
NURTURING A CULTURE AND CLIMATE OF RESILIENCE TO NAVIGATE THE WHITEWATERS OF THE SOUTH AFRICAN DUAL ECONOMY

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South African business institutions function within what may best be described as a dual manufacturing and services economy, inherently integrated within a larger global economy that is characterised as highly competitive and subject to unexpected discontinuous change. Karl Weick and Kathleen Sutcliffe (2001:2), in research how institutions deal with unexpected trends and events, suggest that in general managers are not at all that adept in this regard and consequently events spiral, get worse and disrupt the operations of the institution. The researchers go on to claim that commitment to resilience and an ability to bounce back from “those inevitable errors that are part of an indeterminate world”, are critical facets in managing an enterprise (Weick & Sutcliffe 2001:2). Yet it is claimed by McManus, Seville, Brunson and Vargo (2007) that there is little consensus regarding how institutions might achieve greater resilience in the face of increasing contextual instability. Hui and Sit (2005:180) suggest that a primary function of culture is “to serve as an appraisal heuristic, enabling individuals to efficiently assess objects, events and people in their environment”. It is therefore implied that culture and climate play a role in the institutional response to unexpected emergent contextual conditions that impact on an institution and consequently its resilience capability. In this paper institutional resilience is therefore explored, with reference to organisational culture and climate as behavioural determinants and the influence thereof in dealing with the complexity of a South African dual manufacturing and services economy.

Key phrases: Dual manufacturing and services economy; organizational climate and culture; enterprise resilience management; complexity theory; managing the unexpected; business continuity; scenarios; globalisation; risk; learning from failure; trend analysis; and narrative enquiry methodologies.

INTRODUCTION

“There is little consensus regarding what resilience is, what it means for the organisation and, more importantly, how organisations might achieve greater resilience in the face of increasing threats”

(McManus, Seville, Brunson & Vargo 2007:ii).

Debra van Opstal (2007:6) in researching institutional resilience makes the following two key observations:

- *“Globalization, technological complexity, interdependence, terrorism, climate and energy volatility, and pandemic potential are increasing the level of risk that societies and organizations now face. Risks also are increasingly interrelated; disruptions in one area can cascade in multiple directions”.*

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- *“The ability to manage emerging risks, anticipate the interactions between different types of risk, and bounce back from disruption will be a competitive differentiator for companies and countries alike in the 21st century.”*

Seen within the context of the introductory quotation of McManus *et al* (2007:ii) there is a serious concern that South African executives may be far too complacent, focusing on the day-to-day operational complexities of their enterprises, with the result that the institutions concerned may well be at risk if confronted with a perfect storm or tsunami of unexpected contextual events that could significantly disrupt the operations of the institutions concerned. Van Opstal (2007:6) in fact claims that at an international level “operational risks are growing rapidly and outpacing many companies’ abilities to manage them”. This sentiment is shared by McManus *et al* (2007:iv) who in terms of their research findings observed that “many organizations are so busy with day-to-day crises that they often don’t consider how to cope with hazards that they haven’t experienced before”. The picture that emerges is one of complacency in the face of emergent whitewaters of converging complex contextual conditions, with the potential to disrupt the operations of these institutions very significantly. The contextual risk profile confronting South African institutions tends to reflect converging trends, which in effect are constantly changing. The outcome of these convergent trends, are deemed to be very complex in nature and essentially unpredictable. Seen within this context the question posed is one of how South African institutions can best position themselves to deal with the risks associated with contextual instability. It is suggested in this paper that organizational culture and climate may well play a significant role in this regard and the concepts are explored to gain an insight into the role they play in nurturing institutional resilience in the face of unprecedented contextual complexity and instability.

