Exploring the cultural basis of innovation

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Abstract. The paper explores the relationship between leadership, culture and innovation. Through an analysis of four enterprises, voted by their peers as having strong innovation-friendly cultures, we explicate the assumptions embedded in these innovation-supporting cultures, and outline the leadership practices that have created them. By locating the study within the interpretivist research paradigm and adopting the 'practice turn' perspective that has characterised recent leadership research, this study has been able to acknowledge and address the political dynamics involved in the creation of innovation-conducive cultures.

Keywords. Organizational Culture, Leadership, Innovation, Practice Theory.

1   Introduction

Innovation has become the pre-eminent requirement for competitive advantage-and thus survival-within the current challenging and dynamic global economy. Innovation, however, is very difficult to achieve in practice and thus in many organisations its rhetorical expression is the only form that it takes. Given that, by definition, innovation is disruptive of the *status quo*, it is not surprising that those who have vested interests in the *status quo* will be ambivalent about it, at best, and resistant to it, at worst. As Verhoeff (2011) points out, in spite of considerable documented knowledge on the capabilities required for innovation, the innovation record of large publically-owned companies, in particular, is not impressive. This point is supported by Henderson (2006) and Henderson and Kaplan (2005); as well as Jaruzelski et al. (2011) who surveyed a large sample of publically-owned companies and found that their 'tolerance for failure' was low. This, they argue, raises serious questions about these companies' appetite for risk taking.

This situation has significant implications for the leadership of large organizations in that it suggests that structural and cultural factors may undermine the execution of the strategic intent to innovate. Given the need for transformational action that fully embraces risk, innovation requires a social environment in which key stakeholders are open to the challenge of transformational learning, however demanding and intimidating they may view this challenge. The creation of such an environment, as Schein (1988) points out, requires the critical scrutiny of the appropriateness of the prevailing organizational form and the cultural assumptions that it has spawned. Similarly, to convert innovation talk (rhetoric) into innovation action (execution), the raft of structurally-embedded, innovation-killing, business-as-usual practices [such as those embedded in risk and performance management systems and justified by the taken-for-granted *enterprise logic* (see Zuboff and Maxmin, 2002)] must be reviewed. Furthermore, the cultural assumptions embodied in the everyday routines to which stakeholders have become inured, must be addressed (Dovey and McCabe, 2014). Gottlieb and Wilmott (2014) concur that unless attempts at innovation are supported by appropriate structurally-embedded practices and cultural assumptions, they are likely to be resisted effectively in spite of any rhetoric to the contrary. In this respect, the symbiotic relationship between structure and culture is recognised as a

phenomenon that can exert significant influence upon the innovation process.

This paper attempts to address the issue of the cultural antecedents of innovation by analysing the cultural basis of the innovation capabilities of four organisations recently voted as having the most innovation-supporting culture by 244 members of the Australian Information Industry Association (AIIA), through a University of Technology Sydney (UTS) designed survey. From an analysis of the survey data, leadership presentations at the award ceremony and follow-up interviews, an attempt is made to explicate, and discuss, the cultural environment that differentiates these companies from their competitors. Furthermore, the leadership practices that have created these innovation-supporting cultural environments are explored with the view to explaining how each of these companies has created an organisational form and culture that is flexible enough to adapt its particular innovative ambitions to its constantly changing operational circumstances.

2   Leadership, Culture and Innovation

Although the phenomenon of organisational culture has been widely researched [see Büschgens et al., (2013) for an overview of this research], there exists little consensus on its nature. For example, the literature review conducted by Kroeber and Kluckhohn in 1952, found 164 definitions of culture. From our perspective, a contributing factor to this confusion is the fact that the vast body of research on this phenomenon is located within the positivist research paradigm: a paradigm that features realist ontological, and objectivist epistemological, assumptions and that seeks acontextual and apolitical, or value-neutral, knowledge of this phenomenon. This search for 'objective' knowledge of a socially constructed concept such as 'culture' seems, to us, to have led to its obfuscation.

