

# The Politics of Creativity: Four Domains for Inquiry and Action by Leaders in R&D

Steve Boehlke

Leaders in R&D functions today face increasingly challenging environments in which to foster creativity and promote innovation. While organizational systems and management processes impact productivity, *relationships* between and among scientists and engineers must be nurtured to sustain competitive advantage. Initiating conversations about organizational dynamics that are otherwise difficult for R&D professionals is a critical task of leaders. This paper, based on practitioner work in the field, identifies four domains of inquiry and action in which focused dialogue and leadership initiative promises more engaged and motivated professionals: (1) pacing productivity; (2) capitalizing on failure; (3) managing connections; and (4) paying the price. As a result of working intentionally in these domains, leaders in R&D make it possible for their organizations to work explicitly with the 'politics of creativity' in a way that encourages trust and fosters more creativity.

## Introduction and Overview

Relationships, more than technology, management processes or organizational architecture, define and differentiate competitors today. The task of nurturing relationships that support innovation requires a responsible use of power and a powerful use of passion. The passion to create is easily stifled when trust is lacking. Fear of addressing key issues which impact an organization's creative energy often prevails when power and control dominate the work environment. Such fear is an indicator of lack of trust.

The goal of this paper is to equip leaders to identify and release unspoken inhibitors to creativity in R&D organizations. As a result, the organization can better leverage its technical talent in the service of innovation with a greater competitive edge in the market.

The political dimensions of creativity are real and omnipresent, though seldom explicitly addressed. Webster's dictionary defines 'political' as 'competition between competing interest groups or individuals for power and leadership'. When people must deal with groups of other people, especially in large organizations, politics is inevitable. Recurring denial by leaders that their organizations are

'political' only reinforces the proposition that power and control are being exercised in a manner that compromises organizational effectiveness.

Indeed, previous research has established that leaders must re-frame 'novel, unfamiliar, and even threatening stimuli so that innovation can happen' (Frost, 1994). Such re-framing 'will often be political. . . . Innovation takes place in the midst of politics, language, trust, and time among other things' (Frost, 1994). And creativity is the primary impulse that spawns innovation.

Through a series of workshops over five years, as well as being a practitioner with large corporate R&D functions across industry, we have identified four domains of inquiry and action where the political behaviour of leaders and creative passion converge.

### *Working 'Under the Radar'*

More than 200 leaders of scientists and engineers primarily from US-based Fortune 100 global companies have participated in 13 Under the Radar™ Workshops we have convened. These workshops, each hosted by a different company, are designed to facilitate inquiry and foster collaboration across

- **Pacing productivity:** recognizing performance motivators and stressors
- **Capitalizing on failure:** fostering a more trusting learning environment
- **Managing connections:** leveraging connections as well as relationships
- **Paying the price:** acknowledging the risks and rewards of being different

Figure 1. Four Domains of Inquiry and Action

industry about critical challenges facing leaders who work with scientists and engineers today. The identification of the workshops as 'Under the Radar' refers to our awareness that crucial issues related to leadership effectiveness lie just beneath the surface of many conversations and interactions in the organization.

Participants in these workshops were primarily directors or senior technical leaders from diverse industries, typically with at least 20 years' experience in R&D functions. The ratio of male to female participants was approximately 3:1. Participation in the 'Under the Radar' Workshops was by invitation with the understanding that there would not be competing organizations from the same industry present. The goal of the workshops was to provide a one-and-a-half day 'learning community' where peers in R&D could discuss difficult and often challenging issues relating to leadership specifically in the technical community. Each workshop included approximately 25 participants. Observation of small-group break-out discussions as well as ongoing work with clients in R&D provided empirical data for this paper.

By documenting and reviewing recurring themes uncovered in these workshops, we have identified four domains where the political behaviour of leaders can either encourage greater creativity or hinder it (see Figure 1). These domains are: (1) pacing productivity; (2) capitalizing on failure; (3) managing connections; and (4) paying the price. We believe it is critical for managers to have open, sometimes difficult, dialogue with engineers and scientists to explore together organizational patterns in these areas to ensure that those patterns are aiding creativity and innovation rather than hindering it.

### *Breaking the Rules*

The political nature of organizations becomes more apparent to individuals when they are confronted with the question, 'How does one learn which rules are okay to break?' This is

not an invitation to compromise ethical standards or perpetuate dishonest business practices. Rather, it is an acknowledgment that everyone learns in some way or other which boundaries are permissible to cross.

In a study of 'rule-breaking' in new product development, five out of seven cases cited either broke or bent rules (Olin & Wickenberg, 2001).

Research has shown new product development to have several peculiarities. Among these, it is a process characterized by organizational politics. . . . Abundant anecdotes tell us of defective rule design. Some anecdotes address how deviant rule-following in fact is what keeps business running (Olin & Wickenberg, 2001).

