How Benign Structures can Support and Retain Creative Performance in Teams

Susan Moger and Tudor Rickards

We suggest that the concept of benign structure is important in understanding how creative leadership can intervene to support and sustain creative performance. We describe this insight with reference to the leadership observed in project teams of various kinds. Our interpretation of the evidence is that creative leadership produces benign structures which help teams pass through two structural barriers ('press') that bear on team performance. The weaker barrier requires help on inter- personal relationships. The stronger barrier requires help so that performance levels go beyond established and accepted norms. The benign become most obvious in the application of creative problem solving techniques.

One of the more persistent themes within creativity research has been a search for systematic approaches that support creativity. The body of work most directly connected with stimulating creativity through structured interventions is that derived from the creative problem-solving approaches of Parnes and Osborn. The original attempts by Osborn to achieve excellence in team meetings led to brainstorming and subsequently to the international diffusion of a structured form of team brainstorming known as the Parnes-Osborn model.

Considerable debate has developed regarding the legitimacy of structured techniques for stimulating creativity. Perhaps unsurprisingly, interest in developing theory in this area has also been limited. Yet, the techniques have retained some practical credibility as means of stimulating creative productivity.

The creativity techniques have been studied mainly within teams, although some workers such as Edward de Bono have attended to techniques seeking to enhance individual. Studies at the level of the group have assumed that creativity is a valued, perhaps necessary, characteristic of teams generating new and valued outputs. However, an important issue has remained largely unexplored, namely the features that might differentiate creative teams from others that achieve 'standard' or expected outputs.

Stimulating creativity

This question emerged within an extended collaborative project between a Business School and a network of regional firms mainly operating in the manufacturing sector. For some years, teams of MBAs, using a creative problem-solving methodology developed from the Parnes-Osborn model, have worked with directors or owners of small-medium enterprises to generate innovative ideas for change for the organisations. A panel of experienced and independent executives evaluates the outcomes of the project on criteria of relevance, originality and feasibility. Over the years, a pattern of team performance has been observed. The majority of teams reach roughly the same level of performance, making judging extremely difficult. From time to time, a team emerges with qualitatively superior performance rated on creativity including commercial relevance and applicability. These teams have become the focus of our investigations. What leads to such superior creative performance? Conversely, some teams under-perform, to a near catastrophic extent. What produces such unexpected poor performance levels?

Advocates of creativity techniques and training have paid little attention to the possibility that teams may have to pass through stages of development prior to reaching optimal levels of performance. Similarly, researchers into the stages of team

development have remained silent about the relationship between creativity training and ultimate performance characteristics of teams. We concluded that theories of team development and of team creativity needed to be integrated into a new framework. In this paper we take these ideas and show how they lead to an explanation for creative leadership.

Creativity and Team Development

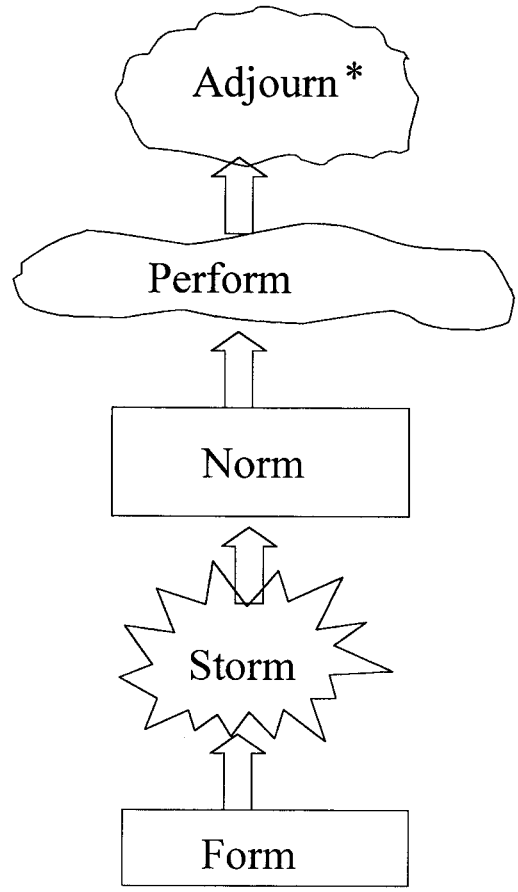
When left without further qualification, creativity in our treatment refers to a multifacetted process through which novel and relevant outputs emerge. Creative leadership is regarded as the behaviours associated with the role of team facilitator in the implementation of creative problem-solving systems such as Parnes-Osborn brainstorming. We also extend the term to a leadership style found in a wider category of teams than those using creative problem-solving techniques. The style seems to have much in common with transformational leadership (Bass and Avolio, 1990, 1994). We see barriers to team development as arising both from externally imposed constraints (environmental press) and from internally generated constraints (socially constructed barriers).