The relatively recent 'practice turn' in strategy, leadership and organizational research (see Crevani et al., 2010; Carroll et al., 2008; Whittington, 2006), has challenged the ontological, epistemological and, thus, methodological assumptions of the positivist research paradigm. Located within the constructionist research paradigm (which features nominalist ontological, and inter-subjectivist epistemological, assumptions), the 'practice turn' perspective views leadership for innovation as a collective inter-subjective achievement. This achievement, it argues, encompasses deeply political processes in which multiple stakeholders are involved in collectively-reflexive practices that co-create, and continuously re-create, an innovation-conducive set of social practices or culture. This approach reflects a more dynamic notion of culture; one which is less prone to reification because of the continuous critical scrutiny of cultural assumptions that is enacted through everyday reflexive practices as a collective negotiates emergent social and competitive contexts. The governance of such practices takes the form of a stakeholder covenant, or social contract, upon which there is broad strategic consensus. As Rouse (2007, p. 531) points out, such 'strategic intent' needs not be explicitly stated but is embedded in practices that feature patterns of interaction that 'constitute something at issue and at stake in their outcome'. Such a 'negotiated order' (an order which embraces intellectual contestation and critique) recognises the necessity for the constant critical scrutiny of power relationships, through collectively-reflexive practices, for valuable ideas to be realised in innovative new products, services and processes (see Allen, 2015; Dovey and White, 2005; White and Dovey, 2004). In his study of technical innovation within an iconic global high-tech organisation, Allen (2015) showed that social innovation preceded technical innovation in that technical innovation only manifested once the prevailing power relations had been transformed appropriately (on this point, also see Karlsen and Larrea, 2014; Verhoeff, 2011). Furthermore, Allen (2015) demonstrated

that such transformation requires the co-creation of collectively-reflexive practices that facilitate the kinds of critical inter-subjective engagement necessary for conventional thought, embedded assumptions (cultural and personal), and vested interests to be effectively challenged.

Schein's (1985, p.9) definition of culture is one that is compatible with our paradigmatic assumptions in that it recognises the social construction of the concept, and it indirectly signals its potential for reification. He defines culture as:

> "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems."

From this perspective, culture is viewed as a tacitly acquired set of socially constructed assumptions that have become embedded in the everyday social practices of a group with a shared history. These assumptions act as a 'taken-for-granted' prescription (and rationale) for everyday behaviour and, in this respect, represent an unquestioned 'guide to action' (or inaction) in accordance with tacitly socialized knowledge bases that have developed over time in response to specific historic organisational problems and challenges. As a form of unquestioned 'recipe knowledge' (that is socialised not as 'this is an answer that our predecessors developed in relation to such-and-such a problem in the past' but rather, as Schein posits, as 'this is the only way to think, feel and act in relation to this problem') culture rarely informs explicit governance documents in organisations. It is usually through the 'unwritten ground rules' for organisational behaviour that culture finds expression.

Schein (1985) views leadership and organisational form (or structure) as the most important antecedents in the formation of culture. He views those with power (as a consequence of ownership and/or structural arrangements) as mediators of the interpretation of problems encountered by a group, and as influencers of how these problems are to be addressed collectively. Aided by forms of hegemony (see Williams, 1977), when culture is tacitly endorsed by leadership as an infallible set of 'recipe solutions' to problems, a habitual, uncritical, collective response to new problems is ensured (what Bourdieu,1977, refers to as *habitus*).

With reference to structural antecedents of cultural assumptions, Zuboff and Maxmin (2002) coin the phrase 'enterprise logic', which refers to the deep structure (or ideological underpinning) of practices within an organisation. These practices are underpinned by shared assumptions, values and attitudes that have become reified as a consequence of the hegemonic logic that has over time shaped structure, strategy and management processes into an effective whole (Miles et al., 1997, p. 7). As Dovey and Fenech (2007, p.574) explain:

> "[T]his is a process in which structural arrangements are put into place (particularly with respect to principles and practices of power and resource management) and gradually become manifest in cultural norms (shared assumptions, or mental models, with respect to 'how the world works'). This ultimately leads to patterns of taken-for-granted behaviour that reflect the hegemony of this logic. Over time, a range of institutional, organisational and individual (socio-psychological) practices that sustain shared assumptions about the 'reality' of these ideological arrangements, become formalised."

Schein (1988, p.15) emphasises the point that organisational structure and culture are mutually reinforcing and, thus, should not be thought of as two separate phenomena:

> "the basic organization design in terms of who reports to whom and

> *who is accountable for what are typically thought of as the major elements of the "formal" structure. But as in the case of organizational processes, these structures are ultimately a reflection of the underlying cultural assumptions. One of the common misconceptions in this area is that structure can be analysed as a factor separate from culture. If one starts with a socio-technical model of organizations, one cannot separate structure from culture. One can, however, ask whether some formal structures are more likely to facilitate or encourage learning, adaptation, and innovation, and, if so, what kinds of cultural assumptions will favor the evolution of such structures?"*

In recent times, many smaller 'insurgent' organisations have begun to successfully challenge the market dominance of large organisations (see Naim, 2013) and their success is due in large part to the adoption of a structural form that allows more appropriate assumptions about organisational life to manifest in the everyday behaviours that fuel innovation (see, for example, Fisher, 2005).

