposeful stride, as if he is late for an important appointment—indeed, he is. He is hustling (robbing, or stealing), trying to sell stolen goods, avoiding the police, looking for a heroin dealer with a good bag . . . coming back from copping . . . , looking for a safe place to take the drug, or looking for someone who beat (cheated) him—among other things. He is, in short, *taking care of business*. (Preble and Casey, 1969, p. 2)

CONTROLLED OPIATE USE

As we've seen, many—indeed, most—heroin abusers take their drug of choice on less than a daily basis and are not literally physically dependent on it. However, most street opiate abusers would also become addicted if given the opportunity. But they simply cannot sustain the daily grind of raising the cash, locating the seller, dealing with the consequences, or running the risk of arrest that several-times-a-day use would entail. At the same time, a high proportion of opiate users take their drug on a *controlled basis*. Until fairly recently, it was not realized that controlled opiate use is possible; it was thought that one was either an addict or an abstainer. However, it is entirely possible that the occasional yet regular controlled user of narcotic drugs is more common than the addict. The term that is used in the world of narcotic drug use to describe this limited use is “chipping.” Chipping (or “chipping”) means to fool around or play around with heroin, to use it once in a while or somewhat more often without getting hooked. How common is opiate chipping?

We all recognize that the controlled use of alcohol is not only possible—it is the majority pattern. Most drinkers are moderate in their consumption and do not become alcoholics. Yes, one might object, but narcotics are, well, *addicting*; they produce a physical dependence. Fair enough, but so does alcohol. As we saw in Chapters 1 and 2, during much of the history of the United States, alcohol was consumed at levels far greater than it is now; in the period roughly from 1790 to 1830, for instance, in terms of quantity consumed, there were proportionally many more alcoholics than there are today. The simple fact is that patterns and styles of drug use are not a simple function of the properties of the drugs themselves. To think that they are is to fall victim to what I call the chemicalistic or pharmacological fallacy, or what Himmelstein calls “the fetishism of drugs” (1979). It is people who choose to take drugs, not drugs that control people; what they take, how they take them, how often, and under what circumstances—all are under the control of the actor, the individual deciding to take (or not to take) a given drug or set of drugs. All drug use is surrounded by values and rules of conduct; these values and rules spell out sanctions—penalties for misuse and rewards for proper use—and these values, rules, and sanctions have an impact on how drugs are actually used.

These rules (sociologists call them *norms*) may be widely accepted and operate on the society-wide level, as with alcohol, or they may be characteristic of only small groups or subcultures, whose attitudes and values differ from those of society at large. But when the important people in someone's life believe in a rule and act on it, and enforce it, one's own behavior will be influenced by that fact. Naturally, some will follow their society's or subculture's rules on drug use and some will not. Norms set limits or

establish guidelines that form the framework within which use takes place; they influence people's behavior but they do not dictate it.

According to Norman Zinberg, author of *Drug, Set, and Setting: The Basis for Controlled Intoxicant Use*, values, rules, and sanctions promoting controlled or moderate drug use “function in four basic and overlapping ways.” First of all, they “define moderate use and condemn compulsive use.” For instance, controlled opiate users “have sanctions limiting frequency of use to levels far below that required for addiction.” Second, such sanctions “limit use to physical and social settings that are conducive to a positive or ‘safe’ drug experience.” Third, sanctions “identify potentially untoward drug effects.” Precautions must be taken before and during use; for instance, opiate users may “minimize the risk of overdose by using only a portion of the drug and waiting to gauge its effect before using more.” And fourth, sanctions and rituals “operate to compartmentalize drug use and support the users’ non-drug-related obligations and relationships.” For instance, users may budget the amount of money they spend on drugs and limit use to evenings or weekends to avoid interfering with work and other obligations (Zinberg, 1984, pp. 17–18).

Is it really possible to use heroin or the other opiates on a moderate or controlled basis? Zinberg located a number of controlled opiate users and examined their patterns of use, including what made them distinctive and how they accomplished this seemingly impossible feat. They had been using opiate drugs for an average of more than seven years; for four and a half years, they had been using them on a controlled basis. (Some controlled users had used opiates compulsively, and some on a marginal basis, for part of the time they had been using opiates overall.) For the year preceding the study, about a quarter (23%) used opiates sporadically, or less than once a month; a third (36%) used one to three times a month; and two-fifths (41%) used twice a week. None used them daily or more. Their pattern of use and the length of time that they sustained this pattern showed “without question that controlled use can be stable” (Zinberg, 1984, p. 69).

Some observers have objected that opiate users who are not yet addicted simply have not reached the stage in their drug “careers” when use inevitably becomes uncontrolled or compulsive (Robins, 1979). But the length of time of opiate use in Zinberg’s sample was not only substantial (more than seven years), it was not significantly different from that of compulsive users in the sample. Moreover, most compulsive users had never had a period of controlled use. And the length of time controlled users had been taking opiates on a moderate basis (four and a half years) was ample time for them to have become compulsive users (Zinberg, 1984, pp. 69–70). Controlled use is a stable pattern for a significant proportion of narcotic users; moderate use does not necessarily or inevitably turn into compulsive use or addiction. It is a phenomenon that must be understood in its own right.

This same study compared and contrasted the patterns of use that characterized controlled users with those of the compulsive users and found interesting differences. They did *not* differ in type of opiate used—say, sticking with “soft” narcotics, such as Darvon or codeine, versus using heroin. They did *not* differ in route of administration—snorting versus IV injection. They did *not* differ in personal acquaintance with other users who had suffered extremely negative consequences as a result of opiate use—for instance, death from an overdose.

However, the controlled users *did* differ from the compulsive users in a number of crucial ways. In contrast to compulsive users, controlled users (1) rarely used more than once a day; (2) often kept opiates on hand for a period of time without immediately using them; (3) tended to avoid using opiates in the company of known addicts; (4) tended not to use opiates to alleviate depression; (5) usually knew their opiate source or dealer personally; (6) usually used opiates for recreation or relaxation; (7) tended not to use opiates to “escape” from the difficulties of everyday life (Zinberg, 1984, pp. 69–81).

While the controlled use of narcotics, including heroin, is a stable, long-term pattern for many users, it is not clear just what makes it possible for some to avoid physical dependence—how, for instance, they manage to stick to the practices spelled out above—while, for others, this seems to be an impossibility. And, while survey data suggest that recreational nonaddicted users of narcotics are more common than addicts, it would be rewarding to know with a bit more precision just how numerous the representatives of each category are. Controlled opiate use is worthy of far more study than it has attracted so far.

THE MISUSE AND ABUSE OF PRESCRIPTION NARCOTICS

As we saw in Chapter 6, in 2010, nationwide, in the catchment areas that contributed data on drug-related lethal overdoses, coroners tabulated about 10,000 deaths in which the use of the narcotics, opiates, or opioids were implicated. Since DAWN’s coverage is incomplete, the actual figure is likely to be several times higher than this. Still, this figure is three to five times higher than for any other single drug or drug type, including alcohol, the benzodiazepines (or Valium-type drugs), cocaine, and the antidepressants. But if we look at the narcotics or opiate-type drugs more carefully, breaking them down into subtypes, we notice a very interesting story unfolding before our very eyes. As we’ve seen, for the better part of the past three-quarters of a century, at least since the 1930s, when Alfred Lindesmith (1947) and Bingham Dai (1937) began studying addiction, heroin was becoming or had become the paradigmatic narcotic, the drug of choice among addicts, the biggest, baddest drug of them all—the premier substance addicts took. The day-to-day administration of heroin specifically marked one as an addict. William Burroughs (1953) and Alexander Trocchi (1960) eloquently describe the heaven-hell life of the heroin addict with a mixture of pride and defiance on the one hand and shame and pettiness on the other. But several developments have been unfolding during the past couple of decades that drastically alter this picture.

In 2011, the NSDUH estimated the nonmedical past-year use of “pain relievers” at 4 percent, OxyContin specifically at just below 1 percent, and a decline for both between 2010 and 2011. MTF puts the annual figure for high school seniors for OxyContin in 2012 at 4 percent, more or less stable for 2002–2012, and Vicodin at 8 percent, also more or less stable since 1991. Because the Centers for Disease Control (CDC) estimates that both use and overdose deaths from prescription narcotics generally, and from methadone specifically, have tripled in the past two decades (Centers for Disease Control, July 2012, November 29, 2012; Szalavitz, 2012b), perhaps it is wise to examine DAWN for a portrait of the use and abuse of opiate-type prescription drugs. DAWN offers a partial glimpse to the transformation that has taken place in the world of narcotic addiction.

As we know, DAWN's data are not only incomplete but almost certainly unrepresentative; hence, we must generalize from them with a great deal of caution and healthy skepticism. But they do offer a clue to, a glimpse at, what the pattern of nationwide untoward drug effects looks like, and which drugs are most often implicated in emergency department (ED) visits and medical examiner reports (ME) occasioned by a fatal drug overdose. The ED reports separate drug-related emergency department visits occasioned by illicit drugs from legal prescription agents; their category "opiates/narcotics" is separate and distinct from, and does not overlap with, heroin. It includes codeine, methadone, oxycodone (Percodan, Percocet, and OxyContin), hydrocodone (Vicodin), codeine, oxymorphone (Percocet and Opana), and laudanum (an alcohol tincture of opium), as well as several other opiate-type drugs that are used via prescription for pain. (The brand names of these substances are combinations, with aspirin or acetaminophen.) Interestingly, in 2010, this category of narcotics was implicated in more than *twice* as many ED visits (556,551) as heroin (258,482). In contrast, DAWN's ME reports combine all narcotics into a single category, and the researcher must search out the subcategories to determine *which* narcotics are more likely to be implicated in lethal drug-related overdoses; unfortunately, DAWN asks MEs to tabulate its narcotics-related lethal overdoses in only three categories: heroin, methadone, and "other," the last of which is a grab-bag grouping. Still, the ME reports provide another interesting development that immediately surprises us: Again, heroin's contribution to drug-related deaths is below that of other narcotics: slightly less (1,969) than that of methadone (2,021), and substantially less than the category of the "other" narcotics, including oxycodone (including OxyContin), hydrocodone, and roxicodone (6,331).

Is the use of prescription painkillers for legitimate medical purposes or for recreation? Are patients taking legal narcotics to treat their pain or for the purpose of getting high? As we've seen in earlier chapters, these are not two distinct, separate, clear-cut categories; in the case of painkillers, drug treatment oozes into recreational use. Between November 2012 and December 2012, the *Los Angeles Times* published a four-part series on "Legal Drugs, Deadly Outcomes," revealing that the misuse and abuse of prescription opiate-type drugs is fostered by a small number of "reckless" doctors who write massive numbers of prescriptions for patients and "rogue" pharmacists who fill them without questioning their legitimacy. Patients try different doctors and pharmacists in an effort to find a few that will cooperate—or they hear about them through the grapevine. "Rogue pharmacists have a symbiotic relationship with physicians who prescribe drugs for addicts. Neither can flourish without the other." Through "trial and error," patients discover doctors willing to write large numbers of prescriptions and pharmacists willing to dispense large amounts of drugs without scrutiny. "Then word gets out." Said Derrick Jones, an agent for the Drug Enforcement administration, "If you've got a 22-year-old kid coming in with a prescription for enough Oxy to put a horse down, that's got to raise some red flags with a good pharmacist." Most pharmacists will refuse to fill such questionable prescriptions; a few won't. Those few become popular with patients and pseudo-patients who overuse, misuse, abuse, and become addicted to prescription painkillers. Some dealers come into a pharmacy with prescriptions claiming that they are filling them for patients who are too sick to do so themselves. A medical board investigator discovered that one physician, Carlos Estiandan, 62, was earning \$3,000 a day, in cash, selling prescriptions. Drug-addicted patients crowded the lobby of his office, one of three

he owned. Said one of his employees to a federal investigator, “Estiandan will give the patients anything they want.” One federal investigator came into his office requesting a prescription for a painkiller. The doctor asked him why he was in pain. A fall, an accident? The investigator said no. “I must have a reason to fill out a prescription,” the doctor replied. The agent said it was a long time ago and he didn’t remember. Again the physician said he needed a reason and, nodding and raising his eyebrows, suggested that the patient supply one. Maybe it was weightlifting, the investigator suggested. The doctor wrote the prescription immediately.

In 2010, *Listserve.com* nominated the “Top 10 Abuse Prescription Drugs”; five of them were narcotics/opiates: oxymorphone (Percocet and Opana), oxycodone (OxyContin), laudanum, narcotic syrups (codeine and hydrocodone), and Dilaudid (hydromorphone) (Ladd, 2010). The *Los Angeles Times* listed 10 drugs that were “most commonly linked” to prescription overdose deaths in four south California counties; four of the top five of these were narcotics: hydrocodone, oxycodone, methadone, and morphine. Together, they contributed to the demise of just shy of a thousand California residents. The *Times* selected five “warning signs” or risk factors in prescription drug deaths: past overdoses; past rehabilitation; a history of substance abuse; anxiety, depression, or mental illness; and suicide attempts. A study of the background of the deceased demonstrates the intimate association between medical and recreational use; the line between them is fuzzy. Most of the dead the *Times* looked at did have at least one ailment for which an opiate provided relief, but virtually all of them went far beyond legitimate use into the realm of extravagant, excessive, dangerous, and, as it turned out, lethal abuse. Many also used Schedule I or completely illicit drugs as well as their medication, of which they likewise took excessive doses.

A 21-year-old man took both oxycodone and methamphetamine; he received prescriptions for OxyContin from several physicians and sold the pills for cash. A 22-year-old man obtained oxycodone and Xanax from several clinic doctors. He had been released from jail—arrested for selling prescription narcotics—the morning of his death; he was taking the oxycodone for his lower back pain. A 23-year-old college student, who had been seeking a drug intervention program and addiction counseling services, was using both prescription narcotics and heroin. A 24-year-old man who had abused both OxyContin and heroin was diagnosed as bipolar, had gone through multiple rehabilitation programs, had been arrested numerous times, and was on probation. The night before his death, his mother walked into the bathroom and found him with numerous pills, which he flushed down the toilet; his mother found his body hours later, in that same bathroom. A 26-year-old man died with codeine, morphine, oxycodone, oxymorphone, and heroin in his body; he had had multiple prior overdoses and had a history of back pain and anxiety. A 38-year-old obese man who died with hydrocodone and methadone in his system had sought out narcotics from multiple physicians; he was in pain because he had been shot in a drive-by shooting, and he found Vicodin, the medication he was taking, insufficient. A 48-year-old female overdosed on codeine, oxycodone, a benzodiazepine, and an antipsychotic; she was clinically depressed and bipolar, had a long history of illegal drug use and heart problems, and had made several suicide threats, but no attempts. A 50-year-old female died with cocaine, hydrocodone, and a benzo in her system; she suffered from chronic neck and back pain, was an alcoholic, had high blood pressure, and had been diagnosed as bipolar; she died in a

motel room, where her boyfriend found her on the floor. A 52-year-old overdose victim died of an overdose of morphine and hydrocodone. He was disabled, was clinically depressed, had been unemployed, and had a history of both OxyContin and methamphetamine abuse. The list is long, the infirmities are multiple, and the number of drugs these unfortunate prescription opiate abusers took when they died was virtually never just one.

Why doesn't the state of California investigate and shut down these rogue doctors and pharmacists? How can such abuse continue in the face of hundreds, even thousands, of overdose deaths? The explanations lie in underfunding and budget cuts. Between 2001 and 2012, the number of prescription-drug-related investigations conducted by the California medical board declined by 40 percent. The state has cut the number of investigators by several dozen; today, these investigations take several months longer to conduct; and the number of doctors practicing in the state has increased by tens of thousands. CURES, the acronym for California's tracking system, originally installed for finding individuals who obtain many prescriptions from multiple doctors, can also be used for locating rogue doctors who overprescribe dangerous drugs. Of the top 10 physicians on the list of overprescribers which the *Times* obtained, 6 were convicted of drug dealing or were sanctioned by the medical board; several had been overprescribing for years before authorities caught up with them. More than 20 of their patients died of drug overdoses after taking the drugs that these physicians prescribed. But CURES is on "life support" due to budget cuts. "We don't have the horses or the ability to do that kind of work," said an official at the state Department of Justice. "We don't have the resources," echoed the executive director of the medical board of California (Glover, Giron, and Branson-Potts, 2012).

Even if heroin addiction ceased to exist, the growing menace of heroin-like prescription narcotics seems destined to step in and take its place. While heroin addiction is a predominantly urban, usually a racial and ethnic minority, phenomenon, the abuse of the prescription opiate/narcotics tends to predominate in white, rural, and predominantly poor communities. Like heroin, however, it is caused by individual disorder, community disorganization—and institutional failure.

SUMMARY

The public stereotype of heroin addicts may be more negative than for any other drug user. Heroin represents the stereotypical or archetypal street drug; the junkie is seen as a lowlife, an outcast, a deviant. To the sociologist and the criminologist, these images make the use of this drug worth studying.

Heroin is derived from morphine (when consumed, heroin is broken down into morphine in the body), which, in turn, is derived from opium. Heroin is a narcotic, a drug category which also includes (aside from morphine and opium) codeine, Dilaudid, laudanum, paregoric, methadone, Demerol, Percodan, Darvon, oxycodone (one trade name: OxyContin), hydrocodone, and fentanyl. Narcotics are excellent and effective painkillers, and are used extensively in medicine for that purpose; they are also, without exception, physically addicting. In addition, all are reinforcing; they produce euphoria—a "high." This, in turn, means that they generate a psychological as well as a physical

dependence. And, since their lethal dose is only a few times higher than their effective dose, they can kill, principally by paralyzing respiration and the heart.

It is remarkable that heroin is discussed in conjunction with other drugs such as marijuana, cocaine, and amphetamine, since it is one of the least-often-used drugs both in the United States and worldwide. Only 1.4 percent of high school seniors and 1.5 percent of the population as a whole has even tried heroin, and use during the past month is only a small fraction of this small percentage. (Let's keep in mind that dropouts, absentees, the homeless, and prisoners do not get into conventional samples of the population, however.) The Abt Associates, using a variety of factors, estimate the size of the chronic heroin population in the country at just under a million. However small its user population is, however, heroin can cause a great deal of harm. In DAWN's overdose statistics, heroin and the other narcotics appear with great frequency: Opiates figure in about 10 percent of emergency department mentions (nonlethal overdoses), and in roughly four out of 10 medical examiner reports (lethal overdoses). By any standard, the opiates, heroin especially, must be regarded as an extremely dangerous drug. Heroin belongs in the category that I've referred to as the "big three" with respect to drugs that generate major problems for the society; the others are cocaine and alcohol.

During the 1990s, some observers raised the alarm that there was a "new" heroin epidemic brewing. According to some indicators, the recreational use of heroin rose during the 1990s. However, that increase seems to have been halted, and heroin use has fallen back to its pre-1990s level. The Monitoring the Future study of secondary school children indicated a substantial increase in most measures of heroin use in grades eight through twelve between 1991 and 1999, but by 2008, use was half of what it had been in the 1990s. Likewise, in recent years, ADAM's arrestee figures indicate a decrease in heroin use among the criminal population; in fact only 5 percent of arrestees test positive for opiates. No heroin epidemic developed in the 1990s or beyond, but again, that does not mean that heroin and the narcotics are not a serious drug problem in some communities and for the nation as a whole. Episode for episode and user for user, heroin is as dangerous as any drug in the psychoactive recreational substance cornucopia, but fortunately, its use is very low—and declining over time.

Given the fact that heroin and the other narcotics are powerfully physical-dependency-producing, it is surprising that many (possibly most) regular users are not actually physically addicted. Most are *controlled* opiate users: They regulate their use by using small amounts; not escalating the amount they use; using their drugs on special occasions; not hanging out with addicts; using them strictly for recreational purposes; and not getting hooked. Though the junkie is the most well-known type of narcotics user, he or she may very well not be the most *typical* one.

Talking to heroin addicts and users gives one a very different slant on the reality of their use of this drug from that which is promulgated in the media. To begin with, the use of the drug is described in extremely pleasurable terms. As we saw, one of my informants told me that shooting heroin was "better than orgasm." Euphoria has to be counted as a major motive for use, especially continued use. As we saw in Chapter 3, reinforcement is almost certainly a stronger motivator for continued use than physical addiction itself. Most of the public wants to attribute dependence to "enslavement" or physical addiction, but the jolt of orgasmlike pleasure certainly accounts for far more behavioral dependence than the avoidance of withdrawal.

The difficulty of kicking heroin stems more from the fact that most of the addict's friends are also addicted than it does from the drug's magical or demonic hold. Still, many addicts—the majority—do kick it, most on their own rather than as a result of a treatment program. Studies of returning Vietnam War veterans who were addicted to narcotics demonstrate that the majority gave up their use of heroin, and of these, the majority did so, again, on their own, without benefit of a formal treatment program. However, what was distinctive about them is the fact that most of their close relationships were with nonaddicts, which indicates that the addict may not be as “enslaved” to heroin as is popularly thought.

Prescription narcotics are becoming the favored substance of a growing number of drug abusers and addicts. Narcotics are painkillers, and most use of them is legitimate; physicians prescribe them for patients seeking alleviation from the agony of their ailments. But some of them exhibit multiple pathologies—alcoholism, illicit drug abuse, mental or mood disorders, clinical depression, suicide attempts, not to mention previous drug treatment and drug overdoses—and they seek out rogue physicians and pharmacists to obtain massive quantities of prescription narcotics. Some of them sell their surplus to others, but many use them (often in conjunction with illicit substances) in massive quantities that eventually kill them. Authorities cannot do what needs to be done to reduce such abuse, since resources are insufficient and budgets are being slashed.

ACCOUNT: Heroin and the Narcotics

Becoming Addicted to OxyContin

This interview was conducted by Tricia Fuentes, a student at Union College in Kentucky. She interviewed Sally, who had become dependent on OxyContin. Sally was arrested for trafficking—transferring a quantity of a narcotic to a friend working undercover for the police—spent 18 months in a maintenance program, became clean after a few relapses, and finally kicked her habit. She's now in recovery and is looking for a job appropriate to her education.

Tricia: You said your drug of choice was OxyContin. How did you get involved with it?

Sally: I can remember hanging out with a bunch of people from the college I was going to, and between classes, we would snort hydrocodone, which is also an opiate. And I can remember being very scared of OxyContin because it's

very dangerous. . . . I do remember the first time I did OxyContin.

Tricia: So can you tell me a little more about the first time you used it?

Sally: I was with a girl that I smoked marijuana with for the first time, a childhood friend from kindergarten, her and a couple other girls from school. We were experimenting with different kinds of drugs, and we all did OxyContin. A couple girls had done it previously and they were the ones that had it.

Tricia: So the first time, did you like what you were feeling?

Sally: Yeah, but I was scared. I thought I was gonna die. I was scared of Oding, and I still continued to do it. I knew that that was a possibility when I done it. The other girls who had done it before kept tellin' us that we would be all right.

Tricia: How did it make you feel?

Sally: It made me feel good. Energetic. But I can remember throwing up and getting higher and higher every time I would throw up. When you first start using it, it produces a lot of nausea, but it was something that just stimulated me rather than completely taking me out of my mind. I could never function with marijuana or alcohol—you couldn't go to class drunk, and the marijuana made me really paranoid. But the opiates just stimulated me and made me really energetic and it felt good.

Tricia: What would you say was the best part about using OxyContin?

Sally: Just havin' the energy from it and I guess you just feel good when you do it. While you're high you don't have a worry in the world. I just became really, really happy when I would use it. Nothing bothered me. I could handle anything—fatigue, stress, I could stay up all night and get high and still go to class and perform the way I was expected to and still party and drink all night and my hangover would instantly be gone.

Tricia: At that point, what other drugs had you experimented with?

Sally: Marijuana and alcohol and Xanax [a sedative/tranquilizer], amphetamines, meth, cocaine, and milder opiates, like hydrocodone. When I did OxyContin, it was just something that clicked with me. It was unlike any other drug I had ever done.

Tricia: So after that, did you start using it. . . .

Sally: Whenever I could.

Tricia: Whenever you could? Did you get addicted really fast? Or would you say you were even addicted?

Sally: Oh, yeah, I would say I was addicted. The physical addiction I noticed within three or four weeks. I couldn't get out of bed without it.

Tricia: And would you go to class? Was that the only way you could go to class? Could you concentrate better?

Sally: Yeah.

Tricia: Could anyone tell that you were using it?

Sally: I don't know if they could tell or not. I mean, it hadn't taken a toll on my health or my physical appearance at the time. It's like a progressive illness. I'm sure I talked a lot when I was really high, but unless you knew what you were looking for, no [no one could tell I was high].

Tricia: So how often were you using OxyContin?

Sally: At the time, it wasn't that easy to get. It's when it first became popular in this area. I would try to use it daily, but if I couldn't find it, I would resort to other drugs or alcohol or other opiates. Just whenever. At that time, I thought it was cool and fun.

Tricia: Were you only using it in groups then?

Sally: In the beginning, yeah. When I went to a dealer's house, I was scared. When I got it, I'd only go with someone else. I kinda picked a buddy to be along for the ride with me. A certain girl who wanted it just as bad as I did. I guess that kind of eased my anxiety about going to drug dealers' houses. It takes a little bit out of you each time you use, and the more the disease progressed, and the more desensitized you become to what's going on.

Tricia: So you started getting used to going [to dealers' houses]?

Sally: Yeah. It became a normal day. I would sit in the dope dealer's house and use all day long and not be scared that cops were going to bust in the door. It became habitual.

Tricia: How old were you when you first tried? Eighteen?

Sally: Yeah, eighteen.

- Tricia:** Do you think that using OxyContin made going through college easier or harder?
- Sally:** In the beginning, it made it easier, but it made it harder once I had to put on two different faces for two different places. I was a student at school [but] I was having a double life. I was trying to impress my professors and managed to make really good grades. And then I started missing class, and the sorts of thing that happen with it when you begin using frequently, so, no, it was not easier. The drug dealer is not the most consistent person in the world; they're not going to be on time. It's a hassle, it's a job even to get high, so you start missing work and you start missing class. So, no, it wasn't easier, it was harder. But it's amazing how much your self-esteem climbs when you're high.
- Tricia:** So you made it through college.
- Sally:** Yeah. I have a bachelor's degree in psychology.
- Tricia:** What about your friends that you were using with? Did a lot of them make it [through college]?
- Sally:** No.
- Tricia:** How do you think you made it?
- Sally:** I really don't know. It was the most important thing to me at the time. I think a lot of it had to do with that other face I had to wear, that other person I had to be to the world. If I didn't make it, all those things people were hearing about me, they'd know were true. I think that may have motivated me more than anything. Like, I did not want my parents to know that I was a drug addict. Or the world to know. I didn't want anyone to know.
- Tricia:** What were some of the consequences you experienced from using OxyContin?
- Sally:** Well, I met a guy when I was 19. I think I was looking for somebody to

take care of me so that I could continue to do what I wanted to do. I think that is what a lot of drug addicts do, they look for someone to enable them. I tried to quit, and I did quit for a while. I continued to drink, I thought I could manage that. I [also] took Xanax occasionally. I moved in with him and we had a pretty good relationship. [Though] I stayed off the OxyContin, I don't consider it being sober or clean because I was drinkin' excessively. But I thought it was normal for teenagers to party, but we drank quite a bit. But I was clean for the first seven months of our relationship. And I do love him now, and I loved him then. But at one point, I got an abscessed tooth and I went to the dentist—I hadn't used any OxyContin or any other kind of painkiller or what I considered a hard drug for seven months—and I got a prescription for Percocet. Taking it released [the feeling of getting high on an opiate], from that moment on until I got clean 15 months ago. I put an opiate in my body every day of my life for four years, and the consequences slowly began. I think it affects your relationships with your family. I would cheat on [my fiancé]. It affected my relationship with my son so that eventually, he lived with my parents. After I graduated, I decided that I was gonna get sober. But I didn't want to put my life on hold long enough to go through rehab. I didn't want to not get a job. I didn't want to not do all the things I had intentions to do. So I got into a Suboxone outpatient clinic. Suboxone is an opiate [a partial opiate antagonist], it's what they use to treat opiate addicts. I was there for a year and a half. I thought it was the best thing that had ever happened to me, even though I was not using it the

way I was supposed to. I started driving to Lexington every other week because they were givin' me way more than I needed. It's supposed to relieve any withdrawal symptoms you have.

It attaches to the receptors in your brain and it does what an opiate does without producing the same effect, it blocks [the effects of] any opiate that you use, and it makes you sick when you do use.

I was on that for a year and I thought it was the best thing that ever happened to me, but I snorted it, I didn't stick it under my tongue and dissolve it like I was supposed to, and so I ended up runnin' out before I could go back to the clinic, and I'd have to buy it on the streets, so I was still involved with those people. Those people, places, and things. And I'd have to get them to go get things for me, and I would do the same things for them. I would help them out when I would get my prescription. I had become so desensitized to this, the whole drug world, that I didn't realize that I was doin' anything wrong. One of my friends wore a wire [and he recorded] me giving him Suboxone. A couple of months later, somebody knocked on my door and there was a SWAT team on my porch. I was arrested for two felony charges of trafficking. I was devastated. What's even scarier was that when they knocked on the door, when I saw that it was them [the police], the only thing I could think of was to hide my pills so that I would have them when I got out. I knew my dad would come get me; he wasn't gonna let me sit in jail. I honestly thought I was gonna walk away Scott-free.

Tricia: So what happened after you got arrested?

Sally: I had never been arrested so it was really, really scary. I got to the national

guard, the armory, I was fingerprinted, I was searched, I was interrogated, and here I am thinkin' I'm not this person that you're sayin' I am. I'm not a big trafficker, but the legal definition of trafficking is exactly what I done.

At the time I thought you had to be a big-time drug dealer to get a trafficking charge and that's not the case at all. So I spent a couple nights in jail because my bond was really high. My parents finally came and got me after 48 hours, and I tried to stop. I went 14 days without a Suboxone. I was scared to death and tried to stop, but I was usin' nerve medicine to go to sleep because the withdrawals were so bad I thought I was gonna die. The physical pain of withdrawin' is the hardest part at first to get over. Literally you can't go to sleep, every hair on your body stands up, and you have goose bumps and it can be 95 degrees outside, and you'll have chill bumps on your body. And throwin' up, diarrhea, nights and nights of sweatin' and not sleeping, and I would get up and get in the bathtub and try to ease the pain, drink a bottle of Nyquil, take a bottle of Benadryl just tryin' every way in the world to just get through those withdrawal symptoms. And I could not admit that I needed help. I was not going to go to a rehab, I thought I could do it on my own. I couldn't go back to the clinic any more. I had two felony counts of trafficking so I couldn't get it legally anymore. So I started usin' my drug of choice again, which was OxyContin. I was out on bond partying all the time knowing that I could be random drug-tested at any time. And I was arrested in September. I didn't get final sentence until May of the next year and besides those first two weeks, I stayed high all the time. I don't know how I stopped

when I got into drug court. I actually took a deal in drug court. I took a deal that I didn't have to do any jail time. I'd still be a convicted felon, and I pleaded guilty to one count of trafficking. It was supposed to be for 18 months but so far it's been 15 months and I'm nowhere near finished. I'm on supervised probation after I get out of drug court for the remainder of whatever's left when I do get out. I have a lot of limitations now. I have a very hard time finding a job. I've been clean 15 months. I mean I have reconciled with my family. I don't choose to hang out with the same people I used to hang out with. They're not [really] friends, they weren't friends then, they were usin' buddies. I had to change everything—people, places, and things—everything. And then the hard part began when I got through the physical withdrawal. Here I am, turnin' 24 years old, and I have no clue what real life's about sober. I'm havin' to learn it like an 18-year-old kid has to learn how to deal with life.

Tricia: So what made you choose drug court over jail time?

Sally: I was scared to death. I didn't want to go to jail. I had never been to jail. When I first got into drug court I tested positive of course—my first drug test was dirty. I went to what I considered a real jail. I mean it was just humiliating. The full strip search. I mean you're a criminal and you're gonna be treated like a criminal, they're not gonna have any sympathy with you. I thought, do you not know me? Do you not know that this is not me? But that's not the case when you go there. You're a number, you're strip-searched, you have to do a lice treatment. I can remember the guards standin' there, comin' out of

the shower completely naked, tellin' me to fuckin' scrub with lice medicine. It was certainly not what I was used to. I can remember her [the jail matron] givin' me a jumpsuit and no panties, no bra, no nothing on under it and tellin' me to put it on. She gave me two left feet sandals cause you can't have shoes, and a mat about an inch thick, no pillow, one sheet to put over my mat which was not even a twin size, it's like a cot size. And they put me in for my sanction, and I lay there for 48 hours, and I thought I will not be back here, this is not for me, and from that point on I decided I was gonna get clean, I was gonna get sober, and I was gonna do whatever I had to do to stay that way 'cause jail is no fun, and so reality set in. And I've been clean ever since.

Tricia: So after you got out of jail, how did you go about quitting?

Sally: I went to a meeting, which I'm still required to go to. I got what I needed to get in an AA meeting. I go to both AA and NA still to this day, but the first meeting I ever went to was an AA meeting. And I can remember sittin' there thinking, I do not belong here. I'm nothin' like you people. What have I done? Scared to death, sick, still thought I knew it all. And they kept tellin' me to keep comin' back, keep comin' back, and I went. I did 90 meetin's in 90 days like they suggested that I do. Found a sponsor. Somethin' happened in those rooms that made me want it. I got to the point where I wanted to go to meetin's. I wanted what they had because I was so tired of living the way I had lived. You've got people that have been comin' in there 30 and 40 years and they're still sober, and also in NA meetin's they're sober. Somethin' about this program works, and I knew that

I had to give it a chance. The meeting at drug court was called Last Chance, and it really is, it's a last chance for me. Even though I have limitations. I am a convicted felon and there are certain places that will not hire convicted felons. I know that if I keep doin' the right thing, God will help me and that He only helps people that help their selves. You have to be the one to put in the footwork, and this life is not easy. It wasn't meant to be easy. I've learned how to deal with everyday problems through 12 Steps. I really thought it was bogus. I really thought, how does this stuff work? And I can sit here and say that I haven't touched a drug or alcohol goin' on 15 months because I've kept goin' to those meetin's and workin' on a recovery program, and I still want to now. I don't want to go back to livin' the way that I was livin'. There is nothin' left fun in it [using drugs] for me.

Tricia: So you said now it's hard for you to find jobs because you're a convicted felon? What kinds of limitations are set on you?

Sally: Well I'm in drug court so I have a pretty hectic schedule. I submit to random drug testing every morning. And I don't know from day to day whether I'm going to [get] tested. The testing doesn't open until 8 a.m. A lot of office jobs begin at 8 a.m., and there is just no way that I could test and be there. I have group therapy once a week. I have to go to that. I have to go to court on Friday mornings every other week. I have NA meetings that require that I turn in [reports] every week to my drug court worker. I have to work a full-time job. So putting a full-time job in with all that [is difficult]. And there are other appointments I have to make as well. I do an individual [visit] with

my therapists, and an individual with my drug court case worker. I really haven't been in the real world of tryin' to find a job [and] of bein' on my own because drug court has been a crutch for me. I know that if I get high, there are consequences. There is no gettin' [away] with it. Like I said, I submit to random drug tests every day. I mean I don't know from day to day [if I am going to be tested that day]. And they test for alcohol. They test for everythin'—it's not just drugs, it's [also] alcohol. I have a curfew. I have an 11 o'clock curfew at night, and I'm bound to the tri-county area. I can't go out of these three counties. If you're on supervised probation, you're not allowed out of the state, whereas I'm not allowed out of [the three-county area]. I just can't afford to get into any kind of trouble whatsoever, otherwise I would be terminated from the program and I would go to prison. I haven't been to a real job that I would really like to have. I haven't been to that kind of job interview yet, but I am going tomorrow to a job interview that requires a bachelor's degree. I'm nervous and anxious about it, but I'm ready. I think people know that somebody's capable of changin'. That was who I was, but this is who I am. And I've accepted the responsibility and I've paid my debt to society, and God willing, as long as I keep doin' the right thing He will, too. I will eventually find the right job, and I'm going to go back to school. I've started taking classes and I just couldn't handle everything that I had to do and work a full time job and go to school full time. [An instructor in a master's degree program] knows what I am capable of, and I think she understands addiction and she's willin' to give me a chance.

Tricia: So does drug court make you have a full time job?

Sally: Yes, I think they just try to integrate you back into society, and there are consequences if you quit those jobs. They just want you to become responsible and independent. I think they understand to a certain extent that it is hard, but if you really want this, you'll find a way to get it done.

Tricia: So what happens if you don't hold a job?

Sally: I would be terminated from the program because it is a requirement.

Tricia: And termination means?

Sally: I would go to prison.

Tricia: So would you say that drug court has benefited you?

Sally: Absolutely, it's the best thing that ever happened to me.

Tricia: What kind of job do you work at now?

Sally: I'm a server at a restaurant.

Tricia: What is that like for you? Having a degree and working in a restaurant?

Sally: It's givin' me a lot of humility whereas I think before I would not have appreciated a good job. I had never worked in a restaurant or anything like that before. It's just [laughs] given me a lot of humility, and the ability to appreciate a good job if I were to get one. And I'm much more determined than I used to be to find a good job and to keep doin' the right thing. I mean it's not all bad being a server. Some people like it and make careers out of it, but it's not for me. I work with a lot of teenagers—getting a job in the restaurant business is really easy. They hire people from all walks of life. Listen at me stereotyping. They don't do background checks and drug testing. A lot of teenagers work there that party and I'm one of these people where I wanna go in and talk and have a relationship with the people that I work

with, and I like it, but we have different goals and objectives on a daily basis, and it's just really hard to work with some of the people that I work with. I've seen a lot of drugs in the restaurant that I work in. I've tried to be nice to people and give people rides and things of that nature and some of them get in my car with felony drugs. I've taken a lot of risks working where I work that I should have never taken in the first place.

Tricia: So at this point in drug court do you find it hard to resist temptation from people at work or just from other people in general?

Sally: I know that I have certain triggers, like being really tired is a trigger for me. But I remind myself of the consequences. And it's just not now, it's when I get out of drug court and when I get off of probation because it's a dead-end road, and if I ever choose to use and choose that lifestyle again it's gonna be the same thing as it was before. Ultimately I'm gonna end up with the same consequences, except next time they're gonna be worse 'cause I'm already a convicted felon.

Tricia: Earlier you said that using drugs had affected the relationships that you had with your family. Can you tell me a little bit more about that?

Sally: Yeah. My brother was the rebellious child and I was the good child, the one that made straight A's. I was in cheerleading, basketball, softball, academic team, gifted and talented, and governor's cup. When I started usin' I started avoidin' my family, and I guess I lost my morals. I no longer cared if I stole money from them because I didn't see it as stealin'. I would manipulate them into givin' me money for things. I thought because I wasn't goin' in and gettin' it out of

my parents' wallets that it wasn't stealing from them. But when you're lying to someone to get money for drugs, or you're just doing certain things to them to manipulate them [it's really stealing]. Like I would use my credit cards to get gift cards then my dad would turn around and pay for them. They eventually lost faith and they didn't trust me anymore and I became a burden. They didn't want me around, they wanted me to get better and they wanted the best for me, but I became a burden to them. I mean, constantly havin' to bail me out of jail and payin' attorney fees. You can just imagine your daughter on the front page of the newspaper in a drug round-up. I think they started asking, what did they do wrong? And I think they know what they did wrong because my life wasn't peaches and cream. My father was an alcoholic. Has my dad changed today? No, but I can deal with him. My mother, I have a wonderful mother. She's the sweetest person you'll ever meet in your life. She'd do anything for me, and I'm very fortunate to have her. [She starts tearing up.] My fiancé [and I] are back together. If we would have been together the whole time it would have been five years on and off. He's a really good guy. He doesn't drink, he doesn't do drugs, he's a hard worker, he's just a really good guy all around, and he would be willin' to do anything for me. I don't think he realized that he was hurtin' me and that he was enablin' me. I think he realizes now that he was an enabler, but he's forgave me for the things I've done, and we are a family now.

Tricia: So your fiancé now, was he the same one you were with while you were using?

Sally: Yes. We broke up and I moved out when I got into drug court because

I really needed to take some time and figure out what I needed to do. I was like a lost puppy. Like I said, I was like an 18-year-old kid havin' to learn how to deal with the world. I never paid my own bills. I did not know what responsibility was. I did not know how to live as an adult.

Tricia: So how did your parents find out that you were using?

Sally: I think it was written all over me. They started wondering where all the money was going. And like I said I avoided them. I didn't want to talk to them unless I needed somethin'. There's a lot of drama that comes along with using drugs. You're constantly fightin' with people over drugs. I always blamed it on bad luck. And mood swings. While I'd been in withdrawal, I'd be violent towards my fiancé. We were constantly fighting. If he wouldn't give me the money to at least come out of withdrawal, there was a fight. I'd break everything in the house. And that is when I got into the Suboxone clinic, when he finally broke down and called my dad. [He said], "Look, I can't do anything with her any more, you've got to come get her," and my dad came and got me that night. And I think that is when it really set into him that I was [an addict], 'cause I was standin' outside, bloody, sick, screaming, cussin' him. My mom had tried to tell him all along that I was usin', not to give me money, and he would turn right around and do it. And they tried to do everything in the world to help me. They tried to get me to go to rehab, but I wouldn't go. I was willin' to do outpatient treatment, and they were the ones that paid for it. I didn't change the people, places, and things, and I kept abusin' it. And then they really realized [laughs] that I was when I was in jail.

Tricia: So did your fiancé know that you were using then?

Sally: Before?

Tricia: Yeah, when you were 19 and first moved in with him?

Sally: I partied, I drank, and done those kinds of things. I saw him use a substance besides alcohol [only] one time. I talked him into taking Xanax one night. And that was the only time I ever saw him use when we first got together, and so he was blind, too. He didn't know what to look for in a drug addict. Where the money was goin'. I was a very good manipulator. I became good at it. I would go buy things and take them back and then turn around and get the money and the credit cards. And manipulate my parents, manipulate him. He enabled me by allowing me to continue to do that. I have done drugs, drugs in front of him one time, and he cried. Because I was snorting. It was the night he had to call my dad to come and get me. My brother lived right up the road. He took me to the drug dealer after I got to my parents. I pawned a \$500 camera for a \$30 pill. All that did was bring me out of withdrawal. So I called [my fiancé] and manipulated him to come and get me. And I told him that I was deathly ill and he didn't want to lose me so he took me and bought me another pill, and he cried in front of me, but I had been doin' it all along so it didn't feel like anything new to me. But I just didn't do it in front of him. He would find straws and pipe clamps that I would shave the pills up with and other paraphernalia. He knew but he didn't want to know. I don't think he knew how bad it was.

Tricia: So you never told him that you were using?

Sally: No, I did not. I didn't want him to know. But he knew when I was sick. He loved me and wanted to be with me

so it was easier for him to just let me do it than to have to fight, and that is how I would manipulate him. He knew if I didn't have drugs, then I would go somewhere and get them no matter what it took to get it. I had lost my morals. So did he know, yeah, he had to know, but he just didn't want to admit it to himself. I think that is why we have Al-Anon meetings for family members of drug addicts because it's not only the addict that suffers, the whole family suffers. All the people that love you, they suffer too. I thought the only person that I was hurtin' was myself. But in reality I was hurtin' everybody that loved me.

Tricia: You mentioned at one point that your son had to go live with your parents. Can you tell me a little more about what happened?

Sally: I just couldn't take care of him. It was a full time job to hustle drugs and to come up with the money. I just basically chose the drugs, the next fix, over my son. He went to live with my parents. He's slowly comin' back home. It wasn't the court's decision, but it was the best thing for him at the time. It was my parents' decision. If I didn't let him go voluntarily, they were gonna take him from me. So better than puttin' him through court and all that and social workers, so I let him go with them.

Tricia: How old was your son when you got arrested?

Sally: Six.

Tricia: So when you were pregnant were you using?

Sally: That was before [starts to tear up and motions that she doesn't want to talk about that any more].

Tricia: You mentioned alcohol in your family. Would you have considered yourself an alcoholic as well?

Sally: Yes.

Tricia: Do you think that led to your addiction?

Sally: I think alcohol is certainly a gateway drug, yeah. . . .

Tricia: So can you tell me a little more about your experimentations with other drugs besides OxyContin? Were there any that stuck out to you more than others?

Sally: Cocaine. I did not like methamphetamine. OxyContin is a central nervous system depressant and so is alcohol, but I think it has adverse effects on people. A lot of people that I would use it with would pass out, nod out, that kind of thing, whereas I was always speeded up from it. I think it affects people differently. But I didn't like meth because I became really paranoid and had hallucinations after usin' it for some time.

Tricia: What was the longest period of time that you used meth?

Sally: Probably two days, two or three days in a row. I've known people to go on binges and stay up 30 to 45 days.

Tricia: Was the only reason you didn't like meth because of the hallucinations?

Sally: Well, OxyContin chose me because I could function with it. I couldn't function with those other drugs. With Xanax, I couldn't even go to class or out in the world because Xanax makes you really sleepy and it slurs your speech as if you were really drunk. I could use OxyContin and still function in everyday life. Not that I didn't like those other drugs 'cause at one point I liked any kind of buzz. When all those things I had done started piling on me and the guilt would take over when I was sober, I would have to get high again just to deal with gettin' up out of bed.

Tricia: What was using cocaine like?

Sally: Your mouth and your throat get numb and you don't go to sleep. I can still smell it to this day. I don't think I really liked using cocaine by itself. I liked using it with alcohol.

Tricia: How does that feel?

Sally: Well, you can drink a lot more when you use cocaine 'cause you don't go to sleep. You don't get that sleepy feelin' like you're gonna pass out. It's kind of like why they came out with Red Bull and Jagermeister, Jager bombs [which contain caffeine]. You don't nod out and fall asleep.

Tricia: So did you only use cocaine when you would go out and party?

Sally: Yeah.

Tricia: With the experimenting drugs that you have used did you ever find yourself using them while not in a group setting?

Sally: Yes, Xanax, because it eased withdrawal symptoms of coming off OxyContin and alcohol. I would get so bad, at times, I would mix all three. OxyContin would be my daytime drug, and alcohol and Xanax at night. If I took Xanax with it, I wouldn't need as much OxyContin, because it's very expensive. And I would pass out in the bathtub; [my fiancé] has found me passed out in the bathtub.

Tricia: How much does OxyContin cost?

Sally: An 80 milligram pill was up to \$100 a pill, and I could easily use four or five 80s a day.

Tricia: Where were you finding that kind of money?

Sally: Anywhere I could get it.

Tricia: Did you have a job?

Sally: No. I'd hang out with drug dealers and I could get drugs. They became my friends and I'd learn how to manipulate them.

Tricia: Into sharing with you?

Sally: No, most of them don't use. Most of them are really insecure people who are either greedy and they want the money, or they want the friends and they know they'll have a lot of friends as long as they have drugs.

- Tricia:** What was the longest time that you went without [OxyContin]?
- Sally:** Never, never a day.
- Tricia:** And that was since you were how old?
- Sally:** Eighteen. That was when I first used but it became worse and worse throughout the years, like, when I was 21, 22.
- Tricia:** And you were first arrested at what age?
- Sally:** Twenty-three.
- Tricia:** How is your relationship with your family now?
- Sally:** It's not what I want it to be because I don't have time for it, but I'm not that self-centered person that I had become before. I have a conscience now. I feel love that I didn't feel when I was usin'. I couldn't. 'Cause I didn't love myself and I wasn't capable of loving anyone else. I didn't care; I had no conscience. Any kind of morality I ever had that was instilled in me was gone.