The Traditional Team Development Model

Some years ago, after reviewing the literature extensively, Tuckman (1965) proposed a model of team development. His four stage model became well known for its 'form, storm, norm, perform' sequence. A subsequent review by Tuckman and Jensen (1977) concluded that the literature generally supported the original model, to which a fifth stage ('adjourn') was added, as shown in Figure 1.

The stages are today regarded as idealised, that is to say, the stages may have considerable face-validity as a general sequence. However, empirical observations of specific teams reveal complexities that can not be explained as a simple stage sequence. Teams may never attain a norm of performance, or may regress to an earlier stage of development. Nevertheless, the model retains its value as a simple means of discussing and exploring team dynamics.

The model proposes an orientation phase (forming), which continues until personal conflicts are exposed and addressed ('storming'). The subsidence of the storm indicates that norms of behaviour have been established. Team efforts then become directed towards tasks (performing). Finally, the team reaches some kind of termination - through task completion, or membership disruption (the additional stage of adjourning). At the core of the model is the implication that teams pass through several developmental stages prior to effective performance. The assumption is that intra-personal, and inter-personal needs have to be addressed before behaviour norms are established. Only then can task effectiveness be achieved.



* Extra stage inserted later

Figure 1. The Stage Model of Team Development after Tuckman and Jensen (1977)

Reworking the Tuckman-Jensen Model

Based on our experiences with teams attempting to develop innovative products, we would consider two critical questions to be 'what mechanisms are at play when a team fails to achieve expected performance?' and 'what mechanisms lead to outstanding perform-

ance?' These questions are shown in terms of the Tuckman-Jensen model in Figure 2.

The questions can be answered if we consider a two-barrier model to creative performance in teams. This new framework (shown in Figure 3) reworks the classical model of team development to illustrate this point. The first barrier represents the interpersonal and intra-personal forces that have to be overcome prior to norm formation. We assume that the barrier is weak, in the sense of providing only a temporary obstruction, which most teams overcome. In contrast, again drawing on general understanding of the rarity of outstanding performance, we assume that the second barrier is a more difficult one for teams to pass through. It represents the forces that are overcome when a team breaks out of the conventional expectations within a particular social context such as a corporate culture. These two assumptions lead to our two-barrier hypothesis of team development. This can be formally stated as follows: 'The performance characteristics of a comparable set of teams operating with common tasks can be accounted for in a developmental process that encounters two successive constraints or barriers to excellence. The first is a weak barrier through which most teams pass to achieve a shared standard of performance. The second is a strong barrier through which few teams pass.

Teams that fail to pass through the weak barrier exhibit dysfunctional behaviour. Most teams pass the weak barrier, but then produce similar performances in terms of ideas, decisions, and observed structures and behaviours. Fewer teams pass through the strong barrier. These teams display exceptional creative performance that is easy to recognise when benchmarked against that of the majority of teams exhibiting standard performance outputs and behaviours.

Preliminary Empirical Studies of the Two-barrier Hypothesis

A two-barrier hypothesis

We have tested the two-barrier hypothesis under two kinds of conditions. The first involved studies of project teams of business graduates engaged on realistic business