The authors of this study continue: 'Perhaps project managers tend to regard such organizational politics as bureaucratic resistance' (Olin & Wickenberg, 2001).

Resistance or not, 'breaking the rules' is a generally accepted 'norm' of the creative process. Without some capacity for acknowledging and exploring these boundaries of openness – where one can step outside or beyond generally accepted norms – the passion for innovation and new ways of working is stifled. Juxtaposed with the necessary exercise of power and control is the creative instinct to go where no one has gone before. The discipline of management must be balanced with the vision and openness of leadership (Herbold, 2002).

Political behaviour in the service of creativity necessarily includes 'rule-breaking'. This is a difficult but important conversation to facilitate. 'Champions (in innovation) are essentially political actors who are not prepared to abide by organizational rules' (Olin & Wickenberg, 2001).

### *Difficult Conversations*

Limiting beliefs about how one achieves success in an organization or how one leads a diverse group of talented people are governed by 'rules' of which we are not even conscious much of the time. The management of 'tacit interactions' is increasingly essential for competitive advantage.

Tacit interactions reduce the importance of structure and elevate the importance of people and collaboration. . . . Tacit work is improvisational and difficult to define in advance, for it follows the problem being solved and the nature of the opportunity at hand (Beardsley, Johnson & Manyika, 2006).

New pathways for innovation are established when aspects of what is tacit can be made explicit without undue fear or recriminating consequences. Creative energy is released not only at the lab bench but also among managers when leaders, both technical and managerial, demonstrate how scientists and engineers can deepen their relationships through more rigorous dialogue. Pursuit of common missions or goals more easily follows.

We will describe each of the four domains of action which require intentional leadership for dialogue and new behaviour to occur within the organization. A review of selected research on creativity and leadership is integrated into the discussion. Examples gleaned from our 'Under the Radar' Workshops further anchor our work to illustrate creative and productive outcomes. We also offer suggestions for further inquiry and study.

### 'Political' Behaviour in R&D

To ground our discussion of the 'politics of creativity' we cite several behavioural examples from our work which threaten the integrity of the creative process and the quest for innovative productivity. It is political behaviour because it seeks to exercise influence and control between competing factions.

'Ours is a success driven culture. You can work on anything you want as long as you report it correctly.' This statement by a senior scientist in a large R&D organization is but one example of how one learns what behaviour is 'politically correct'. There is no intent to be deceitful or dishonest; there is awareness, however, of the need to push the boundaries while at the same time accounting properly for time and resources.

'He is a brilliant scientist; he's just going to have to learn how to work with this guy.' This comment as part of a performance feedback conversation excuses poor leadership practices by justifying intellectual brilliance. Learning to 'play the game' according to rules that bend for the more distinguished talent compromises organizational effectiveness and demotivates rising talent.

Failing to report 'stranded resources' when project plans take an unexpected turn could be viewed as prudent planning for the next round of research in one's division. Or it can be understood as failing to lead with integrity when trying to manage severely constrained corporate resources against an annual profit plan. Whatever the course of action chosen, the 'boundaries of openness' are tested when such implicit behaviour is noticed but not discussed.

The exercise of power and control as exemplified in the above examples need not be implicit or covert. Often the required political leadership is much more overt. 'Acquiring the resources for the successful innovation of new products demands political skills' (Jones & Stevens, 1999). We will address 'political skills' related especially to four domains of inquiry and action previously identified. Before proceeding, however, Jones and Stevens helpfully acknowledge the challenge of appropriate methodology:

Quantitative research methodologies are simply too crude to capture the way in which 'sectional interests' influence organizational activities . . . Methods based on the re-interpretation of existing case studies, questionnaire surveys or even interviews are unlikely to reveal the full range of political activity that occurs in organizations. . . . Those studying innovation oversimplify the complexity of organizational behaviour (Jones & Stevens, 1999).

We do not want to oversimplify. We do want to focus attention on how leaders can touch the creative impulse of technical professionals by surfacing otherwise difficult matters for discussion and action. Managers are necessarily required to exercise power and control to execute their responsibilities effectively. This requires astute political skills. The capacity of managers to navigate challenging issues at the intersection of power and passion differentiates them as leaders. Leaders, aware of political realities which are often not acknowledged, generate trust which motivates and inspires. This, in turn, encourages creativity.

### Four Domains for Inquiry and Action

Our purpose, then, is to encourage leaders to surface underlying assumptions and fears related to each of the four domains discussed below and to take appropriate action. These matters which impact creativity are not easily discussed. Each of the domains includes examples gleaned from our work as well as reference to research literature. The domains are inter-related; each domain can serve as a lens through which to inquire and understand the political issues in the other three domains. For example, the first domain might be further studied in terms of the 'price' which is paid by technical professionals as well as the organization-at-large for the way the pace of productivity is managed at different stages of the R&D pipeline ('Paying the Price' being the

fourth domain discussed below). Attention to these domains need not be linear; priority should be given to those which resonate most powerfully with technical professionals in the organization.