The 2007 gross domestic product (GDP) composition of the South African economy, namely agriculture 3.2%, industry 31.3% and services 65.55 (CIA world factbook), in effect reflects what can best be deemed to be a predominantly dual manufacturing and services economy. These two major economic sectors, from an operational enterprise management perspective, are intertwined and metaphorically may be conceptualized as constituting two strands of an economic rope. It is a rope that is constantly flexing under tremendous contextual strain and its ability to withstand these tensions that it is subjected to is not always all that clear. The South African marketplace is far too small to sustain the level of economic growth required for alleviating poverty and unemployment, both of which are of crucial socio-political consequence. By implication the South African economy is therefore inextricably linked to a highly competitive global economy that is inherently complex in nature and

becoming far more so each day, as the services sector makes inroads into the traditional manufacturing sector of the global economy. The services sector is essentially emergent in nature and even relatively minor instability and change in one of the factors acting on the global services economy can give rise to unexpected outcomes that could well have a very significant impact on South African institutions. It is therefore argued that it is imperative that the management of South African business institutions nurture within these institutions a degree of resilience, in order to navigate the whitewaters of global economic instability.

Sun Tzu, a Chinese warrior-philosopher, compiled the “art of war” well over two thousand years ago (SunTzu, translated by Thomas Cleary 1988:vii,23) and it encapsulates many truths when it comes to engendering resilience in the face of great adversity. One such truth is the need to achieve the sensitivity required to interpret and respond to changing contexts or as phrased within Taoist literature “*responsiveness to master living situations*” (SunTzu, translated by Thomas Cleary 1988:4). It is in fact stated by Sun Tzu that “the ability to gain victory by changing and adapting according to the opponent is called genius” (SunTzu, translated by Thomas Cleary 1988:113). In a more contemporary setting, van Opstal (2007:11) similarly contends that “causes count less than creating the agility and flexibility to mitigate risks and manage outcomes”. Managing the unexpected, according to Weick and Sutcliffe (2001:35), “*is about alertness, sensemaking, updating, and staying in motion*”, all deemed to be key elements of management in adapting to contextual situations, which emerge unexpectedly. Seen within the context of this discussion, the definition attributed to adaptive capacity by McManus *et al* (2007:2) assumes particular relevance, namely:

“Adaptive capacity is a measure of the culture and dynamics of an organisation that allow it to make decisions in a timely and appropriate manner both in day-to-day business and also in crises”.

Clearly stated is the notion of an institution’s culture and climate serving as an important determinant in adapting to day-to-day operational and potential crises situations that may arise unforeseen and unexpectedly. It is consequently implicitly understood that nurturing a culture and climate that enhances the resiliency of an institution, is a critical facet in managing or navigating it through the whitewaters of global economic instability. In a very similar sense Weick and Sutcliffe (2001:124) explicitly assert that “culture is a key element in efforts to manage the unexpected mindfully”. In the ensuing discussion culture and climate are therefore explored as a

means of engendering institutional resilience in having to deal with the unexpected outcomes that emerge from an extremely complex, integrated and highly competitive manufacturing and services economy.

THE CONCEPTS “CULTURE” AND “CLIMATE”

The concepts “culture” and “climate” have generally gained acceptance as a means of understand human systems, both from a perceptual and behavioural perspective. Schein’s (1984:3) definition of organizational culture is in particular frequently cited in the literature by researchers, namely “*the 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 you perceive, think, and feel in relation to those problems*”. Central to the content of many of the definitions attributed to the concept “culture” is a pattern of shared values, beliefs, assumptions, norms, customs, rites, rituals, traditions, and similar cultural attributes that are associated with a specific group of people and which act as a perceptual and behavioural determinant (Weeks & Lessing 1993:29,74). So for instance Tosti (2007:21) suggests that one way to define culture is “the way a group of people prefer to behave”. It is this characteristic that assumes very specific relevance in considering culture’s influence in relation to institutional resilience management.

