Conscious Adaptation: Building Resilient Organizations

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Abstract

Organizations play a pivotal role in the dynamics of social, economic, and ecological systems. Current organizational life-cycle models do not adequately consider the impact of propensities (deeply ingrained preferences and patterns of behavior) on organizational culture and evolution. On a global basis, the predominant thinking modes in organizations are driven by senior executives, marketers, financial experts, legal resources, and the engineers and scientists that create our technology-rich world. Each of these groups has, in aggregate, embedded propensities or tendencies that profoundly shape decision-making patterns and overall social dynamics. Dominant propensities can make organizations vulnerable to risks by inhibiting the level of systems thinking and networking necessary to ensure integration within a global socio-ecological context. The spectrum of propensities within an organization shapes the relative resilience of its human and management systems, and ultimately determines organizational effectiveness. This paper proposes a model for organizational evolution that links the role of propensities to adaptability and resilience. Conscious effort to expand the intelligence of organizations through diversification of propensities better equips organizations to achieve adaptability and sustainability.

Introduction

Organizations are socio-ecological, economic systems that have an expanding global impact. The compounded complexity of game-changers such as social media, energy concerns, debt, climate change and globalization challenge organizational adaptability and resilience. Regardless of structure, organizations and institutions are, at their root, dynamic human systems that attempt to flourish in uncertain, changing environments. Effective problem-solving and decision-making patterns within organizations depend on whether they have the diversity of propensities that enable them to sense and respond to multi-dimensional

risks and opportunities. Diversity in this context goes beyond gender, race, religion, country of origin, sexual orientation, or constructs such as multi-disciplinary teams. More fundamentally, it involves deeply rooted patterns of behaviour, styles of reasoning, and systems of meaning that drive decisions and actions.

Propensities are natural inclinations or tendencies in individuals or groups to behave in particular ways. Propensities are intrinsically connected with individual meaning systems and are the primary determinant of conscious and unconscious habitual ways of thinking and acting. Propensities make individuals, teams, and whole organizations more likely to pursue, and succeed at, some activities than others. Because propensities are deeply ingrained preferences and patterns of behaviour, they have a profound impact on individual and shared world views, reasoning processes, and the ability of individuals to share space with those who have different viewpoints. Propensities reflect operative meaning systems and deeply felt senses of 'who am I' and 'who are we' in relation to changing cultural circumstances. Organizations are collectives of propensities that are cloned repeatedly because hiring practices reflect behavioural preferences. Mintzberg (1993) points out that 'machine bureaucracies' and 'professional bureaucracies', the dominant forms of organization in existence today, are far less suited to adaptation and innovation than more organic 'adhocracies' which bring together diverse specialists on multi-disciplinary teams for the purpose of using those skills as a base to create new ideas and products. Propensities provide an underlying explanation for Mintzberg's observation, and are a mechanism by which organizations can address the challenges needed to become more nimble in a changing world.

Many useful models of organizational life-cycle exist (Daft 2007, Greiner and Schein 1988, Miller 2011, Parker and Lawrie 2006). These models do not recognize that propensities are a significant factor in explaining organizational behavior at each phase, or shaping the

potential to progress to a subsequent stage. This paper explores the links between organizational evolution and diversification of propensities. Propensities condition organizational outcomes. Engineers perceive engineering risks and create engineering solutions, behavioural scientists perceive behavioural risks and create behavioural solutions, and lawyers perceive legal risks and create legal solutions. Diversity of comprehension is often required to solve complex problems, because organizations, like people, revert to their preferred patterns even though they may be ineffective for the new circumstances. Enhancing organizational resilience requires proactive steps. Organizations must consciously measure and comprehend aggregate propensities and their impact on their culture and outcomes. Organizations must also strategically increase the diversity of propensities to meet the operating demands of their industry and communities. Finally, organizations must empower these propensities through job assignments, training and development to consciously develop the organization's adaptive muscles.

Organizations as Conscious Systems

Organizations consist of a hard or soft "technology" that defines their core business, supported by policies, processes and practices. These are driven by a conscious human system working within the context of a global environment (Figure 1). By human system we mean a multi-dimensional, self-regulating interplay of meaning systems, intentions, and capabilities at the team, organizational, and societal levels.
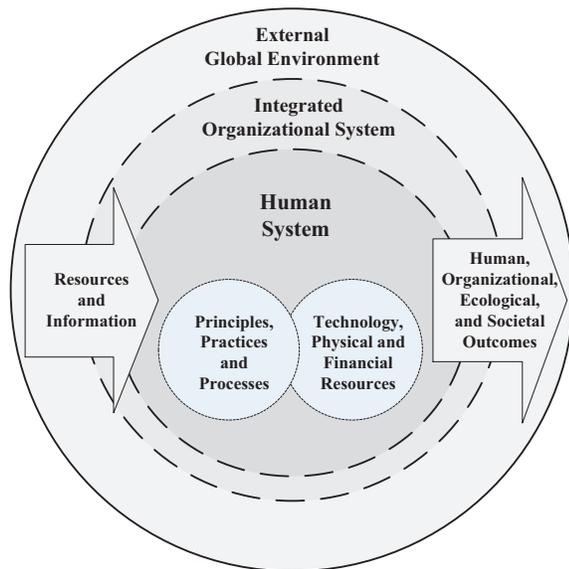