QUESTIONS

Why do you think a young woman such as Sally—intelligent, an “A” student in high school, a college undergraduate—would begin using a narcotic drug, eventually to the point of addiction? Do any of her rationales make sense? Does it have to do with Sally's specific and unique characteristics, her family background, the milieu she grew up in? Do you believe that she is “cured,” that she has ultimately and finally “kicked” the drug habit? If so, why was she successful while so many other addicts have been failures? Do you think that it's significant that Sally had to place her son with her parents because she couldn't take care of him—that she chose, for a time in her life, drugs over motherhood? What does that say about her future prospects as a mother? Do you think Sally will find a job appropriate to her education and, eventually, become a success at it? In your opinion, what's Sally's prognosis?



P A R T

V

DRUGS, CRIME, AND DRUG CONTROL

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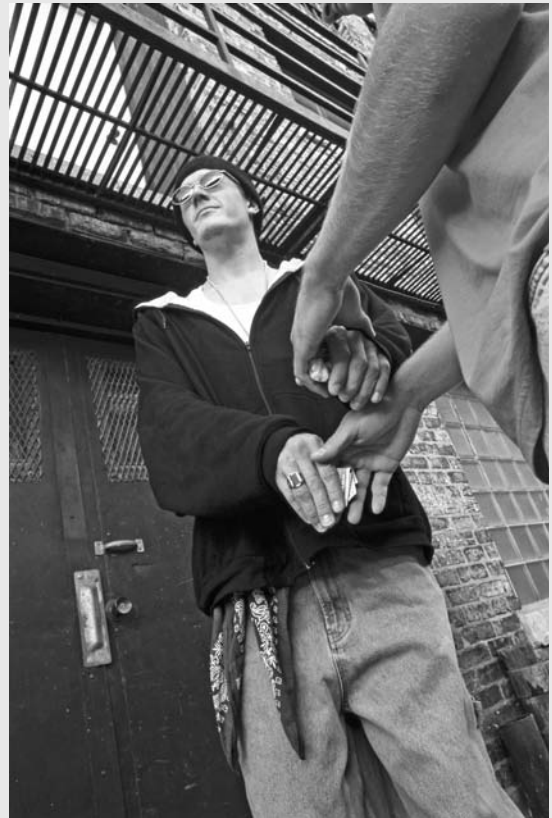
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DRUGS AND CRIME

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In the 1930s, a flood of articles, books, and films proclaimed that marijuana causes crime and violence. The drug “is as dangerous as a coiled rattlesnake,” proclaimed the then commissioner of the Federal Bureau of Narcotics. “How many murders, suicides, robberies, criminal assaults, holdups, burglaries, and deeds of maniacal insanity it causes each year,” Harry Anslinger stated, “especially among the young, can only be conjectured.” The commissioner cited the case of a young man who, under the influence of “reefer,” murdered a harmless old man. “Something just told me to kill him!” the young man was quoted as saying. “That’s marijuana!” the commissioner declared (Anslinger with Cooper, 1937, pp. 18, 153).

Today, we recognize such claims as fanciful propaganda. Hardly any current expert observers conducting research would argue that marijuana *causes* violent, criminal behavior. The Anslinger-fabricated linkage should warn us that claims about the *criminogenic* or crime-causing effects of drugs should be examined with a measure of healthy skepticism and a strong dose of empirical evidence.

WHAT’S THE NATURE OF THE DRUGS-CRIME LINK?

And yet, there *is* a connection between these two universes of human behavior—drug use on the one hand and criminal behavior on the other. This connection is empirical, not causal. By that I mean that, factually speaking, users of illicit drugs, taken as a whole, are statistically *more likely* to engage in criminal behavior than are people who abstain from the use of psychoactive substances. This is also true of people who sell illegal drugs: Their rate of criminal behavior is higher than the national average—a great deal higher. Interestingly, people who drink alcoholic beverages are *also* more likely to commit criminal behavior than people who do not. There are myriad ways in which these two areas of behavior (using psychoactive substances, and selling illicit drugs, on the one hand, and committing crime on the other) overlap and intertwine. In this chapter, we’ll look at some of them. But to fully grasp this relationship, we have to make several qualifications.

As we saw in Chapters 6 and 7, many relationships exist where two or more things are *statistically* but not *causally* related. Remember that rape and the consumption of ice cream are correlated—but not directly or causally; eating ice cream does not cause men to rape women. The connection is *indirect* in that ice cream consumption is higher in the summer, as is the rate of rape. In contrast to the ice cream and rape example, a cause-and-effect relationship is one that is *direct*, in which one factor has an impact on another. Do drugs have that necessary cause-and-effect connection with crime?

In addition, in a discussion of any cause-and-effect connection, we have to be clear on the *direction* of the relationship. Does factor A cause factor B—or is it the other way around? If I bang my thumb with a hammer, it hurts. Hitting my thumb (A) caused the pain (B). This is a direct, causal connection. In contrast, two things could be empirically related but not causally; both are caused by a third factor—factor C. This is the ice cream and rape connection, which is entirely different from the hammer-and-thumb example.

Here’s a related crucial question: Does drug use—getting high—*directly* cause the user to commit criminal behavior (A causes B)? Or does a certain factor (C) cause someone

to both use drugs (A) *and* engage in criminal behavior (B)—thereby creating an *indirect* relationship between our two variables? In the latter case, both drug use and crime are effects of a common cause. For instance, do certain kinds of people like to engage in risky, harmful, and antisocial acts, and so both use illegal drugs *and* engage in criminal behavior? Here, having a predilection for a certain kind of behavior (factor C) causes both drug use (factor A) and crime (factor B).

Researchers refer to one factor or variable that directly causes another as the *independent variable*, and the factor or thing that *is* caused, on which an effect may be observed, as the *dependent variable*. For instance, young people are more likely to use drugs than older people. In the relationship between age and drug use, age is the independent variable and drug use is the dependent variable. Age causes or influences drug use—drug use does not cause or influence age. So, about the drugs and crime question, the question we need to ask is: Which one is the independent and which is the dependent variable? Or, alternatively, are both effects of a common cause, a third fact, which is the *true* independent variable? This is the central question here, the foundation of this chapter.

A qualification: Since the possession and sale of illegal substances are *by definition* criminal behavior, we have to distinguish between drug crimes and nondrug crimes. *Of course* drug use causes users to engage in *drug* crime, since the possession and transfer of illegal substances are themselves violations of the law. The ways in which drug use and drug sale influence each other, and the ways that each influences the commission of criminal behavior, are likely to be somewhat different; each connection deserves a separate discussion. In this chapter, we are interested in how drug use influences *nondrug* crimes, mainly the FBI's Index Crimes: murder, rape, robbery, aggravated or serious assault, burglary, motor vehicle theft, and instances of a category called "larceny-theft."

Another qualification: Since alcohol is a legal drug, its role in causing criminal behavior is likely to be somewhat different from the role played by the controlled substances. For instance, consuming alcohol does not as often place a drinker in contact with persons who are willing to break the law as is true with the use of illicit substances. Drug use, an illicit activity, is more likely than using alcohol to entail interacting in social circles in which illegal behavior is verbally endorsed and routinely practiced. Thus, the consequences of consuming alcohol for criminal behavior are likely to be a bit different from the consequences of the consumption of illicit drugs. Statistically speaking, predicting solely on the basis of your companions, hoisting a glass of beer in your neighborhood tavern is less likely to lead to assault or being assaulted than is smoking a pipeful of crack cocaine.

We also have to clarify *whether* and *to what extent* the connection of illicit drugs with crime is a consequence of their criminal status versus their pharmacological properties. Do users commit crime more often than nonusers because of the illicit status of the substances they use? Or because of the direct effects of those substances? Does the very fact of prohibition actually encourage or stimulate criminal behavior? Untangling the causal role of the law from the causal role of chemicals acting on the human brain is an absolutely essential goal of any discussion in the drugs-crime connection, but it is a complex task.

Finally, there is a close link between *committing* crime—especially violence—and *being a victim* of crime. This is not in the definitional sense that predatory crimes need a victim to occur. Rather, this is in the sense that many of the same social and personal characteristics that correlate with engaging in crime *also* correlate with being victimized

by crime. Criminals and victims of criminals are statistically similar to one another in many crucial ways, including being in one another's presence more often than is true of randomly selected individuals. Hence, many of the same dynamics and causes that produce one also produce the other. When researchers say that the world of drugs is more criminal than worlds that are free of illicit drugs, they mean that users are likely to be both offenders *and* victims. Using and being under the influence of psychoactive drugs is as related to committing crime, as is being victimized by crime. Because of the way most crimes take place, the second can often be predicted from the first. Some observers have argued that this line of reasoning is an example of "blaming the victim" (Ryan, 1976), but "blame" is a moral concept, whereas "cause" is a scientific concept (Felson, 1991). It remains a fact that, both empirically and causally, drug users are more vulnerable to crime victimization than are persons who do not use drugs. As we saw in Chapter 8, women who consume alcohol, especially immoderately, are more likely to be sexually victimized than women who don't drink and aren't drunk. Saying that this is true does not "blame the victim," but it does point to an unfortunate propensity that virtually everyone on the planet knows to be empirically true.

All these qualifications being registered, some drugs *are* vastly more criminogenic than others. Their connection with criminal behavior is extremely strong and does not weaken or disappear when other factors are controlled or held constant. Every time we look at a cross section of offenses, certain drugs stand out as both empirically and causally implicated. These drugs are frequently in evidence wherever crime is committed, and they are often part of the reason *why* crime is committed. In addition, crime frequently follows in the wake of drug use. And three of the four or five drugs that appear in DAWN's data figure especially prominently in the drugs-crime nexus: alcohol, cocaine, and the narcotics. Their contribution to the crime picture is huge, on a crime-by-crime, episode-by-episode basis, and so their place in the discussion that follows will be correspondingly large.

THE RELATIONSHIP BETWEEN DRUG USE AND CRIME

The relationship between drug use and criminal behavior is one of the most firmly established generalizations in the criminological literature. In fact, it is completely unproblematic; hardly any criminologist or sociologist of deviance or drug use questions that drugs and crime are *empirically* related. In nearly every systematic study ever conducted, persons who engage in criminal or delinquent behavior are statistically more likely to use illicit drugs, drink alcohol, and smoke cigarettes than persons who do not engage in criminal or delinquent behavior—and vice versa. And the more frequently persons use drugs for recreational purposes, the greater is the likelihood that they will engage in criminal behavior, the greater is the likelihood that they will do so frequently, and the more serious will be the criminal behavior they engage in. In this chapter, I do not address the relationship between drug use and *drug-related* crime—the possession and sale of controlled substances or *drug involvement as crime*—because they are so definitionally intertwined as to render their causal links intuitively obvious. They are in fact elements of precisely the same activity. But drug selling does influence *nondrug* crimes, such as violence; that issue, in contrast, *is* worth exploring.

The 2011 National Survey on Drug Use and Health (NSDUH) documents this same generalization (National Survey on Drug Use and Health, 2012). Twice as many youths age 12 to 17 who used an illicit drug in the past month (19%) “took part in serious fighting at school or work” in the prior year in comparison to those who did not use an illegal drug during that month (8%). More than a quarter of current users of an illicit drug (28%) carried a handgun to school in the year prior to their survey in comparison with less than one out of 10 of the “no use” group (9%). Close to half of users (45%) “stole or tried to steal something worth over \$50” in the previous year; but only one out of 12 of the nonusers (9%) did so. A quarter of the users (27%) said they had “attacked others with intent to harm” in the prior year, but a twelfth of the nonusers (8%) said that they had done so. And of course, as I said, *selling* drugs is even more closely tied with using drugs: Three-quarters of users (77%) had sold illegal drugs; one in 10 of nonusers (9%) hadn’t. Even use of the *legal* drugs (for a 12- to 17-year-old, nonetheless an illegal act) is *strongly* related to crime, as is binge alcohol consumption. For instance, a third of teenage cigarette smokers (35%) and binge drinkers (33%) stole or tried to steal something of value, while nonsmokers (7%) and non-binge-drinkers (6%) were far less likely to have done so. Carrying a handgun? A fifth for smokers and binge drinkers (each 20%), compared to one-fourteenth for nonsmokers and non-binge-drinkers (7% for each). As Gottfredson and Hirschi would say (1990), the tendency or *predisposition* to engage in one illegal action (using legal drugs illegally) is related to engaging in other illegal actions; they are the same behavior, manifested in different areas of life.

Likewise, NSDUH documents the relationship between drug use and being arrested and prosecuted for illegal behavior. (I would like to thank James Colliver of NSDUH for supplying me with the raw data which permitted these tabulations.) About a third of respondents who had used marijuana in the year prior to the survey (37%) reported having ever been arrested and booked; but less than half of that proportion, one out of 7 (14%), who hadn’t used marijuana in the previous year had ever been booked and arrested. Nearly half of the respondents who had used cocaine in the past month (47%) had been booked and arrested at least once in their lives, but only a sixth who hadn’t used cocaine (16%) had ever been booked and arrested. Even the use of the legal drugs correlated with committing criminal acts. For instance, three times as many respondents who had smoked a cigarette in the past month had ever been booked and arrested for a crime (33%) as was true of those who hadn’t smoked (11%).

Arrestee data shed an even brighter light on the drugs-crime connection. As we saw, the federal government sponsors an ongoing data collection program that bears the acronym ADAM—the Arrestee Drug Abuse Monitoring Program. (Its current incarnation is referred to as ADAM II.) In the largest metropolitan areas around the country, a sample of arrestees is approached, assured there will be no consequences to honest answers, and asked to volunteer to be subjects of the study. In 2011, nearly 90 percent agreed to be interviewed and provide a urine specimen. As all criminology texts explain, arrestees do not offer a representative cross-section of criminal offenders in general. Most criminal offenses do not lead to arrest. It is even possible that drug-using criminals are systematically more likely to get arrested than criminals who do not use illicit drugs. Nonetheless, arrestees are typically high-volume criminal offenders, and the vast majority of persons who commit crime on a routine, ongoing basis eventually get arrested, many of them frequently. Thus, their drug use is worth examining.

ADAM II's data are revealing and tell many stories. Perhaps the first and most important story is that, in comparison with the population at large, arrestees—presumably, all or almost all of whom are criminal offenders—are *extraordinarily* highly likely to use drugs. In 2011, in every one of the 10 large metropolitan areas studied, more than two-thirds of adult male arrestees tested positive for at least one of 10 drugs (cocaine, marijuana, amphetamine, opiates, PCP, methadone, barbiturates, oxycodone, and propoxyphene, known commercially as Darvon, a narcotic); and the median percentage testing positive for more than one drug was 20 percent. In stark contrast, according to the latest (2011) national survey, the National Survey on Drug Use and Health, only a twelfth of the American population (8%) say that they used at least one illicit drug once or more during the past *month*. With most tests, no drug (except for marijuana) can be detected a month since most recent use; most, in fact, detect substances only within two to three days. Even granting that drug use in urban areas is higher than that in less densely and heavily populated areas, we still find that use among arrestees is substantially higher than that of the general population. NSDUH's data suggests that, at any moment in time, roughly 5 to 6 percent of the American population would test positive for an illegal drug; that is, they used recently enough to have traces in their bodies. It is clear that when we compare this statistic with the fact that roughly *two-thirds* of arrestees test positive for one or more illicit drugs, the message is loud and clear: In comparison with a cross-section of the population at large—most of whom are *not* criminals—criminal offenders are *extremely* likely to use illicit psychoactive drugs; in fact, they are *hugely* more likely to do so than is true of non-offenders, on the order of at least eight times more likely. Once again, the available data demonstrate a strong, intimate link between drug use and criminal behavior.

These data sources are illustrative, not definitive. But these multiple sources confirm the same story: People who use psychoactive drugs, both legal and illicit, for recreational purposes are statistically significantly more likely to commit criminal offenses, and vice versa. “Many data sources,” say policy analysts MacCoun, Kilmer, and Reuter, “establish a raw correlation between drug use and other criminal offenses” (2003, p. 65). What causes this relationship? Why is the use of psychoactive substances related to crime? To repeat, what's the *reason* behind the drugs–criminal behavior connection?

James Inciardi refers to this as “The Riddle of the Sphinx”—a riddle that seems fiendishly difficult, that demands an answer upon pain of death, yet whose answer may be simpler than we realize (2002, p. 182). The relationship between drug use and criminal behavior has been debated among drug researchers at least as far back as the 1920s. The questions that these researchers have asked are these: Does drug use cause criminal behavior? Does crime cause drug use? Or are they effects of a common cause? Drug researchers offer different explanations, depending on the theorist articulating the explanation and whether the offense is a violent or a property crime. What are these explanations, what evidence supports them, and which ones seem to make the most sense?

DRUGS AND CRIME: THREE MODELS

Researchers most often argue for one or another of three explanations or models of the connection between drug use and crime: the enslavement, the predisposition, and the intensification models. In one way or another, over the years, these three have dominated the discussion on the issue. The enslavement and the intensification model focus mainly

on economic crime, whereas the predisposition model addresses crime in general, whether property or otherwise. In addition, the enslavement and the intensification models focus mainly on addicting drugs—specifically the narcotics—whereas the predisposition model applies to the consumption of any and all illicit substances.

The Enslavement Model

The *enslavement model* argues that more or less law-abiding citizens, as a result of accident or happenstance—a mental defect, medical addiction, poverty, unemployment, or temporary life problems—become trapped into the use of addicting drugs. The illicit nature of the narcotics market forces these citizens to resort to a life of crime to support their habits. If authorities regarded drug abuse as a medical problem and if narcotics were legal and dispensed inexpensively at clinics, addicts would not have to resort to money-making crimes. Under a regime of legal, medically supervised narcotics, there would be virtually no connection between drug use and criminal behavior. Heroin users commit crimes only because narcotics are illegal (and, therefore, expensive) and addicting—thereby “enslaving” themselves to both a life of addiction and a life of crime (Lindesmith, 1965; Schur, 1962). This perspective is also referred to as the *medical model*.

The Predisposition Model

The *predisposition model* argues against and opposes the enslavement or medical model. According to proponents of the predisposition model, addicts do not engage in criminal behavior because they are forced into a life of crime by their drug use, and they were not law-abiding people before they became involved in the use of narcotics. In fact, most of the people who became addicted were *already* engaged in a life of crime, even before they became involved with drugs. The drugs-crime connection exists because criminals are deviant, antisocial people who have a predisposition for both crime and drug use, and because criminals and users of the illicit drugs are pretty much the same people—they constitute substantially overlapping sectors of the population. This predisposition is reinforced by the fact that in the social circles criminals inhabit and in which they move about, drug use is accepted, encouraged, and widespread. As a result of this predisposition, legalizing drugs would be futile. Under legalization, criminal behavior would remain high among the people who become addicts—whether or not they do become addicts—because they engaged in a life of crime even before they began using drugs. This predisposition hypothesis was promulgated in the 1950s and early 1960s by representatives of the Federal Bureau of Narcotics and the FBI; currently, it is supported by Gottfredson and Hirschi’s “general theory of crime” (1990). This perspective is also referred to as the “criminal model.” For the predisposition model, drugs and crime are simply the same behavior in different areas of life—“force or fraud undertaken in pursuit of self-interest” (p. 15). Drug use and criminal acts are so closely related because they are two halves of the same coin—in effect, *the same behavior*.

The Intensification Model

The *intensification model* offers both a synthesis and a reformulation of the enslavement and the predisposition models. This model argues that both contain a grain of truth, yet,

as complete explanations, they are flawed in that each is based on an unarguably false empirical premise. Neither is entirely consistent with the facts, which is where the intensification model comes in.

Contrary to what the enslavement model argues, juvenile crime frequently precedes drug use. More than half the people who eventually become addicts begin committing crime *before* they became addicted (Anglin and Speckart, 1988, p. 223). But there is no consistent pattern here: Property crime may occur before addiction, or addiction before property crime. Their temporal sequence is almost irrelevant. Both alcohol and illicit drug use are extremely common among delinquents, and engaging in substance abuse and committing criminal offenses typically go hand in hand. Drug addiction does not take place at random; only certain types of people use and become heavily involved with narcotics—and these persons tend to be precisely the type of people who are also highly likely to commit criminal behavior. This would seem to support the predisposition model.

On the other hand, contrary to what the advocates of the predisposition model might predict, when addicts *abstain* from the use of narcotics, their crime rate plummets. Researchers John Ball and David Nurco conducted a study of 350 narcotic addicts in Baltimore. They found that during these addicts' first addicted period, they committed criminal offenses, on average, on 255 days per year; for their first nonaddicted period, they averaged only 82 crime-days per year. The same difference between periods prevailed during their second and subsequent addicted and nonaddicted periods (Ball, Shaffer, and Nurco, 1983; Ball et al., 1981). When narcotic addicts are enrolled in a maintenance program and are taking their prescribed methadone, they commit roughly *one-half to one-third* the volume of moneymaking crimes they commit when they are off the program, not taking methadone, and using or addicted to illicit narcotics (Hubbard et al., 1989).

While it is true that criminal behavior does not disappear during periods of abstinence, neither does it decline to the average for people who do not use illicit drugs. But crime is massively lower during periods of abstinence than during periods of addiction, indicating that predisposition alone is not the explanation. There is a linear relationship here. There are "strong, monotonic increases in property crime activities with increasing narcotics use levels" (Anglin and Speckart, 1988, p. 198). The greater the use of narcotics, the higher the rate of property crime; the lower the use of narcotics, the lower the rate of property crime.

Though drug use does not create or generate criminal behavior from a law-abiding way of life, the use of and addiction to narcotics *intensifies* and *perpetuates* criminal behavior and criminal careers. "In that sense, it might be said that drug use freezes its devotees into patterns of criminality that are more acute, dynamic, unremitting, and enduring than those of other [nonusing] offenders" (Inciardi, 1992, p. 158). In short, "drug use *drives* crime"; it intensifies "already existing criminal careers" (p. 163).

Although each model contains a grain of truth—each is true as a generalization—as complete explanations, both the enslavement and the predisposition models are flawed. The only explanation that adequately and fully accounts for the connection between heavy, continued, and especially addictive drug use and criminal behavior, especially property crime, is the intensification model.

THE DRUGS-VIOLENCE NEXUS: THREE MODELS

Violence is a major type of crime. The FBI includes four violent offenses among its Index Crimes: murder, aggravated (or serious) assault, forcible rape, and robbery. Just as property crime is connected with drug use, so is violent crime: Drug users are more likely to engage in more, and more serious, violent offenses than nonusers, and as use escalates, so does the likelihood of engaging in violence.

The most serious of all forms of violence is murder. The evidence says that drug users are much more likely to both kill and be killed than people who do not use drugs. Over a 15-year period of time, the odds of a randomly selected person being murdered are considerably less than one in 1,000. In the 1960s, Edward Preble interviewed a sample of heroin addicts; then, 15 years later, he tried to locate them for a second interview. One out of seven had been the victims of homicide, which represents a rate of homicide victimization more than 100 times that of the general population (Edward Preble, personal communication). Heroin addicts are not a cross-section of the population at large, and the homicide rate was much higher in the 1970s and 1980s than it is today. In any case, in 1988, of the victims examined by the medical examiner in Los Angeles who had cocaine in their systems, 6 out of 10 had died a violent death; of these, two-thirds were either shot or stabbed. And one in 5 were committing violence against another person when they met their demise (Budd, 1989). Clearly, drug use is *heavily* involved in the world of violence, and in interesting and complicated ways.

What causes or makes for the relationship between drugs and violence? Goldstein (1985) proposed three models to explain the drugs-violence connection: the psychopharmacological, the economic-compulsive, and the systemic models.

The Psychopharmacological Model

The most commonsensical and traditional explanation of why drugs and violence are connected is the *psychopharmacological model*. Proponents of this line of thought hold that it is the psychological and physical effects of psychoactive substances that cause users to become violent toward others. As a result of ingesting one or more substances, users “may become excitable, irrational, and may exhibit violent behavior” (Goldstein, 1985, p. 494). As we saw in the opening to this chapter, this is what the Federal Bureau of Narcotics of the 1930s thought happened under the influence of marijuana (Anslinger with Cooper, 1937)—a view that has been thoroughly discredited. Although the effects of opiates tend to be soothing and soporific, the “irritability associated with the withdrawal syndrome . . . may indeed lead to violence” (Goldstein, 1985, p. 495). And, as we saw, someone is more likely to be victimized when under the influence of one or more psychoactive substances, and hence, in that sense, the effects of drugs may lead, albeit indirectly, to violence.

The Economic-Compulsive Model

Another explanation for the fact that drug use often leads to violence is the *economic-compulsive* model. Some researchers argue that because addicts need to raise large sums of money quickly, they engage in high-risk crimes, including theft, robbery, and burglary, that often escalate into acts of physical harm against the victim. (Robbery is, of course,

itself a crime of violence, as well as an economically motivated crime.) For instance, in a given robbery, both the perpetrator and the victim may be nervous; the victim may resist, struggle, attempt to retaliate against the offender, and the victim may be accidentally stabbed or shot. In a burglary, the offender may be confronted by the resident and may attempt to flee, resulting in a struggle; suddenly, a crime of stealth becomes assault or even murder. Economic crimes undertaken to support a drug habit don't always remain simple property crimes; inadvertently, a certain proportion turn into crimes of violence.

The Systemic Model

The world of drug dealing is saturated with violence. Lacking recourse to the protection of the law, dealers often resort to taking the law into their own hands. Drug sellers carry or stash drugs—a commodity far more valuable on the streets than gold—and handle large sums of cash. The temptation for street people is to rob dealers of both the cash and the drugs. Drug sellers are vulnerable to arrest, and informers often turn them in to avoid long prison sentences; violence is a common response to such betrayal. Drug sales may result in disputes over the quality and quantity of the goods sold. One gang may decide to “muscle into” the territory of an established gang, resulting in violent retaliation. Buyers may receive a shipment of drugs, use most of it themselves, and be unable to pay for what they consumed.

Systemic violence, then, refers to “the traditionally aggressive patterns of interaction within the system of drug distribution and use.” In the *systemic violence model*, systemic violence is “normatively embedded in the social and economic networks of drug users and sellers. Drug use, the drug business, and the violence connected to both of these phenomena, are all part of the same general lifestyle. Individuals caught in this lifestyle value the experience of substance use, recognize the risks involved, and struggle for survival on a daily basis. That struggle is clearly a major contributor to the total volume of crime and violence in American society” (Goldstein, 1985, pp. 497, 503).

Which Model Makes the Most Sense?

A team of researchers who examined the dynamics of criminal homicide in New York City during the height of the crack crisis tackled the question of which of these three models best explains the strong relationship between drug use and violence (Goldstein et al., 1989). They classified a homicide as “drug-related” if both the researchers and the police decided that drugs contributed to the killing “in an important and causal manner” (p. 662). The researchers drew a sample of roughly a quarter of all criminal homicides that took place in 1988. It was made up of 414 “homicide events,” because some of these events involved more than one perpetrator and more than one victim. Just over half (53%) of these “events” were classified as primarily drug related; just under half (47%) were deemed not to be drug related. Studying each event on a case-by-case basis, the researchers and the police determined that 60 percent of the drug-related homicides involved crack cocaine; an additional 22 percent involved powder cocaine.

Which of the three models best explains the connection between drugs and criminal homicide? The psychopharmacological model, which during the crack epidemic in the late 1980s attracted so much media attention and is so intuitively appealing to much of the public, did not offer an adequate guide to reality. The team deemed that of the 118

crack-related homicides, only three (3%) had been caused by the psychoactive effects of the drug. They judged that only eight (7%) were economic-compulsive in origin. Except for a few “multidimensionally” caused homicides, they decided that all of the remainder (100 out of 118, or 85%) could be explained by the *systemic* model. The circumstances of systemic homicides included territorial disputes, the robbery of a drug dealer, efforts to collect a drug debt, disputes over a drug theft, and reactions to a dealer selling low-quality drugs. Typically, killings connected to crack (and powder cocaine as well) were caused *not* by the effects of the drug but by the violent and conflictual nature of the crack *business*.

What makes the crack business an especially disputational enterprise? Why was the crack trade, in comparison with the heroin business, for example, an arena in which murder took place with special frequency? The authors trace the volatile nature of the crack trade to its unstable, unorganized distribution system. Since cocaine can be extremely easily converted into crack, there is no hierarchy or organizational structure to hold dealing networks together. The marketplace is made up of many small-scale entrepreneurs, independents who are able to start up a business for themselves and compete in the same territory for a clientele. Hence, boundary disputes are plentiful, and there are no higher-ups—indeed, there is no organization at all—capable of controlling violence when it does threaten to erupt.

Moreover, in addition to the simplicity of the cocaine-to-crack conversion process, since crack is so inexpensive on a dose-by-dose basis, anyone with a modest cash investment can set up shop. As a result, very young dealers entered the crack trade, many of whom were fearless, reckless, and lacking in judgment. As Robert Stutman, a former Drug Enforcement Administration (DEA) agent (1985–1990) notes in the 1998 PBS broadcast *Drug Wars*, the DEA was frustrated in its efforts to disrupt the crack trade because they couldn’t find anyone who controlled it. There was no organization, he explains. “The organization,” Stutman says, emphasizing his point, “was a 20-year-old guy and three 10-year-old kids.” Hence, the extremely frequent resort to violence—*systemic* violence.

THE ROLE OF COCAINE USE IN VIOLENT BEHAVIOR

Several of the same researchers who were involved in the study on the connection between drugs and criminal homicide (Goldstein et al., 1989) became curious about how cocaine use more generally influenced violent behavior. It is one thing to determine that in 1988, at the height of the crack epidemic, the nature of the drug trade was responsible for a majority of New York City’s drug-related homicides. It is quite another to ask about the role of crack and powder cocaine use in accelerating violent behavior in general.

The researchers interviewed a sample of cocaine users weekly, for a period of eight weeks, about their day-to-day drug use, drug dealing, drug treatment, sources of income and expenditures, and criminal and violent behavior (Goldstein et al., 1991). They divided their sample into “big” and “small” users—the dividing line being the expenditure of \$34 worth of cocaine on days when they used. “Big” male users averaged \$76 per use-day; “small” users, \$19. “Big” female users averaged \$55, and “small” users, \$18. (Because of inflation, these prices were 80 percent higher in 2013; however, in the past

two or three decades, cocaine's price has declined by more than half and its purity increased by 70 percent.)

This study found that, among males, as the volume of cocaine use increased, their likelihood of being a *perpetrator* of violence increased, whereas among females, as cocaine use increased, their likelihood of being a *victim* of violent crime increased.

For male small users, the violent events that most often took place were more or less evenly divided among robbery, non-drug-related disputes, and drug-related disputes. In contrast, nearly half of the male big users' violent events entailed robbery alone. For women, however, consistently across the board, violent victimization represented the largest category of violent events; a substantial proportion of these were "domestic disputes involving spouses, boyfriends, and lovers" (p. 359). During the 56 days of the period investigated, nearly one out of eight (12%) of the big female users were sexually assaulted. Thus, the news of this study is this: For men, increased use of cocaine escalated violent *behavior*; for women, increased use escalated violent *victimization*.

These researchers trace the violence in which their sample was involved, either as a perpetrator or a victim, to their "mode of living," to a "subculture of violence" in which cocaine use "may be a correlate, but not a cause, of violence" (p. 365). The regular use of cocaine often situates the user in a milieu in which violence is a common and frequent accompaniment. While it is certainly possible to find social circles of cocaine users who do not readily and routinely engage in or subject others to violence, statistically speaking, those odds diminish the more that the drug is used and is a fixture or accompaniment of the social life of a group or social circle in question.

This study does not settle the issue of what causes the cocaine-violence link, but it does provide powerful evidence that it is strong and suggests that it is unlikely to disappear as a result of any conceivable policy change. Heavy cocaine use tends to take place in social settings in which violence is a common accompaniment, among social circles who readily and almost routinely engage in violent behavior. The cocaine itself almost certainly escalates the frequency and level of violence, but the people who use the drug engage in violence vastly more than is true of the population at large, and this would remain the case, cocaine or no cocaine. And the legalization and, hence, greater availability of cocaine would not diminish the cocaine-violence link but would, in all likelihood, substantially magnify it. If greater cocaine use resulted from legalization, a greater volume of violence would almost inevitably result as well.

HEROIN ADDICTION AND VIOLENCE

During the 1950s and 1960s, the image of the narcotic addict held by most experts was of a person underrepresented in crimes of violence (Finestone, 1957a, 1957b; Schur, 1962; Lindesmith, 1965; Preble and Casey, 1969). In that era, a majority of researchers believed that, for the most part, addicts rarely engaged in violence. Instead, they engaged in crime rationally and in pursuit of a specific end: to obtain money so that they could purchase heroin to support a habit over which they had control. (This approach is tied to the enslavement theory, discussed previously.) At that time, to the extent that the addict was engaged in a life of crime, it was a product of the artificially high price of the drug they were forced to take. The compulsive nature of chronic heroin use impelled users

into addiction; the heroin laws and their enforcement drove up the price of the drug and made it profitable to sell on a large, organized scale. If some violence did take place in the world of heroin use—for instance, in robberies in which the victim resisted—it was an artifact of the criminalization of the drug.

These early researchers argued that heroin-related violence was overwhelmingly economic-compulsive rather than psychopharmacological or systemic. Remove the economic motive by supplying addicts with cheap, pure heroin, and you sever the connection between addiction and crime and, as a consequence, addiction and violence. These early researchers' position was clearly closely coupled with a policy agenda: the legalization and government dispensation of heroin.

During the 1970s, drug researchers began to realize that the dominant image of the narcotic addict as nonviolent was inaccurate (McBride and Swartz, 1990). Buying and selling heroin take place in a climate of fear, suspicion, mistrust, and paranoia, with each party attempting to take advantage of the other. Aggression and violence are never remote from the enterprise of street heroin dealing. Fitzpatrick (1974) found that criminal homicide was the leading cause of death among the clients of drug treatment programs. (As we've seen, being murdered grows out of many of the same dynamics as committing murder.) Montforte and Spitz (1975) found that two-thirds of homicide victims in Detroit were involved in illegal drug use or dealing. Certainly, by the mid-1970s, the view that the heroin addict was less violent than other criminals was no longer tenable. If anything, researchers showed, the world of narcotic addiction is every bit as violent as most other sectors of the criminal world and, in all likelihood, significantly more so.

How could these early researchers have been so wrong about a major aspect of the addict's life? McBride and Swartz (1990) argue that the reasons are a mixture of misperception and an actual historical shift in the addict subculture. No doubt, some of these early researchers saw addiction in a somewhat distorted light. To begin with, they relied far too much on the pharmacological model, emphasizing heroin's contrasts with cocaine. Heroin, they argued, soothes, sedates, and tranquilizes; its effects incline the user away from aggressive, violent acts. Under the influence, all the addict wants to do is to relax, nod out, and doze off. Vigorous activity is undertaken only when the addict is searching for money and drugs. What these early researchers failed to take into account was that the frequent periods of withdrawal the addict endures are marked by irritability, discomfort, and the strong craving for a fix (McBride and Swartz, 1990, p. 149)—conditions that make violence a potentiality. In any case, the pharmacological effects of drugs do not explain all facets of the user's life; indeed, factors other than these effects may explain far more of the addict's criminal and violent behavior.

Another source of confusion of these early researchers lay in their classification of robbery as a property crime. Robbery—entailing, as it does, victim confrontation and force or the threat of force—is *itself* a crime of violence. Addicts frequently commit robbery. Moreover, as we saw, robbery often sparks other crimes of violence, such as assault and homicide, as when the victim resists, struggles, or attempts to escape, or when the robber misreads the victim's intentions. We can't so easily discount this avenue of violence.

It is also true that between the 1960s and the 1970s, the world of narcotic addiction *became* more violent than it had been previously (McBride and Swartz, 1990, pp. 149–150). Evidence suggests that the subculture of addiction underwent a dramatic

shift beginning in 1970 or so. Individuals initiated into heroin use after that date were socialized into a subculture that was far more willing to use violence than was true before that date (Zahn and Bencivengo, 1974; Stephens and Ellis, 1975).

In addition, before 1970 or so, most addicts used heroin more or less exclusively. After that date, heroin addicts became *polydrug users*. And polydrug users are more prone to resort to violence than the person who uses heroin and only heroin. This is especially true when cocaine is combined with heroin, as is so often the case. By the early 1970s, “a new and different breed of heroin user was living on the streets of American cities” (Inciardi, 2002, p. 191)—a far more violent breed.

Obviously, the earlier image of the narcotic addict as less violent than other offenders is false and has been for more than a generation. In one study of state prisoners in 1979, twice as many said that they were under the influence of heroin (8%) as of cocaine (4%) when they were arrested for the violent crime for which they were incarcerated. And 12 percent of those convicted of robbery said that they were under the influence of heroin at the time of committing the crime, whereas only 6 percent mentioned cocaine (Kalish and Masamura, 1983). One study of the drug use habits of inmates in three states—Michigan, California, and Texas—found that half of the most violent criminals were heroin users, most of whom were daily users with high-cost habits. Three-fifths of the violent predators in this study (those who had committed robbery and assault) were heroin users and a third were high-cost, daily heroin users. And over half of those with high-cost heroin habits were violent predators or robber-dealers (Chaikin, 1986). Heroin abusers and addicts have rates of aggravated assault, sexual assault, and criminal homicide that are as high as or higher than those of drug users who do not abuse heroin. It is true that, as a cohort of the population, heroin addicts and abusers are aging and not being replaced by younger recruits (Johnson, Golub, and Dunlap, 2000). And it is also true, as we saw in Chapter 6, that in 2011, the ADAM II program demonstrated that arrestees are more likely to test positive for marijuana (44%) and cocaine (19%) than for opiates (10%). Still, on a user-by-user basis, heroin users, abusers, and addicts are far from the nonviolent criminals they were made out to be over a generation ago. Most are violent, most are predators, and for most, violence is one out of a large repertoire of criminal behavior in which they frequently engage. The use of heroin substantially increases the likelihood of committing violent crime.

ALCOHOL AND VIOLENCE

To reiterate: The majority of adult Americans drink alcohol. More than half of the respondents in the national household survey age 12 and older said they had consumed at least one alcoholic beverage in the past 30 days, and 50 percent of high school seniors (all of whom are seriously underage) said that they had done so. Wine, beer, and liquor are very much an established fixture of mainstream American culture. Common sense rejects the idea that alcohol has anything to do with committing violent behavior. What could possibly be wrong with drinking a glass of wine with dinner, a beer while watching the ball game, or a nightcap of sherry before retiring? Most people drink, and the vast majority do so with no untoward consequences whatsoever.

Criminologists and drug and alcohol researchers do *not* mean when they say that alcohol is “related” to violence that alcohol—and alcohol alone—arouses the impulse to

inflict harm upon others. They do *not* mean that most episodes of drinking lead to violence. They do *not* mean that most people who drink have committed one or more criminally violent acts during the past year, month, or week. Of the many millions of daily instances of alcohol consumption, *very few* have anything to do with violence. Statistically speaking, as well as in absolute numbers, violence is only *rarely* an accompaniment of alcohol consumption.

Criminologists mean two things when they say that alcohol and violence are related: (1) Drinkers have higher rates of violence than nondrinkers, and (2) the more someone drinks, the greater the likelihood that he or she will inflict violence on another person. Moreover, as we've seen, alcohol is related to being a *victim* of violence: Drinkers are more likely to be victimized by violence than nondrinkers, and the more one drinks, the greater that likelihood is.

These statements are statistical, not absolute; they refer to likelihoods, not certain outcomes. They are based on a comparison of the rate of violence of drinkers versus nondrinkers, and heavy versus light drinkers. Even granted that criminal violence is a statistically rare event, the fact that it is more common among drinkers than nondrinkers, and more common among heavy than light drinkers, means that the statement "Alcohol is related to violence" is true. While *most* of the time alcohol is consumed, violence does not take place, it is also true that, with respect to the *absolute* number of episodes, with all such episodes piled up, alcohol consumption is a *frequent* accompaniment of violence when it does take place—the *total number* of alcohol-fueled incidents adds up to a *great many* violent acts. *Most* cases of criminal violence are accompanied by the consumption of alcohol. It's just that alcohol consumption is a great deal more common than acts of criminal violence.

For a relationship to exist it is not necessary to always or usually find two things together. What is necessary is that when the first thing is present, the second is *more likely* to be found than is the case when the first is absent. If the rate of violence is *higher* when alcohol is present than when alcohol is *absent*, we can say that a relationship between alcohol and violence exists. And it is precisely these conditions that prevail in the real world.

The generalization that alcohol and violence are associated is so well established in the research literature that it seems almost redundant to document it. Still, since it contradicts common sense, establishing this relationship empirically seems to be in order. In the reviews of the worldwide research literature conducted by the U.S. Department of Health and Human Services, published every so often in its volume *Alcohol and Health*, consistently, an average of 50 to 60 percent of the perpetrators of criminal homicide were under the influence of alcohol when they killed their victims. Statistically, alcohol is implicated in the majority of criminal killings, and criminologists regard this fact as causally significant.

And the proportion of homicide *victims* who had been intoxicated at the time of their demise is usually very similar to this figure. Intoxication interferes with judgment and self-protection, increases the likelihood of risky behavior, and places someone interacting with a violent other in a position of profound vulnerability—hence, its causal connection with violent victimization. And the role of alcohol varies according to the sex of the perpetrator and the victim. In one study, alcohol was present in 62 percent of cases involving a male assailant and a male victim, in 53 percent of those involving a

male assailant and a female victim, but in only 27 percent of all cases involving a female assailant and a male or female victim (Pernanen, 1991). This study indicates that norms play a role in the contexts within which alcohol-related violence occurs. The role of alcohol in episodes of violence generally and homicide specifically is one of the most robust, well-established, and empirically grounded generalizations in the criminological literature.

Once again, the question is, Why? What *causes* higher rates of violence among drinkers versus nondrinkers, and higher rates of heavy versus lighter drinkers?

For centuries, the commonsensical answer to why alcohol is related to violence is that the inhibitions that normally keep most of us from striking out against others are “released.” The proposition that alcohol more or less automatically releases inhibitions and causes violent behavior in the violently inclined is referred to as the *disinhibition* (or pharmacological) *model*. This explanation assumes that the effects of alcohol cause what drinkers do under the influence, violence included. Describing the effects of alcohol, one expert writes: “Progressively the centers of basic emotional control are depressed, and the inhibitory functions of the centers are lost with an alteration in the conduct of the individual moving towards [being] ‘miserable, mean, nasty and brutish’” (Paul, 1975, p. 16).

A different perspective is presented by MacAndrew and Edgerton, in their book *Drunken Comportment*, which challenges the “release of inhibitions” claim (1969). Alcohol does not act on the human animal in a standardized fashion, they argue. Instead, alcohol’s effects are influenced or mediated by cultural norms that dictate that specific forms of behavior are appropriate under the influence, while other forms are completely unacceptable. Drinkers are not under the influence of alcohol; instead, the effects of alcohol are under the influence of the culture in which drinkers live and grow up. Alcohol alone cannot account for the variation in alcohol-related behavior, since alcohol is the same everywhere it is consumed. *Drunken comportment*—behavior under the influence—is a cultural, not a pharmacological, product. Drinking does not simply release inhibitions and stimulate the drinker’s assaultive and homicidal tendencies. Instead, the alcohol-violence link is culturally determined and usually takes place within normatively governed limits.

This perspective is referred to as the *cognitive guidedness approach*. So marginal are alcohol’s effects to this approach that, as we’ve pointed out, one researcher was led to comment with reference to two anthropological studies of barroom behavior, “as far as one can judge from their description, the patrons might as well have been drinking orange juice.” In such studies, said this researcher, “the role of the physiological and psychological effects of alcohol is downplayed almost to the vanishing point” (Pernanen, 1991, pp. 18, 211).

Which perspective is correct—the pharmacological (disinhibition) or the cognitive guidedness (drunken comportment) perspective? Is it the effects of the alcohol or the norms of the society that create the link between drinking and engaging in violent behavior? Which of these two “explanatory master frames” (Pernanen, 1991, p. 215) offers the best explanation of why the heavy consumption of alcohol so often leads to assault, rape, and criminal homicide? The best explanation borrows a bit of both “frames.”

Norms do not provide a ready justification for the most seriously untoward behavior that takes place under the influence of alcohol *that would not happen when the actors*

are sober. Extremely dangerous behavior is fairly rare under the influence—but it is also vastly rarer sober. “Why is alcohol used in this way and not coffee, tea, or milk?” Pernanen asks (1991, p. 212). The obvious answer is that alcohol has certain “natural” effects that these other substances do not.

Arguing that alcohol has natural or pharmacological effects does not deny the fact that, in being socialized into the rules and norms of drinking, the drinker learns culturally approved behavior under the influence. In learning the appropriate norms of drinking, drinkers also learn that drinking puts them in a position where they are able to do things that they would not ordinarily do. Part of learning the drinking process involves learning *what the effects of alcohol are*—which is itself largely a product of the natural pharmacological effects of this drug (p. 213).

For instance, the social setting in which drinking takes place influences how much a person drinks—the amount consumed in one sitting, the speed of drinking, and the length of drinking occasions (Pernanen, 1991, p. 193). Once the drinking begins—socially occasioned though it be—the effects of the alcohol begin kicking in. The pharmacology of alcohol *does* disinhibit behavior, and yes, this disinhibition sometimes *does* result in violent behavior. But that violence has limits, at least statistically speaking; it is selective as to time, place, and target.

And yes, there are other “causal agents” in violent behavior aside from alcohol (Parker, 1995, p. 28). But given the fact that violence is such a statistically rare event, some situations involving heavy alcohol consumption are much more likely to result in violence than other situations, identical except for the presence of alcohol. Acknowledging that alcohol is “selective” in producing disinhibition, we are nonetheless forced to accept the fact that alcohol disinhibits, that this disinhibition is a product of the drug’s pharmacological effects, and that one consequence of disinhibition is the higher incidence of violent behavior. Does alcohol *cause* violence? With the necessary qualifications and reservations, most contemporary researchers would answer this question with an affirmative answer. In Goldstein’s vocabulary (1985), the alcohol-violence link seems—in large part—to be psychopharmacological in origin, although “guided” by norms and culture.

SUMMARY

What is the connection between drug use and crime? All researchers know there is a statistical relationship—people who use drugs are much more likely to commit nondrug crime than nonusers, and people who commit crime are much more likely to use drugs than people who do not commit crime. And the connection between certain drugs, such as heroin and crack cocaine, is vastly stronger than that between others, for instance, LSD and Ecstasy. But what’s the causal relationship between drug use and criminal behavior? Establishing a descriptive relationship between drugs and crime is fairly easy; establishing an analytic or inferential or cause-and-effect relationship is much more difficult.

Numerous researchers have proposed different models for the drugs-crime link. (See Table 13-1 for a summary of these models.) The enslavement model, strongly linked with a legalization, medical, or treatment model of the problem of addiction, argues that more or less noncriminal citizens more or less inadvertently become addicted to drugs

TABLE 13-1 A Summary of Models of the Drugs-Crime Connection**Drugs and Crime: Three Models**

Name of Model	Empirical Support
Enslavement Model	Partial
Predisposition Model	Partial
Intensification Model	Complete (Inciardi, 2002)

The Drugs-Violence Nexus: Three Models

Name of Model	Proportion of Cases
Psychopharmacological Model	A minority of cases
Economic-Compulsive Model	A minority of cases
Systemic Model	A majority of cases (Goldstein et al., 1989)

Heroin and Addiction and Violence

Time Period	Studies
Before 1970: Economic-Compulsive/Enslavement Model	many
After 1970: Predisposition and Systemic Model	many

Alcohol Consumption and Violence

Model	Studies
Cognitive-Guidedness Model	MacAndrew and Edgerton, 1969
Disinhibition/Psychopharmacological Model	Pernanen, 1991

and, hence, become “enslaved” to a drug habit. Not having the money to pay for the habit, they are forced into a life of crime. If addicting drugs were dispensed in clinics, the link between drug addiction and a life of crime would be severed. This model was dominant among drug researchers until the 1970s.