An institution’s culture, it would seem, is not static in nature but as suggested by Richard Seel (2000:2) “is the result of all the daily conversations and negotiations between the members of an organisation”. By implication nurturing a culture of resiliency will consequently imply a need for executives and managers to become active participants in all these conversations. It is also claimed by Arond-Thomas (2004:18) that employees’ perception their organization’s climate can be traced to the actions of its leaders. An institution’s leadership thus apparently plays a significant role in the culture and climate that evolves within institutions and consequently influences the resilience of the institution.

Both within the literature and in practice the concepts of “culture” and “climate” are frequently confused and used interchangeably, yet they in effect are inherently and subtly different in nature, while being very similar in terms of acting as a perceptual and behavioural determinant. Organisational climate reflects the perception of individuals within the organisation, with regard to the attributes of the institution concerned. It is therefore the institutional attributes that assume relevance in this regard. Kazama, Foster, Hebl, West and Dawson (2002:6) contend that a commonly

used definition of organizational climate describes it as “employees' shared perceptions about the environment in which they work, and the general sense of which behaviors will be rewarded”. The researches go on to indicate that “given the current paradigm of a rapidly changing business environment in which success relies heavily on human capital, it is of paramount importance that CEOs create a workforce that can continually create and implement innovation” and it is here that the nature of the concept plays a particularly pertinent role (Kazama *et al* 2002:3). Within the context of this paper this could be reinterpreted in terms of creating a climate conducive to institutional resilience, instead of innovation implementation. Thinking about it, resilience and innovation may well resonate in a sense, but then that will need to be the subject of another future research endeavour.

It may be concluded that the climate of the organization, constituting employees' perception of their work environment, will act either in a positive or negative sense depending on the nature thereof. Employees whose expectations in relation to work satisfaction and security have been met may be expected to express far greater loyalty to the institution than if the reverse were the case and it can consequently be insinuated that they would walk the extra mile with the institution to prevail over unforeseen adversity. An often encountered response to economic difficulties experienced by institutions is that of employee layoffs, a practice that itself has very negative implications in relation to the climate of the institution. The consequence of such an action can therefore well be one of lowering the institution's resilience in dealing with the economic difficulties encountered, which is clearly the very opposite of what was intended.

The culture of an institution can in effect impact on the climate of the institution and the complex interaction that takes place can in turn have very significant implications when it come to nurturing a resiliency within institutions. A culture of trust, empathy, and caring can be expected to engender a very positive and favourable work climate, the collective implication thereof being one of increased institutional resilience in the face of adversity. In summary it is argued therefore that culture as a behavioural determinant, will have an influence in determining the nature of the climate that evolves within an institution and the complex collective interaction of the two will play a very pertinent role in framing employee behaviour patterns when it comes to contending with unexpected, severe and unforgiving environmental situations or events that may arise.

With prior discussion in mind culture and climate attributes relating to institutional resilience are explored in the following section.

CULTURE AND CLIMATE ATTRIBUTES ASSOCIATED WITH RESILIENCY

It is debatable whether executives can deliberately manage an institution's culture. It is suggested that a more appropriate approach may be one of attempting to nurture a culture and climate that engenders a sense of resiliency, which in turn enables the institution to ride out the perfect storms of contextual economic, political, technological, ecological and socio-cultural instability. By implication this will necessitate an insight and understanding as to the cultural and climate attributes associated with institutional resiliency. The research undertaken by McManus *et al* (2007:1) would seem to suggest that institutional resilience is a function of situational awareness, the effective management of keystone vulnerabilities and adaptive capacity in a complex, dynamic and interconnected environment. They go on to define situational awareness as "a measure of an organisation's understanding and perception of its entire operating environment" (McManus *et al*/2007:2). Underpinning the necessity for such awareness is the need to detect the emergent trends that are shaping the future context of the institution and the nature of the impact of these trends on the operational activities of the institution. Clearly the institutional characteristic that assumes relevance in nurturing resilience in this case is one of "awareness" and culture and climate attributes that foster contextual awareness therefore needs to be determined.