Figure 1. Integrated Organizational System

Organizations convert resources and information into outcomes which, in theory but not always in practice, are intended to produce beneficial outcomes for the organization, its workforce and clients, ecology and society at large. With varying degrees of success, organizations attempt to form an integrated organizational system to ensure that the entire system is effective and efficient in fulfilling its mandate. Adaptive organizations are conscious of the global environment in which they operate, and recognize that the more an organization works as an isolated entity the less likely it is to be sustainable.

A common pattern in organizations is to hire technical talent to support its technology, whether it is hard technology like manufacturing or soft technology like banking. As the organization grows, the need for increased management controls becomes apparent. The shift to formal processes to enhance efficiency, consistency, and effectiveness often fails to achieve desired outcomes. One reason is that such systems are not usually developed to align with the propensities inherent in the human system. People continue to work within pre-existing meaning systems, behaving according to dominant preferences and styles, and rely on informal processes and networks to get work done. After implementation weaknesses appear, the focus shifts to coaching, campaigning and blaming supervision and leadership for failing to reinforce expectations or motivate workers. Reorganization is a recurring theme through each of these improvement efforts.

Underlying this pattern is a failure to understand the importance of propensities and their impact on meaning system integration and willingness to change. Smart organizations don't treat people merely as a means of production, but as the source of intelligence, conscience, resourcefulness, and connectivity. Human systems are the 'new technology'. The generic needs of this technology include learning and growth, active engagement, contribution, and autonomy or freedom to act in the best interests of the organization. The specific needs are different depending on the propensities required by the work of the organization. For example, the human system in more creative organizations favours permissive leadership, high autonomy, internalized accountability, and minimal intrusion on personal freedom. Alternatively, a high volume industrial organization may need a human system that favours hierarchical responsibility, cooperative behaviours, attention to routines, and accountable, responsive supervisory oversight.

Organizational Life-Cycles

Many useful models of organizational life cycle have been proposed. (Daft 2007, Greiner and Schein 1988, Miller

2011, Parker and Lawrie 2006). These models describe stages of development, identify crisis points that put organizations at risk, and identify leader-manager styles associated with different stages. Greiner and Schein (1988), for example, describe five phases of organizational growth from creativity through direction, delegation, collaboration, to coordination. A shift to a new phase is triggered by a crisis in the preceding one. Early growth stimulates the need for management, staff expansion requires the introduction of work controls, and so forth.

Aspects such as organizational structure, strategies, requirements, risks, and opportunities differ depending on the stage of development. Miller (2011) indicates a link between leadership styles and the stage of evolution in the organization's life cycle. His seven-stage model progresses from prophet (founder), barbarian (control), builder/explorer (growth), synergist (peak performance), administrator (efficiency), bureaucrat (focus on profit), and finally to aristocrat (loss of creativity, excessive management, decline). Miller suggests that the life-cycle of organizational health follows a bell curve which peaks at the synergist stage and declines thereafter.

Miller defines a synergist as "a leader who has escaped his or her own conditioned tendencies toward one style and incorporated, appreciated and unified each of the styles of leadership on the life-cycle curve". He suggests that a synergist is a blend of management styles and is guided by a set of nine principles: spirit, purpose, creativity, challenge and response, planned urgency, unity and diversity, specialized competence, efficient administration, and on-the-spot decisions (i.e., close to the customer, product, or service).

The underlying question is how to make these principles active within an organization. Individual "synergistic leaders" who possess the ability to blend all the attributes necessary for the full functionality of the organization are very rare. More probably, high performing organizations have a few individuals who have the capacity to understand the diversity requirements of the organization at any stage of evolution, and can therefore establish conditions that enable advancement to the next stage. They are effective at seeing the need for synergies in the total system and can bridge propensities that may otherwise not see eye-to-eye. A bell-curve life-cycle is not an inevitable evolutionary path. An understanding of requisite propensities, combined with new technologies, may help organizations consciously develop the resilience and adaptive capacity needed to thrive.

Understanding Propensities

One example of ongoing psychometric research, spanning 30 years and involving 30,000+ individuals in 500 distinct jobs ranging from CEOs to labourers, has mapped propensities across 35 broad occupational themes and 26 behavioural competencies (Cash 2011). This study, using synthetic validity, measures 85 statistically distinct behavioural/psychological attributes demonstrated in the workplace and in general life. While typically used to predict on-the-job behaviors for incumbents and potential candidates for roles, the research data set provides compelling information that measures of aggregate propensity can predict much broader patterns in teams, organizations, and society at large.