The predisposition model argues that it is not drug users who turn to a life of crime but delinquents and criminals who take up the use of drugs. Most of the people who eventually become addicted were already committing delinquent and criminal acts in their teens. The drugs-crime link is strong not because addicts are enslaved to a life of crime but because both addicts and criminals are deviant, antisocial personalities. Drugs and crime are two sides of the same behavioral syndrome. They are manifestations of exactly the same tendency or predisposition.

Inciardi argues that the third model, the intensification model, explains the drugs-crime connection. This model agrees that illicit drug use and criminal behavior grow out of the same tendency to engage in illegal, hedonistic, risky behavior. And it also argues that becoming addicted, even though it does not create criminal behavior from scratch, at least escalates or intensifies the number and seriousness of criminal acts. The same person, when addicted to heroin, commits many more, and more serious, crimes than he or she does when not addicted. Neither enslavement nor predisposition alone accounts for all the facts; only the intensification model, which is something of a synthesis between the two, explains the observed relationship between drug use and criminal behavior.

What's the connection between drugs and violence? The connection (or nexus) between the world of drugs and the world of violence has also been subjected to a tripartite framework. The psychopharmacological model argues that when high, in their agitated condition, users become excitable, belligerent, hostile, and violent, striking out and even killing others as a result. The economic-compulsive model, much like the enslavement model of the drugs-crime link, argues that drug use and violence are connected because in committing economic crimes, addicts may accidentally lash out against their victims—for instance, if the victim struggles or resists. It is not the drug that makes the addict commit violence but the need to earn money to support the drug habit. And the systemic model argues that that the world of drug dealing, especially cocaine dealing, is inherently competitive, aggressive, and conflictual—and hence, violent. It is drug dealing—and specifically, drug dealing in the context of the drug laws and drug enforcement—and not drug use that forges the link between the world of drugs and the world of crime.

Goldstein and his colleagues argue that the systemic model best explains the facts. Looking at a sample of criminal homicides in the city of New York during the late 1980s, at the height of the crack epidemic, these researchers found that half were drug related, and of the ones that were drug related, 60 percent were crack related. Using judgments made independently by the police and the researchers, it became clear that very few of the crack-related homicides (3%) were psychopharmacological in origin and relatively few (7%) were economic-compulsive in origin. The vast majority were systemic. The crack trade is inherently disputational; killings arose as a result of conflicts between and among dealers and customers, rival crack dealers, and dealers and their employees.

However, the fact remains that cocaine and violence are frequent companions—and the greater the amount of cocaine someone uses, the greater the likelihood, and the seriousness, of violent behavior. Paul Goldstein and his colleagues examined cocaine use and routine (less than lethal) violence. At the upper reaches of use, psychopharmacological violence is extremely common; violence is an inextricable fact of life, a part of the subculture of cocaine abuse. But this violence tends to be gender related. As a man's cocaine abuse increases, the likelihood of his being the perpetrator of violence increases; as a woman's cocaine abuse increases, the likelihood of her being the victim of crime increases.

What about heroin? Prior to the 1970s, most researchers thought the heroin addict was basically peaceful and one who committed almost exclusively property crimes. Researchers considered violence rare. (This view is consistent with the enslavement model mentioned earlier.) But beginning in the early 1970s, a new view of heroin addicts emerged: Their tendency to commit violence was significant greater than that of the ordinary criminal or property offender. It is possible that these early researchers misunderstood the world of heroin addiction. Just as likely, the world of heroin addiction became more violent—a world of younger users, who took many drugs, including alcohol and cocaine, in addition to heroin, and were more likely to confront their victims in robberies rather than relying on stealth. The 1970s marked the coming of a “new breed” of heroin addicts.

What about alcohol? What's the connection between alcohol consumption and criminal behavior? Alcohol is a legal drug, but statistically, drinkers have higher rates of violence than nondrinkers, and heavy drinkers higher than light drinkers. Is it the effect

of the drug or the type of person who drinks that generates this difference? Some researchers believe that alcohol is the culprit, arguing that it disinhibits behavior, neutralizing the centers of our brains that force us to think twice about striking out at those around us. Other researchers believe that our behavior is cognitively guided by the cultural norms, not pharmacologically guided by alcohol. Most of us know what the norms say about acceptable behavior, and when it comes to drinking and committing untoward acts against others, we follow them. However, though hardly any one of us transforms from a “Dr. Jekyll” when sober to a “Mr. Hyde” when under the influence, untoward, violent behavior is not only more common under the influence, it would not have taken place if the actor were not under the influence. For the most part, we do not act more violently after drinking coffee or tea; had we not drunk coffee or tea, we would have acted the same way. Alcohol has certain natural or pharmacological effects that coffee and tea lack. Even though the cultural norms do influence and limit our behavior, alcohol disinhibits, and this disinhibition sometimes—more often than when sober—results in violent behavior. In a phrase, a substantial slice of the alcohol-violence link is psychopharmacological in nature.

Experts, observers, and critics have explored and discussed the possible links between marijuana and crime at length and in detail. Researchers have found a statistical relationship between these variables, but it disappears when we control for other factors; “pre-disposition” plays the major role here, not the effects of the drug itself. Driving under the influence may be the only area of concern for policy analysts with respect to the drug’s criminogenic impact.

ACCOUNT: Drugs and Crime

Bob, the interviewee, is a former heroin addict and substance abuser. He served in the military, was in an automobile accident, was seriously injured, and picked up a narcotics habit in the hospital. I am the interviewer. He describes his life from the late 1960s until 1986, when he took his last shot of heroin.

A: The girl I was with and I both had habits. We went through all our savings, went through all our resources. At one point, I broke a leg. And she got hepatitis, she couldn’t work, I couldn’t work. I started doing stickups. Our habits were fairly big. In the beginning, I was wild and crazy with it. The first year of my addiction, like I said, I was trying to test the limits. I was shooting a lot of dope. And when the money dried up, I had no idea what to do.

I wasn’t a street kid, I wasn’t a hustler. I knew the military, I knew guns, I knew violence. And I just, uh, that’s what I did. The first one was scary—the first time, I got this guy around closing time, at a drugstore. I said, this is a stickup, give me your money. I had a gun, and he gave me the money. It was easy. But it was scary. The obsession wasn’t with the stickup itself, it was with what I’m going to get. I’m going to get this bag of dope. It was great. You get a bag full of money. You go into the City [New York City]. You get a whole pile of dope.

Q: Do you have any idea how many times you did this?

A: Over a couple of years, probably sixty-seventy times. A lot. The first time was in February. I was arrested for 21 robberies.

Q: Did you do all of them?

A: Yeah.

Q: You copped to [admitted] doing them.

A: Well, I didn't cop to doing them all at the time. As part of the sentencing arrangement, they indicted me for that many, to clear the books. I was promised a lenient sentence, and they sat down with my lawyer and the D. A. and said, "OK, now, what did you do?" And I told them. This was so, later on, at the sentencing, it wouldn't be brought up. The first couple times I was arrested, they sentenced me to the Rockefeller program, the five-year clinical commitment to the Narcotic Addiction Control Commission. It was a joke. There was no treatment. It was the same uniform, same cellblock, same everything, as the next guy [that is, other, nondrug offenders].

Q: It was just detox and incarceration.

A: Yeah. You were supposed to go to therapy three times a week and the therapist was a corrections officer. There was some kind of baloney going on at that time. Addicts who had been arrested were sitting in county jails for a year, year and a half, waiting for room in the narcotics program, and somebody brought suit about this, and the court said, place these people in a program within ninety days or cut them loose. So, what they did was, they went down the list from the top of people in the program. Before they were going to let these guys loose they were going to let us loose. I had only ninety days in the program, and they let me go. So I said, the stickup business is not going to work. Because I could see how crazy I'm getting. Sometimes I did three in a night. I'd say, let's get a whole *pile* of money so we won't have to do this again for a while. I'd go out and do three-four in a night. So I said, Oh, well, I'll deal drugs. So I started dealing. I had a connection in Harlem. A Cuban. I was buying ounces and quarter-pounds of heroin, bringing it out here, cutting it, bagging it, and selling it.

And I got busted. [Laughs.] So they gave me another go-around with the Narcotic Addiction Control Commission. I only served two months this time. And they let me go. So I said, Well, that didn't work, let me try stickups again. And I got popped [arrested] for another, oh, I don't know, ten-fifteen more. [That is, he was arrested for one armed robbery and admitted to having committed the others.] I had pretty good lawyers at the time, cost me a lot of money. That time, they gave me seven years. They said, "Next time, you're getting life, so think about this." That was the fourth or fifth felony conviction. So I did the seven in 34 months. I went to Sing-Sing. I went to Auburn, I went to Clinton. I served 30 months in Clinton. And it was rough. I didn't like that business at all. Sometimes, before, I got arrested and it was an adventure. But I didn't like being in a state penitentiary at all. It was tough. People there were crazy. You lived in constant fear. The only time I felt safe was when the cell doors slammed at night and even then, I didn't feel safe. . . . Anyway, I got out of prison. I said, That's it, never again. Look at what it's done to my life. Moved upstate [to] New York, almost 200 miles from the City. I decided to take the geographical cure, moved to a place I figured there would be no dope. I got a place, I was working. I had a pretty nice apartment, but I couldn't afford it, so I met this guy in a bar, I had an extra bedroom, rented this guy the room. Turned out, there couldn't have been more than six dope fiends in the whole town—he was one of them! Now, I didn't know that when I rented him the place. So now, instead of driving from Huntington to Harlem, about 40 miles, I'm driving four hours each way, five times a week.

Q: So you started up again.

A: Yeah, I started up again. I'm on parole, too. I still owe 40-something months to the department of parole. It was just a matter

of time before I got busted. So, I went down to Albany, I got on the methadone clinic there. . . . I was on the methadone clinic up there for a while. Two years. And it helped. Pretty much all I had was methadone, smoked a little pot. That was it. But I got busted. A *stupid* thing. I was out of work. And I was doing volunteer work at the VA hospital, working for the Red Cross. I had nothing to do, I lived right by the VA. And some guy in the hospital says, “Can you get me some pot?” I said, “Sure, there’s pot all over, I’ll bring you half an ounce or so,” and he says, “Great.” So I brought it to the hospital, I’m giving it to him in the men’s room, and a cop walks out of the stall. So I says, “Aw, shit! I was always armed. I had a knife.” He said, “Come here”, and tried to grab me. I pulled a knife on him, I ran, they caught me, I got busted. I did six months in the county jail. Possession [of a controlled substance] and assaulting a police officer. That was the last time I went to jail. That was in ’75.

- Q:** Surprisingly lenient sentence. You were very lucky.
- A:** Yeah, yeah, I was. But six months in Albany County jail was no picnic, I’ll tell you!
- Q:** I imagine. But it’s better than being sent back to prison.
- A:** Yeah, well, that was the thing. I thought that when the six months was up, I was going to go back [to prison] and do the 40 months I owed to the parole board. I had a parole officer who was a decent guy. And he got me reinstated on the methadone program on the condition that the day I left the jail, they brought me down to the clinic—he drove me down himself. And I got on methadone.
- Q:** But you were detoxed at the time.
- A:** Yeah, I was detoxed.
- Q:** But they put you on methadone.
- A:** First day out—40 milligrams. I was flying. They didn’t want me to be able to use

heroin. When I started using heroin, I was a nut. So they didn’t want the possibility of me using heroin to occur. So they took me directly from the jail to the methadone clinic. I spent another year on methadone. I said, I gotta get out of this. I applied to a nearby community college. And I started detoxing. I came down from methadone five milligrams at a time. From 100 milligrams to nothing in about four months. Because I remember, the first day of class at the community college was my last dose of methadone. It was great. And I had never been to college before. It was interesting. It was exciting. And I did well. Fairly well. And I thought it was great. I had always felt *less than* everybody else. I didn’t think I could do this stuff [college work]. And I could. So that was great. During that two years, I drank, smoked a lot of pot, on a daily basis. But I didn’t really do much of anything else [that is, he used no other drugs]. I came back down to the Island [Long Island] after that, ’78, and I started clamming again. I drank every day, smoked a lot of pot. I said, well, I can’t shoot heroin [so] once in a while, I would bang some cocaine. Actually, I never really liked cocaine. But for a guy who didn’t like it, I would use an awful lot of it.

- Q:** Why didn’t you like it?
- A:** Because it made me alert, up. What I wanted was, like, put me to sleep, I don’t want to feel this. That’s what I wanted. Something soporific. I didn’t want this jangly business—mainlining cocaine, a gram, half a gram, quarter of a gram, whatever, you get this tremendous rush and five minutes later, you’re looking for more. I couldn’t *believe* the amount of cocaine you could use. I wound up with this girl. Topless dancer. She was something. The only thing we had in common was we liked needles. And we started a run. It lasted six years. Drinking. Smoking. And then going on these runs [that is, nonstop periods of

cocaine use]. It started out two-three-four days, once a month, and the runs got closer and closer together. I married her at some point. She says, to make her mother happy.

Q: How did you pay for this?

A: I was working. She was working. We had some credit cards. We were running a boarding kennel, 150 dogs. We could plan some “creative book work.” And dealing a little bit. Not much.

Q: Weren't you afraid of getting popped again?

A: I was but, you know, we were fairly discreet with it. Like I said, it started out as, maybe a weekend a month. Towards the end, it was, like, we'd blow everything, spend everything we had, borrow everything we could, and then, pay the credit cards. This is crazy—we were going on cocaine runs at 19 percent interest, because we were running the credit cards out. So, pay the credit cards back, pay this back, fix the books, pay the creditors, do all right for a week or so, and then, boom! Go again. So, towards the end, it just got crazy. I couldn't stand it. Some people drink to come down from coke. I used to shoot Dilaudid and then my Dilaudid connection got busted. So I went back to Harlem and picked up some dope [heroin] and I said, well, I'll come down from the cocaine with the dope. And then, when I got the dope, I said, what am I even doing this other stuff for in the first place? Something I gotta shoot *dope* to come down from? So I said, to hell with the cocaine, I'm just going to shoot heroin. . . . [So I] went back on methadone, because that worked once. . . . I did this for about nine months. Methadone. Drank all day. Actually, I was drinking around the clock. Beer. One of these controls: I'll only drink beer. You're not an alcoholic if all you drink is beer. I'd get up in the morning, drink a couple of beers, go to the methadone clinic, pick up my methadone, go to this sleazy little

bar downtown, drink till about 10 o'clock, grab a six-pack, go out on the boat, dig enough clams to keep me going. Come in, hit another bar near my apartment, drink till I was passed out, go home. And that's what I did for nine months. . . . So I went to the VA hospital, I detoxed from about 80 milligrams of methadone and a couple of cases of beer a day. . . . I was drinking constantly around the clock. I was drinking three or four cans in the morning, I was drinking between five and ten beers before I went to work, I was drinking a six-pack of half-quarts after work. And I was drinking from four [in the afternoon] till 11-12 o'clock at night. Straight through. And bringing a six-pack home with me, usually. So a couple of cases a day, it had to be. I had the DT's [delirium tremens, alcohol withdrawal reactions] from beer. Never had the DTs in my life. And I had the DTs in that detox. . . . So I detoxed. I went on a 90-day program. . . . I was alone and miserable. So I went on one more run with heroin. One day, January '86. Tough day. Froze my ass off. Took about six bags of clams. I got \$300-400 for the clams. I went in, saw a friend of mine, for the money, I had a whole pocketful of money. He says, “You want a ride home?” Then he says, “You want to take a ride to Harlem to cop some dope?” I says, “Let's go.” They talk about diseases of addiction. And I could hear my disease talking to me. Believe me, I could *hear* it talking to me. I remember getting off that time, because I had been away from needles a couple years. Between methadone and dibbing and dabbing, I wasn't abstinent, but I had been away from needles a couple years. And I remember getting off, sitting in a shooting gallery in Harlem, and getting this *tremendous* high. I remember this thing in my ear saying, Whatever you gotta do, whatever lies you

gotta tell to keep feeling this, do it. I said, right. I did. For six months, I did. Weekends and then every other day. Then the guy I originally went with said, You're crazy, and didn't go with me any more. Worked back up to a habit. Took a couple overdoses. Woke up in Harlem Hospital. I was digging clams, making \$500-600 a day, and it was all going into my arm. . . . I had a habit, I got high that night—[my brother] gave me the money. The next day, I threw my stuff in the boat, I was going to pull the boat down the [Long Island] Sound, I was going to detox, all that stuff. So I said, aw, just one more time. Took the boat, under the Throgg's Neck Bridge, under the Whitestone, up through Hell's Gate, up the Harlem River, tied my clam boat up in Harlem [laughs], and I tried to get high one more time. I couldn't get high. Spent about 400 bucks. Couldn't even get high. It just didn't work anymore. Some guy that was with me—I went to three or four different shooting galleries—some old black guy I picked up at one of the shooting galleries, he was *falling down*, so I knew it wasn't the dope was bad. For me, it just didn't work anymore. So then, I got in the boat, I came down the Sound. That was the second of July.

The third, I woke up, I got high that morning, then I went to detox. So July 4th, 1986, that was the first full day clean.

QUESTIONS

Which theories or models of the drugs-crime nexus does Bob's case best illustrate? What was the cause of his criminal career? What do you think was the cause of his drug addiction? It is true that he was a substance abuser from an early age; still, most alcoholics do not become heroin addicts. Why did he? In his life of crime, Bob received fairly lenient sentences. Is this a comment on the harsher sentences addicts and drug abusers receive today? Bob got his life straightened out, but only after a substantial number of attempts. Does this mean that his treatment was ineffective—or that addiction is very difficult to overcome? Some observers argue that self-help organizations such as Narcotics Anonymous and Alcoholics Anonymous become a kind of dependency that replaces members' dependence on drugs. What do you think about this claim? NA and AA do not keep records on their rates of success, so it's difficult to compare their effectiveness with those of other treatment programs. Should they violate their stress on anonymity and tabulate what happens to their members?

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In Chapter 1, I explained that there are two absolutely necessary preconditions for use: *predisposition* and *availability*. They are two sides of the same coin. Each is necessary; neither is sufficient.

Alfred McCoy argues that theories of predisposition, which focus on poverty, unemployment, subculture, and so on, leave out of the picture the marketing and trafficking of drugs. Heroin, he says, “is a mass-market commodity with salesmen and distributors just like cigarettes, alcohol, or aspirin. . . . Without global distribution systems, there can be no mass addiction to cocaine or heroin” (1991, pp. 389–390). McCoy neglects predisposition; in its absence, distribution is futile. Still, half of what’s necessary (again, not sufficient) for use is availability—getting drugs into the hands of users, whether potential or actual. Not all drug trafficking is global; trafficking varies from drug to drug with respect to how global it is. Although cocaine and heroin are distinctly globalized commodities, marijuana is often home-grown, and methamphetamine usually crosses only one border (from Mexico into the United States) when getting into the American user’s hands. But whether local, national, international, or global, nearly the entire drug trade entails economic transactions—buying and selling illicit psychoactive substances. Again, availability is half the drug use equation, and availability comes about as a result of socially, economically, and politically patterned systems of distribution. How drugs are distributed is crucial to our understanding of their use.

How do users obtain the drugs they use? How are drugs produced and by whom? Where do they come from and where do they go? In the economic equation, the routes along which drugs travel have an impact on the economy of the country of origin, the country of destination, and the world as a whole.

While prohibition has not stamped out the availability and use of illicit drugs, it has put its distinctive coloration on where and how they are produced, how they make their way through the distribution chain—and, perhaps most important, how much they cost. Most illicit drugs could be produced as cheaply as aspirin; instead, they are one of the most expensive products in Earth. Cocaine costs 30 times as much as gold, and heroin is nearly 10 times as expensive as cocaine. Criminalization has increased the price of illicit drugs—many times over. The distribution of the legal drugs, alcohol, and tobacco; the prescription drugs; and the illicit drugs each demand separate, and detailed, discussions.

AVAILABILITY, PRICE, PURITY, AND THE SOURCES OF THE DRUG TRADE

The illegal drug trade is a huge enterprise, rivaling many legal industries. Its scope, however, has been hugely exaggerated. In the United States in the 1980s, the total retail value of drug sales was estimated to be \$100 billion, more, said one seemingly authoritative source, “than the total net sales of General Motors, more than American farmers take in from all crops” (Lang, 1986, p. 48). The American market was, everyone seemed to agree, roughly half the world’s total illicit drug sales. Said another commentator, even more grandly, “There is more money in illegal drug traffic than in any other business

on earth” (Gonzales, 1985, p. 104). A third observer weighed in, growing expansive on the subject:

The inhabitants on earth spend more money on illegal drugs than they spend on food. More than they spend on housing, clothes, education, medical care, or any other product or service. The international narcotics industry is the largest growth industry in the world. Its annual revenues exceed half a trillion dollars—three times the value of all United States currency in circulation, more than the gross national products of all but a half-dozen of the major industrialized nations. To imagine the immensity of such wealth, consider this: a million dollars in gold would weigh as much as a large man. A half-trillion dollars would weigh more than the entire population of Washington, D.C. (Mills, 1987, p. 3).

It is true that in the 1980s, \$100 billion in retail sales (in today’s dollars) for the illicit drug trade in the United States was not a bad estimate. Still, granting the fact that drug use has declined since then (and taking inflation into account), the economic reality of the current drug trade, while admittedly enormous, is a great deal more modest than these expansive estimates.

The Abt Associates has conducted several data-based research reports on the size of the drug trade and the cost of cocaine and heroin for the Office of Drug Control Policy. And the information gathered by this research outfit is based on ADAM (Arrestee Drug Abuse Monitoring) interviews with arrestees, the National Household Survey on Drug Abuse, DAWN (Drug Abuse Warning Network) emergency department reports, and Uniform Crime Report data supplied by the National Institute on Justice. In the year 2000, Abt estimated, Americans spent \$35 billion on cocaine, \$10 billion on heroin, \$5.4 billion on methamphetamine, \$10.5 billion on marijuana, and \$2.4 billion on all other illicit drugs—for a total of just under \$65 billion. As we noted, the total volume of these drugs consumed in that year, Abt estimated, was 259 tons of cocaine; 13 tons of heroin; 20 tons of methamphetamine; and 1,000 tons of marijuana. Tables 14-1 and 14-2 provide detailed figures for expenditures and, for cocaine and heroin, for the total tonnage consumed since 1988 (Rhodes et al., 2001; Rhodes, Johnson, and Kling, 2001). This was considerably short of \$100 billion, but nonetheless, a substantial quantity of money. Six years later, the Office of National Drug Control Policy, an agency under the auspices of the White House, reached an estimate of just over \$100 billion.

TABLE 14-1 Total Expenditures on Illicit Drugs, the United States, 1988–2006, in Billions (for 1988–2000, in 2000 dollars; in 2006, in 2006 dollars)

	1988	1992	1996	2000	2006
Cocaine	107.0	49.9	39.2	35.2	38
Heroin	26.1	17.2	12.8	10.0	11
Methamphetamine	5.8	4.8	10.1	5.4	18
Marijuana	12.1	14.6	9.5	10.5	34
Other drugs	3.3	1.5	2.7	2.4	**
Total	154.3	88.0	74.3	63.5	101

*not supplied

Source: Rhodes, Johnson, and Kling, 2001, p. 3; for 2006, Office of National Drug Control Policy, 2012, p. 13.

TABLE 14-2 Total Tonnage of Cocaine and Heroin Consumed, United States, 1988–2000

	1988	1992	1996	2000
Cocaine	660	346	301	259
Heroin	14.6	11.7	12.8	13.3

Several additional estimates made by Abt Associates describing the distribution and trafficking of illicit drugs are worth mentioning. First, the information provided by ADAM interviewees made it possible for researchers to estimate the average weekly cocaine and heroin expenditures by chronic users, defined as the use of cocaine one or more times a week for a year, or, for heroin, for 10 days during a month, prior to the survey. The average weekly amount spent by the chronic cocaine user in 1988 was (in constant 2000 dollars) \$440; in 2000, the average was \$212. For the chronic heroin user, the comparable figures were \$365 and \$201 (Rhodes et al., 2001, p. 14). Second, the average retail price (purchased in quantities of less than a gram) for a gram of cocaine in 1981 was \$423; in 2000, it was \$212. For heroin, the figures were \$3,295 and \$2,088 (p. 43). And third, as we've seen, the Abt Associates also found that just as price has dropped, purity has gone up. These researchers found that between 1981 and 2000, the purity of cocaine, purchased at the less-than-one-gram level, rose from 36 to 61 percent, and for heroin, the purity of one-tenth of a gram rose from 4 to 25 percent. Between the 1980s and 2000, the price of cocaine and heroin declined, their purity increased, and the average amount of money that chronic users spent on their drug habit declined (Rhodes, Johnson, and Kling, 2001, pp. 43, 44).

These figures are *very* rough estimates. Some observers question the methods used by analysts in making estimates on the volume and sales of illegal drugs (Reuter, 1996) and, hence, believe that all such estimates are suspect at best. Still, rough and possibly unreliable as these figures may be, illicit drugs are bought and sold on a large scale. The information on which we can have confidence generates the following, almost certainly valid, generalizations. First, with respect to the total amount of money spent, cocaine is the country's number one drug, dwarfing heroin by a factor of nearly 20 to one. Second, both with respect to money spent and total tonnage, cocaine is used less today than it was a dozen or so years ago. Third, although considerably less is spent on heroin than in the past, since it is so much cheaper today, roughly the same quantity of heroin is brought into the country as was true previously. Fourth, in spite of its regionalized use, methamphetamine is a major player in the illicit drug market. And fifth, marijuana, being a very bulky substance, is the illicit drug whose trafficked weight is the greatest; however, in dollar value, the economy of the cannabis market barely exceeds that of heroin, a drug used by vastly fewer consumers and in a much smaller quantity.

Some of these estimates, now more than a dozen years old, need contemporary baseline comparisons. They provide an understanding of how the drug economy has changed since the dawn of the twenty-first century and, perhaps, where it is headed. The White House, through its Office of National Drug Control Policy (ONDCP), regularly publishes a book-length report entitled *What America's Users Spend on Illegal Drugs*.

Its methodology is careful, systematic, and statistically sophisticated. Its estimation of the dimensions of drug trafficking are based partly on usage surveys, partly on drug seizures, partly on drug treatment admissions, and, to a limited extent, on poisoning deaths involving cocaine and heroin. And unfortunately, at this writing, its latest publication (2012), while recent, relies on 2006 and 2007 data.

The joint task force consisting of U.S. Drug Enforcement Agency (DEA) agents and the Colombian military launched two concerted efforts—Plan Colombia in the early 2000s and Operation Purple after 2005—to reduce cocaine production. Agents seized samples of cocaine and analyzed them to determine whether the spraying resulted in damaged product. At the end of the day, ONDCP estimated the tonnage that got through the law enforcement net; its experts came up with two estimates. Based on supply data, in 2006, about 277 tons of South American cocaine got into the United States; based on usage data, American drug users consumed about 390 tons of cocaine. Experts attribute the discrepancy to the facts that many Colombian farmers hid plots of coca bushes from authorities, that much of the crop was a “cloud cover,” and that suppliers added impurities to the cocaine that eventually reached the customer. ONDCP estimates that most heroin consumed in the United States originates either from South America (mainly Colombia) or from Mexico. The Office estimates that roughly 28 tons of heroin is consumed in the United States, and slightly more than 14 tons is brought into the country. The difference between these two estimates, the report concludes, is not large “if Colombian poppy cultivation is understood because of cloud cover” (p. 7). The quantity of methamphetamine is roughly 150 tons—taking a figure between the supply-based estimate (145 tons) and the consumption-based estimate (157 tons). With marijuana, the ONDCP report virtually abdicates its task, throwing out a figure of 4,000 to 5,000 tons but admitting that almost nothing is known about the ratio of home-grown to imported weed trafficked and consumed, not to mention the proportion seized or plant yield estimates. Its overall estimate of illicit drug *expenditures* for the four major illegal drugs is that users spent about \$100 million in 2006—slightly less than the total for alcohol and slightly more than for tobacco products. “Drug sales are big business,” the report concludes (p. 11).

Table 14-3 summarizes the illicit picture for the three principal cocaine-growing countries of South America: Colombia, Peru, and Bolivia. For the most recent year (2011), the State Department estimates that, in these three countries, farmers cultivated 162,400 hectares (or over 400,000 acres) of land devoted to coca plants, which produced a shade shy of 800 tons of cocaine, more than half of which was destined for the United States. The UN’s cultivation figures for 2011 are close to those of the U.S. government, but it does not offer recent tonnage figures. Cocaine production takes place on huge tracts of land, results in the movement of huge quantities of an illicit substance, entails use by many millions of consumers who experience a huge number of ecstatic experiences, as well as many hospital visitations, and for thousands, death by overdose.

In its latest World Drug Report (2013), the United Nations Office of Drug and Crime (UNODC) estimated that profit from illicit drug trafficking worldwide is stable, at roughly \$600 billion per year—5 percent of all Gross Domestic Product (GDP), about 20 percent of all crime proceeds. UNODC estimates 300 million illicit drug users globally, of whom perhaps 10 to 13 percent create problems for their society, mainly in the form of ill

TABLE 14-3 Coca Cultivation and Cocaine Production, Colombia, Peru, and Bolivia; United States Versus United Nations Estimates, 2001, 2006, 2011

	United States Estimates			United Nations Estimates		
	2001	2006	2011	2001	2006	2011
Hectares, Coca						
Colombia	169,800	157,000	83,000	144,800	78,000	64,000
Peru	32,100	42,000	49,500	46,200	51,400	62,500
Bolivia	19,900	25,800	30,000	19,900	27,500	27,200
Tons of Cocaine						
Colombia	700	515	195	617	610	345
Peru	255	295	325	150	280	*
Bolivia	100	115	265	60	94	*
Kg per Hectare						
Colombia	4.1	3.2	2.3	4.1	7.8	5.4
Peru	7.9	7.0	6.6	7.9	5.4	*
Bolivia	5.0	4.5	8.3	5.0	3.4	*

Note: One hectare equals 2.47 acres; one kg. (kilogram) equals 2.2 pounds

Sources: U.S. Estimates: State Department, International Narcotics Control Strategy Reports. UN Estimates: UNODC Crop Monitoring Reports.

health, lowered productivity, and drug-related crime. During the past decade or two, the use of heroin and cocaine in North America has declined somewhat, but that is offset by increased use in other areas, notably Latin America. Factors that influence illicit drug use in a given country include disposable income (the absence of which, as we saw, keeps cigarette consumption down in extremely poor countries), the age distribution, sexual equality (which increases drug consumption among women), and unemployment and high levels of income inequality. For the foreseeable future, UNODC speculates, the use of cocaine and heroin and the other opiates will probably decline somewhat, whereas marijuana and the other cannabis products will remain the most popular and widely used illicit drug. Overall expenditures will, in all likelihood, remain stable or increase slightly.

THE MYTH OF MARKET CENTRALIZATION IN THE DRUG TRADE

One of the most pervasive myths about the drug trade concerns how hierarchical, centralized, and organized it is. Most people imagine that illicit drugs are sold by a highly organized conspiracy like the Mafia, with a single “Mr. Big” or “boss of all bosses.” Yes, the drug trade is highly organized, or at least, some sectors of it are. (Not as organized as General Motors or IBM, but, like GM and IBM, the roles and actions of participants in major sectors of it are closely coordinated with one another.) A great deal of organizational coordination is necessary to grow an agricultural product, extract a chemical

from it, ship it to the United States (not to mention dozens of other locales), evade detection, cross borders, get it into the hands of higher- and middle-level dealers, and sell it to the ultimate consumer. But just as country of origin varies according to the specific drug in question, likewise, degree of hierarchy and organization varies according to the drug and how it is produced and distributed. But even for the more highly hierarchical, centralized drug enterprises, today, there is no Mr. Big, no boss of all bosses.

If it weren't for the fact that there are many Americans who still believe in the myth of a boss of all bosses, it might not seem necessary to refute it. A surprising number of my students still believe that the illegal drug trade is highly centralized, that there is a single, big-time, high-level dealer in the United States who directs the sale of all illicit drugs nationwide. Their Mr. Big is swarthy (in all probability, Latino or Mediterranean), wears dark sunglasses, sits at a very large desk, and speaks with a deep, gravelly voice. And that if he were arrested and incarcerated, drug sales in the country would come to a screeching halt. But—the myth continues—he is protected by corrupt police officials and politicians at the highest levels of power, possibly up to the presidency of the United States. If we could clean up the corruption and arrest Mr. Big, we could wipe out drug abuse overnight!

This belief would be amusing if it weren't so pervasive. Drug dealing in this country is highly decentralized, and has become increasingly so in the past generation; different traffickers operate in hundreds, possibly thousands, of independent enterprises. Illegal drugs are smuggled into the United States from several dozen different countries, and they are sold by dealers of almost every national, racial, and ethnic background on Earth. Certainly there are several Mr. Bigs in some countries or regions. Indeed, a number of them have died, been killed, or been arrested—such as Carlos Lehder (b. 1949, imprisoned 1987), Jorge Ochoa (b. 1950, imprisoned 1987 but released under threat to murder several Colombian politicians), and Pablo Escobar (1949–1993, killed in a shoot-out) in Colombia; Joaquin Guzman Loera (b. 1954, escaped in 2001) in Mexico; and Kun Sah (1934–2007) in Burma—and yet, for the most part, the drug trade continues unabated. And in the United States, there are, again, one or several *local* Mr. Bigs with respect to cartels and monopolies that operate at the community or neighborhood level. Still, to imagine that any single powerful figure, or even a small number of players, could run the whole show in the United States even for a single drug, let alone for all drugs, demonstrates an almost unbelievably childlike naiveté.

Over the past 30 years or so, the illicit drug market has become extremely decentralized. Each drug has its own distribution patterns, including sources, routes, price structure, and cast of characters. And for each drug, there are anywhere from a dozen or so to thousands of separate but overlapping distribution chains, hierarchies, and networks. Depending on the drug in question, dealers at every level of the distribution chain could be Cuban, Haitian, Dominican, Canadian, Puerto Rican, Jamaican, Chinese, Nigerian, Israeli, Russian, Colombian, Mexican, Dutch, Belgian, African American, Italian, Italian American, Pakistani, Iranian, Lebanese, Syrian, or the members of a California biker gang, who could stem from almost any racial, ethnic, or national background. It is true that, for specific drugs, there is patterning to the ethnic backgrounds of drug sellers at all points along the distribution hierarchy, but a single formula cannot even remotely paint a portrait of the illicit drug market as a whole. With several drugs, the ethnic composition changes as the drug moves up—or down—the distribution ladder. Organizations

composed of members from one ethnic or national background are continually contending to muscle into the turf dominated by another ethnic or national group; sometimes, they succeed. What was once a more or less monopolistic, monolithic market structure has become fluid, decentralized, diverse, and adaptable. Mr. Big—if he ever existed—is a phenomenon of a dim, distant decade.

THE MYTH OF THE DRUG TRADE AS A PURE ECONOMIC LIABILITY

In its 2011 report, *National Drug Control Strategy*, the Department of Justice estimated that in 2007, the economic cost of illicit drug use to American society was over \$193 billion. This total included health care costs (\$11.4 billion), losses in economic productivity (\$120.3 billion), and crime losses (\$61.4 billion). Interestingly, although economists do consider them, the DOJ did not calculate the same sorts of costs to the society as a consequence of alcohol and tobacco consumption. And equally as interesting, when the Gross Domestic Product (GDP)—the sum total of the nation's entire economy for a given year—is calculated, the amount of money spent on health care, the criminal justice system, and so on, are typically *added* to the figure, not *subtracted* from it. Herein resides perhaps the most significant fact about the drug trade.

In his *Principles of Political Economy* (1848), the moral philosopher John Stuart Mill (1806–1873) argued that “the annual consumption of gold lace, pineapples, or champagne must be reckoned unproductive, since these things give no assistance to production, nor any support to life or strength.” Today, economists would regard that point of view as moralistic claptrap; in fact, in strictly economic terms, “these things” add to the economy in the same way that bread, clothes, and the construction of houses do. In like fashion, in strictly economic terms, the illicit drug trade, as with many other illegal enterprises, is an industry exactly like every other industry. The money spent on illicit substances contributes to the economy in exactly the same way that the purchase of legal products does. Just as with alcohol and tobacco, illegal drug use can produce undesired costs, including medical care, the loss of an income to a family, and, in the case of alcohol, substance-related crimes. Some of these losses take place in one sector but they also benefit another; others take place in all sectors. But in principle, there is no difference between legal and illegal economic enterprises with respect to contributing to the economy.

Clearly, not all crime is economically productive. Gunning down a father or mother of four small children is likely to benefit only the funeral industry. In economic terms, a rape and an assault involve no generation of wealth, no transfer of assets from one party to another. All crime is *not* economically productive, and much of it can be sterile—even detrimental to the society and to the victims. In other ways—such as undermining the victim's sense of psychological well-being—many crimes can be extremely negative in their consequences.

In contrast, when an illegal enterprise provides goods or a service to a clientele who willingly pays for it, calculating economic gain is in principle no different from a legal enterprise that provides goods or a service to a clientele that willingly pays for it. Looked at strictly as an economic transaction, is there a distinction between purchasing Ecstasy

and purchasing candy? Purchasing marijuana and purchasing cigarettes? If a 20-year-old is not carded and buys a mug of beer in a bar, is that purchase *subtracted* from the country's Gross Domestic Product—or added to it? On his or her 21st birthday, does that mug of beer magically cross from the minus to the plus column? These are rhetorical questions, of course: The economy knows no *moral* or *legal* distinctions between and among products or between and among laws. The sale and purchase of *all* products—whether alcohol, cigarettes, pornography, candy bars, cars, or Bibles—entail plusses and minuses for the economy as a whole and for different sectors of the economy.

Demand is the number one reason that permits the drug trade to flourish. If it were not for the desire or impulse to take drugs, there would be no drug market. It is demand that makes the drug industry profitable (demand, it should be said, along with the illegal status of the product). And the enterprise is profitable not only for higher-level drug dealers. A very large number of people earn a living from the trade—including the people who are working to stamp it out. (For them, it provides jobs.) Once we recognize that the drug trade is a component of a society's, and the world's, total economy, we are forced to consider its *economic contribution* to a region or an entire nation—up and down the hierarchy, from the grower to the importer to the lowliest worker. All workers who earn a wage from the drug trade spend much of that wage in the local sector, on food, clothing, housing, as well as other necessities and luxuries. Hence, we have to consider the influence of the drug in spreading the money around—what is sometimes referred to as the economic “ripple” effect. Again, considered strictly from an economic point of view, eliminating an illegal industry is no different from eliminating any legal industry. Wiping out the drug trade worldwide would devastate the economies of a large number of countries throughout the world.

In Colombia, the cocaine trade is as profitable as the coffee business. The revenues earned by Colombia's illicit drug trafficking make up an underground economy that is *one-fourth* the size of its entire legal enterprises. Try, for instance, to picture Colombia's coffee business wiped out overnight. The result would be economic catastrophe for the country as a whole; millions of its workers would be unemployed, and the merchants with whom they do business, likewise, would be economically harmed. In principle, this is no different for the cocaine trade. The marijuana crop in the United States is more profitable than the corn crop (Pollan, 1995). Picture the entire corn industry obliterated. Again, this would impact not only its growers and sellers but everyone who is dependent on their business, and everyone who does business with them, and so on down the line—to the entire country. One reason why the drug trade is so deeply entrenched at the supplier level is that entire regions and even nations are dependent on it, including citizens who have no idea that they are. Half of Bolivia's foreign trade derives from the coca business (Gonzales, 1985, p. 242). Bolivia is a poor country; what is going to replace this revenue in the event of the loss of the cocaine trade? (The illicit drug trade also contributes to a country's death toll and, in many nations, to the corruption of its law enforcement, but that is separate from its impact on the economy, which is amoral—calculated only by profit and loss.) The Drug Enforcement Administration (DEA) estimates that Jamaica earns more from exporting marijuana than from all other exports combined; if this source of income were obliterated, what would replace it? What industry would contribute as much to these and other countries' GDP? The drug trade produces an endless supply of entrepreneurs willing to take risks in order to earn huge sums of

money and to employ any number of laborers to work at jobs which pay them ten times what they would earn producing a legal crop (Gonzales, 1985, p. 238). In many regions of the world where drugs are grown, no legal agricultural product is even viable; either it cannot be grown under local conditions or, since most are perishable, it cannot reach a nearby market to make the enterprise profitable. None of this *justifies* adopting a laissez-faire approach to trafficking; there are many very good reasons for reducing the harmful impact of the drug trade on the society. But economically, at least in the short run, wiping out illicit drug selling would make a great many working people unemployed and penniless. But there's another important point very much worth making: In addition to supporting a profitable industry, the drug trade may have *other* consequences that are catastrophic; we'll take a look at them in a few pages. Some of these consequences are economic, such as discouraging or choking off legal, and possibly viable, *other* economic enterprises.

WHERE DO ILLICIT DRUGS COME FROM?

Each illicit drug has its own, unique source, and each reaches the ultimate customer in a different way. Moreover, patterns of distribution are extremely volatile, shifting from year to year, according to law enforcement practices, changes in the weather, competition, and the development of innovations by growers, traffickers, and sellers. As a result of this enormous variability in country of origin, making valid generalizations that apply to all illegal drugs is all but impossible. What applies to affluent chemists in Belgium is not likely to apply to poor peasants in Mexico.

We can delineate three models of drug trafficking: the pure agricultural model, the pure chemical model, and the mixed model.

- The *pure agricultural model* refers to systems of trafficking that harvest a product which requires little or nothing (aside from drying and separating parts of the plant) in converting it into the ultimate product; it is consumed more or less as grown. Theoretically, the consumer could walk up to the farmer and purchase the usable drug. The reasons why this transaction does not usually take place are social and economic, not technological. Marijuana offers the best example here. Raw opium—rarely consumed in the United States—also fits the pure agricultural model.
- The *pure chemical model* refers to a completely synthetic substance that does not have its origin as an agricultural product at all, but is developed exclusively in the lab. The user needs a manufacturer with technical expertise to turn precursor chemicals into the finished product—a usable drug. Ecstasy, LSD, methamphetamine, and the club drugs fit this model.
- And the *mixed model* refers to a substance that began as agricultural produce whose principal psychoactive agent is then synthesized from the plant or converted into a chemical, becoming what is consumed by the customer. The mixed model can be depicted by an hourglass shape; it requires funneling the produce of many farms to a fairly small number of labs, through high-level trafficking and smugglers, fanning out once again, from higher- to lower-level dealers. Hence, the customer relies on both the agricultural grower and the manufacturer with chemical know-how to be

able to obtain a usable drug. Heroin (which began as the Oriental poppy or opium plant) and cocaine (which began as the coca plant) provide paramount examples here.

Each of these models harbors some variation, depending, in the case of agricultural products, on the hardiness of the plant and whether it can be grown locally or must be imported from abroad, and in the case of synthetic products, on the complexity and difficulty of the chemical process. It is economically feasible to grow certain plants both indoors and outdoors and, hence, they can be cultivated in the United States. Marijuana provides an excellent example here. In contrast, given the market, the ubiquity of law enforcement, and the nature of the plant, it is not economically feasible to grow coca bushes or Oriental poppies indoors in areas where they would not thrive outdoors. Hence, cocaine and heroin must be imported from source countries.

At this point, the question that should dominate our thinking about the illicit drug trade is this: Why do the existing distribution patterns prevail? Why is this drug produced in a given source country and brought to a destination country through a certain route, while that drug is produced in different locations and shipped through different routes to the same final destination? Drug distribution patterns are far from preordained; in fact, many have changed over time, due to a variety of factors. There is, however, both stability and volatility. Because of competition and the dismantling of distribution networks, trade routes have shifted around enormously for some drugs—but interestingly, not for others. For instance, the sources of marijuana and heroin have been transformed enormously in the past three decades, while the broad outlines of cocaine distribution have remained more or less stable.

With these qualifications in mind, let's look at the origin of illicit drugs that enter and are distributed and consumed in the United States.

Heroin

During the decades following the Vietnam War, a substantial proportion of America's heroin supply stemmed from Asia. The breakup of the French Connection in 1972 brought about a vacuum in heroin distribution in America. Within fairly short order, a substantial proportion of the heroin that had circulated within Asia or had been shipped to Europe began to be rerouted to the United States. For the better part of two decades, most of the heroin that went into the arms of addicts in this country originated either from the so-called Golden Triangle of Southeast Asia (mainly Burma but also Laos, Cambodia, and Thailand), or the Golden Crescent (mainly Afghanistan but also Pakistan, Iran, and Eastern Turkey). Increasingly, Afghanistan came to be the major supplier of the opium from which heroin derives, and most of that is now sent to the Eastern Hemisphere. The UNODC (United Nations Office on Drugs and Crime) believes that Asia and Africa now account for 70 percent of the heroin consumers in the world, and what they use comes from Asia; most of the rest of Asian-originated heroin is sent to Europe.

Heroin trafficking is an example of how flexible and labile the drug trade is. Today, heroin consumed in the United States derives either from Mexico (almost 40%) or, though this source is declining, South America (close to 60%); a tiny percentage comes from Central America. *The National Drug Threat Assessment 2011* reports that the purity of South America's heroin has stabilized at 57 percent; Mexico's heroin is 40 percent pure.

Currently, an increasing proportion of the South American heroin, in addition to all Mexican heroin, is imported into the United States by Mexican nationals. The potential pure heroin production in Mexico is 38 tons. The available data indicates that a substantial proportion of users of the opioids (such as Oxycodone) are switching to heroin, which has put a strain on the facilities of emergency departments nationwide and, as we saw, has caused a rise in DAWN figures. In 2012, for “budgetary reasons,” the Department of Justice closed down the National Drug Intelligence Center, which produced *The National Drug Threat Assessment*. Presumably, the Drug Enforcement Administration (DEA) will report equivalent data.

Once heroin from South America arrives in the United States, on the East Coast, Dominicans play the primary role of distributing the drug from the wholesale to the retail levels. Mexican heroin is primarily destined for the West Coast. In addition, the majority of the Colombian heroin that is sold in the western part of the United States is moved by Mexican nationals. Most loads are in the small to medium range (1-3 kilos) and come into the country via individual couriers; however, recently, larger loads of dozens of kilos have been seized on vehicles crossing the border.

Heroin is an example of a drug whose production and distribution conforms to the mixed model. It begins its life embedded in the chemical structure of millions of poppy plants whose opium gum is harvested by tens of thousands of peasants and small farmers, who sell their product, after a step or two, to a much smaller number of wholesalers who, in turn, sell to an even smaller number of processors who convert the raw opium into morphine, then, higher up, into heroin. The first half of heroin’s journey is pyramidal or fan-shaped, wide at the bottom and tapering narrowly toward the top. The second half of the journey, the distribution process from the pure heroin (after adulteration) to the streets of America, is also fan-shaped, moving from a small number of high-level distributors to a very large number of street sellers at the dealer-to-customer level.

Cocaine

Virtually all of the cocaine consumed in the United States had its origin in Colombia, Peru, or Bolivia, with Colombia contributing the lion’s share. Roughly two-thirds of the cocaine entering the United States today, according to the DEA, crosses into the country over the border with Mexico; the remainder either comes here directly from South America, or hops-skips-and-jumps across the Caribbean. Until the late 1980s, Colombians dominated the business of smuggling cocaine into the United States, even when it passed through Mexico. But huge seizures convinced Colombian traffickers that it would be advantageous to relinquish major portions of the business to Mexican nationals for less unwieldy, complex, and risky logistics. Hence, in the past two or three decades, Mexican traffickers have played a growing and now major, role in the operation of the cocaine trade. By the mid-1990s, half of all cocaine entering the United States, most of it of Colombian origin, was controlled by Mexican transport groups. Cocaine sold on the eastern seaboard tends to be distributed at the wholesale level by Dominicans or brought from the Southwest by Mexicans. Cocaine sold in the Midwest and West is usually distributed by Mexican organizations.