Executives, managers and staff, all generally experience a sense of anxiety and fear associated with contextual uncertainty and unpredictability, as it disturbs their well established comfort zones. In the traditional manufacturing era the predominant management paradigm was one of control, which with the emergence of the global services economy has increasingly been found to be less effective. In contrast the accent in a highly competitive global services economy is on gaining a competitive advantage by means of innovation. In a services context such innovation tends to defy an ability to be patented and consequently service innovation assumes relatively short periods of stability before needing to make way for new innovations that emerge within the marketplace. It is these innovative trends in the services economy that characterise its dynamic and emergent nature and that define it as being highly competitive. Detecting and making-sense of the interacting convergence of the trends shaping the global services economy is deemed to be a human attribute. People are particularly good at detecting changes in trends and patterns, but all too often the stress and discomfort experienced in the process leads to an attempt to normalise the awareness that has been gained. It is this process of normalisation that can have fatal or catastrophic consequences. According to Weick and Sutcliffe (2001:39) evidence suggests that when unexpected trends emerge and are detected

by people it gives rise to apprehension and stress, as their world seems to be far less predictable and controllable than at first assumed to be. They in effect therefore attempt to normalise the awareness gained so as to reduce the stress and discomfort experienced.

Weick and Sutcliffe (2001:40) cite the case of the Challenger disaster where the tendency to normalize the unexpected burns that appeared on the sealed sectors of the booster rockets eventually culminated in the fatal event that ensued. What was first detected as an unexpected anomaly was later redefined and treated as an expected event. It would seem that the space shuttle's solid rocket booster problem had its origin in the design of its joints, a problem that increased in intensity as people failed to take appropriate action on first becoming aware of the signs associated therewith and finally deal with the problem as a potential flight risk in the true sense of the word. Culture and climate as perceptual and behavioral determinants can play a very pertinent role in how people deal with an awareness of unexpected and unpredicted trends. Institutional resilience is fostered within a culture and climate that supports "whistle blowing" to draw attention to detected potential negative trends or patterns that can give rise to events or situations that can seriously impact on the operations of the institution concerned. In the case of the Challenger disaster it would seem that NASA's decision makers were under extensive pressure to launch the space shuttle as scheduled. The result being that any decision taken that would have delayed the launch and subsequently found to have not been fully justified, would probably have had a very negative impact on the carriers and lives of the people concerned. It is a reality that without doubt would have influenced the values, beliefs and assumptions that came into being within the institution as well as employees perception of their specific work related climate. It is also these collective cultural and climate attributes that would have defined the behaviour patterns that emerged, namely that of normalizing the irregularities detected in relation to the O-rings.

The climate attributes underpinning the normalising behaviour attributes relate to a need to reduce employee stress levels experienced. If cultural attributes such as the valuing of "whistle blowing", based on employee perceptions of pattern irregularities, even if subsequently found to have not been substantiated by reality, are rewarded instead of being penalised, this would undoubtedly have nurtured a climate conducive thereto. The perceived risk associated with whistle blowing would have been significantly reduced and consequently the stress and discomfort associated therewith would certainly have also become far more manageable. Weick and Sutcliffe (2001:40) stress that highly resilient organisations take the temptation to

normalise unexpected patterns and events that have been detected very seriously, as they “*have less fear of a false alarm than they have of missing something significant that could escalate*”. They go on to cite the case of a deckhand on an aircraft carrier who reports a lost tool to a superior, resulting in the shut down of all launches and recoveries of aircraft until the tool is found, being praised rather than reprimanded (Weick & Sutcliffe 2001:40). The culture is clearly one of a system of values, beliefs, norms and traditions that emphasise safety over the inconvenience of closing down the flight operations from the aircraft carrier. The consequences of the lost tool being sucked into the turbines of a jet aircraft are far too great to ignore and with safety as a paramount value, it determines appropriate behaviour responses to events such as that described, which in turn nurture a climate conducive to resilience. In the case cited, the fear of the consequences associated with a lost tool and values and beliefs that reinforces a culture of safety comes first, far out-weighs any fear, anxiety or apprehension associated with the reporting of the lost thereof.