Table 1 provides a sample of the rank-ordered behavioral preferences within 6 of the 35 occupational themes. Appendix A provides a complete list of the 26 behavioral competencies and 35 occupational themes. (Note: information on this research is available by contacting Cash Lehman and Associates at *www.cashlehman.com*).

The senior executive sample includes over 1500 successful Chief Executive Officers, Vice-Presidents, and Senior Managers/Directors who were consistently rated as "high" performers in their respective functions. This theme includes executives from small, medium, and large organizations, including multi-national profit and not-for-profit organizations. Each of the other themes in Table 1 includes occupational titles typically associated with that grouping (e.g., medical encompasses physicians, nurses, dental hygienists, optometrists, chiropractors, etc.).

From the career themes in Table 1, it becomes apparent that the propensities of senior executives are significantly different from those of the other themes. This holds for comparisons across all 35 occupational themes. Successful senior executives, as a group, demonstrate high focus on innovation and sustaining profitability. They achieve impact through opportunism, decisiveness, initiative, and demonstrating ease in rapidly changing and even chaotic circumstances. At the same time, preferences such as conceptual thinking and strategic vision are lower than average, suggesting that senior executive effectiveness derives from charting a near-term course and working systematically through managing and controlling, rather than engaging in more systemic and integrative thinking and actions.

Table 1 reveals other differences among occupational themes. For example, the preference for improving the quality of life in communities, including respect for the environment (i.e., 'demonstrates community consciousness' in Table 1) suggests that such considerations are not important for success in senior executive, financial, engineering, legal and political occupations. In contrast, success in medical services and education demands a higher level of community consciousness. Such observations do not mean that the former groups are anti-community or anti-environment.

Senior Executive	Finance	Engineering	Law and Politics	Medical Services	Education
Good to Excellent	**Good to Excellent**	**Good to Excellent**	**Good to Excellent**	**Good to Excellent**	**Good to Excellent**
Leads decisively Seeks innovation Focuses on results Initiates independently Thrives on chaos Demonstrates social charisma Sustains profitability Maintains accountability Manages stress Reasons critically Exercises political influence	Reasons critically Demonstrates character Maintains accountability Leads decisively Builds consensus	Reasons critically Builds consensus Demonstrates character Thinks conceptually Strives for excellence Overcomes adversity Maintains accountability	Communicates clarity Leads decisively Thinks conceptually Demonstrates strategic vision Utilizes humor Reasons critically Strives for excellence Maintains accountability	Demonstrates character Thinks conceptually Demonstrates strategic vision Communicates clarity Demonstrates community consciousness Focuses on results	Communicates clarity Thinks conceptually Demonstrates community consciousness Builds consensus Demonstrates character Maintains accountability Establishes alliances
Low	**Low**	**Low**	**Low**	**Low**	**Low**
Communicates clarity Manages self Builds consensus Demonstrates community consciousness Demonstrates character Thinks conceptually Demonstrates strategic vision Establishes alliances Utilizes humour Strives for excellence Establishes order	Manages self Initiates independently Responsive to change Demonstrates community consciousness Utilizes humor Seeks innovation Exercises political influence Drives achievement	Manages self Establishes order Communicates clarity Sustains profitability Demonstrates social charisma Demonstrates community consciousness Seeks innovation Exercises political influence Drives achievement	Builds consensus Responsive to change Seeks innovation Demonstrates community consciousness Exercises political influence Sustains profitability Drives achievement	Manages stress Manages self Demonstrates social charisma Overcomes adversity Initiates independently Responsive to change Demonstrates energetic enthusiasm Seeks innovation Exercises political influence Sustains profitability Drives achievement	Focus on results Manages self Initiates independently Demonstrates energetic enthusiasm Reasons critically Utilizes humor Exercises political influence Thrives on chaos Overcomes adversity Drives achievement Sustains profitability

Table 1. Aggregate Propensities Related to Success in Selected Occupational Themes [Note: Averages are not included in the table]
(Cash 2011)

It simply implies that community and environmental concerns don't naturally occupy their attentional or intentional fields, and as such are less likely to be given significant weight in decision-making. Multi-stakeholder engagement is generally needed to insert alternate perspectives. The degree of conflict in the interaction will be determined by the relative strengths of the preference, the maturity of awareness of those who possess the strengths, and their capacity for strategic self-management.

In addition, the propensities associated with senior executive, financial, etc. roles generally mean that these individuals have greater resources available to support their agendas.

Sustaining profitability, exercising political influence, seeking innovation, and social charisma are all high in the senior executive profile, and at the same time are the most predominant lows across all other occupational themes. Driving achievement, which is an average predictor of

success for senior executives, is consistently very low across the other occupational themes. This helps explain why organizations that possess these strengths are better positioned to succeed economically. While consensus building, demonstrating character, striving for excellence and thinking conceptually are all low in the senior executive profile, they are high across 2/3rds of other occupational themes. These propensities, combined with high accountability across all groups, lead to a productive followership who support the day-to-day functioning of organizations. The relative absence of these attributes (other than accountability) in senior executives may in fact fuel the competitive spirit that enables the risk-taking needed to move organizations forward.

