**Innovation, Creativity and Entrepreneurship[[1]](#footnote-1)**

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I would like to focus my remarks this morning by drawing upon the research that shows how organizations have led change and renewal through innovation and creativity. I believe that the topic “Intrapreneurship”, i.e. entrepreneurial behavior within an organization is quite distinct and vast and requires separate discussion and discourse. I would therefore draw upon liberally from the seminal work of Michael Tushman of Columbia Graduate Business School and Charles O’Reilly on how innovation and creativity have found their way into mid to large Corporations.

The biggest challenge facing the well established and well entrenched Corporations is: How can they sustain their competitive advantage by operating in multiple modes simultaneously – managing for short term efficiency by emphasizing stability and control, as well as for long term innovation by taking risks and learning by doing.

Tushman and O’Reilly argue that different kinds of innovation require different kinds of organizational hardware – structures, systems and rewards – and different kinds of software – Human Resources, networks and culture. Those organizations pursuing incremental changes require units with relatively formalized roles and responsibilities, centralized procedures, functional structures, efficiency – oriented cultures, highly engineered work processes, strong manufacturing and sales capabilities and relatively homogeneous, older and experienced Human Resources.

The discontinuous innovation units are relatively small, have loose, decentralized product structures, experimental cultures, loose work processes, strong entrepreneurial and technical competencies and relatively young and heterogeneous employees. The units are inefficient, rarely profitable and have no established histories. They often deliberately violate the norms valued in older parts of the organization.

These contradictions inherent in the multiple types of innovation create conflict, tension and dissent between the organizational units, between the traditional and entrepreneurial.

The vital role of the Senior Management and Leadership in these organizations is to create a highly differentiated and highly integrated organization. While differentiation can be accomplished achieving integration is not easy. But Tushman and O’Reilly believe that shifts in innovations streams must be coupled with shifts in organizational architecture. Organizations evolve through long period of incremental change punctuated by discontinuous, frame-breaking change. Organizations have to move from today’s strength to tomorrows’ through discontinuous organizational change.

Innovation involves unpredictability, risk taking and non standard solutions. How to weave this behavior into an established successful on-going enterprise is the key to success.

Let me point out at this stage we are excluding from this discussion all the newly established companies such as Google, Yahoo, Facebook, Twitter, E-Bay, etc. who seized upon a market opportunity and translated that opportunity into a commercially successful venture. These organizations never faced the kind of contradictions, tensions and dissent which well established organizations such as IBM, DEC faced. In case of IBM a discontinuous strategic change – shift from mainframe to PC and PC to services – helped the organization to survive while DEC following an incremental approach building upon its success never made any attempt to make the shift that was required by market forces and ended up as a closed chapter in the Business history of the U.S. General Motors followed a period of incremental change based on the Model T design that lasted until 1919 when they introduced a radically new concept in cars – the fully enclosed steel automobile. Within a few years, the fully enclosed auto became the industry standard. In response, Ford had to temporarily shut down its famous River Rogue facility in order to retool it to produce a fully enclosed car. According to the authors Ford’s single minded attention to incremental change and increase productivity had stunted its ability to quickly imitate GM’s innovation.

Tushman and O’Reilly believe that success is often associated with a tendency to become conservative, to avoid risk and to rely on proven ways of doing things. These inertial forces hold organizations hostage to their distinguished past and stunt innovation and change. Without the creative tensions organizations become stagnant. They reinforce the status-quo, becoming better and better at competing in the short term and consequently become highly vulnerable in the face of long term change. Andy Grove of Intel is right when he says ‘only the paranoid survive’.

The author’s research shows that leaders and managers who were able to hold aside the pressures of growth and success and continually readjusted their strategies and realigned their organizations to reflect, or ideally proactively shape, the underlying dynamics of technological change in their markets were able to succeed in bringing about the shifts. Their thesis is that profound shifts in innovation stream trigger fundamental change in the bases of competition. These different bases of competition, in turn, demand revolutionary rather than incremental organizational change. Those who have succeeded understand the dynamics of technology cycles and innovation streams and were able to proactively shape innovation streams through discontinuous organizational change.

Tushman and O’Reilly’s work suggests that the process of making changes of this sort requires that the overall system must adapt. To them business re-engineering and TQM are partial solutions and do not adequately address the issue of Structural Inertia – a resistance to change rooted in the size, complexity and interdependence in the organization’s structures, systems and formal processes – sets in. To them, the cultural inertia is more pervasive than structural inertia. “As organizations mature, part of their learning is embedded in the shared expectations about how things are to be done. These expectations are manifest in the normal values, social networks and in myths and heroes that have evolved over time. The more successful an organization has been, the more institutionalized or ingrained this learning becomes, further increasing cultural inertia and organizational complacency.” When confronted with discontinuous change, the very culture that fostered success can quickly become a significant barrier to change.

How have the successful firms overcome these structural and cultural impediments in their transitions to lead innovation? Tushman and O’Reilly lay down the critical success factors based on their research. The steps involved in this process are:

1. Define problems and opportunities.
2. Understand Strategic Context – Environment, Resources.
3. Make Strategic Choices – Strategy, Objective, Vision.
4. Identify Gaps – Performance Gaps and opportunity gaps.
5. Describe critical tasks and work processes.
6. Check for organizational congruence, i.e. aligning the formal organization, HR and the culture.
7. Develop solutions and take corrective actions.
8. Observe the response and learn from the consequences.

The authors’ main thrust is that it is culture that can either leverage innovation and change or stifle it. Articulating a vision and widely sharing throughout the organization is vital as it serves as an anchor when other aspects of the business shift. But having established a clear strategy, objectives and vision, looked at the organization’s performance gaps or opportunity gaps, identified the misalignments that result from past organizational strength and the imperatives of the future direction but the most difficult part is to strike the congruence between Task and Culture.

For example, if tradition emphasized technical excellence and formal authority but the new task required speed, teamwork and initiative this inconsistency can become a major cause for persistent performance gap. Tushman and O’Reilly rightly think that the values and norms that drive behavior are among the most critical factors in determining long-term strategic success.

They found that the employees who had a sense of autonomy and empowerment, teams of workers who assumed responsibility for redesign and improvement were able to contribute to the desired change while where the employees were not trusted, over controlled, were simply cogs in the machine, suffered immensely with work requirements becoming more complex, uncertain and changing, formal or rigid control systems have become redundant – rather control must come in the form of social control systems that allow directed autonomy and rely on the judgment of employees informed by clarity about the vision and objectives of the business. The authors are of the view that formal control systems rely on the idea that almost everything of importance can be anticipated. This is a reasonable assumption only in a stable or slowly changing environment but is not valid in an ever changing and uncertain environment.

So, how can the organizational culture be shaped to meet this challenge. Their prescription is that the employees should participate or be fully involved so that they feel responsible and feel committed. Management should vividly convey messages about what behavior attitudes and behaviors are important and finally design comprehensive systems of reward and recognition that are targeted at those attitudes and behaviors that are critical for success. There should be acceptance of mistakes and failures, tolerance for those who challenge the status quo, consistency and repetition in signaling on the part of leaders, support for risk taking, flexibility and adaptability, emphasis on effective teamwork and group functioning and speedy and expeditious implementation of required changes. The organizations that made it clear that inaction is not a preferred alternative or initiative is expected and desired have been successful in achieving their goals.

1. Key note address delivered at the MIT Enterprise Forum held at Karachi on December 11, 2010 [↑](#footnote-ref-1)