An analysis of catastrophic events that have occurred and the behaviour patterns that have either given rise thereto or that have aggravated or calmed the situation that materialised would seem to confirm the lessons learnt from the challenger incident. In the absence of a culture and climate that supports an awareness creation of observed unexpected trends or patterns, it can be expected that normalisation will take over and the consequences from a resilience perspective can be quite devastating. The culture and climate that exists within institutions therefore acts as an alleged invisible hand that directs peoples’ behaviour. The Chernobyl nuclear power plant disaster is probably one of the worst cited cases of a nuclear incident, with the release of a cloud of radioactive fallout that contaminated a large geographical area in Europe. According to the World Nuclear Association “the Chernobyl accident in 1986 was the result of a flawed reactor design that was operated with inadequately trained personnel and without proper regard for safety” (World Nuclear Association 2008). The incident raises concerns as to not only the safety of such facilities, but their resilience in being able to effectively deal with the consequences thereof. In the Chernobyl case this would include the ability of the institution to deal with the events leading up to the incident and the subsequent events that followed, as well as the ability of the government and its relative functional entities involved in dealing with the disaster. From a historical account of events it would seem that their resilience in dealing with the events was hardly one that reflected a high degree of resilience. In terms of this paper the question thus posed is how the prevailing culture and climate of the institutions concerned impacted on their level of resiliency. In this regard it is interesting to note that the World Nuclear Association (2008) claims that the incident “*was the product of a*

flawed Soviet reactor design coupled with serious mistakes made by the plant operators in the context of a system where training was minimal. It was a direct consequence of Cold War isolation and the resulting lack of any safety culture". In a similar sense Boris Gorbachev's (2003) following statement is quite insightful:

"The basic cause that terminated in Chernobyl accident was a political decision, namely, the decision to turn over almost all nuclear power plants from the Ministry of Medium Machine-Building to the Ministry of Energy. Who made this idiotic proposal remains unknown. However, as a result, the atomic engineering of the whole country was actually separated from its raw materials base, from the personnel base, from the experience of running nuclear-hazardous enterprises, and professional nuclear engineers in the management of nuclear power plants were replaced by people who essentially did not belong to the atomic industry".

It may be concluded from this statement that the culture at a management level was not one conducive to the management of a nuclear facility, a fact reflected in Gorbachev's (2003) contention that a manager in atomic industry should have a fairly elevated intellectual capacity, a high level of general cultural standards, and profound scientific and practical knowledge in relation to physics and technology of atomic reactors and "not little professional experience of running them", yet this apparently was not the case at the Chernobyl facility. It is an acknowledge fact that if peoples' values, beliefs, assumptions, norms and traditions come into conflict with the prevailing dominant culture of the institution, they will feel uncomfortable and they will either need to adapt to fit in with the prevailing culture of the institution or leave. From Gorbachev's (2003) account of the Chernobyl situation, the nuclear trained engineers and staff were perceived as being "foreign", the nomenclature of the Ministry of Energy thought them to be "too clever" and "too independent". As a consequence therefore, many of them, unable to withstand the unprofessional, by atomic working standards, moral and psychological situation asked to be transferred back to their original jobs, "despite lower positions, smaller salary and fewer privileges" (Gorbachev 2003). The situation that emerged is summarized by Gorbachev's (2003) following statement: the "Chernobyl nuclear power plant was the only plant where neither the director nor the chief engineer, were specialists in atomic engineering", and the rest is now a history of inaptitude and inexperience in dealing with a nuclear facility that had an inherent design fault. It is a lack of expertise and understanding that is clearly depicted by the vice chief engineer, a retired naval officer, in charge of the electrical engineering experiment on the tragic night in April, demanding that the operators feed water into the non-existent reactor about 15 minutes after the explosion occurred and the reactor no longer existed (Gorbachev 2003).