### *Pacing Productivity*

Being competitive in today's market environment depends more than ever on innovation. At the same time the pressure by financial analysts to perform is relentless. Business drivers dictate reduced cycle time and lean Six Sigma processes from top to bottom. The very pressure to innovate can stifle creativity. 3M, for example, traditionally known as a creative company, succumbed to a leaner, more efficient management style under the leadership of former CEO, James McNerney.

Under McNerney, the R&D function at 3M was systematized in ways that were unheard of and downright heretical in St. Paul, even though the guidelines would have looked familiar at many other conglomerates (Hindo, 2007).

### *Six Sigma*

Lean Six Sigma programs, similar to those McNerney imported to 3M from GE, gained popularity after Jack Welch's extensive use of the process at GE (Welch & Welch, 2005). Black-belt professionals streamline processes and reduce cycle time to increase efficiency and eliminate waste. Many R&D functions are trying to follow suit, adopting such protocols in the lab. The results are mixed, at best, for organizations-at-large as well as R&D. For example, of 58 large companies that have implemented Six Sigma programs, 91 per cent have trailed the S&P 500 since doing so (Morris, 2006). Attention to driving down defects, a primary focus of Six Sigma, is not conducive to creativity. Business processes which address cost-reduction and increased efficiency do not necessarily generate new value.

Eliminating redundancies by evaluating and improving processes can indeed add value. But they also bring additional stress to the R&D environment. The politically astute leader understands how difficult it is for professionals to raise questions about or argue with process requirements. As one R&D project leader in our client group stated, 'It is a fine line between telling the truth and keeping a project alive' with reference to the pressure he experiences in trying to follow process requirements.

This does not mean that creativity cannot be tapped under duress. Sitting in the Apollo

Mission Control Room at NASA's Johnson Space Center in Houston, Texas, at one of our recent 'Under the Radar' Workshops, we were all reminded of the rescue of the Apollo 13 crew from space in 1970. The ad hoc response of the mission control team exemplified creativity and innovation with severely constrained resources under extraordinary pressure.

However, this is the exception not the rule. People cannot maintain such creative output under sustained stress and extended demands for productivity over long periods of time. The seminal work of Teresa Amabile substantiates this.

You may use pressure as a management technique, believing that it will spur people on to great leaps of insight. . . . If so, are you right? Based on our research, the short answer is 'no'. When creativity is under the gun, it usually ends up getting killed (Amabile, Hadley & Kramer, 2002).

Collecting more than 9,000 diary entries from 177 employees in seven US companies, Amabile's study confirmed that time pressure results in professionals being less creative not only on one particular day where time pressure is experienced but in subsequent days as well (Amabile, Hadley & Kramer, 2002).

The importance of variability in pacing is evident not only in the creative process but is also essential in keeping professionals engaged and motivated. A team leader having morale problems with his project team explained with pride that a year or two earlier they had been assigned a difficult project with insufficient time and money. Nevertheless, they were motivated by the challenge and stepped up to succeed in the stressful effort. Subsequent assignments that were short on resources followed and thus were also stressful. The team leader could not understand why team morale was suffering in the current effort since the challenge had motivated them in the first one.

There is a tipping point where the demand to deliver new ideas and create new products is counterproductive. The fact that it may be difficult to determine just where this threshold lies does not negate its substantial impact on people whose passion and energy is extinguished by it.

In our work with R&D leaders the desire to accelerate innovation by streamlining work processes can paradoxically have just the opposite impact, most especially at the 'front end' of the R&D pipeline. One must consider at what stage of the R&D pipeline efficiencies for the sake of greater productivity are advocated. When process improvement measures

are implemented, whether Six Sigma or otherwise, leaders in R&D must exercise caution so that uniformity of processes does not supplant the necessary time and space for creative inquiry and unanticipated discovery to occur. With one client the inventory of leads at the front end of research was drying up, according to many of the professionals engaged with that stage of breakthrough discovery, due to management's efforts to capture cost savings by standardizing processes and procedures. The resulting mechanisms were actually experienced as very cumbersome and time-consuming, squeezing the very creative life out of the organization's most valued talent. Not until explicit inquiry was made about the intent of the process 'efficiencies' versus the impact they were actually having at the 'front end' was a productive yet creative balance recovered.

Pacing productivity requires a conversation, about variability as well as velocity (the speed at which we work) and synchronicity (the timing of collaboration and hand-offs). The political aspect of pacing productivity emerges when management's best intentions fail to provide opportunity for inquiry and response to these variables.