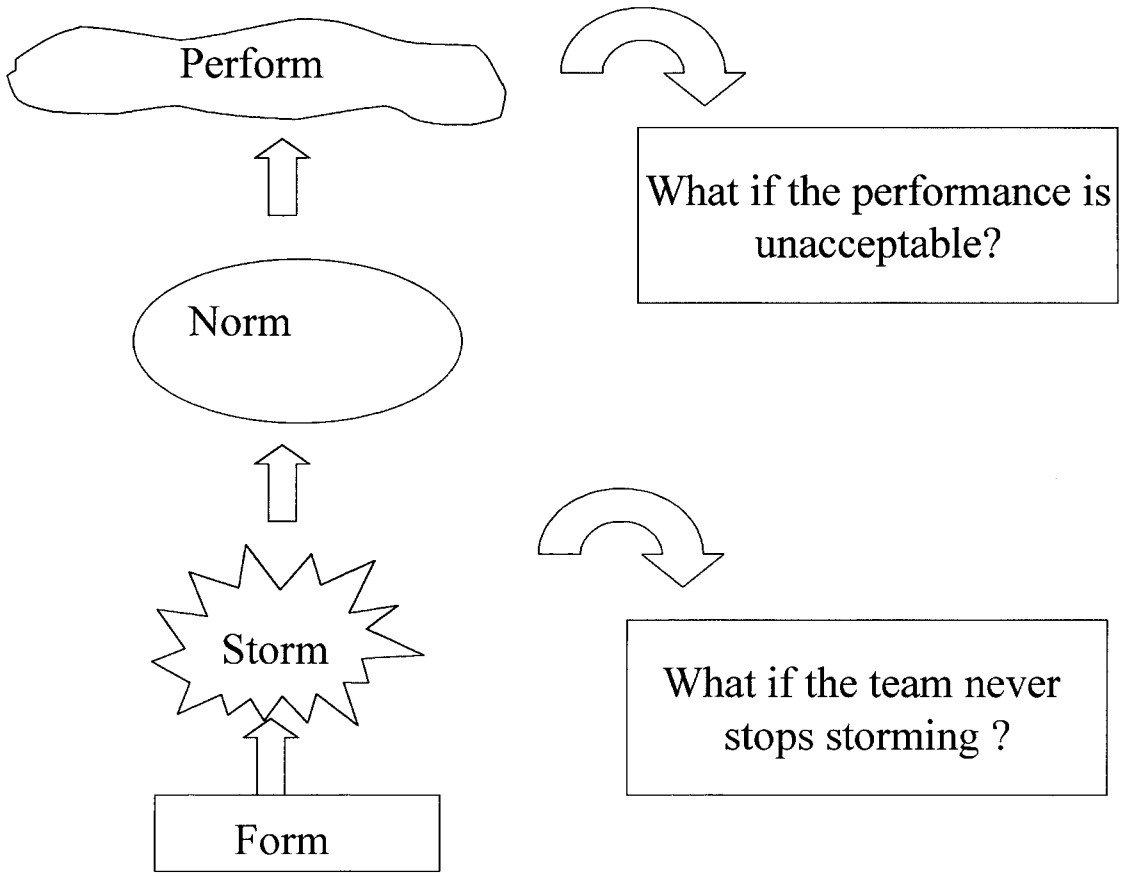


Figure 2. Two important questions left unanswered by stage models of team development