Between 2005 and 2009, federal cocaine seizures dropped by more than half (53,000 to 19,000 kilograms); between 2006 and 2009, the price per pure gram of cocaine

increased from \$95 to \$174, and its purity fell from 68 to 46 percent. All of this indicates that cocaine became less available in the United States in the second half of the first decade of the 2000s. Increased law enforcement activity and cartel violence in Mexico and Colombia have disrupted cocaine trafficking and made the drug less available in the United States—hence, its higher price and decreased purity. In addition, as we saw, Plan Colombia and Operation Purple—joint Colombian–U.S. quasi-military operations—have been spraying coca plants growing on farms, likewise diminishing cocaine supply. At the same time, the use of coke in the 2000s is stable or in decline. Data reported by the *National Drug Threat Assessment 2011* indicate that national cocaine positivity rates in workplace drug tests fell between 2005 and 2009 by more than half (from 0.73% to 0.35%). The report estimated the potential pure cocaine production in Colombia in 2008 at 295 tons, down from its 2004–2007 levels. As we’ve seen, the latest figures indicate that Colombia, Peru, and Bolivia still produce prodigious quantities of cocaine, although both the State Department and the UN agree that the figures have substantially declined during the past dozen years.

Cocaine shares with heroin the shape of its distribution system: two fans, laid end to end, the narrow end of the top one pointing down, meeting the narrow end of the bottom one pointing up. This funneling effect provides huge profits to a very small number of high-level wholesalers—which, in certain kinds of economic and political settings (discussed below), also generates extremely high levels of violence and repression—and much smaller profits to the small farmer and petty street seller, more than they could earn engaged in growing or selling legal products but vastly less than higher-ups earn.

Marijuana

Cannabis production and distribution are extremely decentralized. Most experts disagree or refuse to generalize about proportions and origins—what proportion is domestic, what proportion imported, and so on—but here’s what some observers believe, based partly on seizures, partly on lab analyses, and partly on informants. Unlike cocaine and heroin, marijuana is a bulky product; hence, traffickers prefer transporting it short distances rather than long, and crossing no international borders, or only one rather than many. In addition, cannabis exudes a distinctive odor and, thus, is difficult to conceal and easy to detect. And third, a huge number of people use cannabis worldwide and nationwide; hence, wherever it is grown, much of the consumption of its crop there will be diverted to local usage. As the UNODC’s 2012 *World Drug Report* says, cannabis is “produced and traded almost everywhere in the world, often in local markets,” much of that demand met by “local production” (p. 43).

The most parsimonious version of the origin of marijuana would take these factors into account. The UNODC’s report distinguishes between hashish and herb marijuana. Most of the hashish (or “resin cannabis”) produced is consumed in Asia and Europe; relatively little of it reaches the shores of North America. Of the marijuana consumed in the United States, probably close to half is grown domestically. Most of the remainder, in all likelihood, comes from Mexico, some comes from Colombia, and some comes from Central America. The Netherlands was once a major producer of potent, high-quality cannabis, but Dutch authorities have recently cracked down, limiting the supply

flowing to the United States. In response, indoor cultivation sites have cropped up in countries all over Europe. With the government busting marijuana growing operations in the United States, cultivation has become increasingly sophisticated. Today, enough plants to generate profits of nearly \$200,000 a year can be grown in an indoor area the size of a pool table. Within a very few years, some claim, “virtual” marijuana gardens can be cultivated to be self-regulating; their ownership will be almost untraceable, the grower appearing only to harvest the product and replant some seeds, before once again disappearing into anonymity (Pollan, 1995). Authorities have been dismantling indoor operations as a result of monitoring electricity usage and the purchase of grow-lights, and of using thermal imaging of rooftops to detect excessive sources of heat. In addition, the authorities have seized an immense number of marijuana plants that were clearly cultivated on public parklands, with no cultivator in evidence. Most of the marijuana smuggled into the United States from Mexico is concealed in vehicles, though individual couriers will bring across small loads on foot, and sometimes, substantial shipments of the drug brought in by large ships will be offloaded onto smaller boats and brought into coastal locations and distributed from there.

The federal government declines to estimate the size of home-grown marijuana production, but judging from the number of plants authorities eradicate, it is huge. In addition, Mexico supplies a substantial proportion of U.S.-consumed cannabis; Southwest border seizures alone total 1.5 million kilograms, and the report estimates potential marijuana production at 21.5 tons. In response to outdoor seizures, cultivators have increased indoor production of marijuana plants, increasing the drug’s potency.

Of all drug sales businesses, the marijuana business most closely conforms to the pure agricultural model previously outlined. It is a decentralized, comparatively nonhierarchical, and scattered industry. It is the drug most likely to be—and it is uniquely—produced directly by consumers. It is the drug where the step from producer to consumer is most likely to be local rather than global. No single seller or wholesaler is likely to wield much power; hence, violence and political repression are—although far from unknown—fairly infrequent and not a major factor in the drug’s distribution system. Hence, many of the issues discussed below (globalization, for instance) are least likely to apply to marijuana.

Methamphetamine

Because the chemical process is relatively simple, nearly all the total production of and trafficking in methamphetamine either is domestic or crosses only one border, that is, brought from Mexico into the United States. Prior to the mid-1990s, the majority of the meth sold in the United States was manufactured and distributed by members of motorcycle gangs operating small clandestine labs in the Southwest, mainly California. But about fifteen years ago, Mexican gangs began muscling into the bikers’ turf, and managed to wrest a major portion of the business away from them. Independent labs continue to operate in the United States, but most are smaller and have a much lower production capacity than the Mexican labs, which not only are larger but also tend to be part of an organized criminal cartel.

While most of the methamphetamine consumed in the United States comes from Mexico, seizures of meth labs in the past four or five years indicate a rise in domestic

production as well. Between 2007 and 2010, the price of meth dropped from a high of \$286.39 per pure gram to \$105.49; purity increased from 38.6 percent to 82.7 percent—probably indicating an oversupply. The DOJ (Department of Justice) claims that meth is being used throughout the United States, but ADAM II's arrest data do not back up this claim. Although the precursor chemicals for meth—ephedrine and pseudoephedrine—have been banned in Mexico as well as nearly all states in the United States, traffickers have discovered new smuggling routes to bring these chemicals in from source countries, mainly China and India. The DOJ has detected “smurfing” operations—in the Pacific and Southwest states, a few individuals manufacturing pseudoephedrine, or even groups or consortia that use fake IDs to obtain and sell the precursor to meth labs. In addition, manufacturers have developed currently legal non-ephedrine precursor substitute chemicals, thereby ensuring an uninterrupted supply of methamphetamine. In the United States, while there has been an increase in the seizures in small labs, manufacturers have established “superlabs” in California that have supplied the shortfall. In short, in the past half-dozen years, the meth production in both Mexico and the United States has risen; the drug is both cheaper and purer—and more abundant—than it has ever been.

Ecstasy

Prior to 2005, Western Europe, mainly Belgium and the Netherlands, provided the major source of the MDMA consumed in the United States; according to the DEA, a substantial number of seizures and arrests brought this source virtually to a halt. According to the *National Drug Threat Assessment 2011*, Asian drug trafficking organizations produce “large quantities” of Ecstasy in Canada and smuggle it across the border into the United States (p. 40). Seizures at the northern border increased between 2006 and 2010 by about one and one-half times, from 10 to 15 dosage units; however, there was a slight decrease between 2007 and 2010. In contrast, seizures at the border with Mexico numbered only 387,000, and commercial air seizures, only 830,000 units. Domestic production is much smaller than either of these sources, although it is increasing in scale. According to this report, Ecstasy is no longer viewed exclusively as a “rave” or club drug; “nontraditional” user groups, including African Americans and Latinos, are now purchasing it (p. 41). Both Monitoring the Future (MTF) and National Survey on Drug Use and Health (NSDUH) indicate a fairly stable past-month usage of Ecstasy over the past decade (2002–2011); the number for the population age 12 and older is likewise fairly stable, at about half a million.

LSD

Although the process for manufacturing LSD has been published in a number of books and articles and posted on the Internet, it is an extremely difficult, time-consuming, and complex process, requiring a great deal of chemical sophistication. The number of labs that manufacture the drug is small; perhaps as few as a dozen or two supply the bulk of the country's LSD consumption. Most of these labs are located in California and the Pacific Northwest, and the bulk of their production is destined for domestic consumption (or use in Canada). According to the DEA, the chemists who manufacture the drug tend not to distribute it, but sell the crystal form of the drug to a few “trusted associates, insulating themselves from the wholesale distributors.” Because of the secretive nature of the business at this level of the distribution chain, clandestine LSD labs are only rarely

seized by authorities. Traffickers convert the crystal into liquid form and usually soak blotter paper with droplets of LSD. Less often it is sold in liquid form in vials or breath mint bottles; occasionally, it appears in gelatin tablets.

FACTORS THAT FACILITATE THE ILLICIT DRUG TRADE

Drug trafficking patterns have evolved into their present form, and continue to develop along certain lines, for a complex mix of reasons. Some of these factors are local, such as climate and indigenous cultural patterns, while others can be generalized to settings all over the world. Without question, the most basic, fundamental, and absolutely crucial factor that is the very engine of the illicit drug trade, without which it either would not exist at all or would exist in radically different form, is so obvious that it may be overlooked: *prohibition*. If all psychoactive substances were legal, by definition, there would be no such thing as an illegal or illicit drug. But also, the buying and selling of drugs would look very different as well. If the possession and sale of cocaine and heroin were legal, coca bushes and Oriental poppy plants could be grown in the United States, and Ecstasy and methamphetamine “superlabs” would be located here as well. It’s also likely that the drug trade would be substantially bigger than it is now, and an immense number of ancillary services (such as drug treatment centers) would spring up in response to the greater use. Just as important, if legal, the currently illicit drugs would be incredibly cheap, costing no more than aspirin or Roloids. Whatever impact drug prohibition may have had, it has increased the price of illicit substances; this is perhaps prohibition’s most significant by-product. The drugs in which we are interested are illegal, and their patterns of distribution, as well as the reasons for those patterns, are what we have to examine at this point.

While upper-level drug dealers tend to be wealthy, almost beyond comprehension, the foot soldiers of the drug trade at either end of the distribution spectrum tend to be relatively poor. As the worldwide economic crisis deepens, exacerbating the enormous gap between the industrialized, developed countries and the poorer, developing nations of the world, poverty assumes an increasingly greater role in drug trafficking. At the source end, the opium poppy, from which heroin is derived, and the coca bush, which yields cocaine, tend to be cultivated on small plots of land by poor peasant farmers whose livelihood depends on the illicit crop. (Most of the world’s opium and coca, it should be said, is grown for the production of legal substances.) Very few substitute crops are capable of growing on most of such land, and practically no other crop can get to a sufficiently nearby market to support the peasant’s family at subsistence earnings.

This generalization about the poverty of the majority of hands-on growers does not apply to the leaf cannabis or marijuana grown in North America and Europe, since that industry is extremely decentralized, but it does apply to the resin cannabis or hashish that comes from North Africa and Western Asia. These farmers are more affluent than their peers who do not grow a drug crop, but poverty is an enormous incentive to move from a licit to an illicit product—or not to move from an illicit to a licit product. Toward the middle of the distribution chain, likewise, a large percentage (though almost certainly not most) of the illicit drugs smuggled into a country where they are sold are brought across the border by poor couriers (“mules” or “smurfs”) who carry them on their person, often by swallowing drug-filled condoms. And at the low-level, seller-to-consumer end,

especially in poor neighborhoods, we see petty street dealers; typically they are addicts themselves, barely earning enough on their transactions to pay for their own drug habits. As we'll see in more detail below, there are middle-class drug dealers who sell directly to consumers, but they tend to take fewer risks because they usually sell to persons they know, in fairly substantial quantities a small number of times, indoors, in places of residence, and in settings in which violence rarely takes place (Dunlap, Johnson, and Manwar, 1994, pp. 5–6).

To put the matter another way, the poorer an area, society, or community, the greater the incentive to produce, traffic, and sell illegal drugs. This is because, although the affluent are willing to take moderate risks to earn a great deal of money, the poverty-stricken are willing to take much greater risks to earn relatively little money. A small fraction of 1 percent of the wholesale price of heroin and cocaine goes to the grower, and, refined, once they cross the border into a destination country, their wholesale value increases ten times (Stares, 1996, pp. 53–54). It is the major trafficker and wholesaler who earn the lion's share of the illicit drug profits. The industry's foot soldiers take the most risk and earn the least profit. The poor, with little in the way of economic wherewithal or prospects, are most likely to take such risks. Hence, poverty must be counted as a major factor in the production, distribution, and sale of illicit drugs.

When the central government does not control major areas of a country—when the police and the army cannot enter an area for fear of being shot—it cannot control illegal activity within that country's borders. This leaves drug lords free to grow botanicals from which drugs are extracted and to distribute and sell them at will. Major territories of Burma (Myanmar) have been under the control of private drug armies for decades. In Colombia, the army cannot enter major territories that are controlled by rebels, who use drug revenues to finance their operations. In Afghanistan, likewise, it is local tribes, not the federal government, who control the extremely rugged, mountainous terrain where most of the world's opium is grown. In Mexico, until the election of the Vicente Fox regime in 2000, the corruption of the police and the army was vast and extensive, reaching up to the president's family. Border assignments were bought and sold with the expectation that an officer would earn substantial sums from bribes by drug dealers in exchange for immunity from arrest. In such weak or corrupt regimes, honest law enforcement is a virtual impossibility and drug trafficking is able to flourish. Mexico's current president, Enrique Peña Nieto, installed in 2012, proclaimed that he would make “no pacts” with criminals and vowed to combat illicit drug trafficking.

One key principle that has influenced the sale of illicit substances all over the world is the emergence of worldwide networks that link the source of drugs with their ultimate customer. International and intersocietal commerce has existed for thousands of years. However, it was not until late in the twentieth century that the distribution of the currently illicit drugs took on a truly global complexion. Prior to the early 1970s, international drug linkages tended to be fairly simple: Marijuana was imported into the United States from Mexico; opium, grown in Turkey, was processed into heroin in Marseilles, and smuggled into New York; cocaine, produced in labs in Colombia from leaves gathered in Peru and Bolivia, was brought into the United States and Western Europe.

As I mentioned previously, perhaps the watershed event that transformed drug distribution to its present, global, form was the dismantling in 1972 of the French Connection heroin-trafficking network by the French police, U.S. federal agents, and officers in

the New York Police Department. The cartel had previously supplied 80 percent of the heroin sold in the United States, and its demise generated a drug “panic,” creating an enormous, importunate demand for the drug. This opened up an economic opportunity that many daring, unscrupulous entrepreneurs around the world could not pass up. In the past four decades, the routes through which heroin specifically—and perhaps as a by-product, illegal drugs generally—travel, the number of source countries, and the number of countries through which drugs move, and the national and ethnic groups involved in drug trafficking, have virtually exploded (Stares, 1996, pp. 25, 27–28; UNODC, 2012). Since the 1970s, the international drug trade has been transformed from a cottage industry to a global enterprise whose profits are greater than three-quarters of the national economies of the world; the UNODC estimates it as \$600–650 billion annually.

Globalization is both a relatively recent product of political, economic, technological, cultural, and social changes taking place nearly everywhere on Earth and an umbrella mechanism that has enormously accelerated the illicit drug trade during the past quarter century or so. During that time, international commerce, travel, and communication have multiplied exponentially; the huge increase in the worldwide illicit drug trade is one consequence of internationalization.

In 1970, according to the U.S. Department of Commerce, the value of exports from the United States to foreign countries totaled \$42 billion; its imports from other countries were valued at \$40 billion. In 2012, these figures were \$1.54 trillion and \$2.28 trillion respectively; adjusting for inflation, this represents an increase of more than 10 times. In 1991, the first Internet browser was released. By 1994, there were three million users of the Internet, nearly all of them in the United States; in 2011, there were 2.4 billion Internet users. In August 1919, Aircraft Transport and Travel carried four passengers in an open cockpit from an aerodrome just north of London to Le Bourget Airport in Paris, launching the era of regular international travel. By 1921, six companies operated the London-to-Paris service. In 2012, air carriers transported roughly 170 million passengers as well as nearly 10 million freight tons of cargo between the United States and the rest of the world. That year, airlines and flight cargo companies flew 1.5 million flights into and out of the U.S. The movement of persons, goods, and messages across national borders has created a superhighway for traffickers to transport drugs from the source to the using countries. The sheer volume of bodies and freight coming into every country in the world from every other makes it impossible for officials to monitor and stem the tide of illicit products. Instant communication to and from every point on the globe enables traffickers to convey information on transactions practically without detection. As a result, the drug trade “has increasingly become a transnational phenomenon, driven and fashioned in critical ways by transnational forces and transnational actors. Thus the global diffusion of technical expertise and the internationalization of manufacturing have made it possible to cultivate and refine drugs in remote places of the world and still be within reach of distant markets” (Stares, 1996, pp. 5–6). The huge global expansion in trade, transportation, and tourism has facilitated trafficking in established drug-using areas and “opened up new areas of the world to exploit” (p. 6). Huge increases in international travel, the mass media, and telecommunications “have undoubtedly increased the global awareness of drug fashions around the world” (p. 6). What was true two decades ago is even truer today.

Globalization permits enormous flexibility with respect to where illicit drugs may be grown or manufactured and how they may be delivered to their ultimate markets.

If law enforcement shuts down an operation in a given province or country, entrepreneurs in another province or country quickly move into the economic vacuum. As we saw, the dismantling of the French Connection in 1972 created opportunities for growers and traffickers in other areas of the world to provide the opium to make the heroin necessary to supply American addicts. Whereas in 1972, Turkey accounted for 80 percent of the botanical source of the heroin used in the United States, today, that source is mainly South American (58%) and Mexican (39%). After “Operation Intercept” (1969), when the U.S. border guards searched every car and person entering the country for drugs, the cultivation of home-grown American marijuana increased dramatically (Pollan, 1995; Inciardi, 2002, pp. 54–55). Today, many experts believe, roughly half the volume of the marijuana consumed in the United States is grown here. Observers refer to this phenomenon as the “balloon” effect or the “push down/pop up” factor (Nadelmann, 1988, p. 9): Whenever drug trafficking is “pushed down” in one area, it “pops up” in another. The reason for this is the enormous profits that are to be made in the drug trade and the unlimited supply of people willing to take the legal risk to earn those profits. It is possible that globalization is the single factor most responsible for the enormous expansion in the illicit drug trade during the past four decades. If it were much more burdensome and problematic to move drugs and money across borders, traffickers would not have the same degree of flexibility to adapt to changing legal, political, and economic circumstances around the world.

THE STREET-LEVEL ECONOMICS OF HEROIN ABUSE

A team of researchers led by sociologist Bruce Johnson gathered respondents in the East and Central Harlem communities of Manhattan, in New York City (Johnson et al., 1985). They recruited respondents who met three criteria. First, these recruits used heroin (or methadone) during the period under investigation; more specifically, they administered the heroin they took via injection. Second, they lived on the street and spent little time in conventional settings, such as in a home or at school or a work site. And third, they engaged in criminal activity. If potential recruits failed to meet any one of these criteria, they were excluded from the study. The research team recruited respondents by sending ex-addict, ex-offender staff members into the community to locate stranger users or to interview acquaintances, who would then introduce them to potential interviewees. For the most part, staff interviewed respondents in a storefront setting that was rented for this purpose.

The study produced a number of findings that contradicted commonly held stereotypes about heroin abusers. Several of these were not specifically related to drug buying and selling—for instance, the myths that heroin abusers stick to heroin (most use several other drugs in addition to heroin, including alcohol, often at abusive levels) and that all or most heroin abusers are physically addicted (most are not). But perhaps the most interesting—and surprising—of this study’s findings relate specifically to the buying and selling of drugs.

In the 1980s, figures that even supposed experts cited for the dollar value of the heroin consumed by addicts per day ranged from \$100 to \$150. (That \$100 in 1981 was worth \$250 in 2010.) The image that authors often projected of the addict with respect

to money-making crimes was much like a voracious blast furnace which requires incessant feeding, consuming everything hurled into its maw. The Johnson team found such an addict to be highly atypical. The total income that respondents derived from criminal activity averaged \$12,000 annually for their sample as a whole. For the daily users, this was \$19,000. (Adjusting again for 2010 dollars, these figures come out to roughly \$30,000 and \$47,500.) While these are substantial sums, they fall far short of the \$100 to \$150 per day many observers attributed to the heroin addict in the early 1980s; these sums average out to only \$33 and \$52 per day. (And it is \$82.50 and \$130 per day in 2010 dollars.) What accounts for this discrepancy?

In the past, observers calculated the dollar value of the heroin consumed by addicts and heroin abusers, and along with it, their rate of criminal activity, in an extremely slipshod fashion. One source of error was for the writer to calculate the number of shots of heroin that are supposedly necessary to remain addicted and then to calculate the cost of those shots. Another was to ask users to estimate the cost and size of their drug habits. As the Johnson team discovered, neither of these calculations produces even a remotely accurate estimate of habit size. The sample's irregular users were asked to provide an estimate of the average amount of heroin used per day during the previous year; their global, overall estimate averaged out to \$25. The drawback of relying on such estimates was underscored when the Johnson team asked their respondents about their detailed, day-by-day usage, which came to an astoundingly low dollar amount of \$4 per day—one-sixth of their initial response! The higher their actual use, the more accurate their estimates were of the dollar value of their heroin habits. Still, even the daily users were off by 50 percent—\$53 estimated, \$36 actually used. The sample as a whole roughly doubled their rough estimates above the dollar value of what they actually used, as measured by their more rigorous, detailed, day-by-day accounts—\$43 versus \$18.

Again, why the discrepancy? It seems that respondents made their rough estimates on the basis of their self-image as heroin abusers or addicts. They tended to forget about those days when they used little or no heroin. When they were asked to average use across long periods of time, such as a year, they usually recalled only those days when they were successful in obtaining heroin. It is easy to understand how journalists and sloppy researchers could have arrived at \$100- to \$150-a-day habits for the typical abuser or addict.

Another important and unexpected finding was that the heroin abuser does not purchase all the heroin he or she consumes. The more frequently users consume heroin, the lower the proportion of the heroin they use that is actually purchased. In the Johnson et al. study, daily users purchased only 58 percent of the heroin they consumed with hard cash. For the next lower level of use, regular but not daily users, this figure was 62 percent, and for irregular users, it was 71 percent. Heroin abusers receive a substantial proportion of their heroin by serving as the "day laborers" of the heroin-distribution industry. They cut (dilute), bag, and sell heroin and they "steer, tout, and cop" customers on the street, acting as go-betweens for sellers slightly higher on the distribution chain and customers, or next-to-customer sellers. Most of what they receive for such work is not cash but heroin. The Johnson research team also calculated a category of "income" representing value received for the heroin abuser in the form of "avoided drug expenditures." This comes to an average of \$2,000 for the sample as a whole and \$3,400 for the daily users. Heroin abusers are masters at mooching free drugs from others.

In addition, abusers often steal drugs from others; the dollar value of this economic activity came to \$1,700 worth on a yearly basis; this is not the sort of crime cited in the media or feared by the public at large. Heroin abusers also sell drugs to others, but to judge from the dollar value sold—a \$2,400 yearly average for the sample as a whole, \$3,400 for the daily user—they are as low on the distribution chain as it is possible to get, short of their own catch-as-catch-can customers. In addition, they don't sell that often, at least not as a regular source of income. And their revenue from prostitution and pimping accounts for more than 40 percent of the sample's average criminal income—and more than half for the irregular users. The classic stereotype of heroin addicts as earning all, the overwhelming bulk, or even most of their drug money from robbery, thievery, and other predatory criminal activity is erroneous.

Heroin users, abusers, and addicts do regularly victimize others by committing classic predatory crimes against them. Robbery, burglary, and shoplifting make up nearly two-thirds or 63 percent of the sample's criminal income and between one-third and one-half (or 44 percent) of its total income overall. The authors (Johnson et al., 1985) argue that this does not represent a total loss to the community or the society as a whole. Instead, thievery represents a loss for some parties and a gain for others. The victim loses from an instance of theft, but the thief gains, as does the purchaser of the stolen item—who receives, in the authors' words, a "deep discount"—as does the retail merchant who sells a replacement item to the victim, and the dealer who sells heroin to the thief-addict. That's four winners and only one loser. According to the authors, thievery may be looked upon as "involuntary transfer payments" and stolen goods are "a major component of the ghetto" economy. The fact that many people benefit from drug-related economic crime, the authors argue, "while fewer individuals have identifiable [economic] losses is likely to be sobering." With ghetto crime, "the economic results are good for some persons and bad for others. Little can be done or is likely to be done to stop heroin-abuser theft and the vigorous demand for stolen goods in ghetto communities." In sum, the economic functions of drug-related crime are not simple; since so many parties gain in the many transactions it entails, it won't be eliminated with simplistic solutions (Johnson et al., 1985, pp. 117, 118, 125, 127).

CLASS AND ETHNIC STYLES OF DEALING

As we've seen, in 1988, Congress approved a 100-to-1 ratio for the quantity of powder cocaine (500 grams) versus crack (five grams) that can draw the same five-year federal sentence. Although not immediately recognized at the time (11 out of 21 African American members of the House of Representatives, nearly all of them liberals, voted in favor of the bill), the disparity became the target of the critics of the War on Drugs. Either the intention (Tonry, 1995, pp. 81ff) or the consequence (Duster, 1995) of the bill was racist, its critics said. Why? Roughly 85 percent of crack cocaine defendants who appear in court are black, while only 30 percent of powder cocaine defendants are black; the rest are Latino (50%) or white (20%). This disparity is fueling the rising percentage of African American prison inmates who have been convicted of a drug crime. The mean time served by federal drug offenders *released* at the beginning of the twenty-first century was nearly a year longer for blacks than for whites; the mean time served by offenders

sentenced in 2000 and 2001 was roughly three years longer for blacks than for whites. These critics say that we have a racist criminal justice system when it comes to the drug laws. In 2010, President Obama signed the Fair Sentencing Law, which diminished the disparity between powder cocaine and crack in quantity possessed that draws a five-year federal sentence from 100:1 to 18:1, thereby reducing somewhat the racial bias.

Racial differences in drug use, as reflected by surveys, are small. According to the 2011 National Survey on Drug Use and Health (NSDUH), similar proportions of whites (7.1%), African Americans (8.4%), and Latinos (5.8%) said that they had used one or more illicit drugs once or more in the past month (NSDUH, 2012). (It should be noted that NSDUH also estimated that, in absolute numbers, slightly more African Americans used crack in the month prior to the survey than was true of whites—107,000 versus 98,000.) If blacks and whites use drugs in roughly the same proportion, how is it possible that more than half of all incarcerated drug offenders are black? African Americans are overrepresented as drug offenders relative to their numbers in the population by a factor of four or five. The American criminal justice system *must* be racist in its application, its critics argue, for such disparities to exist. It begins, critics of the War on Drugs contend, with racial profiling—that is, with police differentially monitoring black neighborhoods and differentially following, stopping, frisking, and arresting black suspects. It continues with racist laws that target activities in which blacks are more likely to engage, as seen in the crack cocaine–powder cocaine disparity. And it culminates with a racist court system that is more likely to convict and incarcerate black defendants, sentencing them to harsher, longer terms of imprisonment. Or so some critics of law enforcement claim.

The American criminal justice system may very well be racist, although the literature on the subject is far from clear-cut. The same facts have been read in different ways (Wilbanks, 1987; Cole, 1999; Russell, 1998); moreover, it seems to operate somewhat differently on different *levels* in the system (Walker, Spohn, and DeLone, 1996). In any case, one possible reason for the racial disparities independent of (and very likely in addition to) the workings of a criminal justice system that may discriminate against African Americans is what has been referred to as racial and ethnic *styles* of seller-to-user drug dealing. The police are more likely to apprehend low-level street dealers and couriers than higher-level dealers, in part because they are so much more numerous and in part because their illicit activities are more visible. As the United States Sentencing Commission observed in 1995, nearly 7 out of 10 crack defendants were considered by the police to be street-level dealers or couriers, only 3 in 10 were regarded as mid-level dealers, and only 1 in 20 was a high-level dealer. Given the fact that parties lower down on the distribution chain are more likely to be black than white, while those higher up are more likely to be white than black, racial disparities in arrest figures seem to be almost preordained.

The work of Eloise Dunlap, Bruce Johnson, and their colleagues (Dunlap, Johnson, and Manwar, 1994) suggests a strong linkage between routine police practices and racial disparities. There are two “distinctively different” types or styles of drug selling, say the Johnson, Dunlap, Golub, et al. team: the “inner-city” (mainly black) and the “middle-class” (mainly white) career types. In each type, seller-to-user dealers are primarily male youths and young adults, and are characteristically users themselves. But these two types differ radically in styles of dealing and, hence, exposure to arrest (Johnson, Dunlap, and Tourigny, 2000; Golub, Johnson, and Dunlap, 2006; Johnson, Golub, Dunlap, et al., 2006).

Middle-class dealers “almost always sell to steady customers [known to dealers] in private settings.” Quantities tend to be fairly substantial, sales to each customer are intermittent, and violence is rare. As the Office of National Drug Control Policy observed, powder cocaine is most likely to be bought and sold indoors—away from the open observation of the police.

In contrast, inner-city dealers “often lack access to private settings for sales and typically sell in public [or semipublic locations—such as crack houses—which are likely to be known and accessible by undercover officers] to buyers they do not know.” They sell much more often and in smaller quantities, and high customer turnover is common. Crack cocaine is most likely to be visible on the street and hence, to the police. In such settings, violence is a frequent accompaniment and hence, arrest in such venues is much more likely.

None of these “point of contact” factors address the very real and, for blacks, palpable fact that, in the inner city, they are subject to intense and unequal police scrutiny and, all too often, interrogation. But nonetheless, police tactics and the daily routine of drug use and dealing explain a major chunk of the racial differences in arrests and incarceration. They cannot be ascribed to racist motives alone, and they will not disappear when the police no longer practice racial profiling. Some observers believe that the police are *intentionally* “targeting blacks” for marijuana arrests, and the data certainly seem to bear this out. For instance, in *all* of California’s counties, relative to their numbers in the population, persons of African descent are more likely to be arrested for marijuana possession than whites—in spite of the fact that their use rates are lower—and in some counties, the disparity is three or four times (Levine, Gettman, and Siegel, 2010). The California police are guilty, says the Levine team, of stopping and frisking black citizens simply because they are black. The point made by the Johnson, Golub, Dunlap, et al. team is that *even if no intentionality were involved*, such disparities would prevail, simply because of the usual black versus white “styles” of using and selling marijuana. Most police (white and black) do not consider themselves racists as such but “empirical” racists: They profile blacks because they believe that members of this sector of the population engage in behavior that makes them suspicious, are more exposed to police observation, and are more likely to engage in illegal behavior itself. Hence, the police believe, their higher arrest rates (Jerome Skolnick, personal communication). That the police cast their net wide for blacks but narrower for whites is demonstrated by the California study’s data: *When they were stopped and searched*, whites had six times the arrest rate (6%) of blacks (1%), indicating that whites are stopped and frisked *only when the police feel they have evidence that warrants doing so*, whereas blacks are stopped and frisked on much flimsier—or no—evidence (Levine, Gettman, and Siegel, 2010). Too often, members of the black community feel, they are harassed for the crime of “walking down the street while black.”

HOW THE AMERICAN DRUG TRADE HARMS SOURCE COUNTRIES

Most of the illicit drugs—especially cocaine and marijuana, and, to a major extent, methamphetamine and heroin—brought into the United States originate from Latin America, principally Mexico, Colombia, and, increasingly, Brazil. In this chapter, I questioned the myth that the drug trade is a loss to the economy. Here, I want to

question the opposite myth: That the drug trade is a pure *gain* to source countries. As with any economic transaction, the illegal drug business has plusses and minuses, different according to an array of sectors of the society and the economy.

Profits aside, from the perspective of its most important institutions, the drug trade has wreaked a catastrophic impact on Latin America. In 2008, a panel of experts convened as the Latin American Commission on Drugs and Democracy investigated the problem, and produced a report entitled *Drugs and Democracy: Toward a Paradigm Shift* (2008). The situation, as detailed by the commission's report, was gloomy. America's "War on Drugs" has been a failure. Worst, it has produced far-reaching toxic unanticipated consequences. For Latin America, the drug trade and the drug war have produced violence, the growth of organized crime, corruption, and an explosion in domestic drug abuse. In fact, while drug consumption has stabilized in the United States and Europe, it has skyrocketed in Latin America (p. 7). The United States and Western Europe "share responsibility" for the drug problems with which Latin America has been saddled, "insofar as their domestic markets are the main consumers of the drugs produced in Latin America" (p. 10).

In Colombia, revolutionary guerilla groups, under the control of FARC—the Revolutionary Armed Forces of Colombia—have organized cocaine producers and arranged the purchase and sale of cocaine products. Cocaine has become a major activity and source of funding for Colombian guerilla forces (p. 24). In response, a cluster of extreme right-wing paramilitary forces calling themselves the AUC, the Self-Defense Forces of Colombia—in its time, far more violent than FARC, claiming 10 times the number of homicide victims—began trafficking in cocaine. In the 1990s, as a result of the drug war and the death and imprisonment of drug sellers, the two major cocaine distribution organizations, the Medellín and Cali cartels, were dismantled, producing fragmentation in the illicit drug distribution system in Colombia and a shift of trafficking operations to Mexico, which itself resulted in an explosion of violence in Mexican towns bordering on the United States.

One major consequence of the drug trade and the drug war in Latin America has been the creation of a "parallel" structure of power "operating outside the law" (p. 25), corrupting and destabilizing public institutions—mainly the military, the police, the courts, penal institutions, and the political order. This is especially the case in poorer communities in large cities, areas in the interior far from central authority, and the Amazonian territories of Brazil. In addition, the drug trade, along with government efforts to suppress it, has caused a stupendous increase in violence in major sectors of the entire hemisphere.

As we saw in Chapter 8, on alcohol and tobacco consumption, a number of Latin American countries rank among the nations that have the 20 highest homicide rates in the world. In 2011 UNODC released a report entitled *Global Studies on Homicide 2011*. For the most part, countries with the highest homicide rates are those with entrenched and contentious drug trades. The homicide rate of Colombia, the country with the most deeply entrenched marijuana and cocaine organizations, ranks 14th worldwide. (Still, the homicide rate of Colombia has plummeted by half in the past six years or so, as some of the violent activities of the paramilitary organizations have been brought under control and the drug trade has become more institutionalized and routinized.) Jamaica, another country housing an active drug trade, ranks 4th; Venezuela, Belize, the U.S. Virgin Islands, St. Kitts and Nevis, Trinidad and Tobago, and Puerto Rico, major transit locales for drug shipments, rank 5th, 6th, 8th, 9th, 13th, and 19th, respectively.

“The relationship between homicide [and] firearm and drug commerce is central. Drugs finance the purchase of firearms, which sustain gang wars for control of territories and trafficking” (p. 26), the report continues. In much of Latin America as well as in the rest of the world, the trade in arms and the drug trade are interlocked, constituting the central criminal activity in metropolitan areas. By corrupting, degrading, and negating the civic and public sphere, traffickers have usurped and assumed the role of the political authority, made opposition to their dominion almost impossible, subverted public safety, and rendered democracy unviable.

What solutions does the *Drugs and Democracy* report offer to ameliorate this dreary situation? Abandon the war on drugs, stop trying to eradicate illicit drugs at their source, decriminalize and depenalize the currently illegal drugs, and set up a policy of harm reduction. We’ll look at proposals such as these in Chapter 16, which discusses the issues of legalization, decriminalization, and harm reduction. Meanwhile, the “ripple” (or tidal wave) effect of drug consumption in the United States, the global drug trade, and the government’s enforcement of the drug laws impact the lives not only of residents of the United States, but of people throughout the hemisphere and, in all likelihood, worldwide as well.

The country with the largest drug trade volume with the United States is Mexico. According to the Mexican National Security Cabinet’s *Excelsior*, nearly 30,000 drug-related murders were committed in Mexico within the space of four years, during 2007–2010. Mexico’s population is about 111 million; that of the United States is about 310 million. In the United States, between 2007 and 2010, roughly 60,000 murders took place. On a per population basis, almost twice as many *drug-related* murders were committed in Mexico as took place in the United States *from all sources!* The illicit drug trade—caused by use of and demand for illegal substances in the United States—has turned our neighbor to the south into a virtual slaughterhouse. As of 2010, the carnage had not pushed beyond the border (El Paso, across the Rio Grande River from Mexico, is one of the safest cities in America), but observers speculate that it’s only a matter of time when the United States begins to taste the homicidal consequences of the drug trade.

The United Nations Office on Drugs and Crime’s yearly report, the *World Drug Report* for 2011, discussed the *destabilization* effect that trafficking has on source and transit countries (UNODC, 2012). The sale and distribution of drugs, declares the UNODC’s report, can be both a symptom of, and a factor in, instability in transit countries around the world. UNODC’s assessment of the drug trade for drug-involved countries is gloomy. “Both drug trafficking and conflict undermine the rule of law and, in combination, they can have long-term impact for peace and prosperity.” The UN’s report concludes, ominously, “The violence associated with the cocaine trade [specifically] can be tantamount to civil war in the worst affected areas. Left unaddressed, drug-derived riches can buy the arms and the influence to affect the course of political events, particular in poorer countries” (p. 245).

SUMMARY

The sale of illicit drugs is enshrouded in myth. While the drug trade is large, it is much smaller than numerous inflated estimates have had it. It is certainly not true, as more than one observer has claimed, that people spend more money on drugs than on any

other consumer product in existence. The White House sponsors ongoing research endeavors to determine how much money Americans spend on illicit drugs. In 2000, this research estimates, nearly \$65 billion was spent in the United States at the retail level, more than half of that specifically on cocaine. However, the figure has declined since its peak in the 1970s and 1980s; the 2000 sum is only 40 percent of the amount spent in 1988, expressed in constant dollars. With respect to total tonnage, in 2000, nearly 20 times as much cocaine was purchased (259 tons) as heroin (13 tons). The absolute numbers have changed in the past decade and a half, but the ratio has not: Americans use *vastly* more cocaine than heroin—and this is true worldwide as well. On a gram-by-gram basis, however, heroin is roughly 10 times as expensive as cocaine. Today, many estimates put the total value of the American drug market at about \$100 billion. But these estimates are chancy; the United Nations estimates the world drug trade at \$600–650 billion, which, if accurate, would put the value of U.S. traffic at \$200–300 billion. The fact is, all estimates are educated guesses, and the range of possible values is enormous.

The second myth about the illicit drug business is that the industry is highly hierarchical, centralized, and organized, much like the Mafia, with one Mr. Big (or a small number of Mr. Bigs) at the helm. Any coordinated action must entail some degree of organization, and the distribution of some drugs requires a great deal more organization—and centralization—than that of others. But since the 1970s, the illegal drug trade has been highly decentralized, and is becoming increasingly so over time. Traffickers from practically every nation on Earth are involved in the drug trade, though, of course, for some drugs, ethnicity clusters around specific rungs of the distribution ladder.

The third myth centers around the economic harm to the nation from illicit drug use—more specifically, the fact that Schedule I drugs represent an unmixed deficit to the economy. When an illegal enterprise provides goods or services to a clientele who willingly pays for it, money transferred from one party to another is infused into the economic stream in precisely the same way as is money from the sale of legal products. The drug trade supports not only the people who work for it but also those who work for the legal sector of the economy that drug workers patronize—workers in practically every industry on Earth. Consequently, the obliteration of the drug industry would wipe out these jobs in exactly the same way that the demise of the corn, coffee, automobile, or computer industry would. But again, the multiple harmful consequences of the illicit drug trade are a separate matter. Of course, the drug trade may also have negative consequences.

Numerous agencies carefully monitor indicators bearing on how drugs are produced, where they go, where they are sold, and how. Whether a drug is a pure agricultural, a pure chemical, or a mixed product determines in part its system of distribution. In the United States, heroin originates mainly from South America and secondarily from Mexico.

Nearly all the cocaine consumed in the United States comes from South America, and perhaps 90 percent of that specifically from Colombia. However, as a result of recent restructuring of the system of cocaine distribution, two-thirds of Colombian cocaine entering the country is smuggled into the United States from Mexico, mostly by Mexican nationals—a fairly recent transformation.

Roughly half of America's marijuana is grown domestically, perhaps a quarter comes from Mexico, and the remainder originates from Colombia or other countries. Of all the

illicit drug enterprises, the marijuana market is the most decentralized and its cultivation and sale conforms most closely to the “agricultural” model of distribution, and the cannabis used in this country is often obtained from local or regional sources.

Methamphetamine consumed in the United States is likely to come from one of two sources—large labs in Mexico run by centralized organizations, or smaller, scattered labs in the United States run mainly by biker gangs in the Southwest. In the first couple of years of the 2000s, the number of meth labs seized by the authorities increased by almost 20 times, but after 2003, that number declined, one indication, says the White House, of the effectiveness of the DEA in wiping out the meth trade. Border authorities seized twice as much methamphetamine coming into the United States in 2004 as in 2001, another indication, says the White House, that law enforcement is stamping out meth consumption. However, authorities believe, the drug’s declining price and increasing purity indicate that there’s an oversupply, due in part to the decline of use in many parts of the country. Contrary to the DEA’s and DOJ’s claims that methamphetamine use has reached all parts of the United States, arrest statistics indicate that much of the Midwest, the Northeast, and the South have not, for the most part, taken up the meth habit. However, the recent reemergence of small, local labs as a source of meth indicates that the drug is far from successfully eliminated. Evidence suggests that home-grown meth may now overshadow methamphetamine imported from Mexico.

Over the course of the past four decades, the illegal drug trade has become a worldwide business, with social and economic links that extend all over the globe.

The ultimate economic transaction is that which takes place between the street seller and the user. As with all other aspects of the drug trade, this step is enshrouded in myth and misconception. One is that there is a yawning gulf between the dealer and the user—that the dealer is a wealthy exploiter and the user is a poverty-stricken victim. The matter is not quite this simple, as our examination of the low-level sale of illicit drugs demonstrates.

Transactions made by heroin abusers provide a look at how drug sales actually take place. Journalists, the public, and even some researchers often have an inflated notion of how much money heroin users, abusers, and addicts spend on their drug. Addicts spend considerably less than the \$100 to \$150 per day (or, since these estimates were made in the 1980s, \$250 to \$375 today) attributed to them. And the predatory crime they commit to pay for their drug habit, likewise, generates far less money than is generally believed. Most of what they earn is derived from a variety of nonpredatory crime sources.

Street styles of drug dealing may help explain at least a portion of racial disparities in drug-related arrests. The middle-class, mostly white, style entails dealing in private to customers known to the seller, dealing in larger quantities a smaller number of times, and dealing in locales in which violence rarely or never takes place. The inner-city style entails dealing typically to strangers, dealing in smaller quantities, dealing in public and semipublic places, and dealing in locations in which violence often takes place. Hence, arrest is far more likely to take place under the latter conditions than under the former. Since the middle-class style is typically characterized by white users and the inner-city style is typically characterized by black and Latino users, by this factor alone, racial disparities in arrest are predictable.

The administration of President Richard Nixon (1969–1974) declared a “War on Drugs”; some form of this war has continued to this day. The drug trade is profitable,

both to drug distributors and to their “trickle down” economic linkages, not to mention to the economy as a whole. But the sale of illicit drugs and the enforcement of the drug laws have had multiple harmful effects, not only within the borders of the U.S. but beyond it as well. Of all regions of the world impacted by drug enforcement, unquestionably Latin America has been most catastrophically harmed. (To repeat, the drug trade as an economic enterprise is a separate but related issue.) Many of its most important institutions—most notably, the polity, the military, the police, the courts, jails and prisons—have been corrupted, undermined, and brutalized; as a consequence, the lives of ordinary citizens have become insecure, unsafe, constricted—and often terminated. Some critics of the war against the drug trade suggest depenalization and harm reduction as solutions. Perhaps the drug-related murder rate in Mexico is the most dramatic and graphic picture of how “drug chickens” have come home to roost. The Mexican mayhem has not yet invaded the United States, but many border residents and some experts believe it will within the near future.

ACCOUNT: Trafficking in Illicit Drugs

Dealing Cocaine

At the time of this interview, Billy was a 22-year-old college senior. He dealt drugs, mainly cocaine, for his last year or two in high school and his first three years in college. Quitting before his senior year, he had to move away from his former dealing associates to be removed from the temptation to sell; a few months later, they were all arrested. Billy was never indicted or arrested for his drug-selling activities.

It began in high school. I used to hang out and party with my friends a lot. We would cut class, sit around the park, and smoke joints. Occasionally, we would chip in whatever money we had to buy some cocaine. We didn't buy that much, maybe a quarter of a gram, which we'd split three or four ways. We didn't get a lot, but we loved it.

As time went on, we bought more and more. We would use whatever money our parents had given us for lunch or new sneakers to buy cocaine. We sat in Greg's car for hours doing lines on the rear-view mirror, which we had taken off for that purpose. All of us went to class with our heads somewhere in outer space. I couldn't pay attention or do work in class. Sometimes I would just get up and walk around, not being able to take the

paranoid feeling that surged through my head. Yet I didn't stop. I bought more and more coke until it was impossible to make excuses to my parents for more money. I had to figure out how I could snort cocaine without having to pay for it. A friend told me that if I dealt cocaine, I would be able to snort for free plus make really good money. The idea of having all that cocaine and money excited me. So I went to the friend who sold it to me and told him I wanted to sell it. I asked him if he would teach me what I needed to know to be able to sell cocaine. He said yes, and I was in business.

I began selling quarter- and half-grams to friends. On a transaction, I would make a quarter gram for myself and fifty bucks. At the time, I thought that was a lot. I continued selling for the rest of the year and through the summer. I never even thought about what my parents would do if they found out, or what would happen to me if they did. All I thought about was having the power because I was the man with the cocaine.

I knew that, when I went away to college and lived on my own, I could do whatever I wanted. I didn't have to hide paraphernalia any more or worry about what I said to friends because of the

fear of my parents being on another phone. But there was a problem: No one would front me the cocaine. If I wanted it, I had to pay for it up front. If I wanted to continue dealing cocaine with my friend, I'd have to drive fifty miles to pick it up. So I began selling marijuana. It was cheap and I could sell enough to save some money to begin my cocaine business.

During the first semester of my sophomore year, I met Alfonso in one of my classes. He told me that he was looking to buy some good weed, so I told him I had some he could buy. After a few weeks of ongoing sales between us, Alfonso wanted to make a deal: He would trade fifty dollars' worth of cocaine for fifty dollars' worth of marijuana. I told him that I wanted to deal but I needed him to front the cocaine for me. He said he could trust me, all I had to do was to go to the City once a week to pick up whatever I needed.

At first, I was scared. I would go to this old, rundown building at night and speak to one of Alfonso's friends. Alfonso was always there, but I really didn't know him all that well. At the time, I was so infatuated with the idea of having so much money, I really didn't think. I picked up three and a half grams for \$350. Then I'd cut three and a half grams and make it five grams. . . . I sold that for \$700, and in one deal, I made \$350 profit.