These differences between occupational themes are of interest from two perspectives:

1. what they reveal about the capacity of organizations to assume more adaptive configurations, and
2. the implications of propensity distributions for the emergence of sustainable practices within a global socio-ecological context.

Propensities in action manifest as strengths and inhibitors simultaneously. Homogeneous cultures tend to have a broad representation of a few key propensities. Strong differences in propensity profiles can give rise to misunderstanding, dismissiveness, and conflict. This can exact a price in two ways: those who align with the dominant propensities are likely to exclude, misinterpret, or undervalue the perspectives and worldviews of those with dissimilar preferences. Secondly, depending on the level of expression and prevalence in a particular group, aggregate propensities may create narrowly focused approaches that do not consider the full breadth of interests and solutions that could otherwise be accessible to the system.

Leadership behaviors also act to strengthen or inhibit propensities. Antonsen (2009) points out that power dynamics determine what gets considered in any particular situation. Power dynamics are in themselves a direct product of the interplay of propensities. Where positional power is amplified through decisiveness, social charisma, political influence, initiative, and singular focus on their desired results, the likelihood of contradictory views being heard or acted upon is significantly diminished. The relative maturity of individuals in power; meaning their level of awareness and capacity to manage the positive and negative implications of their dominant preferences, as well as those of their workforce, will substantially determine the degree of suppression or empowerment of diverse propensities. It will also likely determine whether the organization will attract, hire and promote diverse propensities or further suppress the already reduced voice of diversity within the culture of the organization.

Ancona and Bresman (2007), among others, make the case that distributed power, and teams that have the capacity to look and integrate outward as much as inward, are essential to achieve the breakthrough ideas needed for adaptability in changing conditions. Their advice focuses leadership on building networks to achieve new levels of creativity, responsiveness, and resource efficiency. However, this is a significant challenge if the propensities for network building and looking outward are poorly represented in the organization. Propensities cannot be simply skilled in, willed in, or summoned for temporary duty through techniques such as de Bono's six hat approach (de Bono 2010), in which green hat thinking for 'new ideas', and blue hat thinking for 'the big picture' are used to stretch a group on a particular topic. Such techniques cannot substitute for the creative capabilities of individuals for whom this is a natural talent. Only individuals who are well suited for what they do, coupled with an intense love of what they do, produce exceptional results.

To move from 'power over' by management, to distributed power within a human system represents a significant shift in an organization's culture. For organizations with clear preferences for command and control leadership-followership patterns, the degree of relationship building, comfort with ambiguity, and hands-off approach required may be contrary to the needs, strengths and worldviews of managers and staff alike. The change also represents a shift from single-loop problem solving to double-loop learning in which the underlying schema are significantly questioned (Argyris and Schon 1978). The insertion of diversity can help initiate a culture shift, however, these additional resources must be able to bridge the gap and translate in a way that enhances the credibility and acceptance of a different worldview.

Jacques (1996) points out that creative functions such as entrepreneurial work, research and development, policy development, marketing and sales strategies cannot be delegated without loss of effectiveness. When moving to distributed power, it is useful to remember that creative work has to be done by creative individuals in high level positions, regardless of the stage of evolution of the organization.