In summary, we view culture as an inter-subjective phenomenon that reflects human interests-especially those of the most powerful members of a 'cultural community'. As such, it is a political construct that manifests sub-consciously in "shared routines of behaviour, including traditions, norms and procedures for thinking, acting and using 'things'" (Whittington, 2006, p.619). Managing the cultural politics of innovation in response to emergent challenges within a dynamic business environment is thus an important leadership responsibility. The 'practice turn' in leadership studies views this responsibility as a collective one; as one which is addressed through practices that engage the collective intelligence in the appropriate transformation of assumptions in line with the shared commitment to innovate. In this respect, in a special article in the *Harvard Business Review* entitled 'Looking Ahead' (see Drucker et al., 1997, p.18), that articulated the view of five business 'visionaries' (Peter Drucker, Charles Handy, Esther Dyson, Paul Saffo and Peter Senge) with respect to the most important challenges likely to be faced by leaders of organizations in the 21st Century, the journal's editors summed up these five contributions by identifying one common theme:

> *"What is perhaps most interesting about their comments is how each thinker, in his or her own way, has identified challenges that are not so much technical or rational as they are cultural."*

The adoption of innovation as a competitive strategy thus requires the alignment of cultural assumptions with that strategy if its execution is to be effective. This usually requires the transformation of the prevailing cultural assumptions. A particularly difficult aspect of this task is that of making these assumptions explicit in order to understand which of them needs to be transformed. As subconscious phenomena, their explication represents a major leadership challenge.

3   The Challenge of Change

While past experience is a valuable asset when addressing familiar problems, this is not usually the case when confronted with problems and challenges that have never before been encountered. In situations where fresh thinking is required, the tacitly induced modes of interpretation and response acquired through cultural socialisation can become the proverbial 'stone around the neck' of individuals, companies and societies. Thus, the challenge that current organisations face is that of how to create a culture (a set of shared assumptions that facilitates appropriate interpretations of, and responses to, strategic inflection points) that allows a company to innovate (craft and enact new approaches to the novel situation it faces), while retaining a strong degree

of strategic flexibility. By strategic flexibility is meant the ability to anticipate emergent challenges (strategic inflection points) and continuously transform shared assumptions appropriately and timeously in order to survive and thrive within a highly dynamic business environment. To address this paradox a company needs to develop 'ambidextrous' capabilities where, somewhat schizophrenically, it builds the cultural capacity to exploit current possibilities while, simultaneously, enacting an alternative set of cultural predilections in order to explore and capitalise on new, different, opportunities in the future (see Chew and Dovey, 2014).

The challenge of change-and, in particular, the appropriate interpretation of problems and the conceptualisation of effective responses to these problems-is exacerbated by mental processes that manifest another set of assumptions known as mental models (see Senge, 1990; Kim, 1993). Formed as a consequence of our unique biographical experience, these assumptions about 'self, others, and the way the world works' screen our apprehension of events and situations such that our interpretations thereof are governed unwittingly by past experience. Thus, as Senge (1990, p.8) points out, mental models are:

> *"deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action."*

Acting in concert with cultural assumptions, the strong emotional dimensions of these tacitly formed personal assumptions rigidifies psychological defences against change, thereby ensuring that the past experiences of individuals unwittingly dictate their response to change in the present (Dovey et al., 2007; Kotter, 1995). In organizations where leadership is construed as an individual responsibility, this phenomenon has significant implications for the organization's capability to innovate.

As Schein (1988, p.30) points out, culture embodies the learning from past experience and thus it tends to be 'conservative' in relation to the future. Asking the question of which assumptions would underpin an innovation-supporting culture, he identifies the following list:

- control exists over the environment, with optimistic expectations that challenges can be addressed effectively through aligned, collaborative effort (the assumption of a 'collective' internal locus of control)
- risk is part of the process of pragmatic experimentation and failure is a valuable source of learning
- the time it will take for the innovation to be realised will be endured
- all stakeholders are capable learners who will embrace the challenge of change
- collaborative decision making is required to ensure the successful conversion of ideas into innovative new products, services, and practices [see Burdon and Feeny (2011) for an elaboration of this point].