### *Managing Uncertainty*

The drive to minimize uncertainty in work processes and experimental methodology readily follows when stringent focus is placed upon reducing defects and eliminating waste. Learning to manage uncertainty effectively is critical. This is as true for the business enterprise-at-large as much as the R&D function in particular.

Most companies have a strong action bias, so they are uncomfortable with the slow, simmering process necessary to wrestle with future uncertainty. . . . They are focused more on performance than on learning (Schoemaker, 2002).

Appropriate pacing has everything to do with encouraging inquiry in a timely and appropriate way, depending on the stage of the development cycle. 'Political' behaviour readily emerges when management is perceived as shutting down technical discussion prematurely at the 'fuzzy front end' of innovation. Conversely, as a project approaches commercialization, management's exercise of the necessary controls with regard to continuing pursuit of often compelling and newly emerging options may be experienced as political (i.e., controlling in an arbitrary way).

Managing uncertainty requires learning to ask the right questions at the right time. This is

less a function of requiring more data and more about reflection and judgement based on intuition. Wanting more information and additional data can inhibit 'early failure' and timely decision making or encourage it.

We combat our uncertainty either by acting hastily on the basis of minimal information or by gathering excessive information which inhibits action and may even increase uncertainty. Which of these patterns we follow depends on time pressure or the lack of it (Dörner, 1996).

The savvy political leader knows when and how to encourage further inquiry and when to reign in the questions.

Knowing when sufficient, though not necessarily complete, information is enough requires learning the value of the 80/20 per cent solution. 'The more we know the more clearly we realize what we don't know. This probably explains why we find so few scientists and scholars among politicians' (Dörner, 1996). Astute leaders recognize and reward those who exercise early judgement in the face of uncertainty. They do not tolerate failure to ask the critical questions as early as possible.

The amount of time preparing technical presentations for review is a prominent indicator in most organizations of how uncertainty is managed, or not. The preparation for and management of meetings is very much a matter of politics – the exercise of power and control before, during and after. In one client organization this was but a symptom of an organizational norm regarding adequate data sets and sufficient information. Enormous amounts of the organization's collective effort were devoted to preparing for meetings and sitting through lengthy reviews. By applying the Pareto Principle to the organization's 'meeting culture' (Koch, 2003) and doing a simple root cause analysis, it became apparent that time management issues (pushing harder and harder for more in less time) were but a symptom of much deeper systemic issues. This provoked new conversation in unfamiliar terrain. The need to always have 'the answer', and fear of punishment for failure to do so, surfaced as beliefs prevalent throughout the organization. These beliefs contributed to what the client referred to as a 'meeting culture' dominated by over-prepared, time-consuming technical presentations with virtual 'stacks' of back-up slides. Applying the 80/20 per cent solution to the preparation of technical presentations uncovered new understanding of the root causes of all too frequent tedious meetings which inevitably ran over time.

We cannot accelerate innovation by increasing the demand for flawless execution or striving to eliminate uncertainty. Without honest and open inquiry into this domain of action, political behaviour, which drives harder and harder for more and more, easily remains 'unchecked'. Pacing productivity requires conversation about the dynamics of the generative process of humans at work. We are *not* machines.

### *Capitalizing on Failure*

'For a generation of managers weaned on the rigors of Six Sigma error-elimination programs, embracing failure – gasp! – is close to blasphemy' (McGregor, 2006). While 'failure' is inherent to the scientific method in the testing of hypotheses, the capacity to learn from failure in most organizations is severely underdeveloped.

'Every company in the world says, "It's O.K. to fail." And for 99% of them it's probably not true', comments Douglas Merrill, Vice President of Engineering and Chief Information Officer at Google, Inc. (*Wall Street Journal*, 2007). Fear of failure and the accompanying organizational defences result from political behaviour which seeks to exercise control but fails to maximize learning. Converting failure to learning requires an environment of trust and non-defensive behaviour. The creative spirit flourishes when leadership promotes such an environment rather than a 'designed mediocrity', referring to the unspoken often hidden assumptions which leaders fail to uncover (Argyris, 1990).

### *Social Systems and Defensive Routines*

Understanding the value of failure analysis to stimulate organizational creativity and innovative productivity requires a spirit of openness and inquiry and leaders with skills to foster these. Social systems tend to discourage this kind of analysis (Cannon & Edmondson, 2005). This is particularly true in working with brilliant scientists and others with sharply-honed intellectual skills (Argyris, 1991).

The very use of the word 'failure' can provoke strong emotional reaction. Seldom in the midst of experiencing disappointing results or substantial deviation from anticipated outcomes is a person capable of identifying the experience as 'intelligent failure'. In some organizations leaders defer to language such as 'completing the learning' or 'successful project review'. But they do not talk about failure. This has costly consequences.