Organizational Evolution & Propensity Model

To break the problem of adaptation into manageable parts, it is helpful to look at organizational maturation and propensities in tandem, and ask what needs to be understood and consciously acted on in order to foster organizational evolution at different stages.
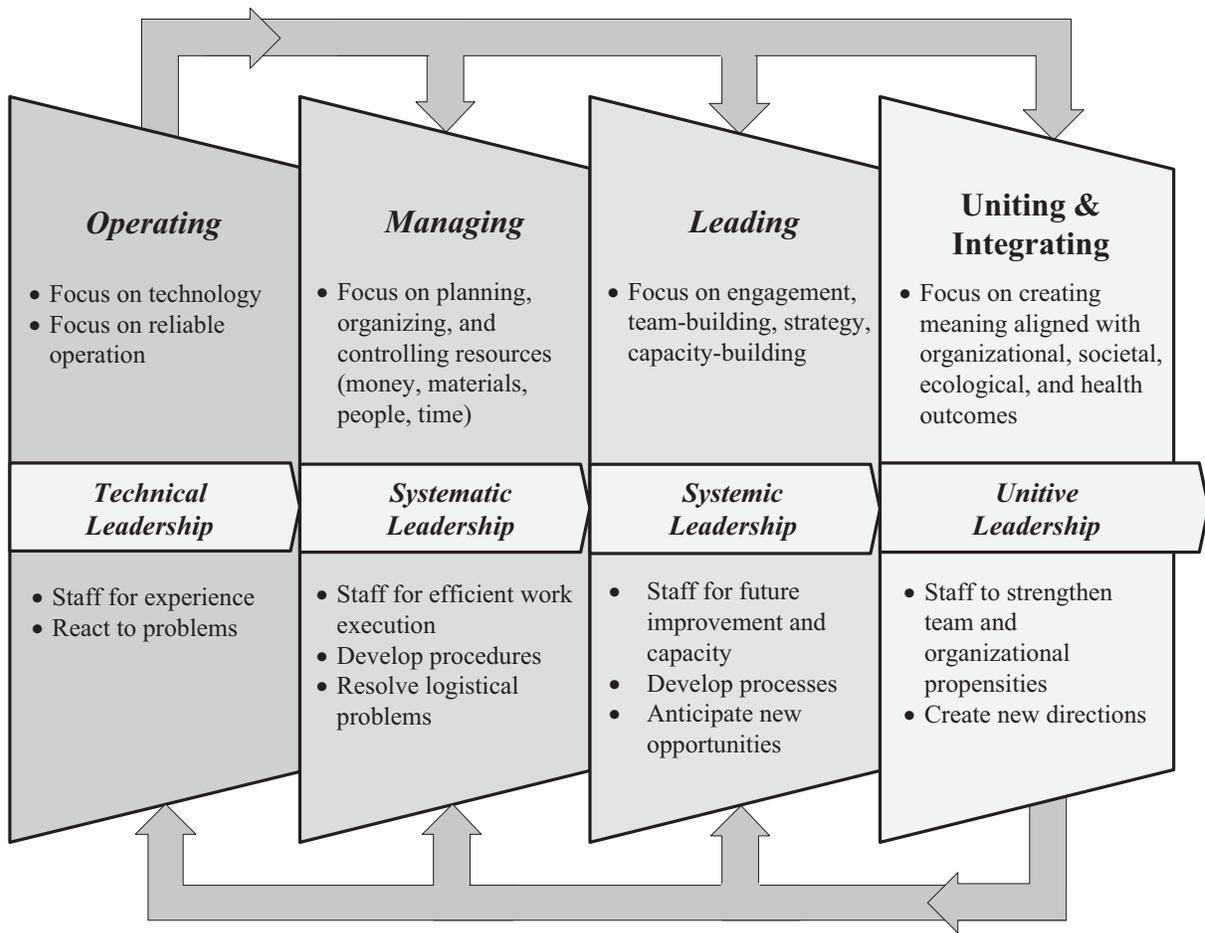
Operating	Managing	Leading	Uniting & Integrating
• Focus on technology • Focus on reliable operation	• Focus on planning, organizing, and controlling resources (money, materials, people, time)	• Focus on engagement, team-building, strategy, capacity-building	• Focus on creating meaning aligned with organizational, societal, ecological, and health outcomes
Technical Leadership	*Systematic Leadership*	*Systemic Leadership*	*Unitive Leadership*
• Staff for experience • React to problems	• Staff for efficient work execution • Develop procedures • Resolve logistical problems	• Staff for future improvement and capacity • Develop processes • Anticipate new opportunities	• Staff to strengthen team and organizational propensities • Create new directions

Figure 2. Organizational Evolution and Propensity Model

Figure 2 proposes a model of the relationship between stages of evolution and propensities. Each stage involves differences in focus, approach, and leadership. For an organization to be resilient, it requires at least some attributes of every stage. The model is recursive in that each stage overcomes limitations in the preceding stage. Uniting/integrating organizations naturally revisit their operating capacity, and move up the cycle again. By understanding what propensities need to have 'voice' and inform organizational meaning systems at each stage, there is an opportunity for organizations to proactively seed their own evolution as opposed to reacting, adjusting, and potentially failing at crisis points. This conscious expansion of resilience helps build what Senge (1990) calls a learning organization.

Organizations evolve in order to mitigate risks and realize opportunities. Their journey towards increasing effectiveness and sustainability typically involves an expansion of focus from the technological system, to the management system, to the human system, eventually arriving at an integrated view of the entire system including its ties to the broader socio-ecological system. Their ability to negotiate this evolutionary path is directly influenced by resident propensities and meaning systems. Conscious adaptation requires organizations to understand their meaning system and propensities, and to determine what needs to be strengthened to facilitate adaptation to a next level of risk mitigation and opportunity realization.

The stages in Figure 2 are:

Stage 1 – Operating: At the core of every organization is a hard or soft technology that defines the nature of its business. In the start-up and early creation phase, organizations focus on operating and enhancing their technology. Expert knowledge is prized for its ability to solve technical problems. Leadership becomes synonymous with technical competence and such

individuals typically rise to positions of power and influence. Outcomes are viewed in concrete product terms, and employees are used to react to technical issues. Risk management tends to focus on the consequences of technical failures. The overall emphasis is on keeping the technology functioning. At this stage, the leadership propensity profile is likely to reflect the propensities relevant to the particular occupational theme, with relatively little diversity in other ranks.