The embedding of such assumptions into the everyday behavioural routines of all stakeholders thus becomes an important aspect of the leadership task of 'working with culture' in order to create an innovation-supporting social environment.

Regarding the issue of cultural assumptions about the phenomenon of leadership, the 'practice turn' in leadership (Crevani et al., 2010; Carroll et al., 2008) has introduced a new, radically different set of assumptions about the nature of leadership; one which shifts the focus from the individual-as-leader to that of the manifestation of collective assumptions in *practices* which endorse all stakeholders as innovators and, thereby, facilitate the conversion of creative ideas into innovative new products and services. In this respect, Jaruzelski et al. (2011, p.5) identify the following assumptions upon which, they argue, innovation-directed leadership appears to depend:

- that all parts of the organisation are inter-dependent and thrive on collaborative action
- that strong identification with the customer is vital
- that passion for, and pride in, products underpins the requisite resilience during the innovation process.

From a 'practice-turn' perspective, therefore, these assumptions need to manifest in collectively-reflexive everyday stakeholder practices. Furthermore, while the introduction of new organisational forms supported by new, incentivised, behaviours may offer easier ways to create an innovation-friendly social environment (as the 'skunkworks' strategy demonstrated in the past), the escalating speed of change is likely to require organisations to transform, chameleon-like, on an almost constant basis. Expecting individuals to manage such a complex task, for which there is unlikely to be time or capability, is unrealistic (the challenge of individuals, alone, being able to make their own, and others', assumptions explicit is already too great). Rather, the critical scrutiny and appropriate transformation of assumptions will have to be embedded in the everyday routines and reflexive practices of the stakeholder collective. As action research studies, located within the constructionist research paradigm, have shown, such collectively-reflexive action is critical to the realisation of innovative new products and services within organisations (Allen, 2015; Dovey and White, 2005; White and Dovey, 2004). While we endorse such studies, we believe that our adoption of a phenomenological methodology for the third form of data collection in this research, signals our belief that research located within the interpretivist research paradigm can contribute meaningfully to our understanding of the cultural antecedents of an organisation's capability to innovate [see Burrell and Morgan (1979) on this point].

4   Research Methodology

Three methods of data collection were utilised in this study. The first step in the data collection process involved a sampling exercise whereby we sought informed opinion on which organizations with an Australasian presence possess the most innovation-supportive culture. This was achieved by conducting an online survey of member enterprises of the Australian Information Industry Association (AIIA) during the fourth quarter of 2013. In addition to rating specified dimensions of their own organization's innovation capabilities, respondents were required to nominate three organizations in Australasia that they believed had the most innovation-supportive cultures (providing reasons for their choices). 244 people responded from the 102 enterprises represented in these responses.

Respondents' nominations for the top three Australasian (ANZ) organizations, with respect to having the most innovation-friendly culture, were analysed within four revenue turnover categories:

1. ANZ organization with an annual turnover of less than $2 million
2. ANZ organization with an annual turnover between $2 million and $50 million
3. ANZ organization with an annual turnover exceeding $50 million
4. Multinational company with an Australasian presence.

Our second phase of data collection occurred at the awards function, where the winner of each category was announced and the CEO, or a senior executive, from each category winner presented on the nature of his/her organization's innovation-supporting culture. As one of the reviewers of this paper commented, asking the organization's leadership to make explicit the assumptions which underpin the organization's everyday practices and routines in a 20-minute presentation, was

perhaps asking too much. The presentations, however, laid the foundation for a set of four case studies of innovative companies within fast-moving industry domains (for an explanation of the case study method, see Yin, 2003). Our research plan was to supplement the relatively superficial data gained from the presentations with richer data gained from the use of additional research methods. Each presentation was video-taped and analysed with the intention of identifying dominant or recurring themes, with respect to the creation of an innovative culture, across these four companies, as well as to highlight uniquely interesting insights conveyed by any of the presenters.