Things were going well, but I wanted more. I asked a friend I knew was interested if he wanted to go into the business with me. He knew a lot of people and could help the business grow rapidly. He anxiously agreed. Our trips to the City were no longer for three and a half grams, but for 10 and sometimes 20 grams. The ride back was always wild because we opened the bag and snorted as much as we wanted. We blasted the music in my new partner's car and laughed the whole ride back to State. When we got back, we cut up the coke, then we'd package it. When all this was happening, our friends from the hall hung out and enjoyed the drug that was now ours at will.

My partner and I were on top of the world. At State, we were the elite. We had hundreds of friends and more money than we knew what to do with. We were now buying an ounce of cocaine (28 grams)

for \$1600. We would turn it into 40 grams by cutting it and earn \$1200 a week profit. At this point, we started partying more than ever. We would stay up all night and blow five grams of coke a day. Anybody who was our friend could come and party. It was always lying around on a desk, and anybody could stick a spoon into the pile and help themselves. . . .

A few months later, three other friends let me know that they wanted to get involved with the business. I set them up and soon, they were making a lot of money. The thrill of it all was unbelievable. We felt like a corporation. We had meetings about our business in fancy restaurants; we drank \$100 bottles of wine. We felt as if we were an organized business with the potential for unbelievable growth. Among the five of us, we were selling four or five ounces of cocaine a week and earning more than \$5,000. And we were partying—a lot. We knew that if we cut down on our personal consumption, we could make much more money. Everyone agreed that one of the reasons we were dealing was so we could snort cocaine whenever we pleased, with no questions asked.

Things started getting out of hand. By our junior year, two guys were dealing marijuana, one was dealing Ecstasy, five of us were dealing coke. One guy was even dealing mescaline. Our floor was like a drug haven, with constant traffic of people, night and day. There was never any privacy because people always came by to buy drugs. Day in and day out, cocaine was being snorted. Sometimes, at five in the morning, we would try to rationalize what we were doing. Everyone looked like a wreck. The sun was coming up and still we'd want more. It was a sickness I knew I had to get away from, otherwise I would ruin my life. I finally realized that things were starting to get crazy and maybe I should get out. I couldn't, though. I couldn't give up the power I had worked so hard for.

Everyone knew where they could buy drugs—especially cocaine. Our popularity was incredible. I had visions of being caught. I thought about my parents. I realized I could break away from this empire which I had started three years ago. I spoke

to my roommate, who never wanted to sell it even though he too enjoyed the rewards which it had brought me. He decided that the best thing to do was to move across campus and just get away from it all. Don't sell it, don't snort it, don't even look at it.

In the fall of my senior year, we moved across campus. It was a different scene altogether. There were no blasting stereos, no kegs of beer, no garbage lying around. It was quiet and clean. I stayed away from drugs for about a month, experiencing a new side to campus. As time went on, people would approach me and ask if I would sell them cocaine. At first, I said no. Then I said, "Well, hold on." I went to a good friend who had also moved from our old haunt, and asked him for some cocaine. He had some, and I sold it. Still, things remained quiet for me. It wasn't like the scene I had left, the three years of dealing and partying. Not many people knew where I was, so I figured things would be okay. On the other side of the campus, though, things were still going strong. They were still selling an immense amount of cocaine without me being there. They weren't about to stop. I had warned my former partners that things were getting out of control, but they just laughed. They'd say to me, "You enjoyed it—why can't we?"

One night at the end of the semester, I got a phone call. The person on the other end of the line was a friend who still lived in our old hall where our "corporation" was located. This is the conversation we had:

He: "The boys have been arrested."

Me: "Oh, my God! How?"

He: "They were set up. They sold an ounce to a police officer. They're in big trouble."

Me: "Do the police know anything else?"

He: "I don't know. Just get rid of everything."

Within five minutes, everyone else who had been involved in dealing was called and told what

had happened. They were all given instructions about what to do and say if they were picked up and questioned. We were all connected. It had become one giant monopoly, with every dealer on campus being a part of it.

I sat down and began to think. All those times we talked about what would happen to us if we ever went to prison. Now I pictured all those things actually happening to my friends. I saw them being locked up in a cell, sexually abused, being ruined for the rest of their lives. I was scared and didn't know what to do. I wished I could go back and erase what I had done, but I knew it was too late. I must have known that this day eventually had to come.

My roommate who moved across campus with me came down to talk. He nearly began crying when I told him what had happened. He was as scared as I was. Neither one of us knew what to do. We felt like criminals just waiting to be arrested and thrown in a cell with the rest of the slime.

Someone must have been watching over us because nothing happened after that. It seems we were okay. We promised to each other that we would never go near cocaine again. It took the arrests of our close friends to finally show us how sick we had become. If we wanted to go on living our lives, it was really time to get out and stay out.

QUESTIONS

What does Billy's dealing operation tell you about selling drugs on the college campus?

What do you think accounts for his decision to sell drugs? Is he different from other students who didn't and don't sell? Or would everyone, given the opportunity, succumb to the allure of being a drug dealer? Do you wish that Billy had gotten caught? Why or why not? Do you think he will go back to dealing, or was that a phase of his life he won't revisit?

LAW ENFORCEMENT, DRUG COURTS, AND DRUG TREATMENT

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Though matters had been brewing for some time, beginning with the election of Ronald Reagan as president in 1980, the U.S. government and American society entered in earnest into an era of virtually zero tolerance for and maximum enforcement against illicit drugs. In 1986, Reagan renewed Nixon's "War on Drugs," but with greater urgency along with a strident stress on punishment rather than treatment—a war that, indicators say, seems to have been tempered somewhat only with the

arrival of the twenty-first century, especially with the installation of the Obama administration. How has this drug war been carried out? What are its basic foundations, outlines, patterns, dynamics, and trends? And what about the “cracks” or “chinks” in the law enforcement armor—the establishment of drug courts and the institutionalization of drug treatment for addicts and abusers? Are alternatives to strict enforcement and incarceration more effective in reducing our currently high levels of drug abuse? How, why, and in what ways did this ferocious “war” slow down somewhat and possibly even reverse itself a bit in the 2000s? Will this more temperate and moderate policy toward drug crimes continue for the foreseeable future?

DRUG USE AND THE CRIME RATE VERSUS ARRESTS AND INCARCERATION

When we look at the sweep of time over the past four decades, we witness an enormous disconnect between the incidence of drug use and the number of drug arrests and incarcerations. Drug use declined from the late 1970s into the 1980s and 1990s, and remained more or less stable, with a bit of wobbling, during the early 2000s. In sharp contrast, during that period, drug arrests and imprisonments skyrocketed, though this increase seems to have slowed down in the 2005–2010 period. According to the National Household Survey on Drug Abuse and the National Survey on Drug Use and Health, between 1979 and 1991, the percentage of the American population age 12 and older who used at least one illicit drug in the past month (which defines “current” use) declined from 14.1 to 6.6 percent, and between 1992 and the early 2000s, that percentage remained more or less stable at between 6 and 8 percent; in 2008, the figure stood at 8 percent, and in 2011, at 8.7 percent. The percentage taking cocaine in the past month was 2.6 percent in 1979, 3.0 percent in 1985, and 1.6 percent in 1988, and between 1992 and 2011, it remained more or less stable, at between 0.5 percent and 1 percent. (See Table 15-1.)

In stark contrast, however, during that same period, the total number of adult drug arrests tripled; between 1980 and 2006, it rose from 580,900 to 1.9 million. During that stretch of time, the number of defendants who appeared in federal courts on drug charges grew from 7,000 to roughly 30,000, and the percentage of all prisoners incarcerated in federal penitentiaries who were convicted specifically of drug offenses increased from 20 percent to nearly 50 percent. In 1980, there were about 20,000 prisoners incarcerated in state penal institutions for drug crimes (6% of all state inmates); today, there are more than 237,000 (22%). Currently, federal time served for an inmate convicted of a drug

TABLE 15-1 Use of Illicit Drugs in Past Month, Age 12 and Older, Selected Years

	1979	1985	1991	1996	2000	2005	2008	2011
Any illicit	14.1	12.1	6.6	6.1	6.3	8.1	8.0	8.7
Cocaine	2.6	3.0	1.0	0.8	0.5	1.0	0.7	0.5

Source: National Household Survey on Drug Abuse and National Survey on Drug Abuse and Health.

TABLE 15-2 Selected Data on Jail and Prison Population, Number of Persons in Prison and Jail, 1980 to 2011/2012

	Jail	State Prison	Federal Prison	Total	Total U.S. Population
1980	182,288	183,988	25,000	391,276	226.5 million
1990	405,320	684,544	58,838	1,148,702	248.7 million
2000	621,149	1,179,214	131,495	1,931,858	281.4 million
2008	785,533	1,407,002	201,282	2,393,817	304.1 million
2011/2012	744,524	1,382,418	216,362	2,343,304	311.8 million

Number of persons in custody in state prisons by most serious offense, 1980–2010

	Violent	Property	Drug	Public Order
1980	173,300	89,300	19,000	12,400
1990	313,600	173,700	148,600	45,500
2006	667,900	277,900	265,800	112,300
2010	725,000	249,500	237,000	142,000

Total Federal Prison Population (latest tally): 219,122**Types of Offenses (excludes some offenses):**

Drug Offenses: 48%

Weapons, Explosives, Arson: 15%

Immigration: 11%

Property Offenses: 4%

Violent Offenses: 8%

Inmates by Race and Ethnicity (state prisons):**Inmates by Gender (state prisons):**

White: 32%

Black: 36%

Hispanic 22%

Male: 93%

Female: 7%

Total population incarceration rate: 492 per 100,000

Male incarceration rate: 932/100,000

Female incarceration rate: 65/100,000

Disparity, male vs. female: 14 ½ times as high

White male incarceration rate: 478/100,000

White female incarceration rate: 51/100,000

Black male incarceration rate: 3,023/100,000

Black female incarceration rate: 129/100,000

Disparity, black males vs. white males: 6 ½ times

Disparity, black females vs. white females: 2 ½ times

Hispanic male incarceration rate: 1,238/100,000

Hispanic female incarceration rate: 71/100,000

Disparity, Hispanic males vs. white males: 2.6 times

Disparity, Hispanic females vs. white females: 1.4 times

offense, about 55 months, is only slightly less than the length of sentence for arson and explosives, weapons, and racketeering and extortion offenses. Drug offenders, on average, are currently sentenced to only eight months less than violent offenders. The scare over drug abuse that was brewing in the 1970s, and that exploded in the 1980s, bore fruit in the 1990s and early 2000s in the form of strikingly stricter law enforcement. During a stretch of the first decade of the 2000s, we arrested more drug suspects, convicted more drug defendants, and incarcerated more drug offenders than ever before in the nation's history—and for longer sentences.

But in the *short* run, however—in the 2000–2012 period—the rush to incarcerate generally, and to incarcerate drug offenders specifically, has slowed down. For instance, between 2007 and 2008, only 7,300 state and federal prisoners were added to penal institutions, the lowest yearly figure in decades. In addition, throughout the 2000s, we see have seen not only year-by-year slowdowns, but also some years where there's been a decline. For instance, in 2002, state correctional institutions in America held 265,100 convicted drug offenders; in 2003, they held 250,900, a drop of 14,200. And in the following year, 2004, the number of prisoners dropped again, by 1,500. The '80s and '90s race to incarcerate drug offenders slowed down during the 2000s, and seems to have reversed itself: The 2010 figure is 30,000 prisoners fewer than in 2006, in keeping with the 2000s tendency towards decarceration. As we saw back in Chapter 2, Table 2-1, the number of persons who were arrested on drug charges declined between 2006 and 2011 by more than 358,000, from 1.89 million to 1.53 million. But in the *larger* picture—roughly from the 1970s to the beginning of the 2000s—the contrast between the decline in drug use and the huge rise in incarcerating drug offenders specifically and offenders generally has been the big news. Over the *long* run, the upward trend in punitive penology—both for crimes generally and for drug crimes specifically—has been remarkable, and that striking fact demands a close look at the part the law, the police, and the courts play in our drugs-as-crime drama. Whether this big-picture tendency has turned around remains to be seen.

The increases in drug arrests and sentences that took place after the 1980s were not unique to drug offenses alone. Seemingly, in the last quarter of the twentieth century, the country was seized with an almost evangelical fervor to punish offenders of nearly all stripes. Between 1980 and 2000, the total number of prisoners in federal and state penitentiaries increased from 319,000 to 1.6 million. In addition, on any given day, over 740,000 inmates are in jails, institutions that detain men and women who are awaiting trial or serving brief sentences for misdemeanors. In 1980, our rate of incarceration (prisons and jails) was about 140 per 100,000 in the population; by 2008, this figure had grown to 750, an increase of over five times. And, crucially, this rise in the prison population over the past generation or so was *not* due to a rising crime rate. Indeed, while incarceration rates have increased, the crime rate has actually declined—and dramatically. Between 1993 and 2010 or 2011, firearm violence in the United States declined by 40 percent; violent victimization by strangers, by over 75 percent; female sexual violence victimization, by more than 50 percent; and household burglary, by 56 percent (Planty and Truman, 2013; Harrell, 2012; Walters et al., 2013; Planty et al., 2013). To repeat: *At the very time that the crime rate (drug offenses included) had been dramatically declining, our prison population rose sharply.* Again, the decline in the tendency to incarcerate has lagged behind the crime incidence declines; only by the early years of

the twenty-first century did incarceration begin to decline as well. Today, incarceration rates have begun to fall into line with the declining rates of illegal behavior. This has especially been true of non-victim crimes such as drug possession.

PROHIBITION: THE PUNITIVE MODEL

The word “prohibition” has both a specific and a general meaning. In its most specific meaning, *Prohibition* refers to the legal ban on the sale of alcoholic beverages which was in effect in the United States between 1920 and 1933; used in this way, the word is usually capitalized. In its more general sense, *prohibition* refers to banning any activity, service, or product through the criminal law. Prohibition may be referred to as a punitive approach; the *punitive model* calls for a policy of punishing persons who ignore the law and purvey or partake in a specific banned or illegal activity, service, or product.

As it applies to drugs, the word “prohibition” can refer to a ban on any psychoactive substance. With a punitive policy, someone who is engaged in a drug transaction or who possesses a given quantity of an illegal substance may be arrested, prosecuted, convicted, and imprisoned. Under a punitive policy, drug possession and distribution are crimes, much like rape, murder, and armed robbery; a criminal penalty is provided for infractions of the penal code. This penalty could entail a fine, a jail or prison sentence, or probation instead of imprisonment; in some jurisdictions (outside the United States), this may even entail execution. When laws are passed providing penalties for a given offense, this is referred to as *criminalization*.

Currently, the punitive or prohibitionist position argues for the possession and sale of the currently illegal psychoactive substances to remain a crime because, its supporters feel, use will decline thereby. (Or because they feel that such penalties symbolize society’s opposition to such use.) Since staunch or strict prohibitionists support a war on drugs, advocates of the punitive policy may be referred to as *hawks*, a term that is usually used to refer to the more warlike factions in a society. In contrast, legalizers may be referred to as *doves*, since they oppose this “war on drugs,” and believe we should “lay down our weapons” and “declare peace” (Reuter, 1992, p. 16).

The more extreme versions of the punitive approach that are used elsewhere are not legally possible in a society such as the United States, one that values civil liberties, the right of due process, and freedom from unreasonable punishment. For instance, today, very few commentators support the death penalty for drug violations. (A few do, and have so stated in public.) In China, executions of drug dealers is routine; they number in the thousands per year. While lecturing at Beijing’s Medical University, psychopharmacologist Avram Goldstein (2001, p. 296) watched the television coverage of a public hanging of 52 convicted heroin dealers. With a crowd of thousands watching, the governor of the province declared: “This is how we deal with drug traffickers!” Such a draconian penalty is simply not a viable option in the United States. However, some advocates of the punitive policy called for execution of the most serious offenders. In testimony to the Senate Judiciary Committee, Daryl Gates, former chief of the Los Angeles Police Department, testified that casual marijuana smokers “ought to be taken out and shot,” because, he said, “we’re in a war” (Beers, 1991, p. 38). Speculated William Bennett, former federal drug “czar,” on a nationwide radio talk show, perhaps anyone

who sells illegal drugs to a child should be beheaded. “Morally,” he said, “I don’t have any problem with that at all” (Lazare, 1990, p. 25). These were minority opinions in the eighties and nineties, even among criminalizers; their presence today has, in all likelihood, considerably diminished, and very possibly disappeared altogether—a historical relic of a more punitive era.

The reasoning behind the passage and enforcement of drug laws is, presumably, that substance use is a threat to the safety and well-being of the society, and it can and should be eliminated, or at least substantially reduced, by arresting and imprisoning violators. While lawmakers may have noble intentions in mind when drafting and enacting a piece of legislation, as Robert Burns, the Scottish poet (1759–1796), reminds us (his words rendered into modern English), “The best laid plans of mice and men often go astray.” Lawmakers do not always achieve their desired goal, of course, and a variety of unintended, unanticipated, and undesired consequences often result from even the best intentions. Some legislation has caused a great deal more harm than good, as we learn from the lesson of national alcohol prohibition (1920–1933). However, this should not condemn all legislation, for surely there are some laws that have had beneficial results. Hardly anyone would vote to repeal laws against serious crimes such as rape, robbery, and murder, simply because they fail to eliminate the behavior they criminalize, or because such criminalization may sometimes have unanticipated consequences.

Two Punitive Arguments

It should also be noted that there are two entirely different punitive arguments, and many observers confuse the two. Let’s call them the hard or strict and the soft or moderate versions. The strict punitive version makes use of the logic of *absolute deterrence*, while the moderate punitive version uses the logic of *relative deterrence*.

The hard or strict punitive argument says that a given activity can be significantly reduced or eliminated by law enforcement; crime is deterred or discouraged in some absolute or abstract sense by law enforcement. This is the rationale for the government’s war on drugs: Escalate the number of arrests of users, addicts, dealers, and producers; impose longer prison sentences on them; fill the jails and prisons; and eventually, drug use will be “defeated.” The advocates of the hard punitive argument quite literally suppose that drug use can be wiped out, or at least drastically curtailed, by an escalation in arrests and sentencing. Arrest and imprison enough drug users and sellers and use will drop to nearly zero, or at least to tolerable, minimal levels.

In contrast, according to the soft or moderate punitive position, law enforcement is not intended to bring about a defeat of or even a drastic reduction in drug use or abuse. This argument is quite different from the hard or strict criminalizer’s position. It says, in effect, that *in the absence of law enforcement*, a given activity will be much more common than it is with law enforcement. It relies on the logic of relative deterrence because it says that *with* law enforcement—as compared with *no* law enforcement—certain kinds of crime less often take place. If there were no laws or penalties against, say, robbing or assaulting others, more people would engage in such behavior. (Not most people—*more* people.) Law enforcement does not reduce the incidence of these acts as much as *contain* them. Same thing with drug use: Punishing the drug violator is not, and, under most circumstances, cannot be a means of drastically reducing or eliminating

drug use. If there were no drug laws, and no penalties for the production, sale, and possession of the presently illegal substances, trafficking and use would be significantly higher than it is now.

Thus, the soft or moderate criminalizers do not see the inability of law enforcement to “stamp out” drug abuse as a failure of the punitive policy. They view stamping out drug abuse as a futile task, and an absurd measure of the ineffectiveness of the laws against drugs. Unlike the legalizers, who argue that “everyone knows” that the drug laws have failed (Best, 1990; Yett, 1990; Hyse, 1994), the proponents of the soft punitive position base their position on relative deterrence. Do a mental experiment, they say. Imagine removing any and all penalties for any and all drug manufacture, cultivation, possession, distribution, and sale. Anyone claiming that drug use would not rise under such circumstances—contrary to every known currently prohibited pleasurable action—risks absurdity. In looking at the drug legalization debate, the difference between these two versions of the punitive argument should be kept in mind. It will assume central importance in several future discussions.

DRUG CONTROL: THE CURRENT SYSTEM

In the United States at the present time, a range of psychoactive substances are regulated by the criminal law; they are the controlled substances. The *Controlled Substances Act*—also referred to as the *Drug Control Act*—provides for schedules or categories of drugs with varying controls and penalties for violations. To simplify a complex situation, three categories of psychoactive substances or drugs are controlled by the law.

Three Categories of Drugs

The first category of drugs may be referred to as the legal drugs. They are not included in the Controlled Substances Act at all; in effect, the government does not consider them to be drugs. These psychoactive substances are available to anyone over a certain age. A variety of laws, rules, and regulations stipulate the conditions of sale and consumption—where, when, and by whom they may be purchased and consumed. Violations of these laws may result in arrest and/or a criminal fine. Still, these substances may be obtained and consumed under a wide range of circumstances without violating the law. Alcoholic beverages and tobacco cigarettes provide examples of legal drugs. Their sale and use are controlled by law, but they are not mentioned anywhere in the Controlled Substances Act. In addition, some other substances, not strongly psychoactive, are commonly referred to as drugs because they are used for medicinal and quasi-medicinal purposes, but they do not appear in the Controlled Substances Act either. These are the *over-the-counter (OTC) drugs*, such as aspirin, Tylenol (acetaminophen), No-Doz, Dexatrim, and Compoz. Since OTC drugs are not psychoactive and are not used recreationally, we will not consider them here.

The second category of substances is made up of the *prescription drugs*. These are the Schedule II through V drugs in the Controlled Substances Act. As we saw in Chapter 9, thousands of drugs that are psychoactive are available by prescription; these are written by physicians for their patients’ medical and psychiatric problems, illnesses, or maladies. These drugs are controlled more tightly than alcohol and tobacco, which are

completely legal. These drugs are available only by prescription, and only within the context of medical and psychiatric therapy. The schedules define the degree of control over the dispensing of prescription drugs as well as spell out the penalties for violating the law. Schedule II drugs (such as cocaine, amphetamine, and short-acting barbiturates) are tightly controlled; Schedules III through V are less tightly controlled. The sale of any of these drugs for nonmedical purposes—for instance, to get high—can result in the arrest and imprisonment of the physician and the user. In addition to their legally prescribed use, as we saw, a number of prescription drugs mentioned in the Controlled Substances Act that are psychoactive are also widely used illegally for the purpose of intoxication; some are manufactured illegally in clandestine labs, sometimes in the United States, sometimes in other countries, most often Mexico, while some are stolen from legal labs or diverted from legal pharmaceutical channels.

In addition to being prescribed to individual patients for the treatment of specific ailments, controlled pharmaceuticals are widely used for two other populations: (1) the mentally disordered, both as inmates of mental hospitals and as outpatients, and (2) narcotic addicts who are clients or patients of methadone maintenance programs or (less commonly) drug therapy programs. The administration of antipsychotic medication to mental patients and methadone to narcotic addicts provides a partial exception to the rule that American society pursues a punitive approach to drug use. As a general rule, “doves” advocate an expansion of methadone programs, while “hawks” wish to hold the line on maintenance programs or call for serious cuts in their funding.

I’ve sketched out two categories of psychoactive substances: First, those that are legal and so are not controlled by, and do not fall under the provisions of, the Controlled Substances Act (those include alcohol and tobacco), and second, those that are classified as Schedule II through V drugs under the provisions of the Controlled Substances Act. The third category of drugs is made up of those whose possession and sale is *completely* illegal; they are not available, even by prescription. The Controlled Substances Act regards these drugs as having no medical utility and a high potential for abuse; they are classified as Schedule I drugs. (The “no medical utility” is largely a legal fiction, since many medical experts, not to mention the provisions of 18 state laws (plus those in the District of Columbia), regard marijuana, a Schedule I drug, as being medically useful.) These drugs cannot be legally purchased or obtained for any reason whatsoever (except under extremely rare experimental or research conditions). Anyone who possesses, transfers, or sells them automatically violates the law, is subject to arrest, and, if convicted, may have to serve a jail or prison sentence and/or pay a criminal fine. Examples of the Schedule I drugs under federal law include marijuana, heroin, MDMA (or Ecstasy), and LSD; they are always (or almost always) obtained illegally, and are widely used, illegally, for the purpose of intoxication.

The Punitive Approach

For the completely legal drugs, the use of a given substance is not in question; possession and sale for the purpose of just about any and all use—including intoxication—is legal. For the completely illegal drugs, it is the exactly the opposite—possession and sale for no use whatsoever is legal. In the United States, it doesn’t much matter why one wishes to use heroin; even medical uses are against the law.

In sharp contrast to these two, the matter is quite different for the prescription drugs: It is the *use* of the drug (and how it is obtained) that defines its legal status. If used in a manner the government deems medically acceptable and obtained by means of a legal prescription, their possession and sale are legal; if used for what are regarded as illicit or disapproved purposes (say, getting high), or obtained without benefit of a prescription, their possession and sale are illegal. Notice, too, that, technically, drug *use* is not a crime; it is possession and sale that are against the law. When observers refer to the illegal use of prescription drugs, this is shorthand for nonprescription possession and sale for the purpose of illicit use. For Schedule I drugs, although it is possession and sale that is technically illegal—and not use—it is ultimately the use of these substances the law is presumably intended to control.

Marijuana provides two partial exceptions to the punitive policy toward Schedule I drugs. First, as we saw, under their state laws, 18 states (and DC) have elected to permit marijuana as medicine; still, it remains completely illegal under the federal Controlled Substances Act. And second, 14 states have partially decriminalized the possession of small quantities of marijuana. In these states, possession of a small quantity of marijuana (the amount varies from one state to another) is not a crime but a civil offense—a “violation.” If individuals are apprehended with less than the stipulated amount, they cannot be arrested (although their stash will be confiscated), convicted, or serve jail or prison time. For such an offense, they will receive a citation much like a traffic ticket and pay a small fine. In these states, the sale or transfer and the cultivation of marijuana, the possession of more than the stipulated amount, and the *public* use of marijuana remain on the books as crimes; only the possession of small quantities is exempt.

Currently, the predominant legal stance in the United States is punitive toward a wide range of drugs. Many drugs are completely illegal; their possession and sale is controlled through the criminal law in every jurisdiction of America. These are the prohibited drugs. The punitive approach has been pursued more or less continuously in this country since the passage of the Harrison Act of 1914 and subsequent Supreme Court interpretations of this act during the 1920s; the Controlled Substances Act of 1970 carries on this same tradition. In a nutshell, the punitive policy toward drug use is this: To solve the “drug problem” and minimize the harm that certain substances cause, its proponents argue, arrest sellers and users, convict them, prosecute them to the full extent of the law, and incarcerate them. If any nonusers contemplate taking up the habit, the example of what happens to those who get caught should dissuade them from such foolish behavior. As I said earlier, there are variations on a punitive theme.

Regardless of how severe or mild the penalties proposed, the criminal law, arrest, and incarceration—punishment—remain the cornerstones of the punitive approach to drug abuse. It is our current policy for many drugs, and it is a policy that most Americans support. Public opinion polls find that roughly 90 percent of all Americans believe that the possession and sale of the hard drugs should remain illegal, and 75 percent support such a policy even for marijuana—marijuana as medicine excepted, and small-quantity possession excepted. (Very few Americans want someone who is in possession of a couple of joints of weed to be sent to prison.) However, the latter opinion depends on the way the question is worded; a majority of the population agrees with the proposition that marijuana users “should not be arrested.” In the 2002 elections, three state decriminalization bills—in Arizona, Nevada, and South Dakota—were defeated. Only a

temporary setback? Evidence of permanent public opposition to decriminalization? The coming years will answer these questions. But the fact that 24 states have either decriminalized small-quantity marijuana possession *and/or* approved medical marijuana, and, in the 2012 elections, voters in two (Washington and Colorado) endorsed marijuana legalization, almost certainly points to future developments.

The Bottom Line

At present, then, the United States follows the maintenance model for 100,000 to 180,000 or so narcotic addicts who are enrolled in methadone programs; the partial decriminalization model (following state, not federal, law) for small-quantity marijuana possession in 14 states; the legalization model for alcohol and tobacco cigarettes; the medical or prescription model for psychoactive pharmaceuticals such as Valium, Halcion, morphine, Prozac, Thorazine, and, in 18 states, marijuana; and a criminalization or punitive model for its illegal drugs—crack, Ecstasy, PCP, GHB, LSD, and heroin, as well as a variety of prescription drugs, such as barbiturates, amphetamine, and cocaine, which are completely illegal if used recreationally or without benefit of prescription. Also, in an odd twist of history, not all states in which marijuana is decriminalized allow medical marijuana, and vice versa.

To put the matter another way: *All recreational drug use in America is prohibited unless otherwise exempted.* The exceptions are alcohol and cigarettes. Marijuana has a partial exemption in that, even in the decriminalized states, the user cannot possess above a given quantity and, even if he or she does possess less than that, may receive a fine similar to a traffic ticket. (The prescription drugs do not represent an exception to this rule, since, in principle, they are to be used exclusively for therapeutic, not recreational, purposes.) In effect, in the United States, the only drugs that users are completely free to take legally for pleasure (caffeine excepted) are alcohol and tobacco.

DOES PROHIBITION WORK?

In their book, *Drug War Heresies*, Robert MacCoun and Peter Reuter (2001) undertook the most thorough and systematic evaluation of drug prohibition ever attempted. They address the question of whether prohibition works—and in what ways—as well as whether legalization would work better. (We'll have more to say about legalization and decriminalization, or what MacCoun and Reuter call *depenalization*, in Chapter 16.) Is law enforcement effective in deterring drug use? Their answer is not likely to please either the prohibitionists (the hawks) or the legalizers (the doves). After assembling and evaluating the available empirical evidence, MacCoun and Reuter conclude, "It is plausible that drug penalties could be substantially reduced without significantly increasing use" *and* state that "legalization might lead to sizeable increases in use" (p. 74).

In assessing the data on fear of legal sanction as a deterrent to illegal behavior, MacCoun and Reuter conclude that perceived severity "plays virtually no role in explaining deviant/criminal conduct" (p. 83). For instance, variations in marijuana use, they conclude, are not influenced by perceived severity. In the United States, the Netherlands, and Australia, the elimination of or reduction in criminal penalties for small-quantity marijuana possession has had little or no impact on use (p. 96). Almost none of

MacCoun's undergraduates at Berkeley even knew that California had decriminalized the possession of small amounts of marijuana a quarter-century previously (p. 97).

MacCoun and Reuter also examined the objective likelihood of drug arrest and incarceration. As we saw, between 1980 and 2011, state and federal arrests on drug charges rose from 581,000 to 1.6 million—a rise from 5 to 12 percent of all arrests. In 1980, marijuana arrests were 70 percent of the total; in 2011, they made up 44 percent of the total, while heroin and cocaine arrests constituted 30 percent. Over that same period of time, the number of commitments to state and federal prison increased 10 times; roughly a fifth of state and nearly half of federal commitments are for drug convictions. Do these arrests and incarcerations argue for or against the effectiveness of law enforcement in reducing illicit drug supply?

While it is true that drug arrests and convictions have increased over the past generation, it is also true that drug transactions have increased as well. And the risk of arrest for a given transaction is actually quite low. Given the volume of sales and the number of cocaine transactions, for example, the likelihood of prison for a single episode of sale is roughly one out of 10,000—an extremely small risk indeed (p. 27). The cards are enormously stacked against law enforcement. The capacity of law enforcement to stamp out or seriously disrupt drug supply through seizing supplies and arresting traffickers is extremely limited. The reasons are many and varied.

- The drug trade is a multinational enterprise. This means that the drugs sold on the streets of American cities have their origin in dozens of countries around the world. Decentralization means that stemming the drug tide in one country results in smugglers from other countries stepping in and supplying the shortfall. As we saw in Chapter 14, this has been referred to as “push down/pop up” (Nadelmann, 1988, p. 9). The elimination of one competitor means greater sales for those that remain, and incentive for new actors to come onto the drug trade stage.
- Illicit drugs can be produced in extremely small spaces in many different locales around the globe. The world's total production of illicit heroin is made from only 5 percent of the world's opium production, most of which is legal. The entire world's heroin supply can be grown on roughly 50 square miles of poppy fields, in tens or hundreds of thousands of scattered fields that are virtually immune to surveillance. Less than 1,000 square miles of land is devoted to the world's illicit coca production, and this production can be shifted around to avoid detection.
- The drug trade is a major employer: It makes a significant contribution to the economy. Considered strictly from its economic impact, as I pointed out, selling drugs is theoretically no different from any legal business. And it isn't only the top distributors who profit, but anyone who derives employment from it. The “ripple effect” is enormous; when drug dealers spend money on the legal sector, they generate jobs for the entire economy. If the drug trade were wiped out in countries in which it is a major sector of the economy, billions of dollars and millions of jobs would be lost.
- The drug trade is a violent enterprise. Major smugglers command armies that are larger in personnel than many U.S. drug agencies, such as the DEA. Judges and police are bribed or intimidated into cooperating with illicit operations. In some countries, individual reformers are killed, indeed, their entire families are killed, resulting in compliance that is simply not possible in the legal sector.

- Intercepting a substantial proportion of the illegal drugs at the border of the United States is a virtual impossibility. According to the DEA in its publication “Drug Trafficking in the United States,” during the first decade of the 2000s, year-by-year people enter the United States by air on 675,000 flights; 6 million come from abroad by sea on 90,000 merchant and passenger ships which contain 400 million tons of cargo; and 370 million people enter by land in 116 million vehicles. Counting the many inlets, islands, and harbors, there are 90,000 miles of coastline where small, drug-laden boats can dock silently, surreptitiously, without attracting attention. Moreover, smugglers are extremely inventive in hiding illicit cargo.

Officials at the Department of Defense commissioned a study by the RAND Corporation to evaluate the feasibility of “sealing off” the borders from incoming illegal drugs (Reuter, Crawford, and Cave, 1988). The report concluded that it would be “extremely difficult” to reduce cocaine consumption in the United States by even as little as 5 percent, even if the government were to put into operation the most stringent and thorough interdiction program possible. Drug smuggling, the report stated, is too sophisticated, decentralized, diversified, flexible, versatile, adaptable, resourceful, and intelligent an operation to be slowed down by a few—or many—seizures and arrests. It simply can’t be done, the RAND report concluded.

Once again, we are forced to face the distinction between absolute and relative deterrence. “Absent law enforcement,” say the authors of this report, “the cost of moving a kilogram of cocaine [for instance] from the wholesale to the retail level,” is “close to the cost of marketing aspirin.” The huge difference between the cost of a drug at its point of origin and the cost to the ultimate customer “is presumably a consequence of domestic law enforcement” (p. 2). In sum, “most studies have only examined variations in levels of enforcement, rather than compare enforcement to its absence.” And, “though the availability and price of drugs are only modestly affected by variations in the current levels of enforcement or interdiction, they would likely be more dramatically affected by the complete elimination of enforcement brought about by legalization or by substantial reductions in the penalties for use” (MacCoun and Reuter, 2001, p. 78). Full legalization, decriminalization, or depenalization, agree most observers, is almost certain to produce substantially lower prices, greater availability, and higher levels of use for most of the currently illicit drugs. In that respect, relative deterrence works.

To the extent that law enforcement can influence price, contrary to what some drug legalization advocates have claimed, both legal and illegal drug use is *not* completely inelastic and *is* sensitive to price. The higher the price, the lower are levels of use—although for each substance or product, the elasticity index is somewhat different. For instance, for cars, it is -1.5 , which means that for every 1 percent increase in price, automobile sales decrease 1.5 percent; for movies, the elasticity index is -3.5 (p. 76). Closer to home, estimates for cigarettes “cluster around” -0.4 and for alcohol, -0.7 . The sale of cigarettes, the most compulsively consumed of these products, is least sensitive to price—but sensitive nonetheless.

Obviously, for legal products, price can be set by the market. Do illegal drugs obey a different economic law? Is the demand for heroin and cocaine completely inelastic, totally unrelated to cost? Though law enforcement does not prevent or seriously disrupt illicit drug supply, it does make obtaining illegal drugs more difficult and more expensive

and, hence, lowers use. Remarkably, demand for illegal drugs *is* sensitive to price. For a highly addictive, illegal drug such as heroin, elasticity is lower than for the legal drugs—in the -0.2 to -0.3 range. And for marijuana, a drug “with much lower dependency potential,” this figure is in the -1.0 to -1.5 range (p. 76). Estimates for cocaine exhibit a much wider range from one study to another, from -0.7 to -2.0 (p. 77). To the extent that law enforcement can influence price, price can influence demand—and, hence, extent and volume of use.

We are forced to return to our distinction between relative and absolute deterrence. If there were no arrests, no seizures, no inspections at the border, no eradication programs, it is certain that the availability of drugs would be vastly greater than it is currently—and, in all likelihood, use would be greater as well. (Yes, relative deterrence does work.) But relying on arrests, seizures, and inspections to eradicate or drastically reduce availability and, hence, use, is a fool’s errand, a delusional enterprise. The legalizer’s argument expresses this position well: The punitive drug policy has been in place since the 1920s; law enforcement has consumed hundreds of billions of dollars in federal, state, and local budgets, investigating, arresting, and incarcerating millions of users—a fifth of all prison inmates, half of all state prisoners—and yet the nation has a core of nearly 20 million current illicit drug users. (No, absolute deterrence does not work.) Once again, law enforcement cannot possibly “wipe out” or drastically reduce illicit drug supply or demand. To the extent that law enforcement “works,” it prevents a flood from becoming a tidal wave.

DRUG COURTS: TREATMENT, NOT PUNISHMENT

In 1989, during the crack epidemic, at a time when the criminal courts were being swamped with cases, Dade County, Florida, officials decided to adjudicate some of their drug defendants in a separate court system. The county instituted a *drug court* to divert defendants charged with narcotic offenses away from the penal system into an alternate program of counseling, therapy, education, job training, close monitoring—including regular urine tests—and threats of return to jail or prison if conditions of the program were not met. Drug courts bypass the usual adversarial system, with defense and prosecution, creating a system in which the judge “addresses each defendant directly,” requiring each to respond directly to him or her. In drug court, “all the justice players are on the same team, making the same demands on the defendant and standing ready to impose the same penalties for noncompliance” (Finn and Newlyn, 1997, p. 360).

In recent decades, the number of drug diversion courts has grown from the one in Dade County to 2,038 across the country (as of July 2009); several hundred more are in the planning stages. Do drug courts work? Do they reduce drug abuse among defendants? Are they more effective than a jail or prison sentence? Do they save taxpayers money? Do they reduce the crime rate? Should the drug court program be expanded? Many researchers have examined the effectiveness of drug courts empirically and in great detail. In June, 2006, the U. S. Department of Justice’s National Institute of Justice issued a summary report, *Drug Courts: The Second Decade*, and in May 2004, the National Drug Court Institute published its findings in *Painting the Picture: A National Report Card on Drug Courts* (Huddleston, Freeman-Wilson, and Boone, 2004). The conclusions of the

studies these reports discuss are fairly consistent; although variation exists with respect to rigorousness of these programs, well-run drug court programs are cost effective in reducing recidivism, criminal behavior, and cost to the community.

Still, the program has its critics. Two types of critics oppose drug courts. The first is the conservative who believes that all drug offenders should be punished with incarceration, and that alternative programs of therapy and counseling are simply a way of letting criminals “get off the hook.” The second is the drug legalizer or libertarian who believes that the state has no right to hold the threat of imprisonment over the head of the user; after all, do we threaten the alcoholic with imprisonment if he or she doesn’t comply with the mandates of a treatment program? (Many radicals as well as right-wing libertarians believe that, by their very nature, any programs sponsored or endorsed by the government are suspect and probably harmful.) The addict needs treatment in the same way the cancer patient does, say legalizers. Treatment should be voluntary, not coerced, and prison should not hang over the head of the addict like a Sword of Damocles.

At the beginning of this chapter, I referred to drug courts as a “crack” or a “chink” in the armor of drug law enforcement. Drug courts represent “a paradigm shift away from a predominantly punitive approach to one that focuses on treatment, investment in human potential, second (and third) chances, and restoration” (Goldkamp, White, and Robinson, 2001, p. 28).

How should we evaluate the drug court program? What constitutes success? The drug court program can be evaluated with respect to the achievement of two goals—individual and organizational. Individual goals are those that the program sets for the arrestee; they include a reduction in individual drug use and abuse and criminal behavior, and obtaining some form of employment. Organizational goals represent reduced community-wide rates of criminal recidivism and savings to the society in the form of the lower cost of treatment in comparison with incarceration. Have drug courts met these goals?

Drug courts are municipal and county-wide entities, and hence unstandardized and highly variable from one jurisdiction to another. As a consequence, it is difficult to characterize their operation and effectiveness, taken as a whole. Available descriptions and evaluations tend to focus on specific drug courts rather than drug courts generally. Nonetheless, enough programs have been described and analyzed by researchers for discernible patterns to emerge.

All drug courts set criteria for eligibility. Miami’s drug court is typical. To qualify for the program, arrestees must be charged with possession or purchase of a controlled substance. Defendants charged with trafficking, those with a history of violent crime, or those who have been convicted of more than two nondrug felonies are not eligible for the program (Finn and Newlyn, 1997, p. 358). To the extent that other courts set broader or less stringent criteria for eligibility (accepting dealers, violent offenders, and/or defendants with more felony convictions), they will include in their programs more higher-risk defendants; therefore, officials must be satisfied with correspondingly lower levels of success. Moreover, including higher-risk arrestees in a program will inevitably result in larger numbers who fail—who are engaged in crimes in the community rather than being incarcerated. To the extent that a court sets more stringent criteria, its success rate will be higher, but fewer defendants will profit from the program, if it is effective. The community has a stake in and should be aware of the criteria the courts set for drug court inclusion, because these criteria impact on the community.

Measuring the effectiveness of drug courts is not as simple as it sounds. Most studies compare graduates of the program—arrestees diverted from the criminal justice system into the drug court who have completed a year in the program—with drug court dropouts. And in study after study, drug court “graduates” have lower rates of drug and crime recidivism than drug court dropouts. But since dropouts are already drug court failures, we assume that they will fail in other ways as well, including using illicit drugs and committing crimes. Basically, these studies “show that the successes succeed and the failures fail” (Goldkamp, White, and Robinson, 2001, p. 32). To understand the impact of the drug courts, we need a more meaningful comparison between defendants who have graduated from a drug court and comparable defendants who were subject to more traditional, and punitive, criminal justice treatment.

All qualifications registered, most observers agree that the drug courts have been successful in meeting both their individual and their organizational goals. One study (Peters and Murrin, 2000) examined the recidivism rates of drug court graduates with a matched or comparison sample of probationers and a sample of nongraduates of the drug court program. One measure of success: Six in 10 of the enrollees in the drug court program were retained after a period of a year (p. 74). The average number of arrests per 100 participants in the year following the program “start date” was 22 for drug court graduates, more than 77 for a matched sample of probationers, and over 156 for nongraduates of the program. The number of felony arrests in the 30 months following entry into the program was just under 30 for graduates, 58 for matched probationers, and 109 for nongraduates. The proportions arrested in the 12 months following the program start date were 20 percent, 43 percent, and 79 percent, respectively; for the proportion arrested in the 30 months following the start date, the figures were 48 percent, 63 percent, and 86 percent, respectively (p. 83).

One of the very few drug court studies of its type randomly assigned eligible clients who were drug-involved, nonviolent offenders to either drug treatment or treatment as usual—jail sentences, parole, and probation. Drug court clients were more likely than controls (“treatment as usual”) to participate in drug treatment and drug testing and less likely to be rearrested. When “differences in the opportunity to reoffend are taken into consideration, controls were rearrested at a rate nearly three times that of drug treatment clients” (Gottfredson and Exum, 2002, p. 337).

With some variation in outcomes, and sometimes with slightly less impressive figures when key variables are controlled, a substantial number of other studies have found the same thing. To summarize, the results of the available research indicate that “the drug court is an effective intervention.” Drug court participants tend to have significantly lower re-arrest rates than felony drug offenders who go through “traditional adjudication and sentencing” (Spohn et al., 2001, p. 171). However, programs usually work only if there are frequent urine tests, routine appearances before the judge, active enrollee treatment participation, and the threat of sanctions—jail or prison time—if the enrollee does not meet program goals (Goldkamp, White, and Robinson, 2001, p. 67). And by reducing individual recidivism rates, drug courts also meet collective, organizational, or community goals by lowering the crime rate and, because drug courts are strikingly less costly than incarceration, saving the government and the taxpayer a great deal of money. One estimate has it that drug court costs \$3,500 per defendant per year, while it costs up to \$44,000 to incarcerate a convict for a year (Unze, 2007). It seems clear that drug courts represent an idea whose time has come.

DRUG TREATMENT

Drug treatment programs represent another “crack” in the armor of a strict “lock ‘em up and throw away the key” policy toward illicit drug use. Indeed, drug courts and treatment programs are interlocked, since nearly half of all enrollees in treatment programs were referred by the criminal justice system. This means that drug offenders were given a choice: treatment or prison. They are being treated in preference to being incarcerated. The effectiveness of drug courts and treatment programs affirm that it is far better to treat drug abusers than to incarcerate them. Many observers view drug treatment as an alternative to—indeed, a rejection of—the “hawkish” arrest-and-incarcerate model.

Drug treatment is based on a pathology or *medical model*. It regards abuse and/or addiction as a disease much like cancer: There’s something wrong with the abuser/addict; he or she is “sick” in some way and in need of therapeutic intervention, or “treatment.” One set of assumptions held by the medical model is that the drug has seized hold of the abuser, the abuser has lost control of his or her behavior and is no longer morally responsible for his or her drug use. The medical model contrasts sharply with the moral model, which is the basis of the punitive or prohibitionist policy toward illicit drug use/abuse. Proponents of the moral model argue that the user/abuser/addict is very much responsible for his or her actions and has chosen to engage in behavior that is immoral, a violation of what should be regarded as right, good, and proper. Enactors of such behaviors must be punished to teach them and others a lesson.

Drug abuse may or may not be a disease or something like a disease; the abuser may or may not have lost control of his or her behavior; and the abuser may or may not engage in “immoral” behavior. These considerations are secondary to a far more important issue: Do treatment programs work? Do they get abusers and addicts to discontinue behavior that is both self-destructive and harmful to the society as a whole? And are they cost effective? Do they save the taxpayers money, as compared with the costs of drug-related medical care, crime, and property loss? Speculating on the moral, philosophical, or ideological status of drug use is a separate and independent issue from whether and to what extent drug treatment works. The question of free will is probably unanswerable, and whether or not addiction is a disease depends on what we mean by “disease” in the first place. But the attempt to unravel and solve these issues is unproductive with respect to assessing the effectiveness of drug treatment programs.

Evaluating Program Effectiveness

It is something of a cliché that most enrollees in self-help or treatment programs fail to change their behavior. In a given attempt, most cigarette smokers fail to give up cigarette use; over the long run, most weight loss programs fail—the majority of enrollees fail to take and keep off significant poundage; after treatment, most alcoholics go back to compulsive, destructive drinking; and so on. Careful studies of the majority of treatment programs show that they have a failure rate of 70 to 90 percent, depending on the criteria used.

Yet, when psychologist Stanley Schachter interviewed the residents of a village on Long Island, in New York State, three-quarters of those who were smokers in the past had been successful in quitting permanently (Brody, 1983, p. C1). One possibility is that these smokers tended to be well educated, and a high level of education is related to

successful cessation of smoking. But the experience of the drug-dependent Vietnam veterans, most of whom did not have high levels of education, indicates that abstinence is not as difficult as the dismally high rates of failure of treatment programs suggest. Fully 86 percent of soldiers dependent on heroin in Vietnam discontinued their use of the drug (Robins, Davis, and Nurco, 1974, p. 39). Moreover, almost all of them either gave up narcotics voluntarily or did not revert to use after “brief forced detoxification subsequent to their discovery” (p. 43; Robins, 1973). Only 5 percent of the addicts who gave up narcotics did so in a formal treatment program. What these and other findings suggest is that abusers—whether of tobacco, alcohol, food, drugs, gambling—are a very unrepresentative “tip of the iceberg.” They represent only those abusers who were unable to quit on their own, the “dregs” of treatment programs, that segment of the abusing population that has been most resistant to treatment. What about the success rates of drug treatment programs?