The culture and climate that existed at the nuclear facility can be construed from the contention by Gorbachev (2003) that “cultural standards impermissibly low for a nuclear-hazardous enterprise” existed and plant workers who risked warning the leaders of the country about the possibility of a serious catastrophe were fired.

The preceding discussion relating to the Chernobyl disaster, largely based on Gorbachev’s (2003) description of events, seems to suggest a culture of bureaucracy that engendered a climate of despondency, which professional and highly trained nuclear engineers and staff experienced as unnerving and they themselves as being extremely vulnerable and sidelined. It is not surprising that within such a work climate most of the highly trained and skilled professional nuclear staff requested to be and were transferred. The description is hardly one would have expected to exist at such a high risk nuclear facility and one can only conclude that the culture and climate that existed played a very pertinent role in the events that unfolded.

A culture and climate of resilience in effect would seem to be the exact opposite of that that portrayed as existing at the Chernobyl facility. It is certainly doubtful if a culture and climate conducive to “awareness”, as to the potential threats that existed in conducting the tests undertaken at the facility, were inculcated in the hearts and minds of the staff concerned. Their ability to make sense of the events and take appropriate action was constrained by their mental mindsets that had not originated in a culture and climate of professionalism and safety associated with the nuclear industry. Their understanding, expertise and awareness as to the operations of the facility and the potential dangers that existed were therefore significantly constrained and the resiliency of the facility was consequently placed at risk. As noted by Weick and Sutcliffe (2001:146) “*culture gives direction, a set of guidelines, and suggests what to do, even when events begin to worsen*”. Implied therefore is a recipe for resilience embedded in the thinking, values, norms, beliefs, traditions, assumptions and experiences that collectively define the culture that needs to exist within such a facility, one that apparently did not exist at Chernobyl at the time of the disaster.

NURTURING A CULTURE OF RESILIENCE

Increasingly services directed institutions are imbedded within a larger systemic network of interaction and collaboration, which has given rise to what has become known as the “extended enterprise”. This has not only increased institutional vulnerability in terms of the multiplicity of interdependencies that exist, but has also given new meaning as to what constitutes cultural resilience. The institution’s culture is no longer merely defined by means of the cultural attributes that are shared by

members of the institution itself, but in terms of a larger system of values, beliefs, norms, assumptions and traditions that emerge from the relationships that are established between members of the extended enterprise. In effect institutional resilience, within the context of the extended enterprise, is therefore deemed to be a function of the integrated systemic network of relationships and the cultural attributes that emerge from these relationships. Seen in this context, the nurturing of cultural resilience is an extremely complex activity and it needs to be questioned if it in effect can be intentionally managed at all. The diversity and extent of the relationships that come into existence in a globally networked enterprise can in particular be quite incredible and it may therefore be assumed that the complexity involved implies that it is hardly possible to intentionally cultivate a cultural ecosystem of resiliency on so large a scale. It may therefore be concluded that at best executives can attempt to identify the nature of the cultural trends that are emerging within the ecosystem. The formation of positive cultural trends can then be reinforced through appropriate responses and trends seen as being counterproductive disrupted.

