

EVOLVING LEADER-MEMBER EXCHANGE (LMX) THEORY AND MARKET-ORIENTED LATERAL LEADERS IN TURBULENT GLOBAL MARKETS

R. RAY GEHANI, The University of Akron

In this study we examine the impact of market orientation of leaders on their leader-member exchange (LMX) with their followers. We review the evolution of leader-member exchange (LMX) theory over the past five decades, and relate the strategic influence of increasing turbulence in the market environment on multiple generations of leadership styles during that period. Whereas vertical dyadic exchanges between hierarchical leaders and their followers may produce satisfactory performance of followers in equilibrium markets with predictable growth, these dyadic exchanges fail to do so in turbulent markets. Disequilibrium markets with disruptive turbulence demand introduction of discontinuous innovation from a new generation of market-oriented lateral leaders working closely with their boundary-spanning followers. We propose a number of hypotheses relating the market environment, leader-member exchange, and performance. Implications for managers and future researchers are discussed.

INTRODUCTION

The market orientation construct (Day 1999), researched extensively in the 1990s, proposed that organizations aspiring to become market-driven must motivate their employees to get closer to their customers. To stay ahead of their competitors, these organizations make key decisions based on their shifting markets (Deshpande, Farley and Webster Jr. 1993; Jaworski and Kohli 1993; Narver and Slater 1992). Yet many leaders in the upper echelons, due to their lack of commitment to such strategic change, fail to translate those aspirations into organization-wide actions (Day, 1999: 11; Kotter 1996). Farrell, (2000) and Slater and Narver (1995) have proposed that such market-organizations must first become learning organizations (Garvin 1993, Senge 1990). This demands that leaders in these organizations must also adapt their leadership styles, and develop their employees to learn to respond rapidly to their

changing market contingencies. This is critical for survival as well as growth in market environments with high turbulence (D'Aveni 1999).

In the twenty-first century economy, a number of mega-shifts disrupted our global market environments demanding new leadership approaches (Fukuyama 1999; Manz and Sims 1989; Thurrow 1999). Traditionally, high performing organizations have depended on either visionary transformational or transactional leader (Bass 1960; Bass and Avolio 1994; Nadler and Tushman 1990). In equilibrium markets with predictable growth, the charismatic visionary leaders or the hierarchical transactional leaders had the knowledge needed to meet their competitive challenges. On the other hand, for turbulent market environments with disequilibrium and unpredictable growth (D'Aveni 1994; 1999) the visionary charismatic leaders or the hierarchical transactional leaders do not possess all the alternatives. Even when a visionary leader provides a grand strategic vision, this translates into high performance only with the help of initiatives and innovation by followers. These boundary-spanning followers are closer to their customers and the

markets where disruptive turbulent changes take place. These followers must take the lead, and help leaders in upper echelons define the market challenges their organizations face. In return, the leaders in the upper echelons must support their boundary-spanning followers by allocating to them with adequate resources for training and development. Empowered followers, who feel that they own the market challenges, tend to change, improve, and innovate rapidly (Gilbertson 1999).

When complex organizations face turbulent contingencies, the traditional leadership theories based on leader – member exchanges (LMX) are not adequate for bringing about large-scale strategic changes and innovation. Instead, in this paper we propose that these organizations facing dynamic market contingencies need agile market-oriented lateral leaders. These market-oriented lateral leaders use shared goals, defined jointly with their associates, to respond to the disruptive contingencies in their market environments. On the other hand, the market-oriented lateral leaders in the upper echelons, usually with deep expertise of their own, exchange and interact with their followers as equal lateral leaders on specific projects.

In this study, we first discuss the significant strategic influence of turbulent market environments on organizations. Then we review the evolution of the leader-member exchange (LMX) theory over the past five decades and two different generations of leaders from this period. Based on the limitations of these visionary transformational and hierarchical transactional leaders in turbulent markets, we propose the need for a third generation of market-oriented lateral leaders. We discuss the significant influence of turbulence in market environment, and its evolving impact on leadership. A number of research hypotheses relating the market environment contingencies with leader – member exchange (LMX) and performance of the followers will be developed from our discussion of the relevant literature. Finally, we discuss the limitations and implications of this research study for professional managers and future researchers.

CONTINGENT INFLUENCE OF MARKET TURBULENCE

The fall of the state-owned communist economies in 1989, and the subsequent rapid globalization of markets, turned relatively stable markets with predictable growth into intensely competitive world markets (Fukuyama 1999; Gehani 2001; Thurow 1999). Competition in these global markets, with lower entry barriers, is driven by a much higher intensity of rivalry between the existing competitors and a growing number of potential new entrants (Porter 1979; 1980). These market shifts demand increased cost-cutting efforts. With greater choice of offerings to customers, the bargaining power of buyers increases to a much higher level than when the markets were primarily domestic. With the introduction of disruptive radical innovations, more substitute technological innovations are likely to be launched (Williamson 1975; 1985).

In such turbulent and intensely competitive market environments, incremental and disruptive radical contingencies have a significant impact on the performance of all competing business organizations. Organizations must adapt and respond quickly to continuous and discontinuous economic regulation, competitive rivalry, and technological discontinuities (Christensen 1997). These market contingencies can turn highly efficient organization systems and processes ineffective (Nadler and Tushman 1990). Fast-changing market contingencies drastically alter the rules of competition, with a radical impact on the competitors' performances (D'Aveni 1994). In relatively stable markets, the profit potential of firms depends on raising entry barriers and reducing the intensity of rivalry. In the intensely competitive environments, on the other hand, superior profits arise from redefining the rules of competition by offering new innovative value propositions to the customers. This is best accomplished not by a hierarchical or charismatic leader, but by a network of market-oriented lateral leaders.

EVOLUTION OF THE LEADER-MEMBER EXCHANGE (LMX) THEORY

Exchange between leaders and members has been the focus of significant attention from a large number of academic researchers and management practitioners. They have noted that leaders influence their subordinates' behaviors into taking certain goal-oriented actions (Bass and Avolio 1994; Yukl 1994). This is often based on the followers' perceptions of their leaders' behavior (Hall and Lord 1995). The objective of this leader – member exchange (LMX) is to attain certain social goals (House and Howell 1992; Mumford 1986; Winter 1991). The theories of leadership based on such leader-member exchange (LMX) and different approaches to leadership have evolved over time, and can be clustered into different generations.

Generation – I: Traits Approach in Leadership Theories

The heroic model of charismatic leadership is grounded in the religious prophet as the role model for leaders. This was first proposed by the German sociologist Max Weber (1947). Such leaders were assumed to be naturally endowed with extraordinary powers over others. According to the traits approach of leadership theories (Dansereau and Yammarino 1998; Ivancevich, Lorenzi, Skinner, and Crosby 1994), leaders possess certain desirable traits that they use uniformly with all their followers. These traits include their high need for achievement, high intelligence, likeability, and more (House and Howell 1992). They have dominating personalities, and they are often extroverts with high energy. They tend to belong to families with higher socio-economic positions (Ivancevich et al. 1994). These leaders use their “push” sources of legitimate, reward, and coercive power, and “pull” sources of referent power, expert power, and ownership power to influence others (Gehani 1998; Ivancevich et al. 1994). The transformational visionary leaders use their charisma to motivate their followers to perform beyond their own normal expectations (House and Howell 1992; Tichy and Ulrich 1984). These leaders build the confidence of others, and inspire them to focus on

higher-level achievements and self-actualization goals, rather than on lower-level safety and security goals (Ivancevich et al. 1994).

Many empirical researchers investigating leaders' behaviors found that their leaders did not use a consistent average leadership (AL) behavior toward all their subordinates (Dansereau and Yammarino 1998). With different followers, leaders often behave in differentiated relationships. The situational relationship-based leadership theories were at first researched as the vertical dyad linkage (VDL) model of leadership (Dansereau and Yammarino 1998). Over the past five decades these exchanges have evolved in multiple phases (Graen and Uhl-Bien 1991; 1995; Vecchio and Gobdel 1984).

Generation – II: Functional Approach in Leadership Theories

In 1972, the situational vertical dyad linkage (VDL) model of leadership evolved into the phase-two, leader-member exchange (LMX) model (Graen Novak, and Sommerkamp 1982). This resulted first in a large number of broad conceptual research, and later many empirical research studies. According to the theories based on the functional approach to leadership, a leader behaves in a certain way in relation to his/her followers. Per the Michigan Leadership Behavior studies (Likert 1961), different leaders rely on people-centered approach and job-centered approach to different extents. In the Managerial Grid® model (Blake and McCanse 1991; Hersey and Blanchard, 1988), different leaders are classified by their concern for production and their concern for people, on a 1-to-9 scales.

In many exploratory studies of leader-member exchange (LMX), as in the Ohio State leadership studies, LMX was broadly classified into “consideration” and “initiating structure.” In subsequent empirical research, these constructs evolved into other measures. These studies, however, did not focus their attention on market and external environmental contingencies for a firm. Such market contingencies have significant impact on an

organization's performance in markets with disruptive turbulence.

According to the Iowa Leadership Behavior Studies, there are laissez-faire leaders, democratic leaders, and authoritarian leaders (Bennis and Nanus 1985; Shaw 1973). The laissez-faire leaders take no initiative in directing or suggesting alternative courses of action. Authoritarian leaders make most decisions and determine the policies for the followers without sharing or consulting with them. Democratic leaders allow the followers to develop procedures and progress towards their goals, while the leaders set the overall direction (Bennis and Bierdman 1997).

The Ohio State Leadership Behavior studies (Fleishman and Hunt 1973), classified different leaders based on their consideration for employees and use of initiating structures. Leaders with high consideration build mutual trust, show respect for their followers' concerns and ideas, and maintain good two-way communication to encourage followers' participation in decision-making (Davis, Schoorman, Mayer and Tan 2000). Leaders vary in their use of initiating structure, involving detailed planning, organizing and directing. According to the Fiedler's Contingency Leadership theory (Fiedler 1967; Fiedler and Chemers 1974), different leaders use different degrees of situational control, task structure, and position power in their leader-member relations.

Situational Leadership Theory, formerly known as the life-cycle theory of leadership, proposed that leaders adapt their behaviors depending on the readiness, ability, and willingness of their followers. The Vroom-Yetton Normative Leadership model helps leaders decide to what extent they should allow their followers, depending on their commitment requirement and quality requirement, to be involved in different types of decisions (Vroom and Jago 1974; 1988). The Path-Goal situational theory relates the impact of a leader's behavior on the path and the accomplishment of the ultimate goals or end results (House and Mitchell 1974). Different types of leaders use directive behavior, supportive behavior and participative behavior, and they may provide

achievement-oriented leadership by setting challenging but reachable productivity goals.

More recently, a new stream of leadership theories is evolving from the Vertical Dyad Leadership (VDL) model. In the "individualized leadership" model of leadership, leaders work with each person on a one-to-one basis (Dansereau and Yammarino 1998; Mumford, Dansereau, and Yammarino 1998). For example, leaders seeking superior performances from particular subordinate members do so by reinforcing these members' self-worth. This finding was based on the evidence that attempts to build self-esteem, self-worth, or a sense of feeling competent, tend to motivate people to perform better (Amabile 1998; Mumford 1986). Leaders boost their followers' self-worth by attending to the follower members' needs, displaying confidence in their abilities, and providing support for their actions (Mumford, Dansereau and Yammarino 2000). Other researchers have pointed out that in organizational settings (as opposed to laboratory or academic settings), other aspects such as autonomy, achievement and pride, as well as guilt, shame and fear of failure also motivate people (Winter, 1987; Yamagashi and Sato 1986).

Limitations of the Leader-Member Exchange (LMX) Theory

In the 1990s, David Goleman proposed that the emotional intelligence quotient (EQ) of leaders is a more significant determinant of leaders' effectiveness and exchange with their followers than their intelligence quotient (IQ) or technical competency (Goleman 1995). EQ includes a leader's sensitivity and ability to manage his/her own and others' emotions. Few research studies, however, have provided the empirical evidence that emotional intelligence or exchange is a stronger predictor of a leader's performance than the leader's decision-making and problem-solving skills needed to resolve environmental threats and exploit market opportunities (Mumford, Dansereau, and Yammarino 2000). Especially for leaders in the upper echelons, their more autonomous followers and the leaders themselves focus more on meeting external and futuristic market challenges than on internal social

support (Mumford, Dansereau, and Yammarino 2000; Schriesheim, Castro, and Cogliser 1999).

Followers' behaviors can be understood in terms of their basic needs for feeling competent and successful. When they lack these, they need and search for reinforcement and social approval. The subordinates with strong approval needs, and ongoing attempts to build self-worth, can develop excessive dependency on their leaders with referent power (Mumford, Dansereau, and Yammarino 2000). Particularly in high-velocity market environments and contingencies, subordinates' excessive dependency on their leaders for social approval may prove counter-productive for a rapid-response organization. Further, in such dynamic market environments, achievement and autonomy of more entrepreneurial and creative employees may prove more productive (Amabile 1998).

In the twenty-first century, therefore, we are slowly evolving into the next phase of leader-member exchange (LMX) theory. Its scope needs to be broadened to include an awareness of the significance of an organization's market contingencies on leadership style and behavior (Dansereau and Yammarino 1998).

NEED FOR THE GENERATION – III STRATEGIC APPROACH IN LEADERSHIP THEORY

Strategic Influence of Turbulence in Market Environment

Most research studies on leader-member exchange (LMX) have restricted these interactions to a closed social system of dyadic leader-subordinate interactions (Mumford, Dansereau, and Yammarino 2000). Leadership theories in other fields, such as in organizational theory or resource/capability based strategic management, hold that a primary job of a leader is spanning the boundaries of an organization and adapting to the external market environment. The leader-member exchange (LMX) theory and its more recent version, Individualized Leadership (IL) model, have assumed insignificant contingency effects of

external market environments (Mumford, Dansereau, and Yammarino 2000). Leaders in turbulent markets, on the other hand, are expected to make superior strategic decisions that help their organizations overcome their environmental uncertainties and enhance their future well being in the markets in which they operate (Hamel and Prahalad 1994).

Different intensities and frequencies of disruptions in market environments generate different patterns of competence-enhancing and competence-destroying changes in the affected organizations (D'Aveni 1999). Competence-enhancing market changes consolidate and strengthen the competitiveness of incumbent organizations. For example, in the personal computer markets, Intel's high installed base of Pentium III microprocessors strengthened the chances of success for Intel's new Pentium IV product. Competence-destroying market changes are caused by shifting customer preferences, demographic shifts, technological obsolescence, deregulation, or globalization. These disruptive changes destroy an organization's critical success factors, and change their value-creation process. Such changes converge the related and unrelated market segments so that the prior industry leaders no longer lead the restructured industry markets.

Based on these changes, D'Aveni (1999) suggested four types of turbulences in market environments. First, the equilibrium market has long periods of little disruption. Examples include regulated markets for the telecommunication, airline, and trucking industries. Second, the fluctuating equilibrium market is characterized by frequent competence-enhancing continuous improvements. Sony leveraged its electronic multi-media and miniaturization capabilities to introduce digital video disks (DVDs). Third, the punctuated equilibrium market is characterized by brief periods of discontinuous competence-destroying revolutions (caused by the introduction of a radical technological innovation), followed by long periods of settling down with the new dominant design standard. For example, in the video-cassette recording industry, the market victory of VHS format over Betamax format was followed

by a long period of equilibrium with the new format standard. Fourth, the disequilibrium market environment is characterized by frequent introduction of radical discontinuous disruptions. This category includes newly deregulated markets, high-tech industries, or highly fragmented low-tech industries. In the 21st Century, in global industrial sectors such as those for semiconductors, office equipment, personal computers, consumer electronics and more, the organizations are strategically affected by rapid changes and disruptive shifts in their market environments.

EVOLVING MARKET ENVIRONMENTS AND LEADERSHIP

Markets evolve and change over time. Do these evolving markets require different types of leadership styles? Rapid market expansion in the late nineteenth century and the early twentieth century saw the emergence and growth of entrepreneur heroes like George Eastman, the founder of Eastman Kodak in Rochester, New York, and Henry Ford, the founder of Ford Motor Company in Dearborn, Michigan (Gehani 1998). Electrification, and the invention of systematic industrial research and development, ushered in what many economic historians call the second industrial revolution (Thurow 1999). Local and small economic markets were replaced with larger nation-wide markets. The inventive and charismatic hero leader also introduced disruptive technologies and brought about Schumpeterian constructive destruction (Gehani 1998, p. 135). George Eastman replaced photographic glass plates used by photo studios with his portable Brownie camera preloaded with a flexible photographic film. Similarly, in October 1908, Henry Ford produced Model T automobiles on a moving assembly line, replacing the traditional "hot-rod" crafting process. These disruptive innovations were followed by long periods of steadily growing equilibrium markets for cameras and cars. The hero leaders often emerge after struggling under the intense heat of major institutional obstacles. With high confidence from their past successes and charisma, the hero leaders dominate others and dictate the behavior of their followers. Most heroic charismatic leaders bask in the illusion of their self-fabricated vanity

(Galbraith 1983). They often surround themselves with the followers who seek their paternalistic approval. Together, these leaders and their followers develop an illusion of invulnerability and unanimity (Janis 1972). These heroic leaders and their docile followers stereotype their opposition. They either self-censure or put peer pressure on their dissenters and doubters. Members develop "mindguards" to any adverse facts and information. Janis (1972) classified these decision-making symptoms in their leader-member exchanges as "groupthink."

Another frequent flaw with the charismatic hero leaders is that during their tenure in organizations, most of the efforts and energy of the leaders as well as their followers are spent on promoting the leaders' image. The heroic leaders often, intentionally or unintentionally, neglect grooming their successors. It is therefore common that when the heroic leaders leave, they leave behind a big leadership gap (McGill 1989). These leaders believe that their heroic leadership style can not be learned. The heroic leaders frequently advise others to be "heroic and messianic," develop "strong self-image," and be "powerful" (McGill 1988).

Fall of the Hero-Entrepreneurial Leader and Rise of the Hierarchical Transactional Leader

In the early twentieth century, the hero entrepreneurs like Carnegie and Rockefeller discovered that they earned more profits by conglomerating their empires into monopolies and trusts, and restricting their production and supply of goods, than by increasing their outputs. The stock market crash on October 26, 1929, and the Great Depression that followed it, exposed the inability of these charismatic hero leaders to overcome changes of national proportions in market environments. The charisma of hero leaders was not enough for large and multi-division complex organizations to respond rapidly to their disruptive market changes. The Great Depression turned many potential leaders / entrepreneurs to risk-averse followers. This gave birth to the hierarchical "organization man" (Whyte 1956). In the 1930s, General Motors under the "organization man" Alfred Sloan, out-competed heroic leader Henry Ford by

organizing its multi-divisional structure under Sloan's central authority (Sloan 1972). The war efforts during World War II, including the Manhattan Project to develop America's atom bomb, saw the amazing power of coordinating large hierarchical organizations.

Max Weber (1947) proposed that hierarchical authority in a bureaucracy was key to modernity. Complex activities (such as building a car or a camera) can be carried out by a market of many small independent suppliers contracting and transacting with one another to produce the needed parts, components, engines, and power trains. These contracts use decentralized design, system integration, and distribution. However, according to the classic theory of the firm (Coase 1937; Williamson 1975; 1985), the total transactional cost of negotiating, contracting, or litigating with the various outsourcing parties in the market is far larger than the total cost of carrying out these activities in-house within a hierarchy. Frederick Taylor's *Scientific Management* helped the hierarchical transactional leader in a growing large firm, coordinate effectively the activities of a large number of low-skilled immigrant workers (Taylor 1911). As a result, in the early twentieth century, automobiles were mass-produced by Ford Motor Company and General Motors, and Eastman Kodak mass-produced cameras in their vertically-integrated hierarchical firms. In these large complex organizations, the hierarchical transactional leaders controlled the quality, cost, and delivery of all their inputs, parts and components.

During the 1960s, the Harvard economist John Kenneth Galbraith surveyed the industrial landscape, and proposed *The New Industrial State* of professional "organization men" working in giant business organizations (Galbraith 1967). In *The Anatomy of Power*, Galbraith (1983) pointed out the exaggerated role assigned to the personality of leaders. This role inflation was in part due to their self-created synthesized personalities. Under the transactional hierarchical leaders, big business enterprises got bigger. During the 1960s and early 1970s, these hierarchical transactional leaders relentlessly pursued increasing economies of scale in purchasing, production, and R&D. Their vast financial resources

allowed them to develop new products for far-flung global markets. Soon enterprises and governments in other countries, particularly in Britain, Italy, and Japan, started imitating the U.S. businesses with state-supported promotions of their big businesses at the expense of emerging smaller businesses (O'Toole and Bennis 1992).

Disruptive Market Shocks

The disruptive oil shocks of 1973 and 1979 skyrocketed the price of a barrel of oil, and shook Galbraith's *New Industrial State* at its core. The large hierarchical U.S. organizations, and their transactional leaders, could not adapt fast enough to the disruptive changes in their market environments. They faced the threat of rapid penetration of the nimbler and more fuel-efficient Japanese auto makers. The complacent bureaucracies, and their hierarchical transactional leaders, desperately hung on to their elaborate long-range planning exercises, severe customer neglect, and horrendous human resource practices (McGill 1988).

In 1989, fall of the Berlin Wall, unification of Germany, and disintegration of the former Soviet State, spread globalization around the world and made markets highly interdependent (Gehani 1999). Open commercial access to Internet technology in the mid-1990s ushered in the third industrial revolution (Fukuyama 1999; Thurow 1999). Just as the second industrial revolution in late nineteenth century transformed America's local markets into national markets, the third industrial revolution transformed the national markets into global markets.

Limitations with the Hierarchical Transactional Leader Facing Market Disequilibrium

In simpler markets with punctuated equilibrium (D'Aveni 1999), the hierarchical leaders controlled all the key information and knowledge necessary to make their strategic decisions. As the industrial economies around the world transitioned to information-based high-tech systems of production facing disruptive changes, a large fraction of information and tacit knowledge in these increasingly

complex organizations was generated in its distributed parts. The information and knowledge necessary to make tactical and strategic decisions grew exponentially (Fukuyama 1999). Thus, in turbulent market environments with disequilibrium, the centralized hierarchical leader faced insurmountable new challenges. Corporate governance required a mastery of multiple technological skills, which few hierarchical leaders could master on their own (Fukuyama, 1999). The inflexible hierarchical leaders in large complex organizations made centralized decisions slowly and could not respond rapidly to their changing market conditions.

In turbulent market environments, the leaders of growing organizations are increasingly forced to delegate their power to either their technical followers or their front-line boundary-spanning local representatives (Mintzberg 1975; 1994). Toyota's lean or just-in-time management relied on blue-collar assembly-line workers taking over some of the roles of their hierarchical leaders in rival organizations (Womack, Jones and Roos 1991). Such lateral delegation of authority is possible only with a key prerequisite – that the blue-collar lateral associates are adequately trained to undertake some of the leadership roles formerly performed by their white-collar hierarchical leaders. Trusted leaders provided a competitive advantage for superior business performance (Davis, Schoorman, Mayer and Tan 2000).

MARKET-ORIENTED LATERAL LEADER FOR TURBULENT DISEQUILIBRIUM MARKETS

Market turbulence demands a new breed of market-oriented lateral leaders guiding their fast-response agile organizations (Day 1999). In the 1980s, flatter learning organizations emerged that were lean, flexible, and adaptive to their customers' changing preferences or their rivals' changing postures (Slater and Narver 1995). These flat firms have large spans of control, forcing their leaders to work with a large number of market-driven lateral leaders and followers. Their production runs are short and focused on a few products, and their concern for quality is high. Their

owner-leaders know and pay individualized attention to all their followers. Due to the smaller human scale of these organizations, these employees are motivated by their individualized relationships with their innovator owners. One must, however, admit that not all the large businesses were annihilated during the 1970s and 1980s by their smaller rivals. General Electric, under the leadership of Jack Welch, and Coca-Cola under Robert Goizueta mimicked their smaller agile rivals and continued to succeed and grow (McGill 1988).

Based on the above discussion, following hypotheses can be proposed for the relationships between different leadership styles and market environments, with the vertical dyadic and lateral leader-member exchanges (LMX).

Hypothesis – 1: The charismatic heroic and transactional hierarchical leadership styles promote a vertical dyadic leader – member exchange.

Hypothesis – 2: The market-contingency driven leadership style promotes a lateral leader-member exchange.

Hypothesis – 3: Equilibrium and punctuated equilibrium market environments promote a vertical dyadic leader-member exchange.

Hypothesis – 4: Disequilibrium market environments promote a lateral leader-member exchange.

Next, we will discuss how the vertical dyadic and lateral leader-member exchanges (LMX) are related to short-term and long-term performance of followers.

LEADER – MEMBER EXCHANGE, TASK PERFORMANCE AND INNOVATION

During the 1980s, the Japanese, South Korean, and Taiwanese firms competitively challenged and disrupted the market environments for many U.S. industries (Gehani 1999; 2001; Hamel 2000). The

disrupted markets included office equipment, consumer electronics, factory automation, semiconductor memory chips, and automobile assembly. In response, the U.S. firms in these sectors were forced to dramatically deepen their core-competencies and dynamic capabilities to innovate (Gehani 1999; 2001; Hamel and Prahalad 1994). According to Gary Hamel, the author of *Leading the Revolution*, "most companies long ago reached the point of diminishing returns in their incremental improvement programs. Radical non-linear innovation is the only way to escape the ruthless hyper-competition that has been hammering down managers in industry after industry" (Hamel 2000).

To sustain their declining competitiveness, many hierarchical transactional leaders pursue continuous improvements and higher efficiencies of their ongoing operations. For radical innovations, on the other hand, either large markets do not exist or the current markets need to be reinterpreted and transformed significantly. Christensen (1997) observed that many leading firms failed to recognize the disruptive impact of new technologies on their competitive market environments. The more successful an organization is, the harder it is for its hierarchical leaders in upper echelons to trigger their people's attention to technologically innovative ideas and new market opportunities generated by the environmental and market disruptions. Tushman and O'Reilly (1996) noted that in the turbulent market environments, leaders need to build "ambidexterity" by simultaneously innovating effectively and managing their current operations efficiently.

Collins and Porras (1991; 1994; 1995) have noted that some charismatic heroic leaders occasionally "tell time" or set a grand but static vision. Their performance rises with their great innovative idea. For a limited time, they ride the growth curve of an attractive product life cycle. A more effective type of leader, instead of promoting individual personality traits, charisma or individual ideas, is able to generate higher performance over a sustained period of time by focusing attention and resources on building their organization's architecture and human social capital. Such learning organizations, run by market-driven

lateral leaders, are able to continuously respond to market challenges over multiple product life cycles, even long after their original lateral leaders are gone.

O'Connor and Rice (2001) noted that in well-established firms, usually the recognition of opportunity to innovate arises out of individual initiatives rather than any standard organizational routines. Most breakthrough innovations evolve from invention or creative technical discovery by individual scientists or engineers. These front-line employees have limited training to recognize the potential business opportunities of their breakthrough innovations. Their leaders support, develop, and direct such creative initiatives of individual employees to productive uses (Amabile 1998).

The complexity theory postulates that organizations that mimic natural organic systems, and evolve by adapting to their changing turbulent environments, are more likely to survive and grow (Cilliers 1998; Kauffman 1995). Extremely static hierarchical organizations, or excessively chaotic organizations, are likely to adapt poorly to turbulent market contingencies. One must, however, be aware that such self-organized systems in nature produce adaptive results, but the process is often wasteful, producing high variances (Fukuyama 1999: 189).

To promote sustained innovation in organizations, the lateral leaders in upper echelons need to overcome many organizational challenges. Breakthrough innovations often take over a decade to develop (Gluck 1988). Organizations facing disruptive market contingencies, therefore, need to proactively anticipate the trajectories of various relevant technologies, and monitor the shifts in their market competition. Their leaders must invest the resources needed to develop potential new markets ahead of their competitors. Boundary-spanning individuals play the important roles of technical and market gatekeepers by linking internal and external sources of information (Gluck, 1988; Gehani 1998). They acquire, interpret, and disseminate new information to the relevant people in their organization.

Sawhney and Prandelli (2001) found that for the highly turbulent contingencies caused by converging technologies and merging industrial sectors, when the locus of innovation is within the boundaries of a firm, technological innovation is best managed by using hierarchical transaction mechanisms. Within the boundaries of a closed hierarchical system, a common goal is to minimize transactions costs by reducing any radical changes in the organization's business processes. In turbulent market environments, on the other hand, a different network mechanism evolves for coordinating radical innovations across a community of multiple organizations (Sawhney and Prandelli 2001).

For example, in the photographic film industry, Eastman Kodak collaborated with its rival Fuji Photo Film, and down-stream users Canon, Nikon, and Olympus, to radically innovate and jointly develop a new 25 mm photographic film format, Advanced Photo System (Gehani 1998: 100). This radical innovation was coordinated by the five founder firms (called G-5), but their new intellectual property was freely licensed to 40 other firms including competitive rivals, such as 3M, Agfa and more. In the software industry, the Linux operating system and the Apache web server software were developed by a collaboration of multiple developers (Sawhney and Prandelli 2001). For the open-source software, any single firm does not control the intellectual property rights. The goal of the member firms of the innovation community is to innovate by focusing on maximizing their top-line transactional value rather than by minimizing their transactional costs and expenses (Williamson 1975; 1985).

From the above discussion, and our previous review of different behavioral leadership theories, we propose the following hypotheses relating the vertical dyadic and lateral leader – member exchanges (LMX) with multiple measures of performance of the “followers.”

Hypothesis – 5. Reliance on vertical dyadic leader – member exchange (LMX) will lead to (a) a high consideration for followers, (b) a higher short-term task productivity, and (c) a lower long-term innovation.

Hypothesis – 6. Reliance on lateral leader-member exchange (LMX) will lead to (a) a moderate consideration for followers, (b) a moderate short-term task productivity, and (c) a high long-term innovation.

In a separate study, these hypotheses are empirically tested.

MANAGERIAL IMPLICATIONS AND FUTURE RESEARCH

From the foregoing discussion it is evident that the organizations facing market turbulence and disrupting disequilibrium need to respond in a timely and innovative manner to their new market contingencies. This requires a major shift in the way these organizations are led.

The heroic transformational leaders or the hierarchical transactional leaders, who were effective and/or efficient in relatively stable markets with predictable growth, can no longer effectively lead their widely distributed organizations facing disequilibrium markets with disruption. First and foremost, the frequent market disruptions demand developing leadership competency at all levels of an organization. Some progressive organizations, such as W.L. Gore, the producer of high-performance outdoor polymer textiles, have for decades fought some employees' temptation and need to add hierarchical structure to their “lattice organization structure” (Gehani 2001; Rhodes 1982: 34).

Second, a pre-requisite to the market-oriented learning organization is to allocate adequate resources for continuous learning, training and development of their social and human capital embedded in their lateral “followers” and lateral leaders.

Future researchers must empirically validate whether all followers, given access to relevant training and development, are willing to adopt market-oriented learning, and are willing to accept the challenge of becoming market-responsive lateral leaders. It is postulated that a significantly large fraction of

employees, instead of becoming autonomous market-oriented lateral leaders, may prefer to continue to be complacent followers looking for guidance from their heroic or hierarchical leaders. The role of incentive systems used to enhance the responsibilities of the boundary-spanning lateral leaders (former followers), or the redesigned responsibilities of the lateral leaders in the upper echelons, may be the focus of future studies.

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