Stage 2 – Managing: As organizations grow, they begin to experience challenges in quality and productivity that require enhanced controls. Procedures, planning, and resource management become more formalized. Emphasis expands from technical aspects to logistical thinking aimed at improving resource utilization and work execution. Clear expectations for performance are used to improve productivity. Outcomes are viewed in financial and production terms, and employees are used to resolve operating challenges. Risk management expands to encompass financial concerns and regulatory compliance. The overall emphasis is on achieving business results. At this stage, the leadership propensity profile likely begins to emphasize productivity, both in terms of organizational performance and human satisfaction. Utilitarian leaders view themselves as demonstrations of how teams can work to everyone's fulfillment.

Stage 3 – Leading: Stricter management controls enhance viability; however, these eventually give rise to issues related to employee motivation, satisfaction, and even loyalty. In response, emphasis shifts to include leadership development, team building, empowerment and a myriad of other efforts to boost morale and discretionary effort. Vision, mission, values, organizational culture, and strategic planning become a focus for enhancing organizational effectiveness. Processes and procedures become integrated into formal management systems. Employees are perceived as the means by which the organization distinguishes itself from its competitors, and their willingness to actively promote the organization's interests becomes important. Risk management expands to include issues related to organizational capacity and sustainability. The overall emphasis is on capitalizing on new opportunities within and outside the organization. At this stage, the leadership propensity profile likely begins to value relatedness, consensus building, and human development. They use socialization as the means to enhance cooperative effort.

Stage 4 – Integrating-Uniting: Advanced organizations recognize that long term sustainability requires them to pay attention to building and sustaining their capacity to anticipate, innovate and initiate changes on a societal and global level. The focus is on long term strategies, citizenship, contribution to society, and integration across organizational, national, political, and social lines.

Employees are perceived as active participants in shaping the fabric and direction of the organization. Emphasis is placed on developing conditions that enable the full creativity and intelligence of the human system to flourish. These leading edge organizations continually shape and transform the nature of society itself through their exploration of new thought systems and new technologies. To achieve this level of performance, these organizations align meaning, propensities and systems to create new directions. Leaders who operate at this level focus on the functioning of complex systems and their interfaces. They look beyond the constraints of existing systems to create transformative solutions. At this stage, the propensity profile emphasizes shared decision-making and problem solving, optimism, enthusiasm, and a willingness to provide new learning opportunities in a supportive climate.

Organizations that understand the stage they are at can proactively manage propensities to strategically move from a leader-follower alignment model to one of distributed power and systemic integration.

Culture, Propensities, and Evolution

The relationship between organizational evolution and propensities is relevant to the popular topic of organizational culture and culture change. Edgar Schein's iceberg model of culture (Schein 1992) provides a convenient visual representation. The model describes three levels: Level 1 describes visible attributes or artifacts of the culture that exist above the 'waterline' (organization structure, management systems, symbols, behaviors, etc.); Level 2 describes the espoused values of the organization or culture; and Level 3 involves the basic underlying assumptions, perceptions, and deeply held, automatically accepted beliefs that form the root of culture. The triangle on the left of Figure 3 is an adaptation of Schein's iceberg model.