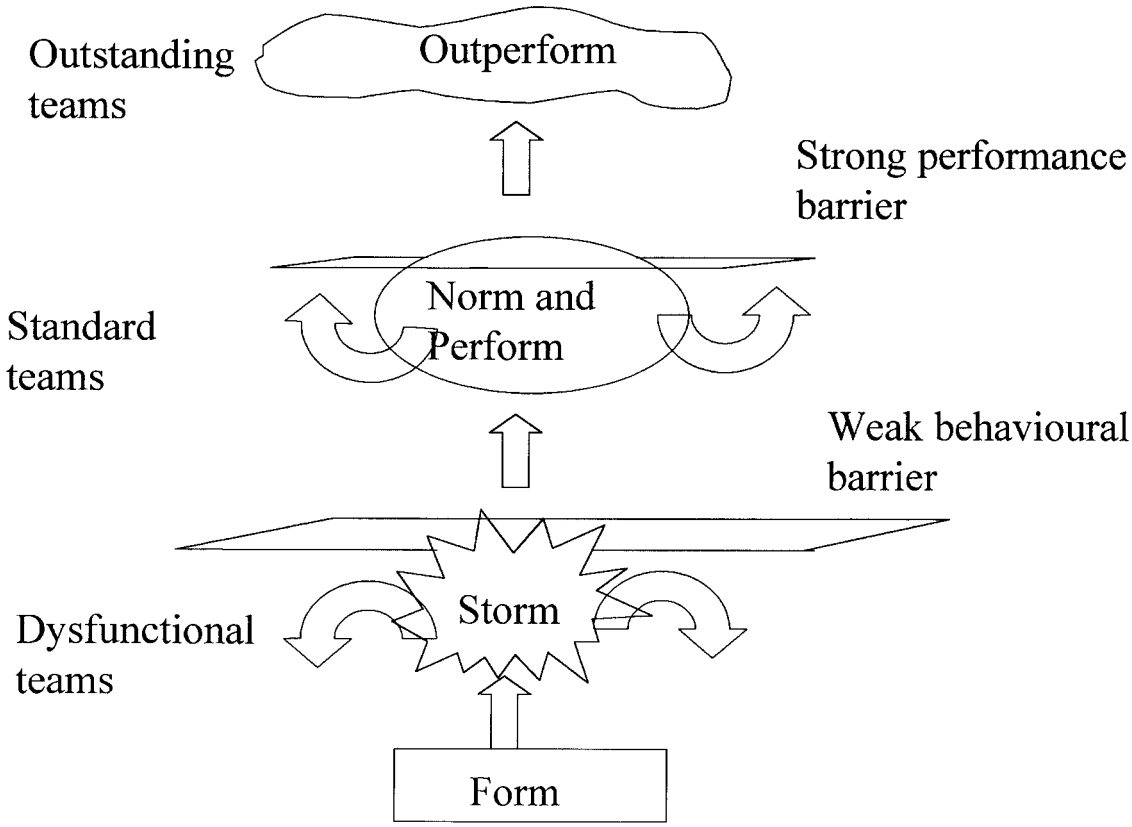


Figure 3. A revised model of team development introducing a weak barrier to standard performance and a strong barrier to exceptional or creative performance

challenges. The second occurred through access to the reports of multiple teams entering an innovation contest within a multi-national industrial organisation.

Within a set of comparable teams dealing with comparable tasks, and provided with similar levels of training and information, the overwhelming majority attains the 'acceptable quality' of standard teams. Infrequently, a team produces ideas and observed behaviours that are delightfully unexpected and creative. Even less frequently, a team fails to perform to a level that earns a pass credit. Perhaps we should add that even within the standard teams, the training in creative problem solving is reported as helping in establishing effective norms of behaviour. The general consensus is that the training at very least helps teams to move smoothly towards the norm/perform stage of development.

Over a period of years working with such teams we would estimate that the frequency of dysfunctional teams ranges from 0%–15%. These are easily identifiable by tutors and fellow students, as well as through their inferior results. Outstanding teams probably crop up with a similar frequency.

The second body of work through which we tested the two-barrier model became available when we gained access to nominations for an innovation award within a large corporation over a three-year period. Each year its ten divisions were invited to submit a nomination from their most effective and innovative project team. The intrinsic and extrinsic rewards for the winners provide high motivation for divisions to nominate their best performing team. Over the three-year period there was a one hundred percent participation rate, so that we assessed 30 innovation projects.

Only once was there an obvious winner. The innovation had been achieved in face of severe environmental challenges, and secured the corporation's position in a new international market remote from corporate headquarters. Of the remaining nominations, the great majority (27 out of 29) showed evidence of a high level of competence. This is a remarkable level of convergence of performance, consistent with strong corporate norms

of quality. As a consequence, the assessor had to report to the board that there was no clear winner, in two out of the three years. In these years, the company resolved the problem by introducing additional and idiosyncratic criteria that permitted a winner to emerge!

We also found two submissions that were so inferior to the others that the teams clearly failed to pass through the weak barrier. The work was below what would be expected of teams achieving the corporate norms of standard performance. (Our interpretation is that the corporate expectations lead to quite high standards of performance shared across what we have called 'standard' teams. By the standards of another, less effective organisation, these might be classed as exceptional. However, the standard teams also have predictability in performance, lacking the kind of breakout thinking that transcends taken-for-granted assumptions). The two reports from teams we classed as dysfunctional, were the only ones that sought to place blame on others outside the group. It would be consistent with notions of team development to assume that these dysfunctional project groups had failed to learn the expected norms of behaviour attained by the majority of teams, including norms of self-sufficiency within allocated resources. Lack of experiential learning may be an important characteristic of teams that have difficulties in passing the weak barrier.