Experience at our 'Under the Radar' Workshops confirms that leaders seldom share their

own stories of failure; they have no 'safe' environment to practise doing so. Yet there is little that can have as much impact in eliminating fear in an organization and encouraging more open inquiry as the sharing of personal stories.

Defensive routines, both individual and organizational, are powerful behaviours which leaders often ignore because they do not know how to deal with them. In contrast, the tasks of leading the project team or managing the business are more familiar because there are more concrete, clearly defined management processes to prescribe the way. Argyris defines 'defensive routines' as 'all the policies, practices, and actions that prevent human beings from having to experience embarrassment or threat, and, at the same time, prevent them from examining the nature and causes of that embarrassment or threat' (Argyris, 1994).

### *Consequences of Defensive Routines*

A study analysing the outcomes of 14 strategic failures in a very large European telecommunications company draws some supportive conclusions about the consequences of defensive routines (Baumard & Starbuck, 2005). Among other things, the study concluded that managers tend to ignore small failures that challenge the organization's core beliefs.

The core beliefs in turn gave small failures consistent patterns over time. . . . Manoeuvres for political advantage often took precedence over the substantive strategic issues, and managers used their vows of allegiance to core beliefs to justify failures in which they participated (Baumard & Starbuck, 2005).

More rigorous conversation about failure and the defensive routines which bury it is essential. At least three factors discourage the discussion of failure in social systems, as documented in the research of Cannon and Edmondson: (1) individuals experience negative emotions when examining their own failures; this chips away at self-confidence and self-esteem; (2) most managers are rewarded for decisiveness, efficiency and action rather than reflection and painstaking analysis; (3) psychological biases and errors reduce human perception, sense making, estimation and attribution (Cannon & Edmondson, 2005).

Tools such as 'After Action Reviews', originally implemented by the US Army, and 'Emergent Learning Maps' can encourage constructive organizational dialogue about failure. But the utilization of such tools as part of project reviews and evaluation does not guarantee that organizational learning is occurring.

In designing a 'Capitalizing on Failure' workshop for an R&D client, we agreed on the need to identify some 'case studies' for the workshop. Initially the client requested that we provide relevant external case studies. While recognizing the potential value of doing so (the Baumard and Starbuck study cited above being one such relevant study), we inquired further about internal documentation that might serve as case study material. We subsequently learned that 'After Action Reviews' were used in the lab. However, for reasons described as related to the security and protection of intellectual property, these reviews were not available to the managers enrolled in the 'Capitalizing on Failure' workshop.

One outcome of the workshop was new awareness of how learning about failure was thwarted because of organizational norms. In the end, two very significant internal case studies were presented by leaders in the organization, using 'After Action Reviews' that had not previously been available to management in any clearly accessible way. The learning was immediate and the new behaviour self-evident.

Failure to include conversations about 'failure' as part of the discourse of management is a second manifestation of the 'politics of creativity' at work. In addition to surfacing and exploring underlying assumptions about the pacing of productivity, leaders must practise uncovering organizational defensive routines. Failure to do so perpetuates an environment of fear and risk aversion, reinforcing patterns of behaviour antithetical to creativity and discovery. Creativity flourishes only where trust is sure.

### *Managing Connections*

Identifying new relationships and discovering new patterns is core to the creative process. Who would imagine that spam-blocking technology might have an application in HIV research? (Baker & Greene, 2007). Assessing the impact of one's networks on creative energy requires differentiation between connection and relationship. Relentless connectivity actually diminishes the time and space we have to identify and reflect upon unique, valued relationships – whether ideas, people, products or nations. Limiting connections may be as critical to achieving breakthrough as expanding one's network.

### *Over-Connected and Under-Related*

'The World is Flat' is a popular point of view these days (Friedman, 2005). It depicts a global

community that has increasing access to and dependence on one another, economically and otherwise. Social networks such as MySpace have emerged as among the most powerful (and valuable) on-line phenomena in recent years (Kirkpatrick, 2006). In the world of R&D, the possibility of peer discussion and review of a scientific discovery occurs within hours of a posting on-line, long before journal publication permits the exchange of technical information.

However, such burgeoning connections do not necessarily enable new relationships or innovation. Emerging evidence suggests that despite the seemingly endless opportunities to connect, people are feeling more disconnected than ever. Recent research published by the American Sociological Association cites evidence that 'discussion networks are smaller in 2004 than in 1985. . . . The number of people who say there is no one with whom they discuss important matters has nearly tripled' (McPherson, Smith-Lovin & Brashears, 2006).

Connections and relationships are not the same. Connections may look like relationships and some people will even act as though they are the same. Connections are characterized by an exchange of value; relationships generate sustainable mutual value. Trusting relationships reinforce learning and foster creativity.