Before looking at the findings from the many studies that have examined drug treatment program effectiveness, we must establish several important qualifications.

First, reducing drug use or abuse to zero is an extremely unrealistic goal. It is crucial that we measure effectiveness by *reductions* in use, not total abstinence. Almost inevitably, if total abstinence is the goal, the overwhelming majority of—if not all—programs will be found to fail.

Second, there will be some variability in effectiveness from one program to another. Some are better administered, monitor their enrollees more carefully, or are more adequately staffed or better funded than others. The big picture is important here: how programs perform around the country rather than in one particular instance.

Third, one type of program may work better for one particular type of client than for another: younger versus older, male versus female, polydrug abuser versus the exclusive heroin or crack addict, educated versus uneducated, and so on. It could be that programs need to be tailored or geared to the characteristics of their clientele.

Fourth, drug treatment programs are not in the business of performing miracles. Their clientele often have medical problems and psychiatric disorders; tend to be relatively uneducated, unemployed, underemployed, or intermittently employed; are frequently involved in a life of crime. Also, most are polydrug drug users, are dropouts or failures at more than one treatment program, and, close to half the time, are abusers of alcohol as well as drugs. Most of their enrollees are multi-problem clients. In fact, the more severe the client’s problems when entering a drug treatment program, the lower the likelihood of success. Drug treatment programs are unlikely to turn people with multiple problems into law-abiding, hardworking, responsible, abstemious citizens. Once again, the goal must be a reduction in rather than a complete elimination of problem behavior.

How do we measure drug treatment success? What are the goals we want these programs to accomplish? In the 1800s, countless quack cures for drug abuse were announced, each to be unmasked for the fraud it was. In the 1950s, Synanon, a therapeutic community program, was trumpeted as a cure for numerous former heroin addicts, who—or so the claim went—were drug-free for a year or more during treatment. The problem with such claims is that they were always made in the absence of control groups, not to mention verifiable evidence. Flawed as they were, during the 1960s, the pioneering methadone maintenance programs were subject to empirical scrutiny and found to be

effective (Dole and Nyswander, 1965). Subsequent research found these early claims to be inflated, due to their selection of clients with an optimistic prognosis and their less-than-careful tabulation of dropouts (Kleinman and Lukoff, 1977). Nonetheless, these early methadone maintenance programs have withstood the challenge; they have grown in enrollments and remain one of several viable treatment options. And the early studies examining these programs have enabled later researchers to establish meaningful criteria with which to evaluate drug treatment programs. What criteria should we use to evaluate the effectiveness of a drug treatment program?

The reduction in the use of illicit drugs must be regarded as paramount here; secondary measures are a reduction in the use of alcohol, a reduction in criminal activity, and the acquisition of an education and marketable skills, along with a rise in employment. All of these must be listed as significant (Hubbard et al., 1989, p. 5). And in an age in which budgetary constraints are ever-present and considerations of the bottom line are deemed essential, we are forced to ask, are these programs cost effective? Do they save taxpayers money? Does the society come out fiscally and economically ahead by funding drug treatment programs?

Types of Programs

Four principal types of drug treatment programs, or treatment modalities, currently prevail in the United States: (1) methadone maintenance; (2) the therapeutic community (or TC); (3) outpatient, drug-free programs; and (4) self-help peer groups, such as Narcotics Anonymous (NA) and Alcoholics Anonymous (AA). Each has strengths and weaknesses; each is appropriate for a somewhat different clientele. The therapeutic community is much more expensive than the other two programs and seems to work best for younger, polydrug clients. Methadone maintenance is used exclusively for narcotics addicts and seems to work best for older clients who have tried a number of programs and failed to make a go of it. In addition, compared with the other two programs, very few maintenance clients are referrals from the criminal justice system. Drug-free, outpatient programs work best for clients for whom the other two are inappropriate. It is clear that the principle “one size fits all” is wrong. Instead, a “full range of settings is necessary to treat the variety of drug abuse patterns currently prevalent” (Hubbard et al., 1989, p. 98).

Methadone maintenance is used solely and exclusively to treat narcotic addicts or abusers, or, in the case of recently released convicts, former narcotics addicts or abusers (or polydrug abusers who have a primary dependence on one or more narcotics). Methadone is a synthetic narcotic that is administered to clients who are dependent on an opiate drug. Enrollees in these treatment programs either are stabilized on a particular dosage of methadone or are withdrawn from methadone, in stages, over a very long period of time—months, even years. Hence, when they are treated in the program, they are physically dependent on the methadone instead of the illicit narcotic (heroin or one or more of the other narcotics) that they were dependent on previously. If patients were to suddenly withdraw from the methadone, they would undergo painful abstinence symptoms, just as they would have previously done had they been withdrawn from heroin. To be plain about it, these clients are methadone addicts. And since methadone is a long-acting drug (unlike heroin, which is a relatively fast-acting drug), the withdrawal symptoms with methadone are likely to be even more prolonged and painful than those with heroin.

If methadone maintenance programs were to be evaluated on the criterion of whether the addicts achieve a drug-free existence, they would always be judged a failure because by definition, on the methadone maintenance program, the addicts remain addicted.

Two types of methadone maintenance programs exist: the metabolic or adaptive, which administers high doses for long periods of time, in theory, for the remainder of the addict's life; and the change- or abstinence-oriented, which administers smaller doses for shorter periods of time and aims eventually to withdraw addicts from methadone altogether. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), there are about 180,000 enrollees in methadone maintenance programs nationwide.

Therapeutic communities (TCs) are residential or live-in programs. Phoenix House, Daytop Village, and Odyssey House are some of the hundreds of TC-type programs operating nationally. TCs operate under the assumption that a drug-free existence is not only a realistic goal for recovering drug abusers, but an absolutely necessary one. (Tobacco use, presumably, is excluded.) The view of all TC programs is that substance abuse is not the abuser's central problem. Instead, drug abuse is symptomatic of an immature, hedonistic, self-centered personality, a disorder of the whole person, not a single aspect of the person.

Outpatient drug-free programs do not include medication (such as methadone) in their treatment modality; they enroll clients who live in the community; and they administer some form of therapy and counseling in their treatment.

Peer self-help programs such as Narcotics Anonymous (NA) and Alcoholics Anonymous (AA) are cost-free, not-for-profit organizations made up of thousands of local, autonomous groups, each of which is self-supporting. AA and NA are based on "The Twelve Steps," which require that the member acknowledge powerlessness in the face of substance abuse temptation, and submission to a "Higher Power."

Do these programs work? Do they help enrollees reduce their current levels of drug abuse? Do they save the society money, save lives, reduce crime in the community? The earliest full-scale evaluation study of the effectiveness of drug treatment programs is referred to as DARP, the Drug Abuse Reporting Program; it looked at clients enrolled in treatment programs between 1969 and 1972. Its conclusions were that "treatment in methadone maintenance, therapeutic communities, and outpatient drug-free programs [is] effective in improving post-treatment performance with respect to drug use, criminality, and productive activities" (Simpson and Sells, 1982, p. 7). DARP spawned two more recent data-collection efforts, TOPS and DATOS.

TOPS

In the 1980s, a team of researchers (Hubbard et al., 1989) conducted a study that is referred to as TOPS—Treatment Outcome Prospective Study. This study examined the treatment outcomes of over 11,000 drug abusers who entered treatment programs nationwide between 1979 and 1981. It was the most thorough, systematic, and detailed investigation ever undertaken on the subject. (TOPS looked only at methadone maintenance, therapeutic community, and outpatient drug-free program outcomes; it did not examine the outcomes of peer-oriented self-help programs such as AA and NA.) Its sample was different from that of DARP, due in large part to the changing patterns of drug use

between the late 1960s and the early 1980s. The major difference was that, while half of DARP's sample was made up of daily narcotics abusers, only a fifth of TOPS's sample was, indicating the declining role of heroin over time as the abuser's drug of choice. The study reported the following:

For all treatment modalities, the longer the clients remained in the problem, the greater the likelihood that they would discontinue their use of illicit drugs (Hubbard et al., 1989, p. 125). In addition:

- Methadone maintenance programs enroll clients for a significantly longer period of time than the other programs. In TOPS, the average length of stay of enrollees in methadone maintenance programs was 38 weeks; for TCs, it was only 21 weeks, and for outpatient, drug-free programs, it was 15 weeks (Hubbard et al., 1989, p. 95). This finding indicated that a client's motivation is a crucial factor in achieving treatment goals.
- For all three programs, on average, enrollees reduced their use of illicit substances. There were many failures, of course; in fact, the majority of enrollees failed to be abstinent during and after treatment. But for all three programs, the total volume of illegal drug use was reduced. For methadone maintenance programs, roughly half were abstinent for a year during treatment, and the sample as a whole reduced their illegal drug intake by 70 to 80 percent compared with pretreatment levels (p. 125). On average for TC clients, the volume, frequency, and complexity (the use of a variety of drugs) declined substantially. For example, more than a quarter of TC enrollees were regular users of cocaine in the year before entering the program; three to five years after treatment, only one in 10 were (p. 109). Improvements for the outpatient, drug-free program were not quite as impressive but they were significant nonetheless.
- The reduction in predatory crime is significant for all three programs, declining to one-half to one-third of their pre-treatment levels. Two-thirds of those who reported engaging in predatory crime before treatment had ceased involvement in the year after treatment (pp. 128).
- Employment figures were not nearly as impressive as the reductions in drug use and criminal activity. For methadone maintenance, there was virtually no improvement. For TCs, prior to treatment, 15 percent had been employed for a year; after treatment, this rose to 40 percent. For outpatient, drug-free programs, this figure rose from one-quarter to one-half—a significant improvement, but hardly an employment cure-all for the drug abuser (p. 129).
- Changes in levels of alcohol consumption were extremely small and hardly encouraging. One-fourth of methadone maintenance clients used alcohol at abusive levels before treatment; three to five years later, one-fifth did. For TCs, the comparable figures were one-third to one-quarter. And for drug-free, outpatient programs, they were just over 3 in 10 before, just under 3 in 10 after (p. 140). Treatment programs change the alcohol abuse picture practically not at all for clients.

A consideration of the bottom line emphatically demonstrates that drug treatment *works*. With respect to the total amount of money saved—in terms of productivity, employment, death, disease, hospital care, money stolen, and so on—versus the cost of these programs—*any* and *all* of these programs—society gets back roughly three or four

dollars in benefits for every dollar spent (Hubbard et al., 1989, Chapter 7). The real bottom line, viewed in cost-benefit analysis terms, is that drug treatment saves much more than it costs. Cutting drug treatment programs is extremely “penny wise and pound foolish” and costly policy.

DATOS

DATOS (Drug Abuse Treatment Outcome Study) interviewed 10,000 clients enrolled in programs between 1991 and 1993 in 96 programs in 11 cities (Hubbard et al., 1997); the program is ongoing, and continues interviewing clients to this day. The researchers studied enrollees in the same three types of treatment programs: methadone maintenance programs, therapeutic communities, and outpatient drug-free programs. In addition, they looked at clients in a new program designed mainly for cocaine abusers, the short-term inpatient program. (Unlike DARP and TOPS, researchers excluded clients enrolled only a week in a treatment program.) Like the change in sample composition from DARPS to TOPS (abusers who were in treatment programs in the late 1960s versus those in the early 1980s), DATOS’s sample differed from that in TOPS. DATOS clients were older (the majority were over 30), more likely to be female (roughly one-third), more likely to be referred by the criminal justice system (43% versus 31%), and much more likely to use cocaine. Cocaine was the main drug abused by DATOS clients. Compared with the TOPS sample, twice as many methadone maintenance program enrollees and six and a half times as many TC enrollees abused cocaine (Hubbard et al., 1997, pp. 262–263).

With a few exceptions, in general, the DATOS findings confirmed those drawn by TOPS: The longer the client stayed in a program, the more all forms of drug abuse declined, indicating that motivation plays a powerful role in treatment success. Methadone clients stayed in their programs longer than was true of enrollees in the other treatment programs. Drug use of all kinds declined significantly after treatment as compared with before. Participation in predatory crime declined significantly—by more than half—after treatment. Improvements in levels of employment were modest and for methadone maintenance (and short-term inpatient therapy), practically nonexistent. Alcohol abuse was reduced not at all for methadone clients, but cut in half for TC, outpatient drug-free, and short-term inpatient program patients (pp. 266–268). One study that focused on cocaine abusers (Simpson, Joe, and Broome, 2002) found that daily alcohol consumption was cut by two-thirds one year (6% versus 22%) and five years after leaving the program. Ties to the community (religious, occupational, marital, family, friendship networks) were strongly related to program effectiveness. Once again, the available data suggest that treatment works and that it is cost effective, saving the society, and the taxpayer, countless *billions* of dollars. Each subsequent follow-up of DATOS samples reveals the same outcomes: Treatment lowers drug abuse and crime, but the bias toward patients with longer retentions in the program remains a methodological issue (Hubbard, Craddock, and Anderson, 2003).

TOPS was conducted (1979–1981) before the AIDS crisis; DATOS, conducted in the early 1990s, is the first study of the effectiveness of drug treatment after the AIDS epidemic broke. Hence, DATOS included a question on risky sexual behavior as a possible source of AIDS. One criterion of an effective drug treatment program is reducing the incidence of risky or HIV/AIDS-causing sexual behavior. The study measured at-risk

sexual behavior by “sexual intercourse with two or more partners without always using a condom.” For the sample as a whole, risky sexual behavior was cut not quite in half (Simpson, Joe, and Broom, 2002, p. 267), indicating that the effectiveness of treatment extends beyond the usual quartet of drugs-crime-employment-alcohol.

DATOS has continued to collect data into the twenty-first century on the effectiveness of drug treatment programs; the conclusions of these more recent studies, still ongoing, are essentially the same as those of the earlier waves of studies. Independently, other researchers (Huddleston, Freeman-Wilson, and Boone, 2004; Simpson, 2003; Carey and Finnigan, 2006) have reached precisely the same conclusions. (Findings from 75 DATOS-based publications can be found online at www.datos.org.) In addition, a parallel study conducted in the United Kingdom, NTORS (the National Treatment Outcome Study), arrived at essentially the same findings: Drug treatment works, and it is a sound and wise investment. Two researchers compared NTORS findings in the United Kingdom with the DARP, TOPS, and especially DATOS data, and drew out five “grand designs” in what the evidence says about what works in treatment (Franeý and Ashton, 2002): (1) Cocaine treatment saves money. (2) Despite budget cuts that programs have sustained over the years, outcome performance remains good. (3) In the long run, more experienced clients are more successful in treatment programs. (4) “Longer is better”; retention in treatment programs is the key to positive outcomes. (5) “Mutual aid sustains gains”; joining in adjunct treatment programs boosts the chances of success. Says Dwayne Simpson, director of the Institute of Behavioral Research at Texas Christian University: “We know it works; now let’s make it work better” (Franeý and Ashton, 2002, p. 17).

SUMMARY

Between 1980 and the early 2000s, on a per population basis, while the crime rate has plummeted, the rate of incarceration in the United States has increased three and a half times. The reason for the increase is threefold: parole is less likely to be granted; if granted, parole is more likely to be revoked; and drug offenders are more likely to be incarcerated. During the past two or three decades, while most indicators of drug use have declined, arrests and incarceration rates for drug possession and sale specifically have sharply increased. Since 1970, the total number of prisoners in state and federal penitentiaries has increased by seven times, and the number and percentage specifically for drug offenders has increased faster than the total. The lengths of sentences for non-violent drug offenses are very similar to those of many violent offenses.

The term “prohibition” refers to a punitive or criminalizing approach to dealing with troublesome behavior. Under drug prohibition, criminal penalties are applied to the possession and sale of controlled substances. Prohibitionists believe that the application of criminal penalties will reduce or contain drug use. The punitive or prohibitionist argument comes in two very different varieties: the strict and the moderate punitive varieties. The strict punitive version makes use of the logic of *absolute* deterrence, while the moderate punitive version is based on *relative* deterrence. The absolute deterrence argument holds that punishment can wipe out or substantially reduce drug use; the relative deterrence argument holds only that in the absence of punishment—in the absence of drug laws, arrests and incarceration—drug use would be comparatively higher.

The moderate deterrence argument holds that the currently high rates of drug use do not provide evidence for the fact that drug prohibition has failed. Indeed, the opposite is the case: The drug laws deter enough drug use to make the enterprise a success; laws and law enforcement *contain* drug use, but they cannot wipe it out.

The United States harbors a mixture of drug policies for different drugs. Its drug laws, principally the Controlled Substances Act of 1970, define three different universes of drugs. First, there are the legal drugs, like alcohol and tobacco, which are regulated, available to anyone above a certain age but bought and sold under restrictions set by law; the Controlled Substances Act does not regard them as drugs at all. Second, under the Controlled Substances Act, there are the Schedule II through V drugs, which are legal if obtained via prescription and used for medicinal and psychiatric reasons, but illicit and illegal if obtained without a prescription and/or used for recreational purposes. These drugs include cocaine, methadone, the amphetamines, most of the sedatives and tranquilizers, and most of the narcotics.

And the third type of drug under the provision of the Controlled Substances Act is the Schedule I drugs, which are completely outlawed. They include marijuana (legal as medicine under state law in 18 states as well as in Washington, DC), LSD, heroin (legal in medical treatment in the United Kingdom), and MDMA (Ecstasy). The possession and sale of such drugs is automatically a criminal act. One exception: The possession of small quantities of marijuana has been decriminalized in 14 states and in several Western European countries. An enormous volume of research has been conducted on the impact of drug prohibition. Two policy analysts, Robert MacCoun and Peter Reuter (2001), reviewed, summarized, and analyzed much of this literature. Their conclusion would be pleasing neither to the staunch advocates of the war on drugs (the hawks) nor to the legalizers (the doves). Increasing the severity in penalties for drug possession and sale has no deterrent effect whatsoever. “Sealing the borders” of the United States does not reduce consumption because the country’s borders are extremely porous. On the other hand, following the relative deterrence argument, removing all criminal penalties on illicit drug possession and distribution would, in all likelihood, increase use of and harm caused by the currently banned substances.

After more than a quarter-century of fighting President Ronald Reagan’s “War on Drugs,” we’ve learned that criminal penalties for drug trafficking do increase the cost of drugs, and use is responsive to cost. Once again, the distinction between “absolute” and “relative” deterrence is crucial. Full legalization, or a legalization, decriminalization, or depenalization policy of any kind, is almost certain to produce lower drug costs, greater availability, and higher rates of drug use and abuse. But, once again, law enforcement cannot wipe out or drastically reduce drug use. To the extent that drug law enforcement “works,” it merely acts to keep illicit drug use from becoming too cheap, too available, and too attractive. Law enforcement contains or keeps the lid on rampant use. Perhaps that’s the best we can do.

In jurisdictions around the country, alternatives to incarceration have been instituted. Called “drug courts,” they offer the nonviolent drug offender a program of diversion from the criminal justice system into some sort of treatment program. Although the evidence is complex, the results are mixed, and the outcomes are variable, the available evidence suggests that drug courts are effective in saving the community money and lowering the re-arrest rates of drug offenders.

Drug treatment programs, likewise, have a mixed record of successes and failures. Three waves of research have been conducted; their findings are more or less consistent. Not all clients who go through a program show improvements; as a general rule, the longer a client remains in a program, the greater the likelihood of improvement. Taken as a whole, drug treatment significantly lowers rates of drug use and criminal behavior, but, for methadone maintenance clients, little improvement is seen in rates of employment or alcohol abuse. In contrast, cocaine user samples show marked declines in levels of alcohol consumption. The most recent studies show an improvement in risky, AIDS-related sexual behavior among treatment program graduates.

ACCOUNT: Law Enforcement, Drug Courts, and Drug Treatment

Arrest and Incarceration

At the time of this interview, the respondent was 21 years old. Sally had been released early after serving one year of a three-year sentence for the sale of a controlled substance. After being out of prison for four weeks, she began working at an office job. She is determined to go straight.

- Q:** When were you arrested and what was the crime?
- A:** I was arrested two years ago last December. I was 19. The crime was a Class B felony, the sale of a controlled substance in the third degree. The substance was cocaine.
- Q:** To whom did you sell it?
- A:** To friends. We were basically selling to friends because we wanted to do drugs. We'd get a couple of grams extra to sell to our friends. Somehow, the [undercover] police got wind of what we were doing and they wanted ounces. We were just selling maybe five or six grams a week, but the police wanted six ounces. We said we can't get six ounces, that's too much. That's how the police do it—they try to get you to sell a lot so that they have no problem convicting you. Anyway, the police kept calling us and calling us, they really wanted it, they said, and we thought about it and we thought about it. They really wanted to

get us. The police bugged us for about two months, and so finally we said we could get six ounces. We finally sold coke to them, but we had come down to two ounces. They wanted at least that much so they could get a solid conviction. That was the most we could possibly get our hands on. Even when we went around trying to get it, people we dealt with asked us, "What do you want two ounces for?" We had been dealing with our friends for months and months, just small quantities, and all of a sudden, we were asking for two ounces. They figured something was up. But we said, don't worry about it. Being stoned, you're not thinking properly. . . . We made two sales to the cops. The first time was just to see if we could get it for them. That was only half an ounce. They said they wanted to check out what kind of stuff we could get. They didn't arrest us that time. A month later, they called us again, and we got them two ounces. The night we got it, the police came over to our apartment. We weighed out the coke, they snorted a little with us, then they wrapped it up and put it in their pants. One cop told the other to give us the money. The second reached into his pants and instead of coming out with a wallet, he came out with a gun. At first,

I thought we were getting ripped off. We had a lot of coke and a lot of jewelry and other valuable stuff in the house. I thought for sure they were going to rip us off. The funny thing is, I was relieved that they were cops. It didn't dawn on me that a ripoff could happen, but at that moment, I thought they were going to take everything we had. . . . The police arrested us about midnight. They took us to [the county seat], down in a basement of some building where they booked us and did all this paperwork. They tried to get us to sign papers stating that we would cooperate with them. I wouldn't sign anything until I talked to my lawyer. . . . My codefendant, who was my boyfriend, was ready to sign anything, he was so scared. He just wanted to get out. My parents came down to the courthouse. . . . The police kept us there overnight. Booked us and kept us in a holding cell. We were arraigned the next morning. Then they let us go in our parents' custody. We went to court on and off for 14 months. Then they incarcerated us. [After 14 months,] we came back and the judge said three years and then they just took me away. I didn't expect to go to prison because I had been out on the street for so long. When I was free, I was scared [about the possibility of being incarcerated], but after more than a year had passed—I had a good job by then—just the arrest alone had scared me enough to stop what I was doing. The one night in jail after our arrest had scared me badly. I thought for sure they were going to give me a second chance. It was my first offense. . . . I went upstate, to [a correctional facility for women]. I was confined for a full year, but I only served nine months there and three months in a much smaller facility near the city. . . .

Q: What were the conditions of your release?

A: I got two years' parole. The conditions are seek, obtain, and maintain employment. And report to my parole officer twice a month.

Q: Do you feel your parole officer is providing you with assistance and guidance?

A: Yes. I'm happy to have a very good parole officer. She seems to me to be one of the most caring officers I have met. I have spoken to others on parole and their officers are always threatening to violate them, to send them back [to prison]. My parole officer has not violated me [reported me for a violation], and I've been out for four weeks without finding a job. She could have violated me, but she's not into violating me, she wants to see me make it. We sit down together. I can really talk to her. I put everything on the table with her. We have a good relationship; she wants to help me. . . . She is very supportive.

Q: When you returned to your community, what adjustments did you have to make?

A: Well, the whole group of friends I had, I can no longer relate to them. Right now, I don't have any friends. . . . They're all doing the same things I was doing before I left. Drugs, drinking, going out all the time. I don't want to do that any more. When you start getting older, there's a lot of responsibility you have to accept, and these people don't see that. I try to talk to them, and all they say is, yeah, yeah, have a drink, do some drugs. I don't want that, but they won't listen. I just can't relate to them any more.

Q: What about your parents?

A: They are happy to have me home and out of prison. They just want me to stay home all the time, which I don't want to do. I like to go to the movies, I want to go out and see men. I don't want to sit home with my mother all the time. . . .

Q: Your father being a retired police officer, what effect did your arrest have on him and the relationship between the two of you?

A: He saw it coming. At the time, I wasn't living at home, but when I did come home, I was always stoned. Being a cop, he knew. My boyfriend and I had a brand-new car, a large amount of gold jewelry, new clothes

all the time. And I was not working. My father put two and two together and figured out what was going on. I kept saying, don't worry, I'm not doing anything wrong.

A month later, I got arrested. He was very upset, but he came to court with me all the time. He thought his being a cop would help me, but it didn't. If anything, everyone thought I should have known better. Your father's a cop, they kept saying. Through it all, my father was very supportive. When I went upstate [to prison], he came to see me, but the experience upset him so much, I asked him not to come any more. He just sat there, grinding his teeth. I could see by his face it scared him. Seeing all those people I was with, seeing his little daughter there—it didn't fit with him at all. But both my parents could see that I was doing well [in prison]. I had put on weight, I wasn't doing drugs, and I was thinking clearly. In a couple of months, my whole way of thinking was turned around.

- Q:** Do you feel the arresting officers and the district attorney were pushing for a conviction?
- A:** Oh, yes, they were pushing. They love to get convictions. . . . The cops tried to make us look like such big dealers, like we were such dangerous people. In reality, we were dealing a gram here, a gram there, maybe \$500 a week. We were dealing so we could snort without paying for it. We were also making a little money on the side. They tried to make us out as big and bad. Yeah, they were really out to arrest us.
- Q:** Did the authorities offer you any plea bargaining?
- A:** Yes, that's how I got the one to three years. They wanted my boyfriend and me to cooperate with the police. To go around and set up other dealers. . . . We went to a couple of bars in the area. Getting drugs around here is no problem when you are into it. So we met a couple our age [in a bar], they were turning us on [to cocaine].

But we couldn't rat on them, we couldn't turn them in. I suppose if we could have [ratted on them] we probably would have gotten off [avoided the sentence]. But if you have a reputation of being a rat, this causes a big problem in prison. So we kept lying to the cops, saying we couldn't find anyone [who deals cocaine]. Practically everyone else knew we had been arrested and they wouldn't deal with us. People were avoiding us. Eventually the cops stopped pushing us to become rats.

- Q:** What is your feeling about the criminal justice system?
- A:** When I was in prison, I was in a program . . . which is a positive alternative type of program. The program offers an environment which gives the inmates training in human development. It helped make my prison experience more rewarding for me. If it had not been for this program, the whole experience would have been very negative. . . . This program encourages inmates to look at themselves, to discover the good stuff about themselves. A lot of people in prison seem to hate themselves. You can see this by the way they treat themselves. Prisons need more programs, more counseling to get inmates to like themselves. To want to get out, to work, to support their kids, make a contribution, realize that they have not done the right thing. Some inmates feel they have not done anything wrong, even though they have shot someone or robbed a little old lady. Through these programs, they learn to get more self-respect. These programs make you think about yourself, your crime and your life. . . .
- Q:** How do you feel about the past and the future?
- A:** I would never want to go back, but it did me good. It took me out of my environment long enough for me to look objectively at everything. What I had been doing and where I was going. It motivated me. I have to be a better . . . worker because of

my record. If anything, it gave me motivation. It was a good experience for me, but I would never want to do it again or wish it on anyone. But I tried to make the best of it. I had to. I wouldn't be straight right now [if I hadn't served time in prison]. I would still be out smoking pot, drinking, doing drugs, and not looking for work. I just got a good job. I'm so glad it's all over.

Q: Do you feel that through your experience you have found a new you?

A: Right. I learned the hard way.

QUESTIONS

Do you think that Sally's sentence was fair?

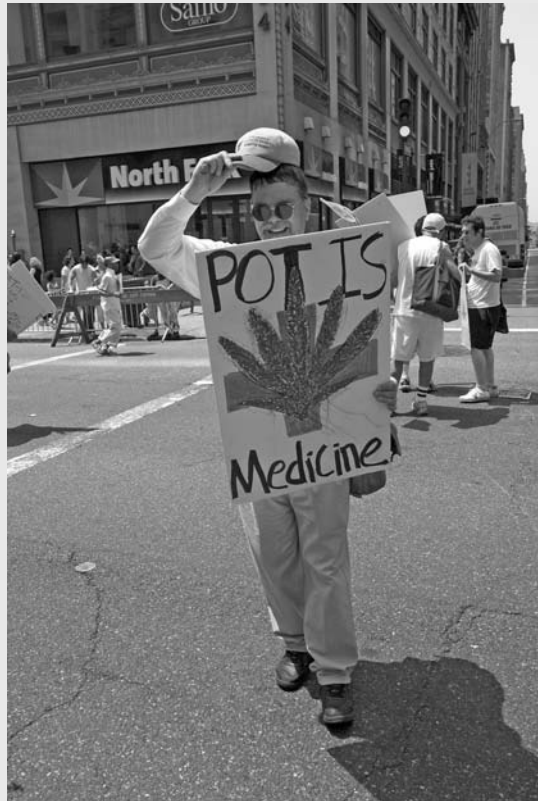
Would she have served a longer sentence if she

had been a racial minority? Did her arrest and incarceration deter her from continuing to sell cocaine? More generally, in the case of drug use and sale, is law enforcement an effective deterrent? Do you think that her reform is permanent? Did she really learn to go straight—in her words, “the hard way”? If so, how is her case different from those of the many other drug arrestees who continue to use and sell even after a jail or prison sentence? Do we learn something from this case about the wisdom of arresting and incarcerating drug sellers and users? Does Sally's success story verify that prohibition is the best policy? Or is Sally an exception to the rule?

16

LEGALIZATION,
DECRIMINALIZATION,
AND HARM REDUCTION

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As we've seen throughout this book, the dominant approach in the United States to the control of recreational psychoactive drug use is prohibition. It is against the law to possess and distribute nearly all substances for the purpose of getting high. Two drugs, alcohol and tobacco, are exceptions to this rule, and tobacco's effects, while recreational, may be described as an extremely "low-key" high (Goldstein, 2001, p. 121). Though the distribution of alcohol and tobacco is controlled by state law, these substances may be legally purchased by almost anyone above a certain age for any purpose. In addition, thousands of drugs—at most, a fifth of which are psychoactive—are available by prescription from a physician specifically for medical and psychiatric purposes. However, if these drugs are taken without a prescription, that is, for recreational purposes, to get high, their distribution and possession are illegal. Inasmuch as prescription use is not recreational use, these drugs don't count in our equation.

All psychoactive drugs aside from alcohol and tobacco are prohibited by state and federal law. Marijuana is a partial exception, as we've seen, since small-quantity possession has been decriminalized in 14 states. (Marijuana is legal as medicine in 18 states and the District of Columbia, but this too does not count as recreational drug use.) In addition, as of 2012, small-quantity marijuana possession and sale is legal in two states—Colorado and Washington. Still, for the remaining states, *partial decriminalization* does not mean the substance is legal, since the police can confiscate the drug and the possessor may be fined. And drug courts and drug treatment, likewise, are "cracks" or "chinks" in the armor of the strict law enforcement model. Peyote is permitted in some states to American Indians for religious ceremonies—another exception to this rule. But the generalization that covers the control of psychoactive substances in the United States still applies: The possession and distribution of psychoactive substances for the purpose of recreational use is a crime unless otherwise stipulated.

Critics by the thousands have attacked the current system of prohibition. They believe that criminalizing drug taking for pleasure has serious negative consequences for users and for the society as a whole. In this chapter, I discuss some proposals for drug legalization, decriminalization, and harm reduction. We'll consider such questions as these: Would a legal change away from our current system of "lock 'em up and throw away the key" be more effective? Is an emphasis on the punitive approach doing more harm than good? And is American society drifting toward a more relaxed or *laissez-faire* approach to less harmful forms of recreational drug use? Many observers think so. The following sections summarize their reasoning.

LEGALIZATION: AN INTRODUCTION

Beginning in the late 1980s (Kerr, 1988), critics of the current system began to advance with remarkable frequency and urgency a taboo, almost unthinkable proposal: the decriminalization or legalization of the currently illegal drugs. Dozens of books, hundreds of magazine and newspaper articles, countless editorials and op-ed pieces, and scores of prominent spokespersons have urged the repeal of the drug laws. For a time, drug legalization became a major focus of debate, joining such controversial subjects as abortion,

global warming, the economy, gun control, homosexual rights, women's rights, minority rights, and affirmative action as yet another battlefield of controversy. In the past two decades, the national legalization debate has died down, but state-by-state approval of medical marijuana and small-quantity marijuana possession, along with, as we saw, outright legalization of marijuana in two states in 2012, attests to the endurance and vibrancy of the issue, for at least one controlled substance. For the most part, battles over the legal status of the other drugs seem to have been set aside; perhaps the advocates of each position wait in the wings for a more opportune moment.

Some observers—Barry McCaffrey, former federal drug “czar,” among them—have argued that debating drug legalization is a waste of time, little more than cocktail party chatter, since the proposal has no chance whatsoever of executive, legislative, or judicial approval. I believe, for a variety of reasons discussed in this chapter, some form of legalization is a program worth discussing. It is true that in the United States, full legalization of any of the drugs aside from marijuana is a doomed enterprise. But some of the proposal's champions have influenced less radical formulations elsewhere (Western Europe, for instance), and may do so in the United States in the future. And opponents of outright drug legalization need to know what critics of the current system are saying to strengthen their own argument.

Legalization is not a single proposal. Instead, it is a cluster of proposals that stands toward one end of a spectrum of degrees of regulation and availability. Very few, if any, legalization advocates argue that there should be absolutely no controls whatsoever on the possession and sale of psychoactive drugs—for instance, that minors be allowed to purchase heroin and cocaine from whoever is willing to sell to them. Instead, all agree that *some* sorts of controls will be necessary. Hence, the relevant question is this: On the spectrum ranging from just shy of complete control to just shy of a complete lack of control, what level of legalization makes sense? The spectrum is so broad, and the details are so crucial, that in many ways the “great divide” between legalization and prohibition is artificial, almost irrelevant. Consequently, both the similarities and the differences between and among the various legalization programs, and those between and among legalization and prohibitionist programs, have to be considered.

To appreciate the import of proposals to legalize the possession and sale of the currently illicit drugs, it's necessary spell out the reasons legalizers think the current system of prohibition is inevitably and fatally flawed and must be changed. According to the legalizers, what's wrong with our current system?

WHY LEGALIZERS THINK DRUG CRIMINALIZATION IS A FAILURE

Proposing that the drug laws and their enforcement be changed implies that the current system of prohibition has failed; it is, critics say, ineffective, harmful, and/or unjust. The bulk of the legalizers' writings are devoted to criticizing the current punitive policy; only a very small proportion deal specifically with the particulars of a viable legalization program. Consequently, to fully understand the justifications for drug legalization, we have to address *how* and *why*, its advocates feel, the current prohibitionist program has proven to be a failure. Behind the punitive reasoning of criminalization is the assumption

that a drug war can and should be fought, that it can be won, and that the principal weapons that must be used in this war are the law, arrest, and imprisonment—along with the palpable *threat* thereof. The drug warriors believe that drug abuse is primarily a police matter. In stark contrast, all or nearly all legalizers agree on one point: They oppose the current punitive system. They insist that drug abuse is not primarily a police matter and that relying on the law, its enforcement, and incarceration is ineffective, counterproductive—more harmful than beneficial—and unjust. Legalizers oppose the very basis of drug prohibition by means of the law and law enforcement. (DRCNet, a legalization/drug reform organization, publishes an electronic newsletter, the *Drug War Chronicle*. Go to www.stophedrugwar.org.)

Why do the legalizers and decriminalizers believe that our current, mainly punitive approach to drug control doesn't work? In their view, what are the flaws in attempting to solve the drug problem by criminalizing the sale and possession of the currently illicit drugs? Why don't drug prohibitions work, according to the legalizers? Occasionally, a journalist will argue that the legal ban on drugs actually *stimulates* the desire for the consumption of psychoactive substances (Raver-Lampman, 2003), but hardly anyone who has detailed, systematic knowledge of the impact of legal controls will make such a foolish argument.

Before these questions can be answered, we have to lay down specific criteria as to what constitutes “working” in the first place. No specific drug policy is likely to work best in all important ways. It is entirely possible that a given program may work well in one way and not in another. What do the legalizers mean when they say the punitive policy toward drug abuse doesn't—and can't—work? In criticizing the current policies and urging drug legalization or decriminalization, they make the following ten points.

First, criminalization makes illegal drugs expensive and, hence, profitable to sell. Because of the profit motive, arresting producers and sellers and taking them out of business simply results in other producers and sellers stepping in to supply the shortfall. Therefore, drugs can never be stamped out through the criminal law: The demand for drugs is constant and inelastic; their criminalized status makes them expensive, and therefore highly profitable to sell. Therefore, it is inevitable that suppliers will remain in business. Ironically, it is criminalization itself that guarantees “business as usual.”

Second, the legalizers say, the currently *illegal* drugs are less harmful than the prohibitionists say—more important, they are less harmful than the currently *legal* drugs. Hence, drug criminalization is both aimed at the wrong target and discriminatory as well. If anything, stricter controls ought to be applied to cigarettes and alcohol—which kill many more people—and not the far safer currently illegal drugs.

Third, the legalizers insist, prohibition is futile because criminalization does not deter use. Rates of drug abuse are as high now, under a punitive policy, as they would be under a policy of legalization; legalization would not produce an increase in use, or at least a significant increase. Everyone who wants to use is already doing so. Also, prohibition is a logistical impossibility; there are too many holes in the net of social control, and drugs will always leak through the net. Hence, the very foundation of prohibition is invalid. Moreover, because the demand for drugs is inelastic—users will pay any price, no matter how exorbitant—raising the price through legal harassment cannot work.

Fourth, the legalizers argue, prohibition encourages the distribution and therefore the use of harder, stronger, more dangerous drugs—and discourages the use of softer, weaker,

safer drugs. This is the case because criminalization places a premium on selling drugs that are less bulky and easier to conceal, and show a greater profit margin per operation. This has been referred to as the *Iron Law of Prohibition*: The more intense the law enforcement, the more potent the prohibited substance becomes (Thornton, 1992, p. 70). In contrast, under legalization, less potent and less harmful drugs, such as cocaine leaves, cocaine gum, opium, mescaline, psilocybin, and marijuana, will be adopted rather than the more potent, more harmful, and artificial, illicit drugs now in use, such as LSD, crack, heroin, methamphetamine.

Fifth, the legalizers say, drug dealers sell in a market in which there are no controls whatsoever on the purity and potency of their product. Hence, users are always consuming contaminated—and dangerous—substances. In contrast, there would be strict controls on purity and potency; as a consequence, death by overdose would be virtually eliminated.

Sixth, the legalizers argue, undercutting the profit motive would force organized crime out of the drug trade. As a result, the stranglehold that criminal gangs and mobs have on the throat of the community would be released; residents would be able to reclaim their neighborhoods.

Seventh, the legalizers assert, the current level of drug-related violence is solely a product of the illegality of the drug trade. Drug-related murders are the result of disputes over dealing territory or “turf,” robberies of drug dealers, assaults to collect a supposed drug debt, the punishment of drug workers, drug thefts, and dealers selling bad or bogus drugs (Goldstein et al., 1989). Eliminate criminalization and the profit motive will be eliminated, and so will drug gangs and the violence they inflict. The murder rate will decline, and neighborhoods and communities will be safer.

Eighth, the legalizers say, by placing such a huge priority on the drug war and encouraging the arrest of dealers, the government has opened the door to the violation of the civil liberties of citizens on a massive scale. False or mistaken arrests or rousts, the seizure of the property of innocent parties, corruption and brutality—these are the legacies of prohibition. Under legalization, such violations would not occur. The police would not be pressured to make questionable arrests, nor be tempted by bribes from dealers; consequently, they would be better able to serve the community (Wisotsky, 1993; Ostrowski, 1990).

Ninth, the legalizers urge, consider the enormous cost and the staggering tax burden of enforcing prohibition; billions of our tax dollars are being wasted in a futile, harmful endeavor. According to a range of estimates, currently, the federal government spends roughly \$20 billion a year on fighting the drug war and, together, the states spend about \$30 billion. Under legalization, not only would this waste not occur, but the sale of drugs could be taxed—to the tune of some \$50 billion—and, hence, governments could raise revenues to treat drug abusers. In an era of fiscal austerity, surely the budgetary argument should weigh heavily. Legalization would represent using the tax dollar wisely.

And tenth, the legalizers argue, useful therapeutic drugs that are now banned by the government would be reclassified so as to take their rightful place in medicine. Marijuana, a Schedule I drug by federal law, but (as we’ve seen) already approved as medicine by 18 state laws, is useful in reducing nausea and lack of appetite during chemotherapy. Heroin, also completely banned as a Schedule I substance, is an effective analgesic or painkiller. In addition, a Schedule I classification is the kiss of death for

scientific experimentation. The book has been prematurely closed on drugs such as MDMA (Ecstasy) and LSD—both Schedule I drugs—both of which have enormous potential for unlocking the secrets of drug mechanisms and, possibly, for valuable therapeutic applications as well. Our society cannot afford to remain ignorant about drugs with such complex and potentially revealing effects as these (Grinspoon and Bakalar, 1997; Beck and Rosenbaum, 1994, pp. 146ff).

FOUR PROPOSALS TO REFORM THE DRUG LAWS

The term drug *legalization* has been used to cover a multitude of proposals. Some would not entail real drug legalization at all, but rather involve substantial changes in the drug laws. Proponents of some legalization proposals wish to remove criminal penalties from all psychoactive substances. Others are selective and aim to legalize some and retain penalties on others. Moreover, legalization is very different from decriminalization. And requiring addicted or drug-dependent individuals to obtain their supply via prescription is not the same thing as permitting drugs to be sold to anyone, without benefit of a prescription, in a wide range of retail establishments. More generally, legalization and prohibition do not represent an either-or proposition. In reality, they form a continuum or spectrum, from a completely libertarian or “hands off” proposal, with no laws governing the possession or sale of any drug at one end, to the most punitive policy imaginable—say, the death penalty for users and dealers of every banned substance—with every conceivable position in between.

In reality, very few commentators advocate a policy of no controls whatsoever on the possession and sale of any and all psychoactive drugs. Nor do many commentators call for the death penalty for the simple possession of the currently illegal drugs, including two joints of marijuana. Hence, what we are discussing in the drug legalization debate is degrees of difference along a spectrum somewhere in between these two extremes. As Ethan Nadelmann (1992, pp. 89–94) persuasively argues, the moderate legalizers and the progressive or reform-minded prohibitionists have more in common than the first group does with the extreme, radical, or hard-core legalizers, or than the second has with the harsher, more punitive prohibitionists.

The issue, therefore, is not legalization versus prohibition. Rather, the debate centers on some of the following issues: How much legalization should we institute? Which drugs are to be legalized? Under what conditions can retailers dispense drugs? Are drugs to be dispensed in approved, licensed clinics? Or in any and all sorts of retail outlets? To whom may drugs be dispensed? To addicts and drug abusers only? Or to anyone above a certain age? In what quantity may drugs be dispensed? At what purity? At what price are the legalized drugs to be sold? Or: Can anyone grow marijuana or opium poppies, manufacture meth or MDMA in their home labs, or import cocaine and heroin into the country—buy them in Colombia and cross the border with ounces of them? Precisely *what* drug-related activities should be legally permitted?

Each drug policy proposal will answer such questions in a somewhat different way. There are many drug reform proposals, not just one. There are even many different drug legalization proposals. It is naive to assume that the broad outlines of drug policy are the only thing that is important, and the details will take care of themselves (Trebach, 1993.)

In my view, this assumption is fallacious. Zimring and Hawkins (1992, pp. 109–110) refer to this view as the “trickle-down fallacy.” On both sides of the controversy, observers too often “simply ignore the detailed questions . . . of priority and strategy” (p. 109). A specific policy—what should be done about each and every particular—“cannot be deduced” from a general position (p. 110). At the same time, some points are shared by all legalizers and some points shared by all prohibitionists.

Let’s distinguish four drug policy reforms: legalization, decriminalization, the prescription and maintenance models, and harm reduction.

Legalization

One common legalization proposal refers to placing one or more of the currently illegal and/or prescription drugs under the controls that now apply to alcohol and/or tobacco. (But which is it—alcohol or tobacco? Alcohol is considerably more tightly controlled than tobacco, and controls that apply to alcohol do not apply to tobacco.) Under this proposal, psychoactive drugs could be purchased on the open market, off the shelf, by anyone above a certain age. Since the same controls on alcohol and tobacco would apply to the currently illicit drugs, a proprietor would not be able to sell to a minor, an intoxicated individual, or an inmate of a jail or prison or a mental institution, or to sell within a certain distance from a house of worship, a school, or an active polling place on Election Day. Controls would also apply to the establishments that sell the drugs in question. With respect to alcohol, certain types of bars, for instance, must also serve food. Package stores must observe a variety of rules and regulations; some, for instance, are run by (in other words, bottled alcoholic products can only be sold by) the government. Even those that are private enterprises are controlled: Such establishments cannot be owned and operated by convicted felons; in some jurisdictions, they cannot be open on Sunday; they cannot sell substances stronger than a specific potency; and so on. Thus, legalization refers to a state licensing system for the currently illegal drugs that would be more or less similar to that which currently prevails for alcohol (again, or tobacco). It is difficult to imagine taking seriously a legalization scheme proposing that we control cocaine, heroin, and methamphetamine *less tightly* than we now legally control alcohol and tobacco.

One qualification: Under our current policy of legalization, manufacturing alcohol (beer and wine, for instance) or growing tobacco for the purpose of *private* consumption—not commercial sale—does not come under state control and is perfectly legal. The state retains the right to step in and play a role only when selling (or the presumed intention to sell) takes place. (Moreover, manufacture of a substantial stipulated quantity of alcohol implies the *intent* to sell.) This qualification does not apply to illicit drugs, of course; private production of Schedule I drugs remains illegal. In addition, under legalization, public use is controlled under a variety of circumstances—for instance, driving while intoxicated and public intoxication are illegal. And lastly, for both alcohol and cigarettes, there are restrictions on advertising: Cigarette ads and ads for hard liquor are (voluntarily) banned from television advertising, current athletes are not depicted endorsing alcoholic beverages, and beer is not drunk on camera. Presumably, the drugs that would be legalized would be controlled, voluntarily or by law, more or less the same way as for alcohol and tobacco: they would be *regulated* but not banned.

In the Netherlands, by law, small-quantity marijuana possession is technically illegal. However, in practice, the drug is sold openly in “coffee” shops (or “hash bars”) and these transactions are ignored by the police. Blatant advertising of marijuana products is discouraged; sale to minors under 18—even the presence of minors in an establishment—and the sale of hard drugs will cause the police to shut a shop down. Thus, small-quantity marijuana possession and sale there have been legalized *de facto*, although *de jure*, or according to the law, they are still technically illegal. The hard drugs are unaffected by this policy; the sale of heroin and cocaine, especially in high volume, remain very much illegal. In the Netherlands, the proportion of prisoners who are convicted drug offenders is slightly higher than it is in the United States, about one-third (Beers, 1991, p. 40). At the same time, possession by the addict or user of small quantities of heroin or cocaine (half a gram or less) tends to be ignored by the police. However, the sale of even small quantities of hard drugs is not permitted to take place openly in legal commercial establishments, as it is with marijuana (Leuw and Marshall, 1994). The Dutch policy toward marijuana represents one variant of legalization—tacit, *de facto*, if you will. But it’s important to note that the quasi-legalization of marijuana in the Netherlands is continually under attack from conservative politicians. Two developments are worth noting: Since 2008, several dozen “coffee shops” that serve marijuana have lost their licenses and have been closed down, and as of 2011, noncitizen tourists have been banned from marijuana-serving establishments.