What is not commonly recognized is that everything that manifests above the 'water line' is a reflected product of level 3 of the triangle. In effect, human systems are enabled and motivated by the thoughts, feelings, personal beliefs and perceptions of their members at level 3. These basic assumptions are typically neither confronted nor debated and are therefore extremely difficult to change. Challenges often arise in organizations because senior managers mistakenly believe they can successfully prescribe values and behaviors, or they believe that changes to structures and processes at the artifact level will cause the culture to follow. In addition, leaders frequently lack the methods and tools for understanding and working with deeper individual, team and organization level meaning systems.
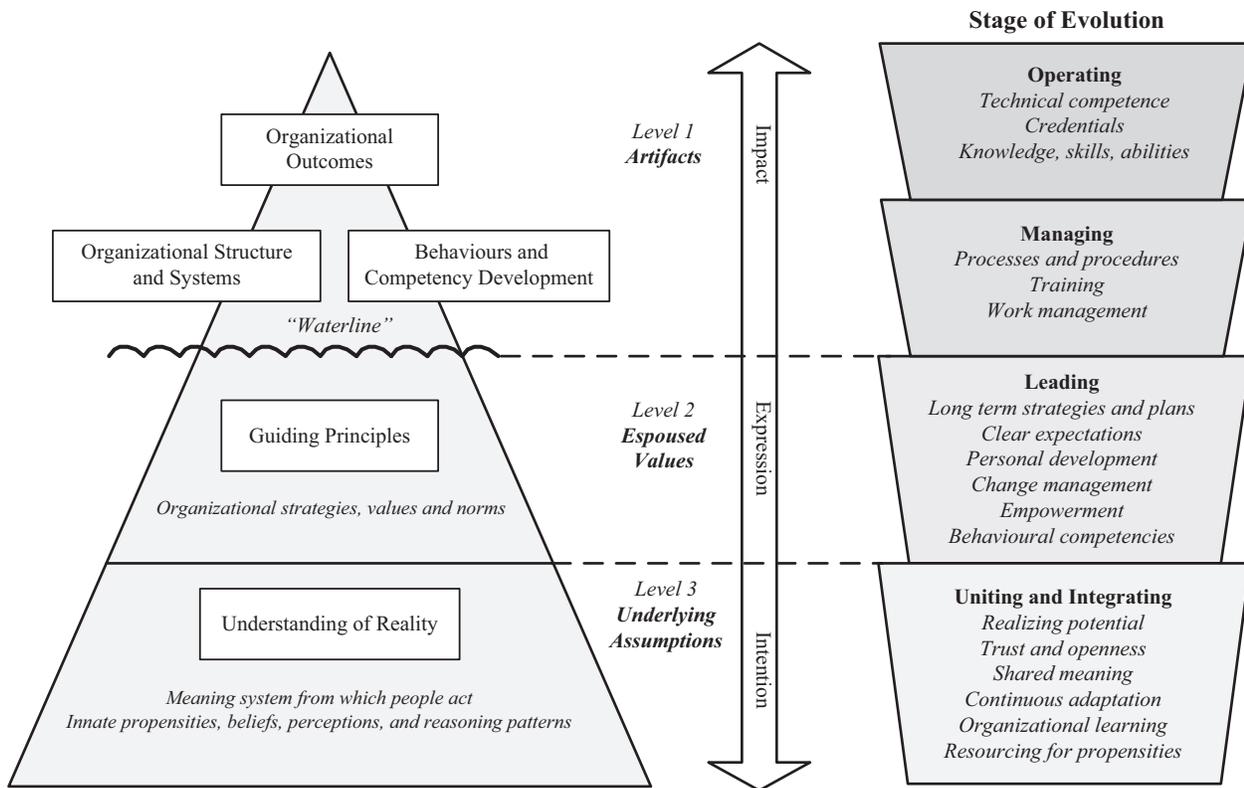
Figure 3. Culture and Organizational Evolution

Incremental change, (so-called continual improvement) can be introduced at the artifact level, since it is usually consistent with the espoused values and belief system of the collective. As March and Heath (1994) suggest, "the key to improving adaptiveness in the individual decision-maker is to strengthen the match between decisions and the demands of the decision environment". In practical terms this means to recognize the limitations of rational decisions made on the basis of logic and rules.

Transformational change requires a shift in the meaning system of individuals within the collective. As shown in the right side of Figure 3, organizations at the first two stages of evolution focus on making incremental change in the technological system and how it is managed. The focus in stages three and four shifts to influencing levels below the "waterline", particularly related to personal and inter-subjective meaning, which play a significant role in deep change. As Holling et al. (2001) describe it, trans-formational change requires triple-loop learning that involves "solving problems of identifying problem domains among sets of wicked and complex variables".

Propensity models provide a different way of understanding and influencing organizational performance and culture. They provide insight into dominant pre-ferences for reasoning, relating and responding and how they influence the ongoing construction of reality. As Schein (1992) points out, culture serves the purpose of reducing the anxiety associated with encountering changing circumstances, by defining what should be paid attention to, what events mean, and how to react. In homogenous organizations, the construction will be more narrowly defined, less open to debate and have a more limited selection of responsive options than in more diverse cultures. Homogenous human systems, like homogenous biological systems, avoid risks of conflict and competition at the expense of resilience and longer term survival. As a result, meaning systems are more entrenched, stable and predictive of organizational behavior. From a cultural perspective, propensities provide a way of consciously expanding beyond the limitations of these values and patterns of reasoning.

Summary

Propensity profiles provide new optics for looking at organizational capacity, adaptability, resilience, and sustainability. They provide a language for understanding

aspects of organizational culture and performance. Organizations are unlikely to evolve in the absence of the propensities needed to gain proficiency at different levels. Lack of diversity and filtering by imbalances in power dynamics inhibits the unfolding of the full intelligence within human systems. Such organizations cannot benefit from the distinct knowingness of their silent voices. As Weick (1995) suggests, "heedfulness, staying open and responsive to those around you, and to what is happening, is a key feature in dealing with rapid change, crisis, and the unexpected." Failure to do so results in missed opportunities and diminished ability to foresee risks that compromise sustainability.

Leadership levels are often not considered distinct disciplines with distinct propensities and functionalities. Experts are often promoted to management and executive positions for which they do not possess the propensities needed to achieve overall organizational effectiveness. As organizations grow, the fact that like prefers to recruit like, contributes to patterns of homogeneity, whereby specific aspects of the work, rather than the complex system and its interactions with the environment are the primary focus. It is often incorrectly assumed that executive teams and leaders have all the attributes necessary to guide organizations through uncertainty, even when supported by multi-disciplinary teams drawn from the same organizational culture.