Research on the power of social networks substantiates statistically the value of generating trust in relationships. A study done in three global companies in different countries found that two types of trust play an important role in how people transfer knowledge: competence-based trust and benevolence-based trust (Cross & Parker, 2004). The latter, in particular, is contingent on personal 'relationships' not just connections which transmit information. 'When people have this kind of trust they are more forthright about their true expertise and much more likely to be creative, learning what they need so they can do something better or differently' (Cross & Parker, 2004).

### *Small-World Value*

A recent study by researchers at the University of Pennsylvania suggests that the ability of groups to solve difficult computational problems is actually greater when they are structured as a 'small-world' network than in more expansive, information-rich, arrangements (Kearns, Suri & Montfort, 2006). Access to global information actually seemed to hamper the performance of subjects.

With further study, such findings may have implications for areas such as information

sharing across large organizations and the design of user interfaces for complex systems for multiparty coordination (Kearns, Suri & Montfort, 2006).

More connections in expanded networks do not necessarily increase value. A client in a Fortune 100 R&D organization spoke of the challenges of 'Open Innovation' by contrasting relationships in a neighbourhood with those of a cocktail party.

In the former the relationships evolve from a shared sense of purpose, involve trust, and are intended to serve in numerous ways an uncertain future. In the latter the relationships are opportunistic, based on common immediate circumstance; while they may be energetic and exciting they infrequently lead to relationships of value in the long term.

The client's experience speaks to the need for new models for network relationships which attend to limiting connections rather than constantly expanding them.

An example of confusing the nature of connections with relationships was evident in a client organization with which we worked. Wanting to engage more professionals in imagining the future state of the organization, senior leaders created an internal 'wiki' for top-tier R&D professionals where they posted a white paper describing an envisioned future state of the industry. When a meeting was convened to discuss the white paper, only three to four individuals out of a population of some 100 had entered a comment on the wiki. Senior leadership was perplexed and disappointed. In unplanned break-out discussions at the outset of the meeting to discuss the lack of 'dialogue' on the wiki, the primary factors identified by participants for the breakdown in communication were lack of context or direction about what was expected as well as lack of trust about how the comments would be used. 'Small world values' – that of a community of mutual relationship – were missing in the virtual environment.

Proliferating networks, while expanding connections, do not necessarily foster valuable relationships. The creative impulse is compromised if not completely lost when managing connections dominates one's priorities. The constant thumbing of Blackberries and other mobile devices by leaders in and of themselves reinforce perceptions of constant vigilance and necessary control on the part of management, whether intentional or not. This is actually a kind of 'political' behaviour though few would initially identify it as such. This warrants a further cost/benefit analysis when it comes to creativity and innovative productivity.

There is a 'tipping point', where not only information but connection overload as well, can kill creativity and the passion that fuels it. 'I just need time to think' is a recurring refrain among many of our clients in search of more opportunity for creative exploration and reflection. Pulling the plug on connections for a period of time and focusing on a few key relationships may generate more value than ever-expanding networks that are always 'on'.

### *Paying the Price*

'Nothing is created without something being destroyed', asserts Patricia Woertz, CEO of Archer Daniels Midland (Birger, 2006). Her remarks mirror those of Pablo Picasso: 'Every act of creativity is first an act of destruction'. Underscoring the 'wrenching personnel decisions' related to the re-organization of Chevron Oil's Downstream Company, where Woertz previously served as a senior executive, she continues, 'It underscores the shadow side of creativity'.

Alert and responsible leaders understand that they can cast big shadows. Without explicit and timely acknowledgment of the consequences of the choices they make, including the decision to pursue new, creative, unprecedented technical solutions, ROI can be compromised despite the best of intentions. Something has to be released or let go or even destroyed in order to change. This is difficult for many leaders to acknowledge to themselves never mind their constituency.

### *Creativity and Leadership*

The exercise of creativity and the practice of leadership converge in terms of both bearing a cost. This is not a reference to capital investments or salary and benefits but rather the personal and social consequences of deviating from established norms. For all the literature devoted to leadership theory and practice, very little has addressed the cost of leadership. Literature searches uncover numerous references to 'sacrificial' leadership, primarily in the context of religious discourse. Very little research has been done on leaders 'paying the price' in terms of personal risk as well as professional consequences.

This reality is illustrated by the experience of a senior scientist in one of our client organizations who was sequestered away for over a year to work with a highly selective and very talented technical team on a promising breakthrough project. While the merits of the technical work remain a matter of debate, the 'political' consequences were immediate and continuing. His failure during that period of

time to confer with others in the organization who had a vested interest in managing what was happening resulted in his being marginalized within the organization even several years later. Differing perspectives undoubtedly exist within the organization on the facts of the matter; however, failure to acknowledge the 'political' dimensions of technical professionals making such choices undermines creativity and stifles passion.