The final phase of data collection adopted a phenomenological methodology (see Moustakas, 1994). Through follow-up interviews with a senior manager in each of the four winning companies, the insights offered via the presentations were explored more deeply. Our assumption was that through the sustained everyday experience of their organization, those people selected for interview possess privileged insights into how its culture facilitates the innovative outcomes that AIIA members recognised through the survey. The focus of these interviews was, thus, to access more fully the knowledge of those who have deep experience of the phenomenon under research (namely, the nature of the shared assumptions that manifest in the everyday practices that support the organization's innovation capability). Through unstructured interviews that allowed the interviewees to create the constructs, and through the use of probing questions such as, 'can you be more explicit?'; 'tell me more about that?'; 'what do you mean by that?'; 'can you give me an example?'; etc., we attempted to gain insights into the deep structure of the culture of these organisations. Such sensitive, sustained, probing allowed us to delve deeper into the experiences of each interviewee, thereby enabling her/him to articulate knowledge that would not normally 'come to mind' easily. In this way, knowledge that is extremely 'sticky' [see Szulanski (1996) for the difficulties experienced in attempting to articulate tacit knowledge] became more accessible, allowing us to explore each interviewee's experience more deeply. The transcripts of the interviews were analysed independently by each of us and, following Heidegger (1996 edition) and Stahl (1993), we utilised the hermeneutic circle in our transcript analysis to achieve a rich understanding of the complex social practices and assumptions that underpinned the culture of each organization, based on the privileged knowledge of those interviewed. Thus, by utilising a range of methodologies, each assumed to be appropriate for the specific data collection task it addressed, we attempted to make as explicit as possible the cultural bases of the innovation capabilities of each of the winning organizations.

5   Results

An analysis of the survey results showed an inverse relationship between innovation capabilities and organizational size. Generally larger organizations were judged to have less innovation-friendly cultures than SMEs.

The nominations, by survey respondents, of organizations with the most innovation-supporting cultures delivered clear winners within each category of financial turnover:

1. QuintessenceLabs: (ANZ organization with an annual turnover of less than $2 million)
2. Xero: (ANZ organization with an annual turnover between $2 million and $50 million)
3. Atlassian: (ANZ organization with an annual turnover exceeding $50 million);
4. Google: (Multinational organization with an ANZ presence).

One outstanding feature of the four presentations at the awards ceremony was their

emphasis upon the leadership's strategic intent to innovate as a precursor to culture creation/transformation. Such intent, they argued, precedes and informs the culture creation/transformation processes that all view as fundamental to the innovation project. By articulating the strategic intent to innovate as a non-negotiable dimension of life within the organization, it is claimed that all stakeholders are given a clear message of 'what really matters' in terms of organizational priorities, practices and outcomes. This point was strongly endorsed by the senior manager interviewed in each of the four winning organizations.

Secondly, all four companies acknowledged the responsibility of the leadership to ensure that the company is structured in a way that enables the execution of the strategic intent. As the presenter from *Xero* pointed out, for staff to have genuine ownership of their work, and if bureaucracy is to be 'stamped out' of the workplace, a flat structure is required. In our interview with him, he goes on to argue that design is 'at the start and heart of everything' that is done at *Xero*, including the design of 'a platform that has enabled us to attract a large number of innovative technology entrepreneurs to come and build exciting new products that we integrate'. The presenter from *Atlassian* concurred, arguing that the organizational form should allow staff, once employed, to be 'set free' to 'become the change they seek'. During our follow-up interview we were told that, at *Atlassian*, staff members are encouraged to form virtual teams to facilitate innovative work outside of their normal teams, functions and organisational routines.

Thirdly, all four presenters conveyed the message that 'the strategy is the culture'; that is, that strategic intent must be underpinned by the creation of an appropriate culture whereby everyday action within the organization becomes aligned with that intent. In our follow-up interview with the founder/CEO of *Xero*, he expressed the sentiment, shared by all of those interviewed, that his organization is 'obsessed with having an innovation culture…and having an entrepreneurial spirit permeate throughout the organization regardless of how big we get'. A common theme across all four winning organizations is the conviction that at the heart of these innovation-supporting cultures is a set of cherished core values that are deemed to lay the foundation for decisive action in that they are not *espoused* values but, rather, *enacted* values. For example, at *Xero*, these values are centred on passion, embracing challenge, taking personal ownership, and creativity ('design is at the heart and start of everything we do'); while *Atlassian*'s values are (more starkly) stated as: open communication (no bullshit); don't exploit the customer; build with heart and balance; teamwork; and 'be the change you seek'.

