Leadership for knowledge organizations

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Abstract

Purpose—To give some theoretical foundation to leadership function and style for managing knowledge workers whose work, by definition, is non-routine, thrives on innovation, and places a special demand on autonomy for its execution.

Design/methodology/approach—Extant search of literature to look for evidence supporting successful leadership theories and practices that are shown to improve performance of knowledge workers. Synthesis of findings to structure a framework in the form of major propositions for their testing by future research.

Findings—We begin with establishing our first finding that states that leadership of knowledge organizations is different from the leadership of traditional organizations. Then we build six additional findings for shaping a successful leadership process for knowledge organizations.

Research limitations and/implications—Since it is a theoretical paper built on a search of literature in the field of leadership, there is a need to empirically test the findings to give them their final shape. Each of the seven propositions in this paper would result into many hypotheses that should initiate several empirical studies.

Practical implications— We consider individual and organizational/group contexts of the leadership proposed here, and also provide recommendations for carrying out this research further. While the paper is written more specifically with regard to the leadership of knowledge organizations where its findings should be fully implantable, however, to some extent, they would apply to all organizations.

Social Implications—Leadership is a ubiquitous social phenomenon. It affects not only organizations, but also every aspect of human activity. This paper is an attempt to alter the fundamental thinking of leaders, suggesting to not to use authority and, instead, to allow everyone connected with the task the opportunity to lead. This shift in leadership paradigm will have an impact on the behavior of all involved and, steadily, will bring a change in the norms of social behavior.

Originality/value—This paper is a move towards giving the knowledge organization leadership some theoretical framework, as it is still in a state of flux in spite of attracting a lot of research.

Keyword—Leadership, knowledge-based systems, organizations

Paper type—Research paper

Introduction: Leading Knowledge Organizations

Knowledge Workers

In the knowledge driven contemporary economy, organizational growth comes from innovation rather than the operational efficiency. This shift has brought back the importance of

human element in work, because tacit knowledge, the most important ingredient of innovation, resides in human minds (Glynn, 1996; Nonaka & Takeuchi, 1995; Tsoukas & Mylonopoulos, 2004; Tymon & Stumpf, 2003; Wyckoff, 1996). The workers that possess and use the knowledge the firm needs for its performance are called the knowledge workers. Drucker said that they are professionals and intellectuals (Drucker, 1992). He stated that they are not satisfied with the work that is just a livelihood. It is for this reason that these workers want, and should have, control over their work functions. Sveiby and Lloyd (1987) believe that they should get this control for the better functioning of the organization.

Knowledge Organizations

A grouping of knowledge workers in any manner in the firm for arriving at solutions to unique problems that haven't appeared in their current form in the past, nor are expected to appear like that in the future (see, for example, Sveiby & Lloyd, 1987) is broadly known as the knowledge organization. Knowledge organization work demands creativity, research, and the abilities of the mind more than any common crafts and skills (Drucker, 1988). In describing these organizations, we find that these organizations place emphasis on the theoretical knowledge and technical expertise (Bell, 1973). These organizations emphasize the importance of innovation in their working. Additionally, they are also known as "innovation organization", "innovation-driven organization", "knowledge-intensive organization", etc.

A knowledge organization could be a complete organization, a division, a department, a section of an organization, or just a group of individuals working together for a common purpose (see, for example, Amar, 2002). In this classification, the concept of a 'firm inside a firm' can be well applied (Friedman, Roberts & Linton, 2008).

The prescriptive leadership style for these organizations draws from the definition of knowledge work and what would provide leadership for the workers who perform the knowledge work. It is because of the requirements of the knowledge work that these workers are managed and led like researchers in an R&D work environment (see, e.g., Berson & Linton, 2005) or as junior/senior colleagues. Workers in these organizations direct and discipline their own performance through organizational feedback from colleagues, customers, and headquarters (Drucker, 1988).

This research fills the need for effective leadership of knowledge organizations. Our outcome is a set of seven propositions that reflect the surveyed literature. For practicing managers, these propositions give insight into how to lead to get better innovation and productivity from their knowledge workers; for researchers, these propositions provide venues for conducting empirical and field research. Additional directions for future research are also given.