Decriminalization

Decriminalization refers to the removal of state control over a substance or activity. (Many observers use the term “decriminalization” to refer to what I call “partial decriminalization.” *Full decriminalization* is the removal of all—or nearly all—state controls over a given product or activity.) It is a legal “hands off” or *laissez-faire* policy of drug control: no control at all. Under decriminalization, the state no longer has a role in setting rules and regulations concerning the sale, purchase, distribution, and possession of a given drug. Under such conditions, the distribution of marijuana, heroin, or cocaine, would no more be the concern of the government than, say, selling tomatoes or T-shirts. Clearly, no one may sell poisonous tomatoes or dangerously flammable undershirts. But under a policy of full decriminalization, the rules and regulations that apply to drugs would be even *less* restrictive than those which now apply to the currently legal drugs alcohol and tobacco.

Under full decriminalization, anyone could manufacture, grow, or import any quantity of any drug and sell it to anybody without restriction. The only factor that might determine the sale of drugs, blatant poisons aside, should be the operation of a free and open economic market (Szasz, 1992). Almost everyone proposing this policy is likely to add one obvious restriction—that sale to a minor should be against the law. As I noted previously, however, full decriminalization for every currently illegal drug (with the remote possible exception of marijuana) is not a feasible or realistic policy, and is of theoretical interest only. To expect that legislatures will permit the possession, sale, and distribution of substances that have a powerful effect on the mind and great potential for harm to be subject to government controls no stricter than those which apply to the possession, sale, and distribution of tomatoes simply beggars the imagination. It is a

pie-in-the-sky proposal that has no hope whatsoever of implementation, at least for the foreseeable future.

There is one partial exception to this rule: Some commentators strenuously argue—and, in some quarters, persuasively—that users be permitted to grow certain natural psychoactive plants, such as the opium poppy, the coca bush, the peyote cactus, psychedelic mushrooms, and the marijuana or cannabis plant, for their own private consumption (Karel, 1991). Thus, one aspect of full decriminalization remains a viable subject of debate, while most of the other particulars remain outside the realm of the possible, beyond the pale, so to speak.

The term “decriminalization” is often used to refer to what is actually partial decriminalization. As also noted above, in 18 states, someone in possession of a small quantity of marijuana cannot be arrested or imprisoned. Small-quantity marijuana possession is a “violation”: The police may confiscate the drug and issue a summons, much like a traffic ticket, which usually entails paying a small fine. Hence, partial decriminalization does not remove all legal restrictions on the possession, sale, and/or distribution of a given substance, but it does remove some of them. This is not what advocates of decriminalization mean by the term, although many observers loosely and inaccurately equate legalization with decriminalization.

Prescription and Maintenance Models

The prescription and the maintenance models overlap heavily, although they are conceptually distinct. Both are usually referred to as the *medical approach* to drug abuse, since both see certain conditions as a medical matter and the administration of psychoactive substances as their solution. Currently in the United States, the *prescription model* prevails for pharmaceuticals deemed to have “legitimate” medical utility; hence, certain approved psychoactive substances may be prescribed by physicians for the treatment of their patients’ ailments.

Under an expanded prescription or maintenance policy, loosely referred to as legalization, anyone dependent on a given drug would be able to go to a physician or a clinic and, after a medical examination, be duly certified or registered. Certification would enable the drug-dependent person to obtain prescriptions at regular intervals which, in turn, would make it possible to purchase or obtain the drug in question. Or the drug could be administered directly by a clinic or a physician. Some current prescription models call for an eventual withdrawal of the client or patient from the drug, but they insist that this must be done gradually, since this approach is both humane and effective. Under the current prescription policy, pharmaceutical companies must test drugs and submit a report to the Food and Drug Administration (FDA) to the effect that they are both safe and effective for the ailments for which they would be prescribed. The FDA cannot approve a drug that, tests indicate, is either unsafe or ineffective. Presumably, if the currently illegal drugs were to be prescribed to addicts, they would have to pass muster as safe and effective medicines. Heroin, cocaine, and methamphetamine are far from safe, and it is difficult to imagine ailments for which cocaine and meth might be effective, with the exception of dependence on them.

One version of the prescription model is referred to as the maintenance model because the addict or drug-dependent person is “maintained” on doses of the drug

in question. Currently, in the United States, some form of maintenance is in effect for roughly 100,000 to 180,000 heroin addicts, most of whom are administered methadone. However, methadone maintenance programs are fairly tightly controlled in most jurisdictions, and most addicts nationwide are not enrolled in them, either because they do not wish to be—for instance, because the restrictions are too severe and the quantities administered are too small—or because the clinics do not have room for all who wish to enroll. To set up a full walk-in program for any and all heroin addicts who want to take part in methadone maintenance therapy would require a *quadrupling* of the current operating budget of this treatment modality, and such a program would be extremely controversial. (Currently, legislative critics and supporters of methadone maintenance are in a cease-fire mode: legislative critics don't try to slash the budget of maintenance programs if supporters don't try to expand it.) In addition, there is no heroin maintenance program in place in the United States, and none for persons dependent on a drug other than a narcotic. Such programs are in effect in Great Britain (in Liverpool) and in Switzerland.

Presumably, a legalization proposal that relies heavily on the medical model would aim to expand the number of addicts currently on methadone; expand the number of possible narcotics used for maintenance programs, including heroin; and possibly even expand maintenance programs to include non-narcotic drugs, such as cocaine. Again, regardless of the particulars, a drug maintenance program sees drug abuse as a medical, not a criminal, matter, and aims to legalize the administration of psychoactive substances to addicts or abusers. It is not clear what treatment program administrators propose to do when drug abusers refuse to participate in a given mandated program, demand to use other drugs in addition to the legal drugs they are being administered, or insist on a significant escalation in the dose they are administered. Or what might be done when someone who is not chemically or psychologically dependent demands quantities of a given drug from the program, or when someone violates the terms of the program by obtaining illicit supplies of the drug. Proponents see the primary motivation of drug abusers as maintenance, not recreation, an assumption which many observers question as naive.

Harm Reduction

Harm reduction represents an eclectic or mixed bag of policy proposals. It is a *specifist* legal policy: different programs for different drugs. Harm reduction is the explicit policy that prevails in the Netherlands, Switzerland, and certain jurisdictions in the United Kingdom, such as Liverpool. Its goal is stated in its title: Rather than attempting to wipe out drug distribution, addiction, and use—an impossibility, in any case—its goal is for drug policy to attempt to minimize the harm that drugs or their control cause. Legal reform, likewise, is secondary; the emphasis is on *practicality*—what works in concrete practice rather than what looks good on paper or in theory. A needle exchange and distribution program stands high on the list of particulars of any harm reduction advocate: Addicts can turn in used needles at distribution centers and receive clean, fresh ones free of charge, no questions asked. This is designed to keep the rate of new AIDS/HIV infections in check. Another particular of the harm reduction advocates relates directly to law enforcement: Make a sharp distinction between “soft” and “hard” drugs, and between users and small-time, low-level sellers on the one hand and high-level, high-volume

dealers on the other. In practice, this means de facto decriminalization of small-quantity marijuana possession and attempting to route addicts and abusers of the harder drugs into treatment programs without arresting them. Big-time heroin and cocaine dealers, however, are arrested and imprisoned.

In sum, harm reduction means the following: stressing treatment and rehabilitation; underplaying the punitive, penal, or police approach, and exploring nonpenal alternatives to trivial drug offenses; expanding drug maintenance, especially methadone, programs; experimenting with or studying the feasibility of heroin maintenance programs; expanding drug education programs; permitting heroin and marijuana to be used by prescription for medical treatment; considering ways of controlling the legal drugs, alcohol and tobacco; being flexible and pragmatic (thinking about new programs that might reduce harm from drug abuse, and if one aspect of a program fails, scuttling it and trying something else). The bottom line is this: Drugs are not the enemy—harm to society and its constituent members is the enemy—and whatever reduces harm by whatever means necessary is all to the good (Beers, 1991).

No one who supports a harm reduction proposal questions the fact that there are theoretical and practical difficulties and dilemmas in implementing such a policy. For instance, how do we measure or weigh one harm against another? What if our policy results in fewer deaths and more addicts? Or in less crime but more drug use? If we are truly worried about harm from drug abuse, why concentrate on legalizing or decriminalizing the illegal drugs—why not focus on ways of reducing the use of, and therefore the harm from, the *legal* drugs? What if our policy improves conditions for one group or category in the population but harms another? And will harm reduction really result in less state control of the drug addict, abuser, and user? Government regulations and programs designed to reduce drug-related harm are likely to result in far *more* state intervention into the lives of persons affected by such programs. (For a cynical, mechanistic, and ill-conceived critique of harm reduction programs from a radical or left-wing perspective, see Mugford, 1993.) None of the program's advocates suggest that it is a problem-free panacea or cure-all, but all believe that these and other thorny issues can be resolved with the application of reliable information and common sense.

WOULD DRUG USE/ABUSE RISE UNDER LEGALIZATION?

In the legalization debate, perhaps the key issue is whether drug use and abuse—and hence, medical complications and death—would rise under legalization. Does the current system of prohibition keep drug abuse down to tolerable levels? Would the legalization of the currently illicit substances open the floodgates to a greater volume of use and hence, almost inevitably, to a correspondingly greater volume of drug-related social, economic, and health problems? After all, tobacco and alcohol are legal but harmful; what is the magical element in heroin, cocaine, and methamphetamine that would make them legal but harmless?

As we've seen, there is at least one way in which criminalization is a failure. Attacking the supply or manufacture and distribution side of the drug use equation is extremely unlikely to work. The lure of the profit motive is too great for too many people, even with some, though small, measure of risk. But what about the demand or user side of

the equation? The motives for selling and use, although intertwined, are at least analytically distinct. Can law enforcement deter use?

More generally, do the law and its enforcement deter *any* activity? If there were no laws and no enforcement, would currently illegal activities become more common? Conversely, if a product or service were criminalized, would the demand for it remain constant? Would just as many customers be willing to pay for it regardless of whether it was legal or illegal? Just how inelastic is the demand for certain products and services? The legalizers are insistent that “prohibition doesn’t work”—indeed, *can’t* work (Morgan, 1991; Hyse, 1994). Is this true for all products and services, under all circumstances? Is this true for the currently illegal drugs?

There are two entirely different arguments underpinning prohibiting or outlawing an activity; many observers confuse the two. They are the hard, or strict, and the soft, or moderate, versions of the punitive model. The strict punitive version makes use of the logic of absolute deterrence, while the moderate punitive version makes use of the logic of relative deterrence. According to the hard or strict punitive argument, a given activity can be reduced or eliminated by law enforcement; crime is deterred or discouraged in some absolute or abstract sense by law enforcement. In contrast, the soft or moderate punitive position does not see a defeat of or even a drastic reduction in drug use or abuse as feasible. According to this argument, *in the complete absence of law enforcement*, a given activity would be much more common than it is *with* law enforcement. It relies on the logic of relative deterrence because, it says, with law enforcement—as contrasted to no law enforcement—certain kinds of crime take place less often. If there were no laws or penalties against robbing or assaulting others, more people would engage in such behavior. (Not most people—*more* people.) Law enforcement does not reduce the incidence of these acts so much as it contains them. The same thing applies with drug use: Punishing the drug violator is not—and, under most circumstances, cannot be—a means of drastically reducing or eliminating drug use. But if there were no drug laws, and no penalties for the production, importation, possession, and sale of the presently illegal substances, use would be considerably higher than it is now.

National Alcohol Prohibition (1920–1933)

Legalizers or “antiprohibitionists” adopt a broad, sweeping view of the failure of prohibitions in general. And their guiding model for this position is national alcohol prohibition (1920–1933). The Eighteenth Amendment, also referred to as the Volstead Act, is the only constitutional amendment to have been repealed in American history.

Everyone knows that Prohibition was a catastrophic failure—very possibly the biggest domestic legal mistake in the federal government’s history. We’ve all learned about the history of Prohibition—including Al Capone, organized crime, gangland violence, bootleg liquor, bathtub gin, speakeasies, and illegal nightclubs. Since Prohibition was such a disaster, it follows as night follows day that our current policy of drug prohibition has also failed. “Prohibition can’t work, won’t work, and has never worked” (Carter, 1989). True or false? And “work” in what sense?

Policies may work well in one way but badly in another. Prohibition is an excellent example of this principle. Interestingly, as we’ve discovered, national alcohol prohibition did work in at least one sense: It reduced the level of alcohol consumption in the

American population. Historians, medical authorities, and policy analysts have put together indicators from a variety of sources—arrests, automobile fatalities, hospital admissions, and medical examiners' reports, as well as legal sales before and after Prohibition—and concluded that the consumption of alcohol declined significantly between 1920, when the Eighteenth Amendment took effect, and 1933, when it was repealed. The conclusion is inescapable: In the narrow sense of reducing alcohol consumption, Prohibition did work. Far from being a failure, in this one respect, it was a resounding success.

But again, in most other important respects, Prohibition *was* a disaster; in this sense, the antiprohibitionists are correct. Banning alcohol sale nationally may have switched millions of drinkers from beer, a less potent beverage, to distilled spirits, a far more potent and more harmful beverage; it inadvertently encouraged the sale and consumption of harmful, poisonous substitutes, such as methyl alcohol; it certainly gave organized crime an immense boost, pouring billions of dollars into the hands of criminal gangs, consolidating their power, and effectively capitalizing their other illegal enterprises; and it encouraged corruption on the part of politicians, and both corruption and brutality on the part of the police, and on a massive scale. In addition, the homicide rate rose during the 1920s, and fell after 1933. In these crucial respects, Prohibition did not work; indeed, it was a colossal failure. And it was also a failure from the point of view of *absolute* deterrence: Many Americans did get their hands on illegal alcoholic beverages.

The lesson we learn from Prohibition is not that drug prohibitions cannot work; it is that, in instituting a drug policy, impacts come in packages. Some of the contents in a package are desirable, whereas others are mostly undesirable. Another package will contain a different mix, with entirely different positives and negatives. Which package one selects depends on values, not science—it depends on a preference for certain results over others. There is no policy that will yield results that everyone—or anyone—will regard as entirely or uniformly positive. As the saying goes, “You pays your money and you takes your chances.”

Legalization and Use: Two Issues

The question of the impact of legalization on the incidence and frequency of use pivots on two separate questions, one empirical and the second moral and ideological. The empirical question is familiar to us all and can be stated simply: What evidence do we have on the impact of legalization on use? The moral question is a bit harder to spell out, but need not detain us here, since it is essentially unanswerable: If legalization did result in an increase in use, how many more users and abusers would represent an acceptable increase, given the benefits that this change would bring about? Richard Dennis (1990, pp. 128–129) estimates that legalization would result in a 25 percent increase in the number of abusers and addicts. Even if the figure were to double, he finds this acceptable, considering that legalization would unburden us from criminalization's enormous monetary and human costs. I suspect that even if we were all to agree on Dennis's numerical prediction, not all of us would accept his conclusion. Again, the moral question has to be disentangled from the empirical question. Empirically, what would be likely to happen under legalization? Would the use of the presently illegal drugs rise or remain at about the same level?

The Worst-Case Scenario

One critic of the drug laws, mocking critics of the legalization argument, claims that supporters of the current laws argue that legalization will mean that “countries will plunge into anarchy, families will disintegrate, and most of us will become drugged zombies” (Mitchell, 1990, p. 2). Some supporters of the drug laws actually do believe in this *worst-case scenario*. Former drug czar William Bennett estimates that under legalization—a plan he vigorously opposes—some 40 to 50 million Americans would become hard-core heroin and cocaine abusers. William Pollin, former director of the National Institute of Drug Abuse (NIDA), argues that since cocaine is the most pleasurable (or reinforcing) drug currently in use, it makes sense that if there were no law enforcement, “the number of cocaine users would be right up there with smokers and drinkers. . . . We’d have 60 to 100 million cocaine users instead of the 6 to 10 million current users we now have. . . . Viewed in this light,” Pollin adds, our punitive law enforcement policy “is 90 percent effective” (Brinkley, 1984, p. A12). *Would* we become a nation of “drugged zombies” under legalization?

In reality, it is highly unlikely that the use and abuse of cocaine or heroin would increase ten times if any of the currently debated legalization plans were put in place. I believe that Bennett’s estimate of 40 to 50 million addicts to heroin and cocaine and Pollin’s estimate of 60 to 100 million regular users of cocaine are seriously wide of the mark. Regardless of how alluring, seductive, or reinforcing these drugs are, the tens of millions of Americans Bennett and Pollin project who will become involved in the use of these seriously mind-transforming drugs for the pleasure they afford—and risk destroying everything they now value, including job and career, marriage and family, money, possessions, and their freedom—simply do not exist. Most people have a *stake* in those things they value in their current lives, and becoming seriously involved in a hard drug would undermine or subvert that stake. At the same time, if one or another legalization proposal were to be instituted, the number of Americans who took, and became seriously involved with, the currently illegal drugs, including heroin and cocaine, would increase more than modestly, possibly even dramatically, possibly along the lines of two to three times; in sum, there would be a significant increase, but the worst-case scenario would not come to pass. (Again, *many*, but not *most*, Americans would get on the drug bandwagon under a significantly more laissez-faire policy.) My estimate contradicts both the legalizers, who argue that there would be no, or an extremely modest, increase, and the criminalizers, who argue that the increase would be monstrous, almost uncontrollable. Here, I am a firm believer in relative deterrence: Yes, use is currently lower *with* law enforcement than would be the case *without* law enforcement, but no, law enforcement does not and cannot eliminate or drastically reduce use. Perhaps some justification of my estimate is in order.

Factors in the Legalization–Use/Abuse Equation

We can use three different sets of evidence to address the question of the impact of legalization on frequencies of use. The first is related to what we know about human nature generally. The second is related to the intrinsic nature of each drug—what its effects are. And the third is what is known about actual or concrete frequencies of use under more, and less, restrictive conditions. Variables we must bring into the equation include the hassle factor, cost, and an issue we looked at earlier: loyalty or continuance rates.

Human Nature

All predictions of what is likely to happen under certain conditions are based on assumptions about human nature—a theory of behavior, if you will. Legalizers and prohibitionists hold contrasting assumptions about human nature. Let's look at each one.

Legalizers see human nature as basically rational, sane, temperate, and wise. "Inform a normally intelligent group of people about the tangible hazards of using a particular substance and the vast majority of them will simply stop" (Gazzaniga, 1990, p. 39). The reason why drug abuse will not rise sharply under legalization is that most people are cautious and not willing to take risks; since the use of the currently illegal drugs entails a certain likelihood of harm, their use is extremely unlikely to be taken up by many people who are not currently already using. In contrast, one of the reasons that prohibitionists cite in support of their argument is their assumption—as we saw with Bennett's and Pollin's predictions—that many people are not nearly so rational and moderate in their behavior as the legalizers believe. Many Americans will experiment with and use heroin and cocaine, the prohibitionists believe; of this total, a substantial proportion will become compulsively involved with them to the point of abuse and addiction. The reason why this will happen, prohibitionists believe, is that many of us are willing to take dangerous risks. The prohibitionists argue that a lot more people are reckless risk takers than the legalizers think. In fact, prohibitionists say, this is precisely the reason why societies institute criminal laws outlawing certain activities: By introducing the risk of arrest, the slightly foolhardy will be dissuaded from engaging in them, while only a fairly small number of *very* foolhardy souls will be willing to do so.

In my view, the argument between the criminalizers and the legalizers is misplaced. To put it another way, both sides are partly right—and partly wrong. And while most Americans are not risk takers, this is irrelevant. The crucial issue is not the orientation of *most* Americans, but the orientation of a minority. There are enough hedonistic risk takers in this society who, under the right social and legal conditions, would be inclined to experiment with drugs and seriously disrupt the lives of the rest of us. In spite of the practical, hard-working, sober veneer of most Americans, many among us who want to drive fast cars, get intoxicated on psychoactive drugs, engage in a variety of sexual adventures, neglect our workaday and family obligations, eat fattening foods without restraint, dance until dawn, and commit a vast panoply of criminal acts are deterred by the consequences, including social and monetary; for some of these actions, the legal consequences are important as well. The removal of legal penalties outlawing one item on that list—obtaining and getting intoxicated on drugs—would make the use of drugs more attractive to a substantial number of Americans. My contention is that the threat of arrest and imprisonment is *one* of the mechanisms that keeps the wilder side of the moderate risk takers in check, while the small minority of extreme risk takers remain undeterred by risk, legal or otherwise.

Yet the legalizers are correct in assuming that *most* of us are not true risk takers. Under legalization, most Americans would not experiment with heroin or cocaine, and of those who do, most would not become unwisely and abusively involved with them. There is practically no chance that, if the laws criminalizing them were removed, heroin or cocaine would ever become as popular as cigarettes or alcohol. The vast majority of Americans would shun the recreational use of the currently illegal drugs, and the vast majority of those who did use them would be temperate and moderate in their use.

Comments one critic of the current policy, “While certain drugs can produce physical dependence, most individuals *will not willingly take* those drugs, even after experiencing their effects” (Gonzales, 1985, p. 105). Still, this is irrelevant. What is important is that *more*—not most—people would use drugs under legalization than is true today, and more would use compulsively and abusively.

Most people do not want to harm themselves. The evidence shows that, however inaccurately, people *do* calculate cost and benefit before engaging in certain actions. (Indeed, this is one of the reasons behind enacting and enforcing criminal laws in general.) But risk is not the same thing as harm; risk entails taking chances—it is not a guarantee of being harmed. In countries without helmet laws, a certain proportion of motorcyclists refuse to wear helmets. For most of those who take that risk, not wearing helmets will make no difference to their life or limbs, because most will not get into a serious accident. The same applies to motorists who refuse to wear a seat belt; for most of them, not wearing a seat belt is not harmful. Harm enters into the picture not in each and every case but in the overall scheme of things. Injury and fatality statistics are very clear about this: You are *more likely* to be seriously injured and die if you do not wear a helmet or a seat belt. *Some* (not all, not even most) motorcyclists are harmed because they didn’t wear a helmet; *some* motorists are harmed because they didn’t wear a seat belt. The law convinces a substantial proportion of motorcyclists and motorists to wear protective devices; even more persuasive than a law by itself is a law with real penalties and vigorous enforcement.

Again, it is simply irrelevant to argue that most “normally intelligent people” will give up an activity if they are aware of the “tangible hazards” of an activity or substance (Gazzaniga, 1990, p. 39). The risk an activity entails is not always clear-cut, obvious, or immediately apparent. Indeed, the danger in question may never manifest itself because, once again, risk is a statistical, not an absolute, affair. Most people are not harmed at all by a great many very risky activities. The two crucial issues are (1) the absolute number who are harmed, not the proportion, and (2) the number who are persuaded not to take a given physical risk because of an entirely separate risk: the likelihood of arrest. If that second risk were removed, a substantial number of people would engage in harmful, abusive drug taking. (Why do the legalizers emphasize the dissuasive power of physical risk but ignore the power of the threat of arrest and imprisonment?) Not a majority, not even remotely close to Bennett and Pollin’s tens of millions of Americans, but a substantial number would do so. Since I see the American population as far more willing to take risks than the legalizers do, I conclude that legalization will result in a significant rise in drug use and abuse.

Drug Use and Effects

A second piece of evidence relevant to the question of the impact of legalization on drug use bears on the effects of the drugs under consideration and the ways they are used. Although, as we’ve used the term in this book, all drugs are by definition psychoactive, not all drugs are used in the same way; while all recreational drugs are used for their pleasurable effects, the way that that pleasure is experienced and integrated into the lives of users is far from identical for all drugs. Although all (or nearly all) the psychoactive drugs possess a potential to generate a dependency in users, that potential varies enormously from drug to drug. And although all the drugs that are taken recreationally are

potentially harmful, the ratio of harm to pleasure varies from one drug to the next. And the intrinsic effects of a particular drug are related to that drug's potential harm.

The mechanics, logistics, and effects of each drug influence the degree to which it can be woven into everyday activities. The effects of cigarettes, as they are currently used, are mildly stimulating. Most users can continue to puff cigarettes more or less throughout the day without disruption—while working, studying, interacting, talking, driving a car, walking about, and so on (Kaplan, 1988, p. 41). Only social disapproval and legal bans cut smokers off from nonsmokers; the intrinsic nature of the use of the drug and its effects do not preclude their integration into much of routine living. Although alcohol is not quite so readily integrated into everyday life as is tobacco, in moderation, it is compatible with a wide range of pleasurable activities. For instance, it tastes good to most of us, it goes well with food, it is typically a lubricator of sociability; it does not usually isolate most drinkers from most nondrinkers except at the point of heavy consumption. Unlike many drugs, the effects of alcohol are linear: The drinker does not have to be intoxicated to enjoy its effects. One can enjoy mild effects of alcohol, whereas for some drugs (heroin, for instance), achieving only subeuphoric effects is likely to be experienced as more frustrating than enjoyable. Most of the currently illegal drugs are taken specifically to get *high*; the user must attain at least a minimal desired threshold of pleasure to make taking them worthwhile.

As a hypothesis, we can state that the more readily a given form of drug use can be adapted to everyday life, other things being equal, the more popular it is likely to be. Contrarily, the more disruptive its use is, the less potential it has for widespread popularity. In contrast to cigarettes and, to a lesser extent, alcohol, and an even lesser extent, marijuana, drugs such as heroin, crack cocaine, and especially psychedelics (for instance, LSD) are *highly* disruptive; their effects jolt the user out of routine activities and away from sociability with others, particularly nonusers. Using these drugs requires a much greater commitment to use and a much greater willingness to suspend whatever else one may wish to do, at least for a time. We may place marijuana and powder cocaine midway along a continuum between cigarettes at one end and heroin, crack, and LSD at the other. Smoking marijuana and snorting or taking powder cocaine intranasally are only moderately disruptive, usually confined to periods when the focus is more or less on getting high and enjoying oneself and socializing with other users who are also high. Again, few marijuana or powder cocaine users seek a mildly pleasurable sensation comparable to that provided by a cigarette or two or half a glass of wine; most wish to become high or intoxicated. Hence, the use of these drugs will create an interactional barrier between the user and the nonusers—and often among users themselves. Thus, with respect to the connection between the way these drugs are used and their effects, tobacco is least disruptive to everyday life and requires the least commitment to use, while a truly effective dose of heroin, crack cocaine, or LSD stands at the opposite end of this continuum: These drugs are highly disruptive and require a great deal of commitment to use regularly and frequently. Hence, legalizers predict, under legalization, heroin, crack cocaine, and LSD and the other psychedelics could never attain the popularity of the currently legal drugs. Given the basic fact of their socially disruptive nature, it is almost inconceivable that they would be taken up on an abusive scale by more than a small fraction of users, even if they were to be legalized. Their use would remain marginalized and indulged in by a very small minority (Nadelmann, 1989, p. 945).

On the other hand, there is the issue of how reinforcing the drugs in question are, a factor which Bennett and Pollin stress in their predictions of use patterns after legalization. We reviewed some of the research on this issue in Chapter 3. With respect to drugs, reinforcement refers, roughly, to how enjoyable a substance is, its capacity to deliver an orgasmlike jolt or “rush” of unmodified, undiluted, unsocialized pleasure. Reinforcement refers to the reward an organism achieves upon taking the drug and the commitment it has to continue taking it. To put the matter in more formal terms, the more reinforcing a drug, the harder an organism will work to continue taking it. The reinforcing potential of drugs can be determined even among nonhuman organisms; rats, mice, and monkeys find cocaine (and, to a lesser degree, heroin and the amphetamines) immensely pleasurable; they will press a bar hundreds of times in order to receive a single dose of the drug. In a laboratory situation, they will take it as much as they can and will even risk their lives to do so. They will take cocaine in preference to food and water, and will even kill themselves self-administering cocaine. Moreover, if they have taken cocaine over a period of time, and the drug is suddenly discontinued, they will continue doing whatever they did previously that rewarded them with doses of cocaine, even as it now goes unrewarded, for a longer period of time than for any other drug, including heroin (Eckholm, 1986; Bozarth and Wise, 1985; Johanson, 1984; Clouet, Asghar, and Brown, 1988). Psychologists regard whatever produces such slow-to-extinguish, previously rewarded behavior as extremely reinforcing. In this respect, then, cocaine stands at the top of all widely used psychoactive drugs. Most pharmacologists and psychologists now argue that psychological reinforcement is the key to dependence, not addiction or physical dependence. Drugs that are highly pleasurable in an immediate, sensual way are most likely to produce addict-like behavior in users, whether or not these drugs produce literal, physical withdrawal symptoms. In this respect, then, among all widely used psychoactive drugs, cocaine possesses the greatest potential for producing dependence.

At the same time, we must be skeptical of any automatic extrapolations from laboratory experiments, whether on humans or animals, to real life. Wilbanks (1992) warns us against the *monkey model of addiction*: the fallacy of thinking that what monkeys in cages do with drugs automatically tells us everything we want to know about what humans will do on the street. After all, animals do not like the effects of alcohol or tobacco; it is difficult to induce them to take these drugs, use them, or become dependent on them. Yet we know that alcohol and tobacco are extremely widely used—and abused—among humans in their natural habitat.

Still, laboratory experiments cannot be dismissed out of hand. They remind us of the *potential* for dependence in humans that specific drugs possess. And cocaine possesses that potential in greatest abundance: It is highly reinforcing—pleasurable, appealing, sensual, and seductive. Remember, this is only one factor out of a range of factors that influence use. By itself, it does not dictate the popularity of drugs. But knowing this one fact about cocaine should make Bennett’s and Pollin’s predictions understandable. I think they are wrong in the *magnitude* of those predictions (again, they leave out the social disruptiveness factor) but it is not difficult to see how they came up with them. Regardless of the size of the predicted increase, other things being equal, the pharmacological properties of cocaine (and, to a lesser extent, heroin) should lead anyone to predict an increase in use under some form of legalization. There are sufficient grounds for genuine concern when it comes to sharply reducing the cost, and, increasingly, the

availability of cocaine—as any legalization scheme is bound to do—given its intrinsically pleasure-inducing and reinforcing property. We'd have to marshal a great deal of contrary data to convince evidence-minded observers that cocaine abuse would not sharply rise under legalization—and, as yet, no such evidence has been forthcoming. In the absence of such evidence, most of us will have to remain convinced that, in the words of John Kaplan (1988, p. 33), any policy of legalization “ignores basic pharmacology.”

Frequencies of Use

What direct evidence do we have about the impact of legalization on drug use? Contrarily, what is the evidence about the impact of the criminalization of drugs and enforcement of the drug laws on use? Does drug use/abuse rise when drugs are legalized and fall when they are criminalized? Or, as the legalizers assume, does law enforcement have little or no impact on the incidence and volume of use? What circumstances make drugs more, or less, available? Is there a variety of controls in addition to legal ones that influence use?

We already know that national alcohol prohibition in the United States (1920–1933) *did* discourage use: Fewer Americans drank and fewer contracted cirrhosis of the liver during Prohibition than before and afterwards. (Prohibition brought about a number of other changes, as we saw, but they are separate from the issue of volume of alcohol consumption.) We also know that the partial decriminalization of small quantities of marijuana in the states of the United States has not resulted in a significant increase in the use of this drug (Cuskey, Berger, and Richardson, 1978). It is entirely possible that marijuana is a case apart from cocaine and heroin. At any rate, cocaine, heroin, and methamphetamine are the drugs most Americans fear and worry about the most. A number of observers have endorsed the legalization of marijuana and yet oppose the legalization of hard drugs such as heroin and/or cocaine (Kaplan, 1970, 1983; Kleiman, 1992a, 1992b). And the Dutch policy (often mistakenly referred to as “legalization”) is based on making a sharp distinction between soft drugs such as marijuana and hashish and hard drugs such as cocaine and heroin (Leuw and Marshall, 1994; Beers, 1991). Hence, the case for or against heroin and/or cocaine legalization will have to be made separately from the case for or against the legalization of marijuana.

Several pieces of evidence suggest (but do not definitively demonstrate) that when the *availability* of certain drugs increases, their *use* increases as well. It has been something of a cliché among legalizers that criminalization doesn't work. Look around you, they say. Go to certain neighborhoods and see drugs openly sold on the street. Drugs are getting into the hands of addicts and abusers right now. How could the situation be any worse under legalization? Those who want to use are already using; selling drugs to addicts, abusers, and users legally would not change anything, they say.

The fallacy in this line of reasoning is that, currently, under our punitive policy, addicts and abusers are not using as much as they would like to. Under almost any conceivable legalization plan, the currently illegal drugs would be more readily available; and if that were so, addicts and abusers would use a great deal more cocaine and heroin than they do now. The fact that we can look around on the streets of the country's largest cities and see drug using taking place means virtually nothing. Most addicts and drug abusers say that they want to use more than they currently do, and if illicit drugs were cheaper, more readily available, and less difficult to obtain, they would use a great

deal more. The antiprohibitionists who argue that drug use will not rise under legalization lack one major characteristic of the competent policy analyst: imagination.

The Hassle Factor

There is also the *hassle factor* to consider. Addicts are pulled into use by the fact that they enjoy getting high, but they are pushed away from use by the fact that they have to commit crime to do so. Street crime is a difficult, risky, and dangerous enterprise; use is held down by that fact. If drugs were less of a hassle to obtain, most addicts and abusers would use them more. The vast majority of heroin and cocaine abusers want to get high, are forced to commit a great deal of crime to do so, and are not getting as high, or high as often, as they want because their drugs of choice are too expensive, and the crimes they commit are too much of a hassle. Mark Moore (1973, 1976) refers to this as the “search time” for illegal drugs; says Moore, as search time goes up, demand decreases. Careful ethnographic and interview studies of street addicts and abusers have shown that getting high—not mere maintenance—is their prime motivation. Most are *not* technically addicted, their day-to-day use varies enormously, and most would use *much more* frequently if they could (Johnson et al., 1985; McAuliffe and Gordon, 1974).

In this sense, then, the drug laws and their enforcement have cut down on the volume of drug use among a substantial proportion—very possibly a majority—of our heaviest users and abusers. Again, the distinction between relative and absolute deterrence comes into play here; these addicts and abusers use a substantial quantity of illegal drugs—but a great deal less than they would if these drugs were legal or freely available to them.

George Rengert (1996) argues that drug use is very elastic, depending (among other things) on supply. If supply is ineffective or inefficient in reaching its ultimate customer, or if a given product or service is inconvenient or risky or dangerous to obtain or engage in, use will decline. Customers have to be willing to put up with a threshold level of hassle to get what they want; beyond that threshold, they give up. If it is too much trouble to obtain a drug, the number of users taking it will decline. Some drug markets are easier for law enforcement to disrupt than others. If a chain of drug supply from grower to user is comprised entirely of intimates, under most circumstances, law enforcement cannot (and, under most circumstances, should not) attempt to infiltrate it. On the other hand, most other markets are made up of more public exchanges, and exchanges among non-intimates, and can be disrupted far more easily. When illicit drug exchanges are public, blatant, and located in fixed neighborhoods, they tend to attract customers who are strangers, and a variety of police tactics will be effective in convincing those customers to give up their effort to purchase the product or service they seek. Some of these tactics include blocking off or rerouting streets, arresting customers, targeting customers who come to a given community from other areas, confiscating customers’ cars, and embarrassing customers. Law enforcement controls major aspects of the hassle factor, and drug use is most decidedly elastic with respect to hassle.

Cost

We’ve already seen in the previous chapter, based on the extensive summary of the literature by MacCoun and Reuter (2001), that drug use is at least moderately elastic—the higher the cost, the lower the use of drugs, both licit and illicit. This equation works

better with nonaddicting drugs such as marijuana and less well with addicting drugs such as heroin and tobacco, but the evidence on the strong relationship between cost and use is robust and incontrovertible. And it is prohibition that keeps the cost of illicit drugs high. In the absence of prohibition, heroin and cocaine would be as cheap to manufacture as aspirin, and under any conceivable or proposed legalization plan, they would be vastly less expensive than they are now. Indeed, it is their very cost under prohibition that the legalizers criticize; in proposing to make them cheaper, without realizing it, they are intimating that their use should correspondingly increase, and significantly. While legalizers often claim that the price of illegal drugs is artificially high and that eliminating the criminalization of drugs would also eliminate the profit motive (Bourgeois, 1995), cigarette and alcohol manufacturers continue to make immense profits distributing distinctly legal products.

Avram Goldstein and Harold Kalant (1990) base their opposition to legalization on the observation that use is directly related to availability, and availability is influenced by a variety of controls, including criminalization and cost. Under any and all legalization plans, the currently illegal drugs would be sold or dispensed at a fraction of their present price. Indeed, that is the advantage of this plan, say its supporters, because the high cost of drugs leads to crime which, in turn, leads to a wide range of social harms, costs, and problems.

But Goldstein and Kalant argue exactly the opposite: The high cost of the illegal drugs is specifically what keeps their rate of use down. If drugs were to be sold or dispensed at low prices, use would almost inevitably rise—in all likelihood, dramatically. This relationship is demonstrated, they say, with a variety of drugs in a variety of settings. For instance, as measured by constant dollars, cost and the per capita consumption of alcohol—and the rate of cirrhosis of the liver—were almost perfectly correlated in a negative fashion in the Canadian province of Ontario between 1928 and 1974, these authors point out: During periods when the price of alcohol was low, the use of alcohol was relatively high; when the price of alcohol was high, use was relatively low. Price and use were inversely correlated with each other.

In addition, observe Goldstein and Kalant, the purchase of cigarettes, and therefore smoking, varies directly and negatively with the level of taxation on cigarettes: The higher the taxes on cigarettes, the lower their sales. “These data suggest that anything making drugs less expensive, such as legal sale at lower prices, would result in substantial increases in use and in the harmful consequences of heavy use” (p. 1515).

There are two additional pieces of evidence bearing on the relationship between the availability of psychoactive drugs and their use: (1) the immense increase in the use of and addiction to narcotics among servicemen stationed in Vietnam, and their sharp decline upon their return to the United States, and (2) the higher rates of certain types of psychoactive drug use among physicians and other health workers—who have greater access to drugs—than in the population as a whole.

Robins (1973) reports that almost half of a sample of U.S. military servicemen serving in Vietnam in the 1970s had tried one or more narcotic drugs (opium, heroin, and/or morphine), and 20 percent were addicted to opiates. Prior to their arrival in Vietnam, however, only a small fraction had ever been addicted, and after their return to the United States, use and addiction fell back to their pre-Vietnam levels. (This study cross-checked self-reports on drug use with urine tests; hence, we can have a high degree of confidence

in the answers on use and addiction.) This study's findings are significant for at least two reasons.

First, the fact that the vast majority of addicted returning veterans discontinued their dependence on and use of narcotics on their own, without going through a formal therapeutic program, has major implications for the study of drug treatment. Second, and more central for our purposes, the fact that use and addiction increased when the troops were in Vietnam, where drugs were freely available (although technically illegal), and they returned to their previous, extremely low levels when these veterans returned to the United States, gives us a glimpse of what may happen under legalization. About 95 percent of those who became addicted in Vietnam had not been addicted in the United States, and a similar 95 percent who became addicted there ceased their addiction when they returned to the United States from Vietnam. This suggests that there must have been something about the conditions that prevailed in Vietnam that encouraged use and addiction, as well as something about those that prevailed in the United States that discouraged them. Some observers have attributed the high levels of drug abuse that prevailed in Vietnam to the combat stress that these servicemen experienced (Gazzaniga, 1990), but it is unlikely that this is the whole explanation. It seems almost incontestable that the greater availability of drugs in Vietnam induced an enormous number of servicemen to use, and become addicted to, narcotics who otherwise would not have become involved. Their low level of narcotic addiction in the United States, both before and after their Vietnam experience, was influenced by the fact that the laws outlawing opiates are enforced here.

There are three aspects of physician drug use, which is significantly higher than drug use in the population at large. First, as a number of studies have shown, recreational drug use among medical students and younger physicians is strikingly higher than among their age peers in the general population; again, availability is related to the likelihood of use. In one study, 73 percent of medical students had had at least one recreational experience with at least one illegal psychoactive drug (McAuliffe et al., 1986). In comparison, for 18- to 25-year-olds in the general population at roughly the same time, the figure was 55 percent, and for 26- to 34-year-olds, it was 62 percent. For cocaine, the comparable figures were 39 percent for medical students and, in the general population, 18 percent for 18- to 25-year-olds and 26 percent for 26- to 34-year-olds (NIDA, 1991, pp. 25, 31).

Second, rates of self-medication among physicians are strikingly higher than is true among the general population. In the study of physician drug use cited above, 4 out of 10 physicians (42%) said that they had treated themselves with one or more psychoactive drugs one or more times, and 7 percent said that they had done so on 60 or more occasions; one-third of medical students had done so once or more, and 5 percent had done so on 60 or more occasions (McAuliffe et al. 1986, p. 807). This represents an extraordinarily high rate of self-medication with psychoactive drugs.

And third, the proportion of physicians reporting drug dependence is extraordinarily high—3 percent of physicians and 5 percent of medical students said that they were currently dependent on a psychoactive drug (McAuliffe et al., 1986, p. 808), far higher than for the population as a whole. Other surveys have produced similar results (Epstein and Eubanks, 1984; Sethi and Manchanda, 1980). Whereas occupational stress has often been cited as the culprit in high levels of physician drug use, abuse, and dependence (Stout-Wiegand and Trent, 1981), as with the Vietnam situation, it is difficult to deny that availability plays a substantial role.

Continuance Rates

As we saw earlier, legal drugs tend to have high *continuance rates*, while illegal drugs tend to have far lower continuance rates. Out of all the people who have ever taken a given drug, the proportion who continue to use it (let's say, who used it once or more in the past month) tends to be fairly high for the legal drugs and fairly low for the illegal drugs. And the *more* illegal a drug is (for example, cocaine versus marijuana), the lower is its continuance rate. In SAMHSA's 2011 survey, 6 out of 10 of all "at least one time" drinkers consumed alcohol during the previous month (63%); for tobacco, the comparable figure is 1 out of 3 (35%). In contrast, for marijuana, the continuance rate is only 17 percent, and for most of the other illegal drugs, considerably less than one "at least one time" user in 10 used in the past month: For cocaine, the figure is 3 percent, and for LSD, the figure is 1 percent. The same relationship holds in Amsterdam, where marijuana (but not the hard drugs) is de facto decriminalized and users and small-time dealers of the hard drugs are rarely arrested. There, alcohol's continuance rate is 80 percent, tobacco's is 63 percent, marijuana's is 24 percent, and the recreational use of prescription drugs falls somewhere in between tobacco's and marijuana's rates; that of the illicit, criminalized drugs is under 10 percent (Sandwijk, Cohen, and Musterd, 1991, pp. 20–21).

Although many factors influence a drug's continuance rate, other things being equal, if a drug is legal, users tend to stick with it longer; if it is illegal, they tend to use it more infrequently and more sporadically, and they are more likely to give up using it altogether. It is not true that, under criminalization, illegal drugs are as freely available as are the legal drugs. Criminalization makes drugs more difficult to obtain and use on an ongoing basis; for many would-be regular users, the hassle factor makes use simply not worth it. High rates of continuance for the legal drugs, and high rates of *discontinuance* for the illicit drugs, demonstrates that fact. Users are more "loyal" to legal drugs than to illegal drugs, and the more illegal a drug is, the more disloyal its users are.

WHAT IS TO BE DONE?

In 1902, the Russian revolutionary Vladimir Lenin (1870–1924) wrote a book entitled *What Is to Be Done?* It turns out he was right about making the Russian revolution but wrong about creating a permanent revolutionary society, and within the same century his book appeared, his creation ignominiously imploded without shots being fired, opening the way for the institutionalization of dozens of capitalistic or semi-capitalistic societies across the globe, from Prague to the eastern tip of Siberia. But in every policy and political context, Lenin's question remains, and a team of researchers consisting of Mark Kleiman, Jonathan Caulkins, and Angela Hawken (2011) raise it with regard to how we should reduce the harms caused by both drug abuse and drug control. This policy wonk trio divide their proposals into three categories: First, a "consensus" list, consisting of those suggestions, they feel, that are widely supported, don't challenge prevailing views, would require little political persuasion, and would certainly have positive results. In the second category, they discuss those that are pragmatically appealing and would have a positive impact, but might ruffle the feathers of conservatives who cannot accept compromise and believe that all illicit drug use and any and all intoxication are bad. We should

not make compromises about such issues, some observers believe, but instead should be working toward obliterating all illegal drugs and all ecstatic, drug-induced states. The third category of proposals the Kleiman-Caulkins-Hawken team set forth are those that make a great deal of sense to policy wonks but would entail radically new ways of thinking about the issues, are politically unworkable, and would probably remain controversial even if they could be instituted and even if they had entirely positive public health consequences.

Here are some of the “no-brainers.”

Target, monitor, and test known drug offenders. A small percentage of drug addicts and abusers engage in the majority of drug-related crime, incur the greatest costs to the society, and create the most substantial problems for the rest of us. “Drug tests are cheap,” they say, “prisons are expensive” (2011, p. 198).

Apply the principle of *triage*: Focus drug treatment on those who most need it, thereby allowing “intensive and higher-quality treatment” for those who are most in need of it (p. 198).

Expand maintenance programs for heroin addicts; it is effective, and it works. Giving narcotic addicts an opiate substitute “demonstrably reduces their illicit drug use and criminal activity, and greatly reduces their mortality rate” (p. 199). The authors suggest buprenorphine, since it is effective and not tightly regulated, but they also argue that methadone works and regulations to avoid diversion are too rigid and should be relaxed.

Study treatment programs empirically, find out which ones work and which ones don’t, support those that are most effective, and improve the least effective ones.

Implement routine drug screening, and refer drug-positive patients to treatment. “Screening for substance abuse should be a normal part of routine checkups” (p. 199).

Recognize that disrupting and eliminating deeply entrenched, “mature” drug markets is an unrealistic expectation; the police can, however, help “maintain the boundaries between areas where a drug is easy to get and areas where it is hard to get, and they can keep drugs not currently in widespread use from becoming major problems” (p. 200). The primary missions of the police are and should remain protecting public safety and order; some tasks are beyond their control.

Orient law enforcement efforts toward controlling and reducing violence. Some drug markets transact business with low levels of violence and do not need to be rooted out; some forms of buying and selling “don’t menace neighborhoods”; both law enforcement and sentencing should focus mainly on dealers “whose actions are unusually destructive” rather than those who sell in a more-or-less peaceful manner.

Acknowledge that disrupting international trafficking is unlikely; drug enforcement in producer countries such as Afghanistan and Mexico should be oriented toward protecting local residents from harm rather than toward reducing drug supply and use.

Increase support for empirically based drug prevention programs. DARE, the authors argue, “has never been shown to actually reduce drug use; defund it,” they imply. They support integrated programs that are designed to reduce “all forms of health risk and anti-social behavior” (p. 202).

On their “pragmatist” list, the Kleiman-Caulkins-Hawken team include some of the following.

Be realistic about tobacco consumption. Some efforts may reduce harm rather than use; we should support them. On the other hand, consequences have to be studied, they

cannot be assumed. Zero tolerance is not the only option, though abstinence is ideal. Find out what works.

“Stop punishing former dealers and recovering drug addicts” (p. 202). Punishments such as denying access to public housing and student loans don’t work; they are “purely retributive and serve little purpose” (p. 202).

Get most drug dealers out of prison. Imprisoning sellers of illicit drugs simply opens up a niche in the market and has no impact on trafficking. “Cutting back incarceration for run-of-the-mill dealers would make room for authorities to concentrate on greater enforcement and punishment on the dealers responsible for the most violence and disorder” (p. 203).