Another stand-out cultural attribute of these four organizations (mentioned in all four winners' presentations and endorsed in follow-up interviews) is that of the importance of *collaboration* as a key source of ideation and innovation. The principle that 'all of us' are cleverer than 'any of us' informs the cultural imperative within these companies to seek creative ideas and to convert them into innovative products and services through the collective efforts of all stakeholders. While all of those interviewed mentioned the role that appropriate collaborative tools can play in supporting innovation, it was the value of *people* that was mostly strongly endorsed in all the presentations as being at the heart of innovation across these four companies. This is exemplified by *Xero*'s presenter who stated that his company's intent is to create 'beautiful accounting software' by 'solving people problems and not technical problems'. This emphasis on people takes multiple forms across these four companies. In particular, all stress the importance of the creation of a pipeline of talent through whose efforts innovative products and services will be realised. In these companies talent is conceptualised within a framework of complex, collectively-reflexive problem-solving practices. Individuals, driven by challenge and continuous opportunities to learn new skills and expand their knowledge base, are encouraged to

take ownership of their everyday action and, through reflexivity, disrupt the *status quo* by continuously questioning the assumptions that underpin the company's practices. As the presenter from *Google* (ANZ) put it, if their staff members 'are not doing some crazy things', they are 'doing the wrong things'.

In all four winning organizations the creation of a talent pipeline is seen as a responsibility of senior leadership. As *Xero*'s CEO explained, he wants 'to be really connected to that whole recruitment process and … to look at the culture fit of the people' being brought into the organization. The presenter from *Google* (ANZ) concurred, stating that as the need is for 'very passionate and curious people … hiring is the most important job that I do as a manager'. Once recruited, the *leadership* of talent was stressed by all representatives of these organizations. In particular, the following leadership practices were strongly endorsed:

- view all staff as entrepreneurs (endorsing risk-taking experimentation);
- encourage open and honest communication (eliminating any fear of 'speaking up')
- tolerate contrary perspectives (facilitating 'creatively abrasive' interaction)
- celebrate failure as a manifestation of appropriate risk-taking.

The assumptions underpinning all of these attributes are those relating to innovation being a human/social process that is enhanced by open and honest communication, strong interpersonal relationships, mission-pertinent learning and permission to experiment and fail. Furthermore, these attributes are also assumed to enable the kind of collaboration that transforms the politics of interpersonal engagement into positive forms where intellectual humility facilitates mission-pertinent learning (as one interviewee put it, to learn one must concede a degree of 'not knowing'). Furthermore, constructive confrontation is viewed in these four organisations as a form of 'intelligent caring'; that is, as a contribution to the individual's development and to the realisation of the company's strategic intent (rather than as a personal attack on others). In this way, in each of these companies, the requisite competitive spirit is framed by collaborative principles.

At *Google* (ANZ) 'innovation has to happen across the organization in every aspect of the business where everybody considers their job to be an innovator'. The presenter goes on to say that, 'every quarter, every team sets innovation goals across the business from engineering, business operations, finance and marketing' … (and) … 'to share all our knowledge we open up systems for security and competition, (which) makes us work faster'. Thus, by assuming that all staff members are innovators, innovation happens across the company and not just in Research and Development (R&D) centres. In this respect, the *Atlassian* presenter claimed that they periodically create teams, 'sometimes globally, sometimes within a single location, with the challenge to change something in 24 hours'. He elaborated on this challenge by describing a system for new graduates where they have to compete internally and produce a new product to go live by their first Friday in the job. Unusually, rather than attempts at incremental innovation that have characterised other companies' encouragement of employee engagement in innovation (such as those at Toyota towards the end of the last century), these companies all seek radical innovation through social practices that exploit the benefits of the innovation-focussed culture collectively created, and re-created, within these four organisations.

These findings reflect a new wave of organizations driven by the competitive imperatives of their industry to re-invent and re-create continually at a very fast rate. All four of these organizations are very customer-focused and comfortable with taking risks that could result in failure. Their culture encourages experimentation and radical innovation. They all have global perspectives and judge their progress through growth.

A provocative issue, raised in one of the winning companies, is that of the implications of geographic location with respect to the creation of an innovation-supporting culture. *QuintessenceLabs*, the winner of Category 1, only succeeded when, in spite of seeking university and investor support in Australia, overseas investors and customers recognised the potential of the idea on which the business is based. To date, all of their customers and investors are from outside Australia. This point raises questions about the role of broader, national, cultural assumptions in the development (and recognition) of organizations' innovation capabilities.