Similar to natural ecosystems where diversity helps sustainability, the case for propensity diversification in organizations has inextricable links to the health of the human system. Monolithic systems are inherently self-limiting in turbulent situations, and doubly so if their organizational systems are manifestations of a stuck culture. Diversity enables organizations to move from detailed views, to process views, to an integrated,

intelligent systems view that provides sufficient degrees of flexibility to achieve overall system health. Organizations that take the viewpoint of "power over" and "ability to act upon" their communities, operate from a narrow perspective that equates to blindness in the context of socio-ecological health.

Rather than focus on life-cycle, organizations need to focus on seeding propensities associated with every phase in appropriate positions throughout the organization and ensure that these diverse voices are heard and empowered through training and development. Strengths have to be embedded in middle and lower management and given voice by senior executives.

By moving beyond the classical demands for greater commitment, accountability and motivation, to addressing performance challenges in terms of assigning and leveraging propensities, organizations can consciously strengthen their adaptive muscles. Attracting, promoting, and supporting diversity of reasoning patterns provides an opportunity for instilling creativity in the face of challenge. The spectrum of propensities within an organization shapes the resilience of its human and management systems, and ultimately determines the overall effectiveness of the organization.

Acknowledgements

Appendix A: Table of Behavioral Propensities

Behavioral Preferences		
Builds consensus	Exercises political influence	Reasons critically
Communicates clarity	Establishes alliances	Responsive to change
Demonstrates character	Focuses on results	Seeks innovation
Demonstrates community consciousness	Initiates independently	Strives for excellence
Demonstrates energetic enthusiasm	Leads decisively	Sustains profitability
Demonstrates social charisma	Maintains accountability	Thinks conceptually
Demonstrates strategic vision	Manages self	Thrives on chaos
Drives achievement	Manages stress	Utilizes humor
Establishes order	Overcomes adversity	

Occupational Themes		
Administration	Home and Children	Personal Services
Behavioural Sciences	Inspection	Protective Services
Construction	Law and Politics	Religion/Philosophy/Ethics
Consulting	Library Services/Languages	Retail
Education	Life/Environmental Sciences	Sales
Electronic/Computer Sciences	Management	Self-Employment
Engineering	Manufacturing	Social Sciences
Entertainment	Marketing	Sports
Farming and Ranching	Mathematics/Statistics/Physics	Transportation
Finance	Mechanical	Writing
Food Services	Medical Services	Visual Arts
Government Services	Medical Sciences	

Table A1: List of Behavioral Preferences and Occupational Themes (Cash 2011)

References

Ancona, D. and Bresman, H. 2007. x-teams: how to build teams that lead, innovate, and succeed. Boston, Massachusetts: Harvard Business School Press.

Antonsen, S. 2009. Safety culture and the issue of power. Journal of Safety Science 47: 183-191.

Argyris, C., and Schon, D.A. 1978. Organizational Learning: A Theory of Action Perspective. Reading Massachusetts: Addison-Wesley.

Cash, L. 2011. Cash Lehman and Associates. Personal communication.

de Bono, E. 2010. Six Thinking Hats. London: Penguin Books.

Daft, R.L. 2007. Understanding Theory and Design of Organizations, Mason Ohio: South-Western Cengage Learning.

Greiner, L. E. and Schein, V. E. 1988. Power and Organization Development: Mobilizing Power to Implement Change. Reading, MA: Prentice Hall.

Gunderson, L.H. and Holling, C.S. eds. 2002. Panarchy – Understanding Transformations in Human and Natural Systems. Washington: Island Press.

Jacques, E. 1996. Requisite Organization – A Total System for Effective Managerial Organization and Managerial Leadership for the 21st Century. Arlington VA: Cason Hall & Co.

March, J. G., and Heath, C. 1994. A Primer on Decision Making: How Decisions Happen. New York: Free Press.

Miller, L.M. 2011. Lean Culture, the Leader's Guide – What you need to know and do to implement lean culture in your organization. Annapolis, Maryland: Lawrence M. Miller, L.M Miller Publishing.

Mintzberg, H. 1993. Structure in Fives – Designing Effective Organizations. Englewood Cliffs, New Jersey: Prentice-Hall.

Parker, D. and Lawrie, M. 2006. A Framework for Understanding the Development of Organizational Safety Culture. Safety Science 44 (6): 551-562.

Schein, E.H. 1992. Organizational Culture and Leadership, Second Edition. San Francisco: Jossey-Bass Publishers.

Senge, P. M. 2006. The Fifth Discipline: The Art and Practice of the Learning Organization. New York: Doubleday.

Weick, K. 1995. Sensemaking in Organizations. Thousand Oaks CA: Sage.

Westley, F. 2002. The Devil in the Dynamics: Adaptive Management on the Front Lines. In Panarchy – Understanding Transformations in Human and Natural Systems. Gunderson, L.H. and Holling, C.S. eds. 2002. Washington: Island Press: 333-361.