Within the management literature critique of traditional management practice, in dealing with the intricacies associated with an increasingly integrated and competitive global economy, tends to reflect a trend away from command and control, towards values driven governance practices that facilitate adaptation and resiliency in the face unexpected adversity. The enabling underpinning values relate to engendering a climate of creative tension, innovation, contextual awareness, co-dependency, trust, cooperation and shared learning, in finding an appropriate means of dealing with the whitewaters of environmental turbulence and irreducible uncertainty, or as suggested by Tom Peters (2003:27) “Revelling in the Mess!”. The rationale of the so called “revelling in the mess” is one of attempting to find new innovative solutions, utilising the full creative potential that exists within an extended enterprise. Underpinning this rationale is the assumption of a culture and climate of creative innovation enablement, characterised as being open and responsive to experimentation and learning from failure. Failure in this sense is construed as constituting a positive learning experience. Ideally one would prefer to learn from failures taking place in simulation, as opposed to real life experiences such as that of Chernobyl. Increasingly scenarios are being explored as a means of learning by thinking through the consequences associated with a range of alternative responses to potential situations that may arise. Simulation has the advantage of being able to discover potential unexpected outcomes that may arise and this is particularly pertinent when it comes to processes that embody significant consequences such as the Chernobyl tests. The learning experiences within such simulation exercises not only increases institutional resiliency in the event of a similar situation occurring in practice, it

engenders a climate of trust, co-operation and awareness that transcends departmental boundaries within an institution.

The traditional manufacturing paradigm that has become ingrained in management thinking is that of continuous improvement in quality, productivity and profitability. It is a paradigm that has given rise to a distinctive culture and climate in many an institution. In the prevailing South African dual economy this paradigm continues to be of relevance, but the turbulence experienced in the global economy has, as we have seen from the preceding discussion, added a new paradigm of management, namely that of the need for resiliency. Institutions can no longer afford the luxury of compromise, in nurturing a culture and climate of resiliency, in order to improve the profitability of an institution; it can have far to devastating a consequence. The conjugate of resiliency is fragility and as seen in the case of the challenger and Chernobyl incidents that spells disaster. A culture and climate of resiliency is engendered by encouraging managers and staff to question and become actively involved in discussing and debating the implication of existing “ways of doing things around here”. The very process of culture change itself needs to be questioned.

Traditional management practice tends to view culture change as a process of transformation, one with a clearly determined end or desired state in mind. The very term “transformation” used within a context of culture change, that implies a change from an existing to a desired state, may in fact be unfortunate as it resonates with well entrenched management practice that emerged in an era of deterministic thinking. In contrast it is suggested in this paper that a culture of resilience emerges from a process of questioning and experiential learning that takes place and it tends to be unique to the institution concerned. Executives need to nurture a climate of trust, mutual respect and above all enablement, where traditional values, beliefs, norms, assumptions and practices can be questioned in order to cultivate resiliency. The process of culture change is thus emergent in nature and not predetermined. New values, beliefs and assumptions constantly emerge from the learning experience that takes place. The role of leadership therefore is not to determine the nature of the desired culture and intentionally intervene to bring it about, but to create conditions or a climate of enablement in which the culture will be able to emerge from a shared learning experience. Culture change is therefore one of evolution and not revolution. If the Chernobyl management team had created a climate conducive to questioning and learning the values, norms and beliefs that contributed to the events that took place would not have been in existence. In contrast a very different culture and climate would have emerged, one that in all probability would have averted the disastrous event that transpired.

The climate of enablement, referred to above, facilitates the process of learning and adaptation that needs to take place. Leadership in order to nurture an enabling climate need to encourage a sharing of information, knowledge, experiences, views and insights between members of the institution at all levels. They need to promote innovation, collaboration and facilitate dialogue, as well as providing opportunities for discussion and learning to take place. This implies a need for a new governance framework, one that is based on nurturing institutional resilience as opposed to so called best practice. The culture and climate of resiliency that come into being, gives rise to a social-ecology of enablement, one that challenges the status quo and traditional thinking. Derek Armitage (2006:2) claims that resilience in social-ecological systems is determined by:

- “the ability of the system to absorb or buffer disturbances and still maintain its core attributes”;
- “the ability of the system to self-organise”; and
- “the capacity for learning and adaptation in the context of change”.