A small number of dysfunctional teams, and a small number of exceptional teams had been found, together with a large number of teams of similar and standard performance. Such a profile of excellence supports the two-barrier framework we are proposing.

The second study has the merits of more realism - each project team was engaged on a real-life industrial task. The results are also consistent with the view that effective large corporations are developing strong cultures in which innovation becomes a norm. In this instance there was an expectation that project teams overcome the innovative challenges within their regular work. However, the strong culture also serves as a ceiling to innovative breakthroughs, as well as a standard of excellence.

Creative Leadership and Benign structures

The conceptualization of team development as involving two different kinds of barrier has encouraged us to search for mechanisms to improve team performance, and for means of reducing the impact of the barriers. Self-reports from teams receiving creativity training suggest that many teams are conscious of a barrier that seems to occur at the 'storm' stage of the traditional team development model. This barrier is seen as one that most teams deal with through unconscious team processes. However, some teams mention that the difficulties of resolving team issues are assisted if a conscious effort is made to address roles and responsibilities.

The process may be one that occurs without a great deal of conscious thought. However, the rationale of facilitative leadership is to provide creativity-enhancing structures. The possibility therefore emerges of creative leadership as moderating the environmental press through the provision of benign structures. The notion of creativity techniques providing a 'set to break sets' is one that has been advocated by Parnes (1993).

The creative facilitator

As we worked with these teams we began to think of the team leader in creative facilitator mode, as supplying such benign structures. If the leader is called in 'just to do a brainstorming' there is the possibility of transient structure that lasts no longer than the brainstorming. If, however, the leader and team continue to apply the principles until they become 'sets to break set' the benign structres become permanent. They replace some ingrained habits often found in teams such as negativity to new ideas, either-or thinking, and so on.

The experimental evidence gives some support to this proposition. Several teams found value in training in De Bono's Six Thinking Hats technique (De Bono, 1987). This approach involves team members discussing a range of team roles in order to plan an agreed sequence of roles. For example, the team may first agree a structure (planning or blue hat thinking), The plan might involve fact finding (white hat) followed by problem finding (creative or green hat) and idea finding (green hat with supportive yellow hat), deferring strong evaluation for longer periods (black hat thinking). The team may also accept that some members have had strong emotional reactions that too often are suppressed. A space for such red hat thinking becomes important. The training provides means for a team to become more self-aware and to open up possibilities of more openness in identifying acceptable team roles.

The teams that behave in exceptional fashion seem to have developed enhanced skills in dealing with a range of factors such as team climate, ownership of ideas, shared goals, and resilience to setbacks.

In our training work we introduce a form of facilitative leadership that encourages team

openness. This style seems particularly associated with transformational team outcomes noted by other workers (e.g. Bass and Alvolio, 1990, 1994). The exceptional teams are those that epitomise the principles behind the creative techniques such as a willingness to defer judgement ('search widely'), and to support one another's ideas ('hitch-hiking'). These characteristics are not simply shown in specially structured creativity sessions. They reflect attitudes that have become internalised into all the team's inter-personal interactions.

Implications for Creative Teams

We have reached a somewhat unexpected finding regarding the use of creative problem-solving methods. For us, they are of value because they make more visible the processes of creative leadership. We see the application as a kind of social learning that has long term benefits in installing 'benign structures' in the way the teams members interact.

The Six Thinking Hats approach is but one example of a promising structure that helps teams through the weak barrier of norm formation. Training in other creative problem-solving systems seems to help teams to consider possibilities beyond habituated perspectives.

But we also suggest that the direct application of the technique can be of minimal impact, if there is no understanding of how the leadership intervention operates. In relatively few cases, interventions may serve to accelerate progress through the strong barrier. It may well be that some of these teams would not have crossed the barrier without some such training. We conclude that the training will help a large number of teams to pass through the weak barrier so as to support the development of cohesive units with shared values and norms. At the more ambitious level, the training may help teams transcend norms thereby producing outstanding creative team results.

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Susan Moger is a Research Fellow at Manchester Business School. Tudor Rickards is Professor of Creativity and Organisational Change at Manchester Business School.