Searching Literature on Power, Control and Leadership

Because the bureaucracy theories that guided management in the last century were not proving to be very effective for leading workers (Gronn, 2002; Osborn et al., 2002; Pearce, 2004; Pearce & Manz, 2005; Piccolo & Colquitt, 2006; Uhl-Bien, Marion & McKelvey, 2007; Wang et al., 2011), the main focus of leadership research for the last twenty years or so has been on finding alternative means to provide leadership. Through an extant search of the literature, we find that leadership is moving towards approaches that are more innovative, emerging, and collaborative (Martin & Ernst, 2005; Osborn & Hunt, 2007). It transcends the role of a lone individual filling the position, and becomes a product of the interaction, tension, exchange rules governing the changes in perceptions, and understanding of the task in such organizations. The absence of the

leader's control, due to the sharing, distribution, collectivism, networking, and self-organizing, is its main theme (Bass & Riggio, 2006; Burns, 1978; Fletcher, 2004; Gronn, 2002; Hazy, 2006; Heifetz & Linsky, 2002; Hooker & Csikszentmihalyi, 2003; Knowles 2002; Montes, Moreno & Morales, 2005; Osborn et al., 2002; Pearce, 2004; Pearce & Manz, 2005; Piccolo & Colquitt, 2006; Sivasubramaniam et al., 2002; Spillane, Halverson & Diamond, 2004; Surrie & Hazy, 2006; Uhl-Bien, Marion & McKelvey, 2004; Uhl-Bien et al., 2007).

The Search Procedure

We started the process by picking the databases to search. These included EBSCO Host, Web of Science (WoS), ProQuest and ScienceDirect. These databases were selected because they are most readily available to the Management and Organization Studies (MOS) community (Fitzsimons, James & Denyer, 2011). Furthermore, the ScienceDirect database is operated by Elsevier, which publishes '*The Leadership Quarterly*', which has published the largest number of articles related to shared/distributed leadership. To capture extensively the keywords, Web-of-Science rather than Web-of-Knowledge was searched.

The preliminary search identified the following key terms that were relevant for this research project: *distributed leadership, complexity leadership, collective leadership, relational leadership, self-organizing leadership, adaptive leadership, administrative leadership, enabling leadership, transformational leadership, shared leadership, emergent capacity leadership, generative leadership, network leadership*, and *flexible leadership*. It resulted in identifying more than 1000 scholarly articles.

Search Limited to Title, Abstract, and Keywords in Journal Articles

The search was limited to the term "*** leadership" in title or abstract or keywords of the journal articles. This ensured that only the articles with sufficient relevance were identified. This produced a significant amount of results, while avoiding a large amount of irrelevant articles.

To exclude unproven research, only scholarly journals were searched. This excluded material that had not gone through a review process. This was done to provide a clearer picture of the development of research while avoiding a large number of news articles, meeting notes, interviews, book reviews, editorials, and conference proceedings.

Table 1 provides a synthesis of the survey that helped us draft the seven propositions that incorporate the pertinent findings. Using these propositions as building blocks, we developed a theoretical model describing the process of leading workers in knowledge organizations. We found out that the resultant leadership is embedded in a complex interplay of many interacting forces at work to provide leadership for getting innovation from knowledge workers (Uhl-Bien et al., 2007).

Power and Its Role in Knowledge Organizations

In organizational and social interactions, power denotes the influence one has in controlling the behavior of others (Dahl, 1957; French & Raven, 1959). According to Pfeffer (1981), power is not normally compatible with the values pertinent to the management of people who predominantly use their minds in their work. Furthermore, leadership literature mostly fails to recognize the distribution and diffusion of power, possibly because of the legitimization of leader as the source of power and influence (Clegg, 1990; Molm, 1999). Traditionally, the definition of leader draws from the existence of this power over one's followers. According to John Gardner, power is the capacity to bring in certain intended consequences in the behavior of others (Gardner,

1993, p. 55). This capacity is formal if it comes and goes with the position the leader holds, and informal if it is garnered from sources other than the position.