It is suggested in this paper that these characteristics have their genesis in the culture and climate that emerges from a shared learning experience in challenging entrenched legacy practices, beliefs, thinking and paradigms. A culture and climate of resilience consequently is deemed to have its origins in the ongoing conversations and dialogue that takes place in questioning the status quo that exists within institutions, during which new beliefs, values, norms and practices constantly emerge, that collectively redefine the culture of the institution. Nurturing a culture and climate of resiliency therefore resembles a constant process of emergent renewal, one that in practice is never ending. Institutional culture and climate stability may in fact ultimately lead to its eventual demise. The renewal process is informed by the development of an inherent sense of awareness as to existing and potential contextual trends that are emerging and the discourse that takes place throughout the organisation as to the impact that these may have on the institution and its day-to-day operational activities.

SUMMARY AND CONCLUSIONS

It may be concluded from the preceding discussion that culture and climate have a definite impact on an institution’s resiliency and consequently its ability to navigate the whitewaters that characterise the highly competitive South African dual manufacturing and services economy. Nurturing a culture of resilience entails the establishment of a climate of enablement, one where ongoing conversations of

exploration and challenging of the existing status quo can take place, based on an inherent awareness of emerging contextual trends that can impact on the institution and its operations. In consequence, an institutional culture of resiliency is not the outcome of a predetermined and intentional culture transformation management process as often suggested. At best management can influence the discussions that take place and thereby play a role in shaping the cultural attributes that eventually emerge. Such interventions, however, require extreme care as they hold the potential of disruption, in engendering a climate that enables constructive dialogue and exploration to take place.

BIBLIOGRAPHY

ARMITAGE D. 2006. *Resilience management or resilient management? A political ecology of adaptive, multi-level governance*. [Online] Url: http://dlc.dlib.indiana.edu/archive/00001828/00/Armitage_Derek.pdf.

AROND-THOMAS M. 2004. Resilient leadership for challenging times. *The physician executive*, July:18-21, [Online] Url: <http://www.encompasshealth.com/documents/ArondThomasManya.pdf>.

GORBACHEV B. 2003. *Chernobyl accident: The principal cause*. [Online] Url: <http://nuclearno.com/text.asp?6229>

KAZAMA S., FOSTER J., HEBL M., WEST M. & DAWSON J. 2002. *Impacting Climate for Innovation: Can CEOs Make a Difference?* Paper presented at the 17th Annual Conference of the Society for Industrial and Organizational Psychology, Toronto, Canada. August. [Online] available Url: <http://rcoes.rice.edu/docs/Kazama&others2002.pdf>

MCMANUS S., SEVILLE E., BRUNSDON D. & VARGO J. 2007. *Resilience management: A framework for assessing and improving the resilience of organisations*. [Online] Available Url: www.resorgs.org.nz/pubs/Resilience%20Management%20Research%20Report%20ResOrgs%2007-01.pdf

HUI M.K. & SIT A.Y. 2005. *Service failure and trust: The roles of benevolence, competence, and culture*. IEEE international conference on services systems and services management, Proceedings of ICSSSM '05, 2005. [Online] Available Url: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=1499457

PETERS T. 2003. *Re-imagine!* New York: DK.

SEEL R. 2000. Culture and complexity: New insights on organisational change. *Organisations & People*, 7(2):2-9, May.

TOSTI D.T. 2007. Aligning the strategy and culture for success. *Performance improvement*, 46(1):21-25, January.

VAN OPSTAL D. 2007. *The resilient Economy: Integrating competitiveness and security*. [Online] Available URL: http://www.compete-resilience.org/upload/Transform_The_Resilient_Economy_FINAL_pdf.pdf

WEEKS R.V. & LESSING N. 1993. *Strategic management: A turbulent environmental perspective*. Johannesburg: NZK.

WEICK K.E. & SUTCLIFFE K.M. 2001. *Managing the unexpected: Assuring high performance in an age of complexity*. San Francisco: Jossey-Bass.

WORLD NUCLEAR ASSOCIATION. 2008. *Chernobyl Accident*. [Online] Url: <http://www.world-nuclear.org/info/chernobyl/inf07.html>.