This fourth domain of inquiry and action for leaders in R&D addresses the potential losses incurred by individuals who dare to be different. The choreographer and dancer, Twyla Tharp, writes, 'To lead a creative life you have to sacrifice. "Sacrifice" and "Having it all" do not go together' (Tharp, 2003). Little quantitative research has been done on this topic. Yet it is acknowledged and referenced repeatedly in the lives and literature of creative personalities.

#### *The 'Faustian Bargain'*

The biographical studies of Howard Gardner on the creative power of seven historical leaders in their respective fields at the turn of the century resulted in several unanticipated themes emerging (Gardner, 1993). He refers to one of these as 'the Faustian bargain'. The reference is to the legend of Faust in which the gift of special power is tied to a kind of 'bargain' to sustain the power or gift. His conclusion: 'Usually, as a means of being able to continue work, the creator sacrificed normal relationships in the personal realm. . . . It's as if each creator had, so to speak, struck a deal with a personal god' (Gardner, 1993).

One should not conclude from this that relationships are not important to the creative process, for another of the unanticipated outcomes of this study is that, at the time of creative breakthrough, most leaders had at least one 'confidant' relationship that was especially significant at that time.

This path of inquiry takes one quickly into the realm of myth and meaning-making, how one 'makes sense' of one's internal experience as well as calibrates one's value to the external world. This is fertile ground for further inquiry though not terrain that is easily traversed by scientists and engineers.

The most evident indicator of these concerns being prominent in the management of R&D is at the point at which technology professionals are promoted to a supervisory or management position for the first time. The required differentiation from their scientific peers, upon whom they have relied personally as well as professionally, is experienced as separation if not isolation. Some are unable to

assume the necessary 'distance' to manage former peers effectively. The cost of losing those peer relationships is not worth the expanded responsibilities and accompanying authority that comes with ascending the management ladder.

The politics at play in organizations can make it very difficult to articulate and explore the trade-offs involved if one risks deviating from established norms. This relates to the question posed at the outset of this paper, 'How does one learn which rules are okay to break?' Deviation is inevitably required in the exercise of creativity as well as the practice of leadership. Seeking permission to depart from organizational norms and procedures is not leadership. Acknowledging that it is required for breakthrough to happen, however, is essential.

To work creatively in pursuit of new discoveries requires courage as well as the discipline to stand apart, to be different. The distinguished existential psychologist, Rollo May (1976) writes:

Creative people as I see them are distinguished by the fact that they live with anxiety, even though a high price is paid in terms of insecurity, sensitivity, and the defenselessness for the gift of 'Divine Madness' to borrow the term used by the Classical Greeks.

Whether or not one links the passion to create to the 'divine madness' of the Greeks, leaders learn to acknowledge and then manage the anxiety of being different while striving to remain connected to those for whom they are responsible. This capacity to differentiate but still be connected is essential to the creative process as well if one wants to generate products of value. Political astuteness in this domain requires self-awareness above all.

## Conclusion

The creative practice of leadership and the exercise of creativity both require uncovering the covert political dimensions of organizational behaviour. We have illustrated how this dynamic manifests itself in a variety of different contexts in R&D functions today.

The question is not whether organizations will have politics, but what kind of politics they will have. Politics can be and often is sordid and destructive. But politics can also be the vehicle for achieving noble purposes, and managers can be benevolent politicians (Bolman & Deal, 1991).

Our goal has been to identify four specific domains of inquiry and action which warrant attention in order to optimize creativity by addressing issues which lie just beneath the surface, under the radar, of many R&D organizations. Our experience in working with our clients as well as our 'Under the Radar Workshops' confirms that the very process of identifying 'undiscussables' initiates change and prompts action. This does not come naturally to most leaders. Without explicit attention to the four domains identified in our work, energy is drained and resources unnecessarily depleted. We have corroborated our experience with a search of the literature in the field that validates specific concerns at the intersection of power and passion in each of the four domains.

Any one of the four domains – pacing productivity, capitalizing on failure, managing connections, or paying the price – can be used as a lens through which to understand and practise interventions in the other three domains. For example, by focusing the inquiry on 'paying the price', one might ask, 'what risks are we willing to take to maximize the benefits of our connections as well as relationships, internal and external?' Or by choosing 'managing connections' as the lens, one could ask, 'How do our external connections or lack thereof impact the pacing of our productivity?'

The starting point for this work is our belief that the quality of relationships establishes an organization's competitive advantage today. As we stated at the outset, the task of nurturing relationships that support innovation requires a responsible use of power and a powerful use of passion. The passion to create is easily stifled when trust is lacking. Leadership at the intersection of power and passion requires establishing trust in domains we are unaccustomed and often inexperienced in addressing. Leaders in R&D can and do make a difference when the 'politics of creativity' are acknowledged and addressed.