6   Discussion of Results

Drawing on Schein's (1985) definition of culture as a set of shared assumptions, this discussion of the results will focus upon the nature of the cultural assumptions held by the four winning organizations with respect to the phenomenon of innovation. What is explicitly clear in all the presentations and interviews is the assumption that innovation requires *people-centric* strategies. While some may not see this as a novel finding, for us it is revelatory given that all of these organizations are located in the technology sector-a sector dominated by positivist research oriented R&D departments (Allen, 2015). Almost every one of the results articulated above reflects an assumption that it is through people that organizations innovate. Furthermore, they endorse several people-oriented strategies with respect to building a culture in which the focus is upon:

- developing targeted talent selection practices
- exercising talent leadership by giving talent appropriate ownership of the innovation process and creating the social practices that facilitate collective reflexivity and learning
- ensuring that the structural form (socio-political environment) adopted by the organization encourages collaboration and allows open communication to become the norm
- explicitly endorsing the taking of necessary risks in doing what may be perceived by some within the organization as 'crazy things'
- constantly reviewing any 'business as usual' practices that constrain inquisitive exploration and which discourage critique of existing cultural assumptions regarding 'permissions' with respect to problem interpretation, and the nature of problem-solving processes.

These strategies endorse the findings of recent research into the leadership practices that underpin innovation capabilities. For example, Dovey and McCabe (2014) raise the issue of the management of selected talent once employed and the degree to which such talent-recruited to drive an innovation strategy-is unwittingly straitjacketed by prevailing business-as-usual procedures and systems (permissions, standards, incentives, performance management, resourcing, etc.). The cases that these authors offer, demonstrate how inappropriate assumptions that are embedded in the organizational structure and in leadership mental models, ensure that the rhetorically acclaimed strategy of innovation is impossible to implement. This echoes the findings of Henderson (2006) and Henderson and Kaplan (2005), on why smaller, more agile, organizations have greater innovation capabilities than larger, more rigidly structured, companies.

The results also endorse the research findings of Allen (2015); Karlsen and Larrea (2014); and Verhoeff (2011) in showing that social innovation precedes technical innovation. In the four winning organizations, social innovation involved the dismantling of the traditional hierarchical form of governance (thereby bestowing

ownership of the innovation process on teams), and the facilitation of learning by team members of how to generate and leverage the relationship-based intangible resources - such as trust, commitment, and resilience - required for the successful conversion of creative ideas into valuable new products and services. This supports Allen's (2015) finding that, at the core of socially transformative action (whereby the politics of innovation are effectively addressed) are social practices that facilitate the challenging of inappropriate interpersonal assumptions. As in Allen's (2015) study, these reflexive practices allowed, in particular, the critical scrutiny of assumptions that inhibited the risk-taking necessary for explorative learning. Such scrutiny was also applied to assumptions about 'the other': assumptions that undermined the processes of mutual identification required to generate the powerful 'identity resources' upon which each team drew strongly in its successful efforts at technical innovation [see Dovey and Mooney (2012) on the role of intangible capital resources in establishing a social platform for technical innovation]. Furthermore, each of the four winning organizations has developed a culture in which it is assumed that mutual openness to the correction or counsel of others, irrespective of status or role, is underpinned by a form of collective humility that allows each to learn from others; to admit to not knowing and to trust that such an admission would not be exploited for competitive advantage by others. As Allen (2015) shows, such cultural assumptions eliminate hubris, ego clashes, personality games, and other forms of destructive politics and set the stage for the collective focus on insightful learning that leads to significant technical innovation.

The findings of this study have profound implications for organizational leadership. They strongly endorse the claim by Schein (1985, p.5) that:

> "culture creation and leadership, when one examines them closely, are two sides of the same coin, and neither can be understood by itself. In fact, there is the possibility-under emphasized in leadership research-that the only thing of real importance that leaders do is to create and manage culture and that the unique talent of leaders is their ability to work with culture."

There is, thus, a growing sense that culture creation/transformation is becoming a critical leadership task and, as the results of this study show, this is particularly true in the case of organizations whose strategic intent is to innovate. The creation of an innovation-supporting culture, however, is an exceptionally challenging political task. As the results of this study show, technical innovation is founded on a base of social innovation of complex kinds that include the transformation of traditional organizational structures and, therewith, of traditional power relations. Success in this endeavor will, thus, require innovative leadership practices that engage the hearts, minds and imagination of all stakeholders.

7   Conclusion

Through this study we have attempted to contribute greater insight into ways of addressing the challenges of adopting innovation as a competitive strategy in the knowledge era. We have pointed out that these challenges are particularly significant for large organizations laboring under outmoded forms of enterprise logic, where structurally-embedded cultural assumptions undermine the execution of the intent to innovate.

In order to address the 'politics' involved in the execution of the strategy of innovation-a strategy that is intent on transforming the *status quo*-we located this study within the interpretivist research paradigm and adopted a 'leadership-as-practice' theoretical framework. From this perspective, leadership is viewed as a

collective inter-subjective achievement that manifests through collectively-reflexive practices aimed at addressing effectively the politics of cultural transformation and creation.

