

Changing Preoccupations of India's Business Leaders[^]: Creativity, Innovation and Environment Leadership

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Introduction and Overview

The Indian registered “Institute of Directors” (IOD India) is a non-profit apex organisation focused upon building better boards. It has both an individual and a corporate membership. In addition to book and journal publishing, IOD India offers an integrated programme of other activities, comprising national and international conferences, awards and other events, masterclasses leading to certified director status, a register of individuals seeking non-executive director appointments and advisory services. A wider network of directors and other business leaders receive soft copies of its journal *Director Today*, hard copies of which are distributed to over 30,000 associates. Book publications include guides, handbooks, books of papers associated with the international events, and digests of the winning entries for various categories of its “Golden Peacock” award.

IOD India has been in existence for over 25 years and certain of its international conventions, conferences and congresses have been running since its early years. Attendance at these annual events on corporate social responsibility; leadership, business excellence and innovation; environment management; corporate governance and sustainability; and risk management can exceed 500 delegates. Recommendations are produced at the end of each event and summary proceedings are published in the next available issue of *Director Today*. What do the points made by speakers and during the discussions at IOD India events and the recommendations that result from them tell us about the thinking, preoccupations and priorities of Indian directors and business leaders at CEO/CMD level, and what are the implications for directors and corporate boards?

When new annual IOD India events have been established and the names of existing ones have been changed, their themes have been a metaphoric mirror, reflecting concerns that the IOD leadership team has had about the Indian business context and Indian corporate boards. The degree of continuity reflects the intractable nature of certain issues, but an analysis of agendas and conference reports and the author’s participant observer experience as a speaker at 50 IOD India events and as author of their theme papers, suggest certain trends and a direction of travel. Over time, the agendas of what used to be a series of discrete events have become more integrated, with areas of overlap. Increasingly, the outputs of each event have become inputs into one, two or more of the others.

In recent years, greater awareness of the extent to which issues are interdependent and the value of collaboration has been evident. There have been consistent calls for boards to act to restore trust and recognise their responsibilities to a wider range of stakeholder interests. There has also been growing recognition that more than incremental change is required. This is evident in the evolution of the name of one event, with the term “quality” giving way to “business excellence” and with “innovation” now added. Disruptive and digital technologies and new business models now feature in the agendas for multiple events, whose themes now include references to “transformational leadership” and new paradigms. This paper explores the implications of transformational leadership and the requirement for innovation in relation to the environment and sustainability. It draws upon points made at recent IOD India events and identifies questions raised for directors and boards.

Transformational Leadership

Traditionally, transformative leadership has been related to taking an organisation through a

particular transformation process from one condition or situation to another. In many sectors today organisations face multiple challenges and unprecedented opportunities as a result of improvements in connectivity, scientific breakthroughs, new business models and more affordable and disruptive technologies opening up new possibilities for adaptation, innovation, reinvention and change. Leaders have also to take account of environmental factors and sustainability considerations. The question has been raised of whether we need to look beyond our past view of transformational leadership and broaden and deepen our approaches (Leithwood et al, 1999).

People and organisations face environmental and other challenges that require creative and innovative responses and much rethinking of individual ambitions and corporate aims and purposes. For example, repetitive, structured and many knowledge-based activities and professional tasks may be handled by robots and other machines, artificial intelligence applications and other digital solutions (Ford, 2015). As Kodak found with digital technology, innovation can represent a threat to established businesses, but as was demonstrated by Canon's response, it can also present a route to rejuvenation, remaining relevant and competitive, and building market share (Christensen, 1997).

Today's CEOs and boards find that the operations of businesses for which they are responsible face threats ranging from drug resistant viruses to terrorism. There are daunting issues such as cyber security, rogue states, global warming, climate change and sustainability to confront. In all these and other areas, such as exploiting disruptive technologies or introducing new business models, there are also unprecedented opportunities. How do we achieve the right balance between reactive and proactive responses, between aspirations and capabilities, and between different customers and stakeholders who views on what represents creativity, innovation and/or a priority may vary?

The Environment and Sustainability

The environment, climate change and sustainability have been core concerns of two IOD India annual conferences, and represent an arena in which engagement with stakeholders (IIGCC, 2017) and the deployment of new technologies have been advocated (Keith, 2013). The issue of trust has also been raised by Dauvergne (2018) who believes that current corporate initiatives are insufficient to address the systemic sustainability challenges we face. Environmental and sustainability concerns are evident in Indian ancient wisdom (Parthasarathy, 2017, Sharma, 2005 & 2013). Hindu Vedas encourage living in harmony with nature rather than its exploitation (Renugadevi, 2012).

How should the environment and sustainability considerations affect the focus of innovation and our view of what represents excellence and responsible corporate conduct? Where resources are scarce and there are other claims upon time and money, could it be irresponsible to seek to be excellent in areas that are not priority considerations or differentiators, or which are not a source of competitive advantage? In backroom areas of little interest to customers and some compliance activities could it be more responsible to be just good enough?

Should a greater priority be given to circularity and the re-use of outputs, for example arranging and locating activities so that a waste product from one process becomes a welcome input to another? How many boards voluntarily engage with the UN Global Compact (2000) initiative and report the steps they take towards a more sustainable and socially responsible business or the UN's agenda for sustainable development (UN, 2015)?

Could the search for more sustainable operations lead to application of disruptive technologies and/or the adoption of a different business model? For example, the strategic use of 3D printing can transform and move the location of production and distribution. It can eliminate waste and unsold stock. Surplus raw material can be reused. Is the nature of some disruptive technologies such that a high proportion of applications could lead to changes that many would consider innovatory? Is their

potential for innovation a rationale for describing them as disruptive?

Climate Change and the Environment

Environmental challenges are being compounded by the multiple impacts of climate change to the extent that water, food and other shortages, crises and conflicts can represent a threat to national security and a profound challenge to Governments (Maynard, 2018). IOD India's environment management conference now also embraces climate change. Increasingly, the actual and potential significance and scope of impacts across a variety of corporate activities are such that for the business community effective responses require engagement and joined up thinking at board level. They are also likely to increasingly require collaboration across supply and value chains.

A systematic search for solutions to the many challenges of climate change identified 80 areas of opportunity (Hawken, 2017). The range of options suggests an urgent requirement for environment leadership and the creative exploration of alternatives to current approaches and practices, and continuing innovation along with the relatively quick adoption and implementation of solutions. Market imperfections that damage the environment create opportunities for radical technologies and new business models and can lead to sustainable entrepreneurship (Cohen, and Winn (2007)). However, many boards are still unaware of how and where their companies could contribute.

Boards need to consider and clarify their responsibilities, identify with whom they could co-operate, initiate questioning and challenge, and establish the level of creativity, innovation and entrepreneurship needed for effective responses in the environmental, climate change and other arenas. They must also ensure that they are plugged into relevant advice and support in areas that might benefit from current, objective and scientific understanding. This needs to be done against the background of having to respond to various other challenges and opportunities to ensure that multiple criteria are satisfied.

Responsibility for Transformation and Change

How should one determine what combination of reactive, adaptive and generative organisational responses to adopt? To what extent can they be sustained (Middlehurst, 2010). When responses have to be made simultaneously across different areas, and the forms of response might benefit from different leadership qualities, are we expecting too much of individual leaders? If, where and when collective leadership is in the frame, should the role and contribution of a corporate board be a first port of call? Could a balanced board composed of competent, confident and curious people with complementary skills provide the collective leadership required?

Some portrayals of the leadership challenge, such as that by James Kouzes and Barry Posner (2002), set out a series of steps, some of which seem to overlap with certain responsibilities of a board, for example understanding stakeholder or constituent expectations or inspiring a shared vision. Individual CEOs sometimes struggle to excel in a few, let alone all of the many qualities expected of a contemporary leader. Would the collective leadership of a board composed of a diversity of talents, and whose members provide challenge and examine a variety of options, provide a more balanced and considered view of risk appetite, priorities and critical next steps than a single person? Should we review the division of leadership responsibilities between CEOs and boards more often and as and when significant changes of circumstances occur?

Companies alone may not be able to secure the degree and nature of changes required to combat climate change, but if boards do not play their part in what needs to be done, local and national Government intervention may be required in a number of areas. This might be broad brush and may not be successful without the engagement and involvement of other players. Corporate environment

leadership has a major role to play. Bloomberg and Pope (2018) stress the potential payoffs of cities and other municipal authorities, businesses and citizens working together. They are hopeful that such collaboration could make a difference and yield both shorter and longer-term benefits.

Location of Understanding

Board involvement and leadership is often required to ensure that creativity, innovation and business excellence are relevant, affordable and sustainable, and that initiatives and activities in these areas are consistent with the board's strategic direction and deliver beneficial outcomes to stakeholders (Coulson-Thomas, Colin, 2017c). A collective decision may be perceived as safer than an individual one. Rather than impose standard models and rigid frameworks, boards can encourage 'horses for courses' judgements of what is best in a particular set of circumstances at a moment in time, while retaining flexibility and the ability to adapt as requirements and possibilities change.

How many boards are actively concerned with the possible impact of technological developments and increased automation upon their people, customers and business partners (Schwab, 2017)? Are they helping them to adopt new and more individual ways of working, and welcoming and accommodating the greater diversity that may result? When doing this, are they also taking account of environmental and climate change issues and impacts? Activities such as inspiring, reconciling different viewpoints, enabling, listening, reflecting, thinking, learning and encouraging creativity, innovation and entrepreneurship have become keys to success in uncertain contexts and shifting situations. Calls may also need to be made for new and better options and approaches.

Today, if they are engaged and motivated, those closer to customers and various people throughout an organisational network may be better judges than CEOs and directors of what their peers, communities and generations would consider innovative, relevant, acceptable, useful and affordable, particularly in relation to the adjustments required to also cope with climate change. The role of leadership may then be to help them assemble the capabilities, collaborations and connections needed to turn ideas into reality. Collaboration can enable a collective search for ideas, options and solutions that go beyond the limits of one person's experience and imagination.

Departmentalism and Directorial Qualities

Individuals can become prisoners of their own particular functional backgrounds. As options, choices and possibilities multiply and new business and economic models emerge, traditional and past strengths and lessons learned in different situations can become sources of weakness and vulnerability. Directors should focus upon the best long-term interests of a company and its stakeholders. Their perspective should be holistic, covering an organisation as a whole, the totality of its operations and its relationships with stakeholders. It should also embrace external challenges such as global warming. In practice, this is not always the case.

When and where rapid and creative responses can depend upon breadth of awareness, wider relationships with stakeholders and the ability to make links and connections across specialisms, narrow skill sets can become outdated, even irrelevant. Being curious and exploring can be better than going automatic and travelling along a standard path (Tenner, 2018). The dangers of departmentalism can be reduced by consciously bringing people with a greater diversity of backgrounds and perspectives into the boardroom. It helps if individual directors have a broad understanding of people and organisations as well as having particular strengths that complement those of board colleagues.

Should the attributes of the alert and intelligent generalist, as well as areas of specialist knowledge, become more significant when candidates for board appointments are considered (Mikkelsen and

Martin, 2016)? With opportunities and possibilities arising in a wider range of areas, will there be greater demand for polymaths? Will the creative and liberal arts experience a renaissance? Could greater exposure to the liberal arts as championed by Allan Bloom (1987) better prepare people for thinking about contemporary issues and choices?

When developments are new and relevant expertise is difficult to identify, CEOs, directors and other business leaders need to be able to both cope with uncertainty and help others to handle it. Phillip Clampitt and Robert DeKoch (2015) consider embracing uncertainty to be the essence of leadership. Uncertainty often arises when novel or different events, situations or requirements arise for which there might not be a precedent and which are not covered by an existing policy, rule or guideline. These can arise as a result of climate change and are the very reasons why many environment-related and other issues appear on board agendas.

Boards and Innovation

Becoming more effective and productive at current activities will not necessarily provide the degree of change needed to cope with many of the challenges companies face such as climate change, and/or capitalise on new possibilities. Many practices, operations and organisations need to be transformed or replaced rather than reformed or improved. Do some boards know enough about the options and possibilities to take rational decisions on what to improve and what to transform or replace? When innovations occur, do they understand the challenge of adopting them and scaling them up (Cox et al, 2018)? Are impacts on the environment taken into account?

Is your board largely reactive and focused upon survival? To what extent is it more proactive and driven to confront challenges, seize opportunities and create a better tomorrow? In many areas, from the utilities, healthcare, waste disposal, cleaning up the environment and increasing inclusion to sustainability, transforming public services and dealing with climate change, there are unprecedented opportunities for creativity, innovation and business and social entrepreneurship.

Are enough directors open minded and prepared for novel situations, new challenges and unanticipated events? Traditional, learned and approved responses may not be sufficient, effective or appropriate in new and emerging situations. Entrepreneurs and innovators require the ability to assess, imagine and invent, and the courage to discover, explore and pioneer. They need to handle risk and uncertainty and see them as areas of opportunity rather than as threats. Some boards are risk averse, but incurring risk is evidence of life and ambition (Coulson-Thomas, 2017a).

If people do not embrace changes and/or adopt new offerings, their potential benefits may not be realised. Not all new ideas lead to successful innovations. Some are rejected. Developments are held back by complacency, disinterest, intellectual laziness and lack of support. Many new products fail. At different stages of an innovation process, imaginative proposals may be frustrated by colleagues who are overly negative, fearful of failure, reluctant to trust, or defensive of the status-quo. Directors need to persevere with necessary changes when things go wrong (Dallas, 2015).

How many boards are proactive and have thought through strategies for innovation and criteria for the appraisal, selection and support of innovation proposals? Too many boards react to incoming proposals rather than proactively seek and/or develop them. Where resources are limited, intense rivalries can arise between teams that are competing for attention and support. Only a proportion of initiated innovation projects may succeed. Are boards consciously funding a balanced portfolio of projects in the hope that enough will succeed to more than cover the costs of any that fail?

The Role of Innovation

Survival, coping with climate change and seizing opportunities can require innovation, change and transformation, doing new things as well as or in place of existing ones. However, much effort is devoted to being better at existing activities that harm the environment or contribute to global warming, are not critical success factors or a source of competitive advantage or differentiation, and which either now or very soon may no longer be required. The blind pursuit of improvement regardless of cost and relevance can be unnecessary, wasteful and unsustainable.

Can striving for the latest model or fashion be wasteful? Does it lead to a disposable society? Can less be more? Is faster always better when it may mean less time to enjoy what we do, produce and consume and less time to think about the changes that would be most beneficial (Honore, 2004)? Are new things sometimes different rather than better? Many people are rightly cynical. They instinctively ask the question creativity and innovation for whom? Creativity and innovation need to be relevant and value adding to customers and users. They should be affordable and sustainable.

Is creativity sometimes sought for its own sake, as when architects win awards for buildings that are loathed by those who inhabit them? Is innovation beyond that needed to remain current, competitive and relevant always desirable? Is a restless search for more and better and something different an indication of a healthy desire for progress, or is it evidence of empty materialism on the part of those who are never satisfied or easily bored? Is it unnecessary “want creation” (Galbraith, 1958)? Is it damaging the environment and contributing to energy and water management challenges? Should we be content with what we have and tried and tested offerings that customers value and continue to buy? Is the innovation and change required one of attitudes, priorities and values?

In some circumstances, could the focus of business excellence upon continuing improvement across all areas of operation be a barrier to differentiation, innovation and more radical change? To stay ahead of the competition, do some companies need to focus and in certain areas be much more than excellent? Are they improving activities that could be replaced by something better and making modest and incremental changes to operations that should give way to alternative business models?

Questioning Innovation

Innovation may be required to confront certain problems facing mankind such as climate change and global warming, and in some areas not innovating could be irresponsible, but is there a danger that it is becoming a “flavour of the month”? Are people seeking step changes and radical transformation in areas in which modest but steady improvement over time might be acceptable and consolidation might be both appropriate and preferred to disruptive change? Successful entrepreneurship often determines whether change is supported and justifiable.

Boardroom discussions can be very revealing when new technologies or business models are considered. A CEO with a financial background might instinctively look for cost savings. Directors often jump in with contributions that reveal their personal biases and priorities. For example, when discussing applications of artificial intelligence (AI), are the possibilities for replacing expensive experts with an AI system explored first? How long does one need to wait before someone raises the question of how such applications might improve the experience of customers or suggest better solutions to environmental and other problems?

Many innovations are motivated by the convenience of the producer or supplier, rather than benefits for the customer or user. Built in obsolescence or creating a new version with a limited life could be considered an irresponsible innovation. Change for the sake of change should be avoided as it can be disruptive and unsettling. Its consequences can also be uncertain. Continuity, predictability and sustainability can be highly valued, Should more boards discuss the rationale and justification for innovation before establishing assessment criteria?

Directors should exercise individual judgement. The difficulty and politics of change need to be understood (Dallas, 2015). Some innovations frustrate. They require people to retrain or change how they operate. For example, software upgrades may require new hardware with more capacity in order to operate. Older alternatives may no longer be supported. One needs to ensure the costs of any disruption involved do not outweigh the advantages, and that all relevant and lifetime costs are taken account of (Leake, 2018). Sometimes the loss of output during a transition phase may not be made good by subsequent improved performance.

Deciding Where and When to Innovate

Juma (2016) identifies the tension that can exist between the need for innovation and the pressure to maintain continuity, social order, and stability as one of today's biggest policy challenges.

Guidelines may need to be prepared covering the innovation decisions that should be reserved for the board and the criteria to be used for selecting proposals, covering areas such as the scale of resource requirements, the nature of the consequences, environmental impacts, who will benefit and who needs to be involved, risk assessments and applicable laws, regulations, rules or policies.

Where an innovation or new business model has the potential to transform possibilities, should a company's vision, mission and objectives determine selection decisions, or should these be revised to take account of what might now be accomplished? Should board aspiration be innovation driven?

Should more leaders, whether CEOs or boards, actively look for ways of sharing power and collaborating with others in order to better cope with the myriad of issues they confront (Hoyle and Swale, 2016)? Should more people and trusted business partners be allowed to vote on which innovation proposals are deemed worthy of support? Might the criteria used to reward innovation influence their views and distort decisions? Recycling older offerings might seem less glamorous than creating new ones, but would this make it easier to achieve sustainability or environmental goals? Not all innovations are radical breakthroughs or game changing developments. Many are incremental improvements, the cumulative impact of which may be significant over time.

In dynamic situations and when particular people and organisations may lack some of the skills and capabilities required to select, develop and implement innovation proposals, collaboration and co-creation with customers and business partners can be especially important. Innovation and cooperation with complementary and compatible parties may need to be the norm rather than an unusual activity if a company is to remain at the cutting edge and competitive and contribute to solutions to a challenge such as global warming.

Involving Stakeholders

Effective engagement with the environment can require a longer-term view (Dwivedi and Tiwari, 1987). When setting priorities in terms of which challenges and opportunities to address and where improvement and/or innovation is most needed, how can and should a board seek to reconcile different viewpoints? Directors should have regard to the interests of various stakeholders when board decisions are taken. Are new mechanisms required to ensure that the requirements and views of important stakeholders are taken into account? What are the priorities from the perspective of a supply or value chain? How should key customers be involved? What are their priorities?

Where they have a choice and an on-line alternative is just a click away, customers can also be fickle. Sales practices such as offering new customers better deals than existing ones encourage switching and disloyalty. A key issue for many boards is how to develop relationships with stakeholders and make them more intimate, long-lasting and mutually beneficial, at a time when trust in business and business leaders is at a low level (Coulson-Thomas, 2018).

Do contemporary leadership, governance and management practices excessively favour shareholder relationships and, in comparison, keep customers and other stakeholders at a distance? The UK regulator has suggested that effective boards should engage with a wider range of stakeholders (FRC, 2017). Do we need new ways of reaching, engaging, involving and developing stronger connections with customers, employees and other stakeholders and securing their continuing allegiance (Coulson-Thomas, 2018)? How concerned are they about the environment and climate change? What are their attitudes to innovation and risk?

Successful innovation involves the taking of acceptable risks. Are some contemporary risk management approaches and practices an obstacle to innovation and entrepreneurship (Coulson-Thomas, 2017a & b)? Directors need to ensure that companies do not incur levels of risk that are disproportionate or excessive in relation to likely returns and what is acceptable to investors and other stakeholders. Boards should establish a risk appetite for various corporate activities. Do some of them need to encourage a more positive and balanced view of risk and responsible risk taking?

Changing Perspectives and Priorities

Many directors and other leaders who are in positions of power and regard themselves as in charge like to visualise themselves at the top of organisation charts, providing direction, issuing policies, taking decisions and monitoring the extent to which those for whom they are responsible are “on message” and falling in line. Their appointments may well have been based upon their past achievements in a previous era when expectations and possibilities were more limited, environment and climate change issues were less pressing, and a different business model was employed, yet some of them still insist on calling the shots.

How many directors remain current and vital? How many are beyond their “sell by” dates? Remaining open to new ideas and possibilities in the present, and being willing to question and challenge prevailing assumptions, explore alternatives and create new options, are important qualities for both directors and entrepreneurs (Coulson-Thomas, 2001). For some, disruptive technologies are a challenge, while for others they represent an opportunity (Stuchtey et al, 2016).

Directors and senior managers are sometimes far removed from the coal face. They can lack awareness of what is happening in emerging sectors and in relation to emerging issues and viewpoints, especially when those involved are from different communities and generations. Hence, they may not be aware of requirements, possibilities and/or where innovation might most add value for key customers and other stakeholders. Directors whose role is to provide strategic direction are generally dependent upon others for creativity and innovation.

In the late 1980s and early 1990s, in certain companies such as Rank Xerox efforts were made to emphasise the importance of people in front line sales and service roles by inverting organisational pyramid diagrams (Coulson-Thomas, 1992). The board now appeared at the bottom. Directors perceived themselves and various layers of management as supporters of front-line staff, the main creators of value. Some chief executive officers (CEOs) renamed their roles as “chief coach” to emphasise the importance of supporting others and helping them to improve their performance.

More recent investigations have shown that performance support can increase flexibility and speed of response, and enable senior management to let go, empower and trust others. It can also make people more aware of the environmental consequences of their decisions and enable them to allow more scope for responsible innovation, while simultaneously delivering multiple benefits for people, organisations and the planet (Coulson-Thomas, 2012 a & b, 2013).

Importance of Openness and Diversity

Few companies are democracies. In recent years, while directors might talk about involvement, engagement, empowerment and participation, the focus of many boards has been upon driving people behind aligned objectives and a common purpose, renewing the attack upon variety and standardising in order to reduce costs. Some boards have even tried to introduce a particular set of values and a common corporate culture into organisations that employ and serve people from a variety of nationalities, religions, ethnic groups and political backgrounds and involved in a diversity of roles and activities. How desirable is this when behaviours can be changed independently of corporate culture (Coulson-Thomas, 2014a & b, 2015a & b)?

In the meantime, just as many if not more of the customers of companies aiming to constrain diversity and variety are seeking a bespoke response to their personal requirements. They want to be treated as individuals rather than as a category or statistic. Many markets also appear to be fragmenting and, as mentioned already, possibilities are multiplying and a variety of new business models have emerged. Sir Karl Popper (1945) warned of enemies of the open society. Are those who are excessively concerned with standards, slaves to particular management approaches, intolerant of diversity, and reluctant to let go and trust others, enemies of the open company?

Openness to new ideas and a constant willingness to explore opportunities to improve, including when at the height of success, can be essential for staying at the cutting edge (Catmull and Wallace, 2014). While creative artists might view each commission as an opportunity to build and enrich a portfolio, push against boundaries and try something new and distinctive, in many businesses creativity cannot be assumed. It has to be fostered or released and then sustained. Directors should encourage people to be open about environmental and other issues and problems and willing to suggest solutions and learn from mistakes and failures, as well as building upon achievements.

If realities are to be confronted and issues addressed, openness may need to be accompanied by candour. A key finding of the final report of the Mid Staffordshire NHS Foundation Trust Public Inquiry chaired by Robert Francis (2013) was the importance of candour in relation to failures and problems, so that issues can be brought into the open and addressed if improvements are to occur. Concealment is an enemy of progress. At Pixar, significant effort was devoted to creating a culture of candour that allowed open, honest and constructive questioning and comment, and encouraged a search for better approaches (Catmull and Wallace, 2014).

Encouraging Greater Diversity

As the number of possibilities that deserve exploration increases and as windows of opportunity narrow, centralised evaluation and decision making in the time-scales required may no longer be possible. Local and more varied responses may be required. Contemporary organisations may need greater trust and more delegation. They might also require a more accommodating and supportive form of board leadership that not only tolerates, but actively encourages diversity. The framework of delegation needs to ensure that various local responses contribute to the coordinated effort needed to deal with environmental issues and climate change.

Many companies and boards themselves still recruit from a narrow gene pool. Potential women directors are often overlooked (Tyson Report, 2003). Are business leaders looking beyond functional labels, past experiences, gender and symbols of race, religion and nationality at personal qualities, the ability to handle uncertainty and at individual motivation, conduct and contribution? Openness and a diversity of complementary talents and personalities can stimulate creativity.

Do the criteria for selecting directors and for assessing board performance need to be reviewed to

reflect issues such as global warming, a changing business environment, disruptive technologies and new models of operation? Would greater diversity in terms of the approaches, backgrounds, experience, gender, skills and ways of thinking of directors help boards to become more effective as catalysts, enablers and monitors of creativity, innovation and excellence? Are some boards insufficiently engaged and dynamic to energise their companies and support reassessment, renewal and transformation?

Stimulating Diversity of Thinking

Greater diversity in ways of thinking may also be required. Over two generations ago C P Snow (1959, 1961) warned in an influential Rede Lecture of the implications of what he perceived to be a growing division between science and the humanities and the emergence of two distinct cultures. Within many companies, is there division between those who think in a logical and structured way and prefer order and standardisation, while others favour variety and diversity, look for links, patterns and relationships and are willing to simultaneously explore in different directions? Systems thinking is required to fully understand many environmental and climate change issues.

To what extent might greater exposure to the creative arts stimulate creativity (Coulson-Thomas, 2017f)? When faced with uncertainty and changing times, do we encourage individual leaders to seek new sources of inspiration from ancient wisdom or a spiritual dimension (Wheatley, 2005; Coulson-Thomas, 2017d), or do we refer strategically significant and framework matters to a board that might be more easily refreshed by reviewing its composition and how it operates?

At the PARC research centre of Xerox Corporation in the 1980s it was found that breaking up the subject, functional, professional and experience homogeneity of research groups by introducing certain graduate degree majors from disciplines that approached problems differently increased creativity. Throughout history, significant breakthroughs in thinking have often been caused by relative outsiders who have challenged complacent orthodoxy (Kuhn, 1962). Inspired leaders are sometimes those who are open to contributions from new sources and directions.

Assimilating Greater Diversity

When addressing challenges it is often unlikely individuals and outsiders who come up with novel solutions (Stevenson, 2017). Contending interests and competing solutions are perceived as healthy by those who encourage differences of opinion and internal debate as more conducive of innovation and creativity than imposing single solutions. These activities mirror the requirements for how an effective and well chaired board should operate. Invariably, balance is required. Some organisations may take more time than others to adjust and assimilate those who challenge traditional approaches and think and operate differently. A group that is too disparate may not be able to hold together.

Differences can sometimes become irreconcilable. The effective director is sensitive to tipping points and how far one can go. Choices may still need to be made in terms of which innovations to back. Play-offs and competitions can be staged, surveys undertaken and consumer panels consulted, but views expressed may need to be challenged. Some significant innovations have sometimes been opposed by those who have felt threatened by them, or who have not understood them or their potential. How can boards ensure that evaluations of innovations are objective and balanced?

Some innovations do not sell themselves. Their advantages may not be immediately obvious to those who are distanced from intended beneficiaries. On occasion, those championing innovations may need to be tough and display qualities of single mindedness, tenacity and ruthlessness that might seem a throw-back to a previous era (Pfeffer, 2015). Some companies would benefit from initiatives to stimulate curiosity and develop entrepreneurial qualities across their organisations.

Understanding Helps and Hinders

Are companies, policy makers and standards helping or hindering sustainable innovation-led growth? Are we on the threshold of fast-and-furious technological development? Scientific and technological breakthroughs are encouraging and promising in many fields and arenas. However, despite the opportunities Fredrik Erixon and Bjorn Weigel (2016) suggest that in Western economies innovation is being hampered by government regulations and corporate practices. Obstacles and barriers to creativity and innovation need to be understood and addressed.

Many people's experience of education, life and employment inhibits their innate creative potential. They are taught and/or told about what has been found by others and what is approved. They learn acceptable answers and are rarely encouraged to seek their own solutions. As a result they lose confidence in their own ability to be creative and may lack the courage and confidence to release their inner creativity (Kelley and Kelley, 2012, 2013). Directors and senior managers who seek to maintain control can stifle creativity in people for whom they are responsible. They need to let go so that the creative potential of others can be released.

Some people look for external advice, for example a collection of hints and tips that can help people to become more creative (Kleon, 2012). Others look within themselves for what is blocking their development of new ideas, whether the motivation to explore alternatives, the confidence to try out new experiences or the courage to advocate a new direction. While positive external forces might encourage them to go forward, negative internal factors may hold them back.

Some of the most pressing challenges facing many companies and mankind are unlikely to be addressed by a succession of modest improvements to existing activities and/or excellence in the performance of them. More imaginative and innovative responses are required. A key function of leadership is to encourage and support the inquiry and creativity that will enable them to occur. Leadership is often associated with activities such as judging and selecting, yet creative thinking may be best enabled by standing back, inviting challenge and encouraging diversity and debate. Tolerating risk, well intentioned failure and uncertainty, providing reassurance when imaginative exploration fails to bear fruit, and avoiding a blame culture can also help (Klein & Knight, 2005).

Boards and Creativity

Do some directors and other business leaders need to pay more attention to stimulating creativity, enabling innovation and supporting entrepreneurship (Coulson-Thomas, Colin, 2017e)? For example, what if anything is being done within many companies to incorporate creativity, innovation and entrepreneurship considerations into the formulation and review of strategy? What action is being taken between companies to unleash creativity across supply and value chains?

Are boards instruments for innovation and excellence, or do the rules, policies and practices that some of them introduce act as a straight-jacket and prevent questioning, creativity and beneficial change? Every day provides opportunities to forge new connections, gain new experiences and learn new things, yet too often the rituals of board meetings and the familiar routines and ingrained habits of directors insulate them from new possibilities.

Boards could play more of a role in questioning whether artificial intelligence (AI) and/or other technologies could help in the development of new solutions to environmental and climate change related problems. Energy and water distribution and management, climate change impacts and the interaction of different systems can be relatively complex. AI applications can complement human intelligence with their ability to learn, handle large quantities of data and suggest new possibilities.

One application to improve the efficiency of Google's data centres has resulted in energy savings of up to 40% in cooling systems (Suleyman, 2018).

Creativity may be a necessary requirement for innovation, but on its own it may not be sufficient to guarantee business success. It usually needs to be accompanied by business acumen and a degree of entrepreneurial nous. At Pixar attention was also devoted to practical business issues such as brand building and rights, acknowledgements and other contractual matters to ensure the studio derived the maximum of credit and benefit from its creativity (Levy, 2016).

Focusing Creativity and Innovation

Directors and boards need to consider where creativity and innovation should be encouraged and sought and what they should be applied to and for what purpose. Discovery and invention may not be required if one can make better use of existing know-how (Perrin, 2000). Some companies seem to lose sight of why people purchase their products and services. The changes they make can be over-elaborate, disruptive and may ignore what customers and users seek to achieve. Rather than be obsessed with internal corporate objectives, boards should encourage the people for whom they are responsible to focus on the aspirations of external stakeholders. For example, they could focus upon the jobs customers want done and what a company could do to help them (Christensen et al, 2016).

One needs to think about the purpose of creativity, and particularly its significance and value for customers and prospects. Can one have too much creativity and over-design a product? Might customers prefer fewer options from a simpler and more affordable product that is easier to use? J K Galbraith (1958) suggested that some forms of creativity such as advertising that fuels "want creation" can be wasteful and irresponsible. Expenditure that others might consider unnecessary could be the conspicuous consumption identified by Veblen (1925). Innovation that creates less wasteful ways of personalisation and standing out might make such practices more sustainable.

On occasion, larger challenges such as climate change are easier to tackle than more modest ones. They may also require breakthrough thinking and bigger steps rather than incremental improvement. The creative entrepreneurship required to succeed can involve imaginative thinking and improvised responses to address issues as they evolve, as well as transformational thinking to address some of the most pressing problems facing larger businesses and society generally.

Again, could the business community learn from the approaches and practices of creative artists? For example, within the performing arts in the place of rigid rules and standard and prescribed responses, there may be scope for interpretation. In the case of Jazz, improvisation and creativity may be actively encouraged (Barrett, 1998). Both creativity and innovation involve doing as well as thinking. They should be about achievement rather than just wishing (Roth, 2015).

Establishing Creative Environments

Many corporate environments are not conducive of the imagination and creativity needed to address environmental issues. There are rules and procedures to be complied with and manuals setting out how things should be done. Those who are cocooned for most of their active hours within an organisation and preoccupied with its internal issues and priorities may be unaware of ferment and unrest outside. Going out and about and into the community to experience the lives of customers, explore alternatives and obtain insights from different situations can open one's eyes to changing requirements and new possibilities. It can spark ideas. Governance arrangements that encourage creative multi-actor collaborations can also enhance innovation (Torfing and Triantafillou, 2016).

A concern for many boards should be the extent to which work, corporate and local environments

are conducive of innovation and creativity. Physical layouts, furnishings, facilities and technological support may be designed and optimised for certain ways of operating. Some environments are oppressive, dark and depressing, while others are lighter and more uplifting and inspiring. One can consciously and specifically create an environment that encourages flexibility, dynamism and change, for example working and learning spaces with supporting technology that can be reconfigured for different purposes, whether open to encourage interaction or providing the private space needed for quiet thought and reflection.

Do your company's working and learning environments and related arrangements inspire and enable the innovative thinking and developments required to address environmental issues, challenges and opportunities? Are your support arrangements, processes and tools conducive of responsible innovation, while at the same time ensuring compliance (Coulson-Thomas, 2012a & b, 2013)?

People may need a degree of freedom in order to challenge, question and be creative (Williams, 2016). In 1997 I set out ten essential freedoms for removing constraints and liberating latent talent by allowing people to work, learn and collaborate in ways, and at times and places, and with support that best allow individuals and teams to give of their best and be creative and productive (Coulson-Thomas, 1997). When conditions are right for the people and relationships involved they can flourish and be fruitful.

Creativity, Innovation and Employment

Peter Drucker (1985) suggested that over time human institutions can outlive their original purpose as situations, circumstances, perspectives, requirements and priorities alter. They can imperceptibly change from being a solution to a pressing problem to become a new obstacle to progress. Sometimes creativity and innovation has to destroy the old in order to create space for the new, a process Joseph Schumpeter (1975) called creative destruction. Innovation can be disruptive. It can allow new entrants and more entrepreneurial businesses to replace established entities (Bower and Christensen, 1995, Christensen, 1997).

Developments in various technologies threaten to replace human workers, whether machine and/or digital alternatives, which if sufficient new employment opportunities are not created will reduce the availability of jobs (Ford, 2015). The areas at risk include the structured and rule based activities undertaken by many professionals (Susskind and Susskind, 2015). Such developments and their implications could create opportunities as well as challenges (Livingston, 2016). These could involve less environmentally damaging activities such as daily commutes to an office.

Sharing available jobs equitably could become an ethical as well as a practical issue for responsible companies, but for many people less working time could mean more hours for creative, sporting and other leisure activities (Brynjolfsson and McAfee, 2014). These could include improving the environment. Arun Sundararajan (2016) believes “the sharing economy” could mean “the end of employment” and lead to new generations of micro-entrepreneurs. Creative graduates have been encouraged to become entrepreneurs and self-employed, i.e. to make a job or living for themselves rather than rely upon someone else to give them a job (Barton, 2016). In developing countries, the informal economy can be an overlooked source of innovation, and there may be developments that could be supported and backed by more established businesses and collaborators (Kraemer-Mbula and Wunsch-Vincent, 2016).

Entrepreneurship can provide an opportunity for many people to reassess what is important to them and what they are good at, and also change direction at different points in their lives (Coulson-Thomas, 1999). Rather than manage a business, keep it on track and ensure its survival, entrepreneurs often challenge an existing order and create new choices (Coulson-Thomas, 2001).

There are many opportunities for individuals to offer services based upon data and information that is freely and readily available, and to which they could add value (Coulson-Thomas, 2003). There are also many opportunities to harness and capitalise upon public concern for the environment and worries about the impacts of climate change.

Flexibility and the Future

Flexible and responsive models of organisation, composed of evolving networks of collaborations, have advantages over hierarchical and more bureaucratic forms that have long been recognised (Coulson-Thomas, 1992). These include better ways of engaging, working with and supporting individual entrepreneurs and entrepreneurial teams. In uncertain times, traditional board activities such as annual budgeting and planning exercises may need to give way to intelligent steering, flexible adaptation and organic evolution. Bringing diverse but complementary and compatible people and organisations together can boost creativity (Bennis and Ward, 1997). It can spark ideas and enable them to remain current, relevant, innovative and competitive.

Directors and boards need to be flexible in their thinking, approaches and practices if they are to provide environment leadership and if their businesses are to have a sustainable future. Prince Charles (2017) finds it “inexplicable” that more effort has not been devoted to progressing various options for addressing and reversing global warming. Business leaders who fail to contribute to identified solutions and initiate searches for further and affordable possibilities may be held to account by future historians for their lack of action while a window of opportunity still existed. Those that do respond will be rightly lauded by stakeholders that benefit.

The potential to use technology to impact upon the environment, change aspects of the natural world and create new forms of life gives rise to new possibilities (Preston, 2018). For boards and societies they create ethical dilemmas, pose difficult choices and give rise to risks and opportunities. IOD India has responded to these and other developments with a new annual conference concerned with corporate ethics and risk management. The growing interdependence of certain themes at IOD India conferences is evidence of their complexity, while their persistence suggests that for many boards they remain to be addressed and that the institute’s efforts to build better boards are still required to narrow the gap between rhetoric and reality and aspiration and achievement.

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