## Acknowledgements

This article is based on a paper presented by the author at the International R&D Management Conference in Taiwan, November 2006, sponsored by the *R&D Management Journal* as well as this journal. Since then clients as well as professional colleagues have contributed to the continuing discussion of this topic. The author especially thanks Jack Johnston, Deary Duffie and Andrew Kaldor for their insights and suggestions.

## References

- Amabile, T., Hadley, C. and Kramer, S. (2002) Creativity under the Gun. *Harvard Business Review*, 80, 52–61.
- Argyris, C. (1990) *Overcoming Organizational Defenses*. Allyn and Bacon, Needham Heights, MA.
- Argyris, C. (1991) Teaching Smart People How to Learn. *Harvard Business Review*, 69, 99–109.
- Argyris, C. (1994) Good Communication That Block Learning. *Harvard Business Review*, 72, 77–85.
- Baker, S. and Greene, J. (2007) Using Spam Blockers to Target HIV, Too. *Business Week*, 1 October.
- Baumard, P. and Starbuck, W.H. (2005) Learning from Failures: Why It May Not Happen. *Long Range Planning Journal*, 38, 281–98.
- Beardsley, S.C., Johnson, B.C. and Manyika, J.M. (2006) Competitive Advantage from Better Interactions. *The McKinsey Quarterly*, 2, 53–63.
- Birger, J. (2006) Patricia Woertz, the Outsider. *Fortune Magazine*, 2 October.
- Bolman, L.G. and Deal, T.E. (1991) *Reframing Organizations, Artistry, Choice, and Leadership*. Jossey Bass, San Francisco, CA.
- Cannon, M.D. and Edmondson, A.C. (2005) Failing to Learn and Learning to Fail (Intelligently): How Great Organizations Put Failure to Work to Innovate and Improve. *Long Range Planning Journal*, 38, 299–319.
- Cross, R. and Parker, A. (2004) *The Hidden Power of Social Networks*. Harvard Business School Press, Boston, MA.
- Dörner, D. (1996) *The Logic of Failure*. Metropolitan Books, New York.
- Friedman, R. (2005) *The World Is Flat*. Farrar, Strauss and Giroux, New York.
- Frost, P. (1994) Leading with Innovation in Mind. *Creativity and Innovation Management Journal*, 3, 79–84.
- Gardner, H. (1993) *Creating Minds, an Anatomy of Creativity Seen Through the Lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi*. Basic Books, New York.
- Herbold, R.J. (2002) Inside Microsoft: Balancing Creativity and Discipline. *Harvard Business Review*, 80.
- Hindo, B. (2007) At 3M, a Struggle Between Efficiency and Creativity. *Business Week*, 11 June.
- Jones, O. and Stevens, G. (1999) Evaluating Failure in the Innovation Process: The Micropolitics of New Product Development. *R&D Management Journal*, 29, 167–78.
- Kearns, M., Suri, S. and Montfort, N. (2006) An Experimental Study of the Color Problem on Human Subject Networks. *Science*, 313, 824–27.
- Kirkpatrick, D. (2006) Life in a Connected World. *Fortune*, 10 July, 98–106.
- Koch, R. (2003) *The 80/20 Individual*. Random House, New York.
- McGregor, J. (2006) How Failure Breeds Success. *Business Week*, 10 July 10, 42–52.
- McPherson, M., Smith-Lovin, L. and Brashears, M.E. (2006) Social Isolation in America: Changes in Core Discussion Networks Over Two Decades. *American Sociological Review*, 71, 353–75.

- May, R. (1976) *The Courage to Create*. Bantam Books, New York.
- Morris, B. (2006) The New Rules. *Fortune*, 24 July, 80–81.
- Olin, T. and Wickenberg, J. (2001) Rule Breaking in New Product Development – Crime or Necessity? *Creativity and Innovation Management*, 10, 15–25.
- Schoemaker, P.J.H. (2002) *Profiting from Uncertainty*. The Free Press, New York.
- Tharp, T. (2003) *The Creative Habit*. Simon and Schuster, New York.
- Wall Street Journal* (2007) Managing Innovation, How to Get the Most Out of Your Company's Big Ideas. 24 September.
- Welch, J. and Welch, S. (2005) *Winning*. Harper-Collins, New York.

Steve Boehlke (steve@sfbassociates.com) is a practitioner with some 20 years' experience supporting global corporations in developing more effective leaders. He is founder and president of SFB Associates, Inc., a consulting firm based in Minneapolis, MN, which focuses on leadership collaboration and development, especially with R&D organizations as well as technical professionals. His research on politics and creativity continues in the context of his consulting work.