Explore positive incentives, such as cash payments, for former addicts testing “clean.”

Expand harm reduction programs, such as needle exchange, supervised injection sites, and the distribution of naloxone kits to prevent heroin overdoses.

Fund studies that conduct research on the medical uses of currently illicit drugs, such as marijuana and heroin.

The politically visionary or quixotic “a bridge too far” proposals? The authors include these: raising alcohol taxes everywhere and cigarette taxes in the grower, low-tax states; banning the sale of alcohol to convicted drunk drivers and drunken assailants; making getting drunk “unfashionable” in the popular culture; encouraging ways for users to get hold of marijuana without supporting criminal organizations or “creating companies that would aggressively promote sales” (p. 205); and studying the “non-medical benefits of psychoactive drugs, and safer ways of using them” (p. 205).

To the pessimist who feels that reasonable proposals about drug policy are rarely implemented, consider the fact that *some* jurisdictions have adopted a number of reasonable proposals, such as more appropriate and less punitive sentencing guidelines, a more factually based drug educational curriculum, and the recognition that the federal government should expand its funding of drug research, including surveys of drug use. In 1972, the National Commission on Marijuana and Drug Abuse issued a report entitled *Marijuana: A Signal of Misunderstanding*, which recommended the decriminalization of small-quantity marijuana possession and the development of a program of study of the feasibility of medical uses of marijuana. The first of these proposals has been adopted in 14 states and the medical use of marijuana, following the results of research based on the second proposal, has been implemented in 18. As of this writing, however, the federal government has adopted neither recommendation.

SUMMARY

Many critics and observers argue that the system of prohibition that currently prevails in the United States doesn’t work and is counterproductive, doing more harm than good. The very nature of legal prohibition makes obtaining a banned product or service expensive, hence, profitable to supply. Because of the profit motive, the arrest of one purveyor does not result in a disruption in the supply of illicit goods and services. Instead, another purveyor steps in and maintains business as usual. Moreover, the illicit drug business breeds corruption, brutality, violence, and crime, not to mention tainted drugs of

unpredictable quality. These critics have proposed that the current system of prohibition be replaced with a system of drug legalization, in one form or another.

Critics have advanced three major proposals: legalization, decriminalization, and a policy of harm reduction. With legalization, the currently illicit drugs would be regulated by the state in much the same way that alcohol or tobacco is. Drugs would be taxed. The state would set limits on their potency and purity, and would determine to whom they may be sold. The government would control matters such as drug advertising and determine who may sell drugs and in what sort of establishment, who is permitted to manufacture them, and where and under what circumstances they may be used, and so on.

Decriminalization (or depenalization) is a very different proposal from legalization. Full decriminalization entails no state regulation or control whatsoever. (“Full” decriminalization should be distinguished from “partial” decriminalization, which currently prevails in 14 states for marijuana as well as the District of Columbia, and permits small-quantity possession without arrest.) It is a *laissez-faire* or hands-off policy of virtually no regulation or control whatsoever. Under this program, anyone may manufacture and distribute any psychoactive substance for any reason. (The sale to and use by minors would presumably be an exception, as would be being under the influence while flying a plane, driving a car, or handling dangerous machines and equipment, and, in the case of a drug like cigarettes, public use, which results in forcing others to inhale the drug’s fumes.) Complete decriminalization, or full depenalization for all drugs, is not a serious proposal and has no hope of implementation at any time in the foreseeable future. It does, however, influence the dialogue between progressive prohibitionists and decriminalizers.

Some observers argue that drug abuse should be regarded as a medical matter and that Schedule I drugs should be rescheduled as Schedule II drugs, and be made available to addicts and abusers by prescription. By the lights of this proposal, they would be controlled in the same way that psychoactive medications such as Xanax, Ambien, lorazepam, and morphine are, the difference being that maintaining the abuser on the drug would be legally permitted. The “condition” that would be treated is the abuse of the drug, and that “treatment” would be the administration of the abused drug. This proposal assumes that abusers and addicts take drugs not to get high but because they are dependent and cannot control their use. Under medical controls, physicians cannot prescribe drugs to patients who want them simply for the purpose of intoxication. But the fact is, intoxication or getting high is the *main* reason why consumers of illicit substances take drugs; state-mandated “treatment” would not address this need or motivation at all.

Harm reduction is a pragmatic or consequentialist proposal rather than a moralistic or ideological proposal. It argues that the purpose of the law is not to wipe out drug use or abuse—that is an impossibility—but to reduce the total volume of harm to the society, including death, disease, a decline in productivity, educational deficits, monetary cost, and so on. Harm reductionists treat each drug on a case-by-case basis and every detail of every proposal on a case-by-case basis. A major element of the harm reductionist’s program is to reduce the harm from the legal drugs as well as those that are currently illicit; in the case of tobacco, that means drastically lowering its use in part by massively increasing taxes on its sale. Harm reductionists are also tinkerers; they believe that any proposal that doesn’t work should be scuttled and only a proposal that does work should be retained. Some elements of a harm reduction policy are currently being instituted in

Western Europe, with some success. Harm reduction should include reforms in the marijuana laws, since public cost is a major element of harm; most drug law violators were arrested for marijuana possession, and some reasonable form of cannabis decriminalization or legalization at the state and federal level would, in the long run, relieve our taxpayers of the burden of billions of dollars.

A major plank of the legalizer's platform is that drug use/abuse will not rise significantly under legalization. Legalizers reason that prohibition is inherently and fatally flawed because if there is demand for a service or a product, purveyors will find a way to distribute it and consumers will find a way to purchase it. But in actuality, many services and products exist whose availability and consumption are strongly reduced by their illegality and law enforcement—national alcohol prohibition being a major example. While there were numerous harmful consequences of Prohibition, alcohol consumption *did* decline by half between 1920 and 1933. On the other hand, the “doomsayers” who argue that the worst-case scenario will come about as a result of legalization are completely wrong; under any conceivable form of legalization, most Americans will not use the currently illicit drugs. The regular use of most of the now-illicit drugs requires a drastically disruptive change in one's day-to-day lifestyle, and relatively few people who do not currently use are willing make that transition. On the other hand, a great deal of evidence indicates that availability strongly encourages use for a substantial percentage of the population. Moreover, today, the heaviest, most chronic abusers do not use as much as they'd like; legalization would increase availability, lower cost, increase use, and, hence, increase the harms such use causes. In short, given what we know about human nature, drug effects, and current patterns of use, outright legalization for all the currently illicit drugs (with the likely exception of marijuana) would inevitably increase use and, very possibly, the chronicity of use, and would almost certainly increase the chance of harms to the society.

Analysts have studied public policies that would reduce drug-related harm. Some are more or less readily implementable, such as non-police, health-related intervention and diversion programs; instituting workable, effective drug prevention programs; and focusing on drug-related violence rather than drug use and sale per se. Other programs that are more controversial, though they would be effective if implemented, are expanding narcotic maintenance programs, as well as any and all harm reduction strategies, and instituting positive incentives for former addicts who test “clean.” The programs that are most controversial, though theoretically effective, include raising alcohol and tobacco taxes, banning alcohol sales to offenders who have committed alcohol-related crimes, and allowing marijuana users to obtain cannabis without supporting the mob or large commercial enterprises.

GLOSSARY

AA See “Alcoholics Anonymous.”

absolute alcohol A substance that is pure or 100 percent ethyl alcohol.

absolute deterrence The view that punishing a given activity will eliminate or drastically reduce its incidence.

abuse, drug (1) Objective definition: the use of a substance to the point that is harmful or dangerous to the user’s life, where the user threatens or undermines previously held values, including health, safety, schooling, job, and relations with loved ones; (2) “biased” or subjective definition: the use of an illicit drug for nonmedical purposes.

acute effects With reference to drugs, the rapid or short-term effects of taking a given drug, that is, those that take place during a single episode of administration; see also “chronic effects.”

ADAM See “Arrestee Drug Abuse Monitoring Program.”

additive effects A characteristic of two drugs such that, when both are taken together, the effects are the same as if twice as much of either had been taken.

agricultural model, pure A pattern of drug distribution that applies to substances grown and harvested from plants that contain drugs but that require little or no preparation or transformation; applies mainly to marijuana and opium.

Alcoholics Anonymous (AA) A peer-oriented self-help organization dedicated to weaning alcoholics off their dependence on alcohol; based on the theory that alcoholics cannot drink in moderation.

amphetamines Central nervous system stimulants; chemically, alpha + methyl + phenyl + ethyl +

amine; examples include Desoxyn, Adderall, and Dexedrine; related to but less potent than methamphetamine.

analgesics A category of drugs whose primary effect is the alleviation of pain; painkillers.

anesthetic A substance with painkilling properties; examples include the narcotics.

anomie (or “strain”) theory of deviant behavior

The theory that nonconforming behavior is the product of a “malintegrated” society whose culture encourages material achievement but whose social and economic structure denies that same achievement to most members, thus leading to “strain.” The result is deviant adaptations, including retreatism (such as drug addiction and alcoholism) and innovation (such as drug dealing).

antagonistic effects Two drugs that, when taken together, cancel out or nullify the effects of each other.

antidepressant/antidepressive drugs Mood elevators; a category of substances used to combat clinical depression, including Prozac, Xanax, Paxil, and Zoloft. They do not produce a pleasurable intoxication in nondepressed individuals and are not used recreationally.

antipsychotic drugs Substances used to treat mental disorders; they include the phenothiazines, haloperidol (Haldol), and risperidone (Risperdal). They do not produce a pleasurable sensation and are not used recreationally.

apparent alcohol consumption Per capita sales of alcohol; based on the assumption that most of the alcohol sold will be consumed.

Arrestee Drug Abuse Monitoring Program

(ADAM) A federally sponsored, ongoing data collection program that drug-tests and interviews a sample of arrestees in jails located in metropolitan areas. Because there are no legal consequences for testing positive for or admitting drug use, the response rate is very high.

ataxia Motor discoordination.

availability, drug The presence of one or more substances in a given area such that potential users may obtain them.

availability heuristic The widespread tendency to believe that phenomena that readily come to mind are more common or frequent than they actually are.

BAC See “blood-alcohol concentration.”

BAL Blood-alcohol level: see “blood-alcohol concentration.”

balloon effect A metaphor indicating that, when arrests for drug sales take place in one area, they open up opportunities in another, much the way squeezing a balloon contracts one area and expands another.

barbiturates A category of central nervous system depressants derived from barbituric acid; examples include Seconal, Tuinal, and Amytal.

behavioral dependence Continuing to compulsively take a drug in spite of a desire to stop and in spite of the harmful consequences to oneself and others.

behavioral tolerance Learning how to handle or compensate for the effects of a drug or alcohol after repeated use to minimize its negative consequences.

benzodiazepine A category of sedative drugs that includes Valium and Ativan; commonly referred to as “tranquilizers” or anti-anxiety agents.

bias As it pertains to a perspective or point of view, oriented in a particular direction without regard to the facts; as it pertains to research, see “biased sample.”

biased sample A subset of a population that was selected by researchers in such a way that each member of the population did not have an equal chance of appearing in the sample.

bioavailability The capacity of the body to absorb and metabolize a specific drug, given the form in which it is taken, and to deliver it to the relevant receptor sites.

biological theories of drug use Explanations for the consumption of psychoactive substances that are

based on physical causes, such as genes, hormones, and neurological factors.

blood-alcohol concentration (BAC) The percentage, by volume, of alcohol in the total content of blood in the body; 0.08 percent is commonly defined as legal intoxication throughout the United States.

blood-alcohol level (BAL) See “blood-alcohol concentration.”

brand-name drug The trademark name given to a drug designated by the manufacturer or the copyright holder.

cannabis The scientific name for the marijuana plant.

capable guardian A hypothetical actor in routine-activities theory, an agent that discourages crime from taking place by protecting a “suitable target.”

Centers for Disease Control (CDC) A federal agency that collects and tabulates nationwide data on sources and consequences of death, disease, and accident, and disseminates information on disease and accident prevention.

central nervous system The brain and spinal cord, which send signals to other parts of the body to perform organic functions; usually expressed as “CNS.”

chemicalistic fallacy The theory or view that we can predict how people will act under the influence of a drug or as a result of taking a drug simply from the pharmacological actions of the drug.

chemical model, pure A pattern of drug distribution that applies to substances produced entirely in the lab; examples include Ecstasy, LSD, and methamphetamine.

chipping Using an addicting drug on an episodic, sporadic, once-in-a-while basis.

chronic effects Drug effects that take place over a long period of time; see also “acute effects.”

club drug An informal term for substances used recreationally at “raves,” concerts, parties, and clubs; examples include Ecstasy, GHB, ketamine, Rohypnol, and, sometimes, methamphetamine.

cognitive guidedness model/approach The argument that behavior under the influence of alcohol is “guided” by cultural norms, rarely straying far from what is culturally acceptable.

conflict theory A “macro” or structural explanation that argues that social behavior is the result of differences among groups and social categories in power, wealth, and resources. Hence, drug abuse

- and drug selling tend to be more entrenched in poorer, more disorganized neighborhoods because viable economic options for residents are limited and community members find it difficult to combat the power of drug dealers.
- constructionism** The approach to reality that defines phenomena subjectively—that is, by how they are seen, regarded, conceptualized, or dealt with by the members of society (such as “a drug is whatever the members of society or the law *define* as a drug”).
- consumption levels** The total volume of a given drug that is used during a given time period.
- continuance rates** For a given drug, a figure calculated on the basis of comparing the proportion of “at least one time” users who have also taken that drug within a more recent time period, usually either the past month or the past year.
- Controlled Substances Act** Passed in 1970, the federal Comprehensive Drug Abuse Prevention and Controlled Substances Act increased funding for Public Health Service hospitals; authorized the National Commission on Marihuana and Drug Abuse, a detailed, wide-ranging study of drug use; and established penalties for the possession and sale of drug categories or “schedules” based, supposedly, on a drug’s “potential for abuse” and medical utility, as deemed by the federal government.
- criminalization** The process of passing and enforcing a law that makes an activity illegal; with respect to drugs, the process of passing and enforcing laws that make the possession and sale of a particular drug illegal.
- criminal model** See “predisposition model/school.”
- criminogenic effect** Having the capacity to cause or influence the commission of criminal behavior.
- cross-dependence** The administration of a particular drug preventing withdrawal from another drug to which the person is addicted.
- cross-tolerance** Tolerance for one drug resulting in diminished effects of another drug.
- DARP (Drug Abuse Reporting Program)** A study conducted between 1969 and 1973 to determine the effectiveness of drug treatment programs.
- DATOS (Drug Abuse Treatment Outcome Study)** A study conducted between 1991 and 1993 to determine the effectiveness of drug treatment programs.
- DAWN** See “Drug Abuse Warning Network.”
- decriminalization, drug** A legal “hands-off” policy toward the possession and sale of drugs; usually refers to *partial* decriminalization.
- decriminalization, full** A complete “hands-off” or laissez-faire policy toward drugs; anyone above a certain age may legally possess or sell any quantity of any drug without legal penalty.
- decriminalization, partial** A policy whereby the possession of a small quantity of a controlled drug does not result in arrest, but if the possessor is apprehended by law enforcement, a small fine is assessed and the substance is confiscated.
- de facto legalization** A “hands-off” practice of not enforcing a law, making the criminalized practice in effect legal.
- de jure legalization** Passing a law that renders a given activity, previously against the law, now legal.
- demonology** The practice of portraying certain people as demons or evil spirits, as the epitome of evil; in the War on Drugs, this applies to illicit drug sellers and users.
- depenalization** Removing criminal penalties for an activity; here, removing criminal penalties for drug possession and/or sale.
- dependence, behavioral** See “behavioral dependence.”
- dependence, drug** See “drug dependence.”
- dependent variable** A factor that is caused by another factor, the independent variable—for example, age (the independent variable) causes drug use (the dependent variable); see also “independent variable.”
- depressant** A substance that “depresses” (or lowers the rate of) a wide range of organ functions of the body.
- descriptive statistics** Numbers or figures that depict the basic characteristics of a phenomenon (such as “63 percent of persons who die of drug-related causes are white”); see also “inferential statistics.”
- deterrence** The view that punishing a given activity will deter or decrease its incidence.
- deterrence, absolute** The view that punishing a given activity will eliminate or drastically reduce its incidence.
- deterrence, relative** The view that, *in the absence of law enforcement*, the incidence of a given activity will be greater than it is, given law enforcement.

- differential association, theory of** The idea that the key mechanism in becoming criminal or deviant is the fact that one associates differentially with social circles whose members define crime and deviance in favorable terms.
- direct drug effects** The consequences of taking a given drug that are caused by the drug itself, as opposed to the economic, legal, and other circumstances of taking the drug; see also “indirect drug effects.”
- disassociative anesthetics** Drugs that have the capacity both to reduce the perception of pain and to generate a psychological state that makes the user feel removed from the reality of the immediate setting; examples include PCP and ketamine.
- discoordination** Ataxia, or the loss of the ability to control one’s movements.
- disinhibition model/hypothesis** The argument that it is the direct effect of alcohol that causes drinkers to be liberated from society’s norms and leads to a substantial volume of dangerous, violent behavior while under the influence.
- distilled spirits** Substances that result from boiling a naturally occurring alcoholic beverage, then recovering the alcohol-rich vapors, thereby making a drink with a higher alcohol content; rum, vodka, gin, whiskey, and tequila are distilled spirits.
- dopamine** An important neurotransmitter; among other things, it regulates the effects of stimulants such as cocaine and amphetamine. It also regulates aggression, reward-seeking behavior (such as eating and having sex), coordination, and judgment.
- dose-response curve** A graph that depicts the relationship between the quantity of a drug that is taken and the measurable magnitude of a specific effect that each quantity produces.
- dove** Someone who believes that drugs should be legalized, that the War on Drugs should no longer be fought.
- drug** (1) Legal definition: a substance whose possession and sale is against the law; (2) medical definition: a substance that is used for the purpose of healing the body or mind; (3) psychoactivity definition: a substance whose use generates significant changes in the workings of the mind—mood, emotion, feeling, and cognitive processes.
- drug abuse** See “abuse, drug.”
- Drug Abuse Warning Network (DAWN)** An ongoing, federally sponsored data collection program that tabulates the number of drug-related admissions to emergency departments (ED reports), as reported by metropolitan hospitals and clinics, and the number of drug-related deaths, as reported by metropolitan medical examiners (ME reports).
- drug action** Substances interacting with the central nervous system at the molecular level; sometimes referred to as the “direct” effect of drugs; see also “drug effect.”
- drug addiction** A term used decades ago to refer to drug use that produced significant withdrawal symptoms; less likely to be used today; sometimes used as a synonym for “drug dependence” or “physical dependence.”
- Drug Control Act** See “Controlled Substances Act.”
- drug courts** Program or model that diverts drug offenders away from the penal system and into treatment programs.
- drug dependence** Compulsive, repeated use of a substance whose basis is positive reinforcement.
- drug effect** The direct and indirect physical and psychic consequences of taking a specific drug; see also “drug action.”
- drug fate** The outcome of a process by which a given drug is broken down in the body and, eventually, eliminated from the body.
- drug mixing** Taking two or more substances at the same time.
- drug tolerance** Diminishing effects after repeated administration of a given drug.
- drug treatment** A program designed to reduce drug use, or the harms associated with drug use, through a means other than law enforcement.
- Drug Use Forecasting (DUF)** ADAM’s name before 1997.
- drugs-violence nexus** The connection between drug use and drug-related activity and violent behavior; researchers attempt to explain why the connection between the two is so strong.
- drunken comportment** Behavior under the influence of alcohol.
- DUF** See “Drug Use Forecasting,” “Arrestee Drug Abuse Monitoring Program.”
- economic-compulsive model** Argues that the connection between drug use and violence is so strong because users need money to maintain their

- habit; while committing moneymaking crimes, users engage in behavior, such as robbery and burglary, that often turns violent—for instance, when the victim resists or struggles; related to the “medical model.”
- ED** Effective dose; the quantity of a given drug that produces a specific effect in a percentage of a designated group of subjects.
- ED episode** A specific incident reported to DAWN of an untoward, drug-related experience that results in the user presenting him- or herself to a metropolitan clinic or hospital for medical or psychiatric treatment.
- ED mention** The mention of a specific drug in a specific incident reported to DAWN.
- ED reports** Reports issued by DAWN emergency departments on drug “episodes,” that is, untoward, drug-related experiences that result in users presenting themselves to metropolitan hospitals and clinics for medical or psychiatric treatment.
- ED/LD ratio** The difference between the quantity of a given drug required to achieve a specific effect in a specific proportion of a designated group of subjects and the quantity required to kill that same proportion; also referred to as “safety margin” and “therapeutic margin.” (Note: Most pharmacology textbooks present this as “LD/ED ratio.”)
- effective dose** See “ED.”
- eidetic imagery** Closed-eye visions or “eyeball movies”; one of the principal psychic effects of LSD.
- electroconvulsive therapy** Treating mental illness by applying electrical shocks to the brain.
- elitist theory of the media** The belief that the elite, the most powerful social class in society, control the content and slant of the mass media.
- emergency department episode/mention/reports** See “ED episode/mention/reports.”
- empathogen** A drug that has the quality of fostering feelings of closeness, intimacy, and compassion for others; said to be the principal effect of MDMA (Ecstasy).
- endogenous drug** A chemical substance, with pharmacological effects, produced entirely within the body.
- enslavement model** The argument that more or less accidental or fortuitous narcotics addiction causes a life that revolves around engaging in moneymaking crimes, that it is drug addiction that causes criminal behavior; consistent with the medical model; see also “predisposition model/school,” “intensification model.”
- essentialism** The approach to reality that defines phenomena by pre-given or “objective” properties (such as “a drug is any substance with psychoactive effects”); see also “constructionism.”
- ethanol** Ethyl alcohol, or alcohol.
- ethyl alcohol** Ethanol, or alcohol.
- exogenous drugs** Pharmacologically active substances that originate from outside the body.
- extasis** An out-of-the-normal experience, such as getting high or achieving intoxication.
- Families in Action** An antidrug, mainly anti-marijuana, lobby.
- FBN** The Federal Bureau of Narcotics, the law enforcement agency that regulated illicit drugs prior to the Drug Control Act of 1970 (the Controlled Substances Act).
- FDA** The Food and Drug Administration, created by the Pure Food and Drug Act of 1906, which regulates the distribution of prescription drugs.
- Federal Bureau of Narcotics** See “FBN.”
- Food and Drug Administration** See “FDA.”
- full decriminalization** See “decriminalization, full.”
- gateway hypothesis** The view that certain drugs—and here, marijuana is usually designated as the gateway drug—are *precursors* to the use of other, more dangerous drugs later in life.
- general depressants** See “sedative-hypnotics.”
- generalist drug policy** A program of drug regulation based on the notion that “one size fits all,” that all drugs should be governed equally by the same laws.
- generic drugs** Prescription medicines that are chemical formulas not copyrighted or protected by company patents; non-brand-name pharmaceuticals.
- genetic theories of drug use** Explanations that rely on chromosomal differences in the population that influence the predisposition to take or abuse psychoactive substances.
- globalization** The worldwide interconnectedness of all nations into an international economic, communications, and legal web; a major factor in the decentralization of drug distribution.
- Golden Crescent** The region of Western Asia in which opium poppies are grown; includes northern Turkey, Iran, Afghanistan, Pakistan, and India.

- Golden Triangle** The area of Southeastern Asia in which opium poppies grow; includes northern Burma (Myanmar), Laos, and Thailand.
- grassroots theory of the media** The argument that the slant and content of the mass media are a product of the interests and beliefs of the majority of the population.
- guidedness model** See “cognitive guidedness model/approach.”
- habituation** The process by which a given user becomes accustomed to the effects of a given drug.
- Hague Conference** An international meeting on drug control, held in the Netherlands in 1911, which produced a treaty that led to the Harrison Act; formal name: International Conference on Opium.
- half-life** The period of time during which 50 percent of a given drug remains in the body after ingestion.
- hallucinogen** A category of drugs whose effects include profound sensory dislocation; often referred to as “psychedelics,” they include LSD and mescaline.
- harm reduction** A policy toward drug distribution and sale that is governed solely or mainly by the desire to lower those consequences that are widely agreed to be harmful, even if that policy is not concerned about eliminating drug use or addressing the ideological issues of fairness or morality.
- Harrison Act** A federal law, passed in 1914, requiring that a prescription, written by a licensed physician, be obtained for the sale of narcotics and cocaine, and that such sale be registered, recorded, and taxed. The act did not directly criminalize addiction per se, but in a series of Supreme Court rulings between 1919 and 1923, maintaining the addict on a narcotic was declared an improper medical practice and hence illegal.
- hassle factor** The trouble or difficulty involved in obtaining illicit drugs.
- hawk** Someone who believes that the War on Drugs should be fought, that illicit drugs should remain illegal and should not be legalized.
- hegemony** Institutional dominance; control by the most powerful segments of society of the major institutions in society, such as the media, education, and politics.
- hemp** The marijuana plant; usually refers to plants that are harvested for their fiber and other nonpsychoactive products rather than for their buds and flowering tops, that is, for psychoactive purposes.
- hydroponic** A method of growing plants in water rather than soil; a common technique for growing high-potency marijuana.
- hypnotic** An agent that potentiates sleep.
- immediate sensual appeal** Having the quality of eliciting a positive, pleasurable reaction in organisms upon taking a given drug for the first time, without the mediation of learning to recognize that reaction; applies primarily to cocaine and the amphetamines.
- inadequate personality, theories of drug use based on** Explanations for the consumption, usually the abuse, of psychoactive substances that are based on the notion that young people who lack self-esteem, who are unable to cope with life, or who are failures turn to drugs to drown out the negative feelings.
- independent variable** A causal factor, one that has an effect on another factor, the dependent variable—for example, taking LSD (the independent variable) causes pupillary dilation (the dependent variable); see also “dependent variable.”
- indirect drug effects** Consequences of taking drugs that are not caused by the drugs themselves but by the circumstances of use, such as using contaminated needles and contracting HIV.
- individualistic theories of drug use** Explanations for the consumption of psychoactive substances that ignore larger, structural, or “big picture” factors and focus exclusively on factors relating specifically to the characteristics of users themselves.
- inferential statistics** Numbers or figures that help uncover the cause-and-effect relationships between two or more variables (such as “50 percent of the cause of drug addiction in the United States can be traced to poverty”); see also “descriptive statistics.”
- institutional dominance** See “hegemony.”
- instrumental drug use** The use of a substance for the purpose not of achieving intoxication but of achieving a goal the drug helps the user to achieve, such as driving a truck or studying for an exam.
- intensification model** The argument that drug addiction *accelerates* but does not *generate* moneymaking criminal behavior and that the predisposition to engage in both compulsive drug use and criminal behavior explains part but not all of the connection between the two.

- intramuscular administration** Injecting a drug directly into a muscle.
- intranasal administration** Sniffing or “snorting” a powdered substance into a nasal passage, where it is absorbed into the mucous membranes and from there into the bloodstream.
- intravenous (IV) administration** Injecting a drug directly into a vein.
- intrinsic school** The argument that the “intrinsic” or pharmacological properties of drugs inevitably lead to specific consequences—for example, taking marijuana inevitably leads to the use and abuse of harder drugs.
- iron law of prohibition** The theory that the harsher the penalties against the possession and sale of a given drug, the greater the use of more potent drugs.
- judgmental heuristics** Flawed but predictable informal rules of thumb people use to reach conclusions or make generalizations.
- law of unintended consequences** The principle that there are often unpredictable and undesirable results of planned, purposive action.
- LD** Lethal dose, the quantity of a given drug that produces death in a designated group of subjects; usually expressed as a proportion, as in “LD50,” meaning, “50 percent of the designated subjects will die if administered the designated dose of the designated drug.”
- LD/ED ratio** See “ED/LD ratio.”
- legalization** A policy permitting the possession and sale of drugs under a government licensing system similar to that controlling the distribution of alcohol and/or cigarettes.
- legalizers, progressive** Persons who believe that penalties against the possession and sale of drugs should be removed, based on humane values that seek to reduce the suffering of the user, abuser, and addict.
- lethal dose** See “LD.”
- life-cycle rates** Varying likelihoods of using drugs at different ages in the life span.
- lifetime prevalence rates** The proportion of the population that has used a given drug at least once during their lifetimes.
- long-acting barbiturates** Anti-anxiety and anti-epileptic barbiturates whose action is slow, such as Luminal.
- loyalty rate** See “continuance rates.”
- maintenance model** The view that the drug problem could be solved or alleviated if users, abusers, and/or addicts were maintained on their drug of choice; the model may be applied to a specific drug or drug type, or to drugs in general.
- “major” tranquilizers** An obsolete term used to refer to the antipsychotic drugs, drugs that are used to treat “major” mental illnesses.
- Marihuana Tax Act** A federal law, passed in 1937 and modeled after the Harrison Act, that effectively banned all possession and sale of marijuana until it was superseded by the Controlled Substances Act, passed in 1970.
- ME** An appointed, medically qualified government official with a medical degree, usually with training in forensic pathology, whose responsibility is to investigate the cause of deaths and serious injuries brought to his or her attention, usually by the police, that occur as a result of nonroutine circumstances, including drug-related causes.
- ME episode** A specific incident reported to DAWN of a drug-related death.
- ME mention** The mention of a specific drug in a specific incident reported to DAWN of a drug-related death.
- ME reports** Reports issued by medical examiners on the number of drug-related deaths that took place in a given metropolitan area; see also “Drug Abuse Warning Network.”
- medical examiners episodes/mentions/reports** See “ME episode/mention/reports.”
- medical model** The argument that all drug use—illicit drug use included—is a medical problem and should be dealt with by medical means; usually entails a proposal to emphasize treatment over incarceration.
- metabolic imbalance** A biological theory of drug use that argues that, once certain people begin using narcotics, their body “needs” them to feel normal; see also “methadone maintenance.”
- metabolite** The chemical a given drug is broken down into after entering the body; the product of the body’s enzymes interacting with the drug.
- methadone maintenance** A program of “maintaining” narcotics, mainly heroin, addicts on a narcotic (methadone) that reduces their craving for, and makes it difficult to become high on, recreational doses of the narcotics.

“minor” tranquilizers An obsolete term used to refer to medications used to treat “minor” mental disorders (“neuroses”), especially anxiety and insomnia.

mixed model A pattern of drug distribution involving both growing a drug-bearing plant in an agricultural setting and chemically extracting its drug for distribution and sale.

money machine theory of the media The view that the mass media are primarily motivated by profit, and only secondarily or not at all by other factors, such as political indoctrination.

Monitoring the Future See “MTF.”

“monkey model” of addiction The idea that to understand human drug taking, it is possible to reason directly from the findings of animal studies.

mood disorder A severe disturbance in one’s emotional state, leading to prolonged periods of depression, sometimes accompanied by alternating periods of disproportionate and dysfunctional elation.

motivated offender In routine-activities theory, the hypothetical actor who would be likely to commit a crime if conditions were right.

MTF Monitoring the Future, a federally sponsored, ongoing data collection program that entails administering questionnaires on drug use to high school seniors (since 1975), young adults not in college (since 1977), college students (since 1980), and eighth- and tenth-graders (since 1991).

multiple confirmation Verifying that a given proposition is true through the use of two or more data sources.

multiplier drug effect See “synergy/synergistic effect.”

narcotics Potent, addicting central nervous system depressants with strong analgesic or painkilling properties; some are semisynthetic, derived from natural products such as opium, while others are created entirely in the laboratory.

Narcotics Anonymous (NA) A peer-oriented self-help program to wean users off the use of drugs; based on AA.

National Commission on Marijuana and Drug Abuse A panel, authorized by the Controlled Substances Act, to sponsor studies on drug use and to make recommendations based on those studies’

findings; produced a multivolume report in 1972 and 1973 recommending the decriminalization of marijuana.

National Survey on Drug Use and Health

(NSDUH) An ongoing, federally sponsored, door-to-door or telephone interview and questionnaire study on drug use of a representative sample of the American population age 12 and older; formerly known as the National Household Survey on Drug Abuse.

natural era The period during which humanity produced and used only psychoactive substances and medications directly from natural products, mainly plants, without synthesizing their constituent chemicals.

negative reinforcement The motivation to continue using a drug to avoid withdrawal symptoms.

neuron A nerve cell.

neuroleptic A substance or medication that “seizes hold” of the central nervous system in order to treat the patient.

neurotransmitter A chemical “messenger,” released from one nerve cell to another, that transforms activity in the nerve cell next to it.

NIAAA The National Institute on Alcohol Abuse and Alcoholism, a federal agency that gathers and disseminates information on alcohol abuse and the treatment of alcoholism.

NIDA The National Institute on Drug Abuse, a federal agency that gathers and disseminates information on drug use and drug treatment.

NIMH The National Institute of Mental Health, a federal agency.

NSDUH See “National Survey on Drug Use and Health.”

objective/objectivistic approach to reality See “essentialism.”

opiate A narcotic product of opium; examples include opium itself, morphine, codeine, and heroin.

opioids Synthetic narcotics; examples include fentanyl, oxycodone, Demerol, Percodan, and methadone.

Opium Wars Two wars (1839–1842 and 1856–1860) fought by Great Britain to force China to open that country to the opium trade, which China had outlawed; the sale of opium was enormously profitable to the British government.

- over-the-counter (OTC) drugs** Substances that may be purchased off the shelf, without a prescription from a physician; examples include aspirin, Tylenol, and Sominex.
- partial decriminalization** See “decriminalization, partial.”
- passive smoke** Smoke that issues from the cigarettes of smokers into the air, which nonsmokers are forced to inhale because they are in close proximity.
- patent medicines** Quack cure-alls or panaceas sold during the nineteenth and early twentieth centuries that often contained potent and addicting psychoactive drugs (such as opium and morphine); for the most part, they were neither patented nor medicinal.
- pharmaceutical drug** A prescription drug.
- pharmacological school/model** The hypothesis or approach that argues that the properties of drugs dictate drug-related behavior—for instance, the belief that the use of marijuana automatically “leads to” the use and abuse of harder drugs.
- pharmacological tolerance** The diminishing effects of a given dosage of a drug after long-term administration.
- pharmacology** The study of the effects of drugs on organisms.
- phenothiazines** A category of drugs used to combat psychosis, especially schizophrenia; examples include Mellaril, Thorazine, and Stelazine; they do not produce a pleasurable intoxication in nonpsychotic persons and are not used recreationally.
- polydrug use** The use of more than one drug, whether at the same time or during a given period.
- populist theory of the media** See “grassroots theory of the media.”
- positive reinforcement** The motivation to continue using a drug to achieve pleasurable sensations upon administration.
- potency** Refers to the quantity of a given drug that is required to produce a given effect; the smaller the quantity, the more potent the drug.
- predisposition** The preexisting tendency to do something; relevant to the subject at hand, the tendency to use or abuse one or more psychoactive substances.
- predisposition model/school** The argument that the explanation for the connection between drug addiction and criminal behavior is that the *kinds of people* who are likely to engage in compulsive drug-taking behavior are *also* the kinds of people who are likely to engage in criminal behavior.
- prescription drugs** Drugs that can be obtained, usually at a licensed pharmacy, only by first getting a written, signed document from a licensed physician.
- prescription model** A drug policy that proposes that drugs be administered by prescription.
- prevalence rate** The percentage of a given population that has used a specific drug within a specific time period.
- problem-behavior proneness, theory of drug use based on** An explanation of the recreational use of psychoactive substances that argues that drug use is simply one specific manifestation of a wide range of problematic behaviors, such as early sexual activity, juvenile delinquency, conflict with and alienation from parents, and impulsivity.
- professional subculture theory of the media** The argument that the content and slant of the media are a product of the norms and ethics of journalists.
- progressive prohibitionist** A person who favors retaining and enforcing the drug laws, but for humane reasons, that is, to protect and promote the common good; usually favors a program of harm reduction.
- Prohibition** The period in U.S. history (1920–1933) during which it was illegal to manufacture and sell alcoholic beverages.
- prohibition** Generally, legally banning any activity, including the possession and sale of psychoactive substances.
- pseudohallucination** An image or vision or perception by a user of a hallucinogenic drug that the user knows isn’t “real.”
- psychedelic** A category of drugs that cause profound sensory alterations, including synesthesia (translation of one sense into another), eidetic or closed-eye imagery, and “virtual” hallucinations.
- psychoactivity** Having the property of influencing the workings of the mind, that is, having an effect on mood, emotion, feelings, and cognitive processes.
- psychodynamic theories of drug use** Explanations that argue that drug use, abuse, and/or addiction are caused by psychological factors.

- psychological/psychic dependence:** see “behavioral dependence,” “drug dependence.”
- psychological theories of drug use** Explanations for the consumption of psychoactive substances that are based either on reinforcement, whether positive or negative, or on personality type.
- psychopharmacological model** The argument that drugs (specifically, cocaine) and violence (specifically, murder) are strongly connected because the direct effects of cocaine conduce toward or cause violent behavior.
- psychopharmacological revolution** The growing use of psychoactive drugs to treat psychological disorders, rather than relying on other methods, especially “talking” cures.
- psychopharmacology** The study of the effects of drugs on the mind, that is, the central nervous system—mainly the brain.
- psychosocial unconventionality** A behavioral and attitudinal orientation that is said to be strongly correlated with and causative of experimentation with and use of psychoactive drugs.
- psychotherapeutic drugs** Controlled substances used to treat psychological disorders; examples include antipsychotics and antidepressants.
- punding** A pattern, caused by administration of amphetamine, of engaging in a compulsive, repetitive action.
- punitive approach to drugs** The policy that is directed toward reducing drug use and sales by punishing offenders with legal penalties.
- punitive argument/model** The argument on which the punitive drug policy is based.
- pure agricultural era** The period stretching from the dawn of time to the nineteenth century, when humans relied exclusively on natural plant products for psychoactive substances.
- pure chemical era** The period beginning in the early twentieth century when drugs were derived from chemicals rather than extracted from natural products.
- Pure Food and Drug Act** A federal law, passed in 1906, that required distributors to list the ingredients of a product on its packaging; may have influenced the subsequent decline in the popularity of patent medicines.
- purity** The percentage of a given drug that a given sample contains.
- push-down/pop-up factor** See “balloon effect.”
- receptors** Locations in neurons at which neurotransmitters bind, hence producing (or blocking) a given action.
- reciprocal hypothesis** The model that argues that alcohol abuse and risky behavior feed back into each other, with one reciprocally causing or influencing the other.
- recreational drug use** Taking a substance in order to achieve its effects for their own sake, that is, for pleasure, for the purpose of getting high.
- reinforcement** Usually refers to positive reinforcement; see “negative reinforcement,” “positive reinforcement.”
- reinforcement theories of drug abuse** Explanations based on the idea that drug abuse is caused by the reinforcing effects of psychoactive substances.
- relative deterrence** See “deterrence, relative.”
- retreatists** Those who withdraw from society’s quest for material success, an adaptation proposed by anomie or strain theory as a consequence of being a “double failure,” that is, failing to achieve success by both legitimate and illegitimate means, resulting in alcoholism or drug addiction.
- retrospective estimates** Calculations, based on the recollections of interviewees, of drug use during earlier periods of time.
- route of administration** The way a given drug is taken—that is, orally, via smoking, via IV injection, via a dermal patch, intranasally, and so on.
- routine-activities theory** A criminological explanation that hypothesizes that crime is likely to take place when a motivated offender is in conjunction with a suitable target in the absence of a capable guardian.
- rule of equivalency** The principle that the effects of alcohol are related solely and exclusively to the total volume of absolute alcohol in the body, and not to the type of alcoholic beverage or the mixing of different kinds of alcoholic beverages. Hence, with respect to its effects, the half-ounce of absolute alcohol in a 1-ounce, 100-proof drink of whiskey is precisely equivalent to the half-ounce of absolute alcohol contained in 10 ounces of beer that is 5 percent alcohol.
- ruling-elite theory** The idea that the most powerful sector of society determines the laws, including drug laws; the content of the media; the educational

- and political systems; and the distribution of income in society—in effect, determining the behavior of the rest of us.
- safety margin** See “ED/LD ratio.”
- SAMHSA** The Substance Abuse and Mental Health Service Administration, a federal agency authorized to study and disseminate information about the treatment of alcohol and drug abuse and mental disorders.
- sampling** Systematically selecting a subset of a population that “looks like” or best represents that population with respect to important characteristics.
- sedative-hypnotics** A category of drugs that produce a calming, soothing effect.
- selective interaction/socialization theory** An explanation of drug use that argues that young people use recreational drugs because, first, they gravitate toward social circles whose members are compatible in a range of ways, drug use included, and second, these social circles further socialize them into the desirability of using drugs. The theory also argues that different factors are more influential at different stages of the young person’s life, that is, as he or she moves from young to older adolescence and into young adulthood.
- self-control theory** An explanation that argues that deviant, criminal, and delinquent behavior—including recreational drug use—is caused by low self-control, which, in turn, is caused by poor, inadequate parenting.
- self-derogation theory** A theory of drug abuse that argues that young people take drugs as a “crutch,” to escape from the fact that they are failures in life.
- sensationalism** The view that the mass media present stories in an exaggerated, biased, lurid fashion, in order to stimulate interest and excitement in the media-consuming public.
- sensory overload** A consequence of taking a psychedelic drug; being bombarded by an excess of stimuli as a result of being incapable of filtering out those that are relevant.
- serotonin** An important neurotransmitter that regulates sleep, appetite, body temperature, and mood.
- Shanghai Commission** An international meeting on drug control, held in China in 1909, that produced a treaty that eventually led to the Harrison Act; its formal name was the International Opium Commission.
- short- and intermediate-acting barbiturates** Drugs that are used for sedation and sleep, and that take effect within a brief time span; they include Nembutal, Tuinal, Amytal, and Fiorinal.
- skewed sample** The sample of a survey or other research effort that is biased and unrepresentative of the population it is intended to represent.
- social control theory** A theory of deviance that argues that violations of social norms, particularly juvenile delinquency, take place to the extent that bonds to conventional others, conventional beliefs, and conventional activities are weak or absent; also applies to drug use.
- social disorganization theory** A sociological explanation that argues that certain communities do not or cannot monitor or control the improper, untoward, or harmful actions of their residents and hence have high rates of deviant and criminal behavior, including illicit drug use.
- social learning theory** The idea that deviant, criminal, and delinquent behaviors are learned in a more or less straightforward manner, as a result of exposure to social circles whose members define engaging in non-normative activities in positive terms; also applies to recreational drug use.
- sociocultural school** An explanation of drug use that argues that drug-related behavior is influenced by the norms users acquire through contact with specific social circles or groups. Thus, this school would argue that the “stepping-stone” theory is false because the progression from marijuana to harder drugs is a product not of the effects of marijuana but of the norms promulgated by marijuana-using social circles.
- sociological theories of drug use** Explanations of use, abuse, or addiction that make use of broader structural, cultural, or institutional factors and variables.
- specifist drug policy** A program of drug control based on the notion that each drug or drug type should be controlled in a somewhat different way.
- stepping-stone hypothesis** The view that the use of certain drugs (and here, marijuana is often the designated drug) literally *causes* the use of other, more dangerous drugs.
- stimulant** A category of drugs that produce a speeding up of signals passing through the central nervous system.

- structural theories of drug use** Explanations for the consumption of psychoactive substances that focus on factors that characterize entire systems within which people live, such as a society's income distribution, a neighborhood's social disorganization, or a region's rate of unemployment.
- subcultural theories of drug use** Explanations of use, abuse, or addiction based on the notion that group-based norms, values, beliefs, and behavior influence drug taking.
- subcutaneous administration** Injecting a drug directly beneath the skin.
- subjective/subjectivistic approach to reality** See "constructionism."
- suitable target** According to routine-activities theory, anything a motivated offender might seek to acquire illegally.
- survey** A research technique that entails asking a sample of respondents questions.
- susceptibility hypothesis** The theory that argues that people engage in untoward behavior, including illicit drug use, because of the kinds of people they are—because of their vulnerability to engage in such behavior irrespective of context, setting, group membership, or socialization processes.
- synapse** The space between neurons, across which neurotransmitters pass.
- synergy/synergistic effect** A characteristic of two drugs such that, if they are taken together, their combined effects will be more than twice as great than if twice the quantity of either had been taken by itself.
- synesthesia** The translation of one sense into another, such as "seeing" sound and "tasting" color; one of the principal psychic effects of LSD.
- synthetic era** The period, beginning in the early twentieth century, when scientists began to create drugs entirely from chemicals not found in nature.
- systemic model** The argument that the reason the connection between drugs and violence is so strong is because the world of cocaine dealing is inherently conflictual, confrontational, and exploitative—and not because of the direct effects of cocaine.
- TC** See "therapeutic community."
- THC** Tetrahydrocannabinol, the primary active chemical in marijuana.
- theory** An explanation, whether confirmed or unconfirmed, of a general class or category of phenomena. Hence, a "theory" of drug use would attempt to explain why some people use or abuse psychoactive substances.
- therapeutic community (TC)** A live-in drug treatment program that seeks abstinence as its goal.
- therapeutic dose** Usually refers to effective dose (ED); see "ED."
- therapeutic margin** See "ED/LD ratio."
- thirty-day prevalence rates** The proportion of the population that has used a given drug during the past 30 days.
- thought disorder** A disturbance in cognitive functioning such that delusions, such as hearing voices where none exist, are often regarded as true and may be acted upon; schizophrenia is the most common thought disorder.
- tolerance** Over time, repeated administration of a particular drug resulting in diminished effects of that drug or in the need for higher doses to achieve the same effect; see also "behavioral tolerance," "drug tolerance," "pharmacological tolerance."
- TOPS** The Treatment Outcome Prospective Study, conducted in 1979–1981, a study to determine the effectiveness of drug treatment programs.
- toxicity** The quality of a drug that refers to how harmful or deadly it is, usually with respect to its capacity to produce death by overdose.
- tranquilizer** A term that is sometimes used to describe sedatives; formerly, it applied to the benzodiazepines and benzodiazepine-type drugs such as Valium.
- transformative era** The period beginning in the nineteenth century when scientists learned to extract psychoactive chemicals from naturally occurring plants.
- triangulation** Examining a phenomenon by using two or more independent data sources.
- UCR** The Uniform Crime Reports, a yearly publication by the Federal Bureau of Investigation (FBI) that reports the number and rate of crimes, arrest figures, and organizational information about law enforcement.
- ultra-short-acting barbiturates** Drugs whose action takes place extremely quickly after administration; examples include Brevital and Pentothal.
- unanticipated consequences, law of** See "law of unintended consequences."

- vasoconstrictor** A chemical substance that contracts the blood vessels and decreases the volume of blood passing through them.
- vasodilator** A chemical substance that expands the blood vessels and increases the volume of blood passing through them.
- virtual hallucination** See “pseudohallucination.”
- Volstead Act** The Eighteenth Amendment, which outlawed the sale and distribution of alcoholic beverages in the United States (1920–1933).
- withdrawal symptoms** Physical reactions, including vomiting, muscular twitching, gooseflesh, and pain in the joints and bones, attendant upon discontinuing the use of a drug to which the person is addicted.
- worst-case scenario** The prediction that, under and as a consequence of drug legalization, tens of millions of Americans would become dependent on hard drugs such as heroin, cocaine, and methamphetamine.
- yearly prevalence rates** The proportion of the population that has used a given drug during the past year.
- YPLL/years of potential life lost** The number of years of life lost for a group, category, or entire society as a consequence of a given harmful incident or behavior, such as smoking cigarettes or driving under the influence; this statistic takes into account the age of the victims.
- zero tolerance** A policy guided by the motivation to punish and stamp out all illicit drug use in all contexts.

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