Through an analysis of four companies voted as having the most innovation-supporting culture by members of the Australian Information Industry Association (AIIA), through a University of Technology Sydney (UTS) designed survey, we have attempted to identify those cultural assumptions that underpin the practices that lead to successful innovation within these companies. The results show that in each of these companies, the 'collective achievement' of effective leadership of the innovation strategy is based on the demystification, and subsequent transformation, of reified cultural assumptions, and on experimentation with new forms of enterprise logic that spawn cultural assumptions that are more appropriate to the emergent and challenging business contexts in which these companies operate. This enterprise logic is characterized by more egalitarian relationships through which stakeholders are empowered to co-create and re-create work practices that assume co-ownership of the innovation project. In doing this, stakeholders are expected to take collective responsibility for the generation of creative ideas, and for generously supporting the creative ideas that are selected for conversion into innovative products and services. The politics of these relationships-competing interests and perspectives-are managed through reflexive practices that surface inappropriate assumptions in creatively-abrasive ways that strengthen the collective intent to innovate.

Whilst these companies collaboratively create and re-create the conditions for the development of appropriate cultural dispositions, those individuals with formal power in these companies play a significant role in establishing, and championing, the strategic intent to innovate as a non-negotiable dimension of company life. Furthermore they structure the company appropriately and create and manage the incentives (tangible and intangible) that offer talent an attractive value proposition. Through these practices, they set the scene for transformational action on complacency-by challenging any stakeholder assumptions that 'business as usual' can prevail-and signal their readiness to embrace risk and tolerate failure. Furthermore, by flattening the organizational structure and facilitating shared ownership of the innovation project, they provide indisputable evidence of their commitment to the 'cannibalization' of their traditional power base. Through this transformation of power relations (and interpersonal relations generally) they establish the social basis for innovative learning and explorative practices.

The manifestation of collective forms of governance of the 'culture creation/transformation' process occurs through a variety of leadership practices. Our results show that the successful execution of the 'high level' leadership practices (such as establishing the strategic intent to innovate) requires the effective enactment of more fundamental and specific practices. These include the building of a 'pipeline of human talent'; the empowerment of that talent to engage in innovation-related experimentation without fear of failure; and the retention of collective focus upon 'what really matters' in everyday workplace endeavor with respect to the sustained capacity to innovate. These practices demand management's committed engagement in the recruitment, and appropriate management, of talent, and in the development of the requisite social skills for facilitating the collectively-reflexive practices through which the politics of innovation are effectively addressed. Furthermore, the successful execution of these practices requires of management a self-reflexive capability whereby assumptions formed through previous work and life experience can be made explicit and transformed if necessary. In this respect, assumptions about the exercising of power; openness to learning (intellectual humility); embracing of risk; recognition of failure as a possible outcome of experimentation; and the (political) nature of innovation, in particular, are likely to require critical scrutiny. In addition,

this study shows that management facilitation of stakeholder *enactment* of a set of pre-eminent core values, and their use as *the* frame of reference in all decision-making, is an important feature of the cultural environment of the four winning companies.

While pointing to interesting leadership challenges with respect to building the organizational capabilities to innovate, the data-base on which this research rests is relatively small and this may have compromised the results. Furthermore, as a set of case studies located within an interpretivist research paradigm, the findings of this study are highly contextual and cannot be generalized to other settings with any degree of confidence. However, whilst the reliability of our results is not assured, the validity of such qualitative research is high. Not only does the research respect the integrity of the research phenomenon (that is, it does not reduce it to an operational variable), the adoption of a phenomenological methodology also facilitates a richer explication of this phenomenon. This explication is able to address value-laden (political) dimensions of the research phenomenon in ways that positivist research is unable to do.

The lead that the study offers, especially the principal finding that innovation-supporting cultures are generated by leadership practices that effectively address the politics of innovation, suggests a promising direction for future research to take. Such research, however, needs to be located within a research paradigm that can accommodate the political nature of innovation and its cultural antecedents. This study shows that, as a social construct, culture is a complex inter-subjective phenomenon; one which the traditional (and still dominant) research paradigm has had difficulty addressing effectively because of the ontological and epistemological assumptions that underpin it. In this respect, our findings indicate that the cultural basis of innovation capability may be better explored through alternative research paradigms that differentiate between social and natural reality.

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