To some extent, all workers are knowledge assets, and negotiate power in their organizations in the form of freedom over their work and work environment by effectively withdrawing or reducing their cooperation in increasing the value they add to the organization (Drucker 1999; Mumford et al., 2002; Mumford et al., 2003). In reaction, the firms devise leadership practice to retain their human assets (Mumford & Licuanan, 2004) and to get from them more than expected (Keller, 1992). This results in a shift in power whereby workers exercise an upward influence on the leadership relationship (Martin, 2007; Mumford & Licuanan, 2004; Pearce, 2004; Pearce & Manz, 2005; Pearce & Sims, 2000, 2002; Rank et al., 2009). Ergo, knowledge workers cannot be led the way managers lead other workers in organizations (Mintzberg, 2008) and forms our first proposition.

> **Proposition 1.** *Due to the differences in the function of leading between traditional and knowledge organizations, it is very unlikely to carry out effectively the leadership responsibilities to get innovation in knowledge organizations using the traditional leadership.*

A Theoretical Framework for Leading Knowledge Workers

The Lack of Use of Power in Leading

Hunt and Dodge (2000) state that no one can hope to lead a contemporary/knowledge organization by ignoring the web of relationships through which all work is accomplished. Interactions and connectivity among heterogeneous agents and across agent networks in these organizations lead to creative emergence, and the leaders provide linkages to the emergent structures without the control of a central coordinator (Cilliers, 2001; Chiles, Meyer & Hench, 2004; Fairholm, 2004; Guastello, 2007; Hazy, Goldstein & Lichtenstein, 2007; Keene, 2000; McKelvey, 2007; McKelvey, Marion, & Uhl-Bien, 2003; Scott, 2004; Uhl-Bien et al.*,* 2004; Yoo & Alavi, 2004). This view of diffused power is supported by Weick, Sutcliffe, and Obstfeld, (2005) and Uhl-Bien et al., (2004), who claim that leadership focuses on the dynamics of leadership as it emerges over time in all areas of an organizational system, where each interchange and interaction provides opportunities for leading, learning, growing and managing change.

Spillane et al. (2004) emphasize the social dimension through which the work of various individuals expresses itself as a leadership function, which widens the basis for decision-making and creates a flatter administrative structure. Gronn (2002) shows how conventional constructs of leadership have difficulty accommodating changes in the division of labor in the workplace where new patterns of interdependence and coordination have facilitated the emergence of distributed practice. Barry (1991) describes a distributed leadership system that works effectively with self-managed teams that are common in knowledge organizations.

Switching leaders has benefits. Since the practice of switching leaders allows all members to experience the leadership role and increases the connectivity within the group, the likelihood that the function could be carried out by any member of the group is increased. The members in such a group relate heedfully to other members. Thus, any individual functioning as a leader understands the transitory nature of the leadership and takes into account the needs of other members (Spreitzer et al., 2005). Such positive connections increase the desire to have more connections, improving the overall connectivity in the group (Miller & Striver, 1997). This is how the practice of switching leaders best assures continued enhancement of creativity and innovation

in organizations (Losada & Heaphy, 2004). The leadership function is dispersed throughout the non-linear interaction and the connectivity among the workers and a new behavior or new mode of operating emerges (Cooksey, 2003; Marion, 1999; Martin & Ernst, 2005; Pascale et al., 2000; Plowman et al., 2007; Schneider & Somers, 2006). Such organizations are changeable structures with multiple overlapping hierarchies linked with one another in a dynamic interactive network (Uhl-Bien et al., 2007).

Lone hero model is condemned. Mintzberg (2008) says that companies should work as communities, which implies the distribution of power to attain greatness rather than the concentration of power in one individual, advocating discarding the "leader-hero" paradigm. This view is supported by Logan, King, and Fischer-Wright (2008) who claim that successful organizations should move away from Level 3 culture (hierarchical, command and control) to Level 4 culture that promotes collaboration and mutual support. Sandmann and Vandenberg (1995) argue that a new philosophy of leadership, known as "post-heroic", is emerging (Fletcher, 2004; Huey, 1994, Hobson et al., 2010). This leadership style is based on bottom-up transformation fueled by shared power and community building. Manz, et al. (2013) quote that sharing leadership shifts the point of influence that more fully taps into capacities of all involved at the time they are most needed. Nirenberg (1993) expresses the fluid, distributed, community, and action-oriented nature of leadership from this perspective. Kodam (2005) discusses how knowledge creation can be achieved through leadership-based strategic community. Knowledge organization leadership needs to be decentralized and distributed to every part of the organization so that those on the periphery, who are first to spot challenges, can act on them instantly (Huxham & Vangen, 2000).

Leadership is About Empowering Followers

Conger and Kanungo (1988) state that the practice of empowering subordinates is a principal component of organizational effectiveness and that the total productive forms of organizational power and effectiveness grow with the superiors' sharing of power and control with subordinates. This is supported by studies conducted by Carmeli, Schaubroeck, and Tishler (2011), and Thorlakson and Murray (1996). Seibert, Silver, and Randolph (2004) present that the empowerment climate is empirically distinct from the psychological empowerment and is positively related to manager ratings of work-unit performance. Druskat and Wheeler (2003) find effective leadership of self-managing work teams where power is distributed.

This implies that knowledge workers cannot be led using the traditional leader-follower approaches (Osborn et al., 2002; Plowman and Duchon, 2008). They would need to be managed in a culture where power is distributed (Amar et al., 2009; Hogue & Lord, 2007; Kirkman et al, 2009; Konradt & Andresen, 2009; Monostori & Ueda, 2006; Nemanich & Vera, 2009; Osborn & Hunt, 2007; Pascale et al., 2000; Pepper, 2003; Plowman et al., 2007; Uhl-Bien et al., 2007; Vecchio et al., 2010).

There is evidence from the practice. A number of articles provide explicit real-life examples of complexity based leadership without the use of power in knowledge work environment. Chiles et al., (2004) analyze how institutional interactions led to the emergence and transformation of Missouri's Musical Theatres. Plowman et al. (2007) discuss how multiple levels of interaction led to the radical transformation of "Mission Church." Similar applications are also available from other sectors, such as public services management, healthcare, and school administration (Bottles, 2000; Christie and Lingard, 2001; Doll, 1989; Harris, 2004; Haynes, 2003; Plsek & Wilson, 2001; Spillane et al., 2004; Wallace, 2002).

On the basis of the evidence gathered from the foregone research, we formulate the following propositions:

Proposition 2a. *In an organization where a variety of unique tasks are executed for Innovation, it is unlikely for any one individual to carry out effectively the leadership responsibilities.*

Proposition 2b. *A knowledge organization will be led more effectively if the formal leader eschews most power and creates an environment of shared leadership.*

Internalizer Leaders More Likely to Succeed

It is common for individuals to seek causes for the outcomes they encounter and whether the attribution of these outcomes, internal or external, influences their subsequent cognition, motivation, affect and behavior (Eberly, Holley, Johnson, & Mitchell, 2011). In a distributed power environment, a leader is more likely to succeed by maintaining an internal locus of control as defined by one's scores on *Internal-External* scale, called "*Internalizer*" (Rotter, 1966). The Internal-External locus of control concept was developed by Rotter (1966) within the framework of social learning theory of personality. Perceived locus of control is defined by Lefcourt (1982) as "a generalized expectancy for internal or external control of reinforcement". Two different types of expectancy shifts are defined: (a) *typical expectancy shifts* related to believing that a success or failure would be followed by a similar outcome; (b) *atypical* expectancy shifts related to believing that a success or failure would be followed by a dissimilar outcome. It supposes that people who were more likely to display typical expectancy shifts were those who are more likely to attribute their outcomes to ability; those who displayed atypical expectancy shifts are more likely to attribute their outcomes to chance. People can be divided into those who attribute outcomes to ability (an internal cause) versus those who attribute them to "chance" (an external cause). Therefore, *Internals* attribute outcomes of events to their own control (Rotter, 1975).

For success in innovation, *Internalizer* classification has a special significance for knowledge workers because commitment to organization draws from the opportunities for personal growth, learning, and independence—the factors that coincide with the internal locus of control (Kinnear & Sutherland, 2000). Internals believe that they can influence success and therefore will be more likely to sustain success, as there is growing evidence that beliefs strongly impact mental and physical systems and abilities (Lipton, 2005, p. 142-143).

Linking to knowledge organizations. Empirical research findings (see, e.g., Rotter, 1966; Schultz & Schultz, 2005) support that a knowledge organization leader with internalizer behavior is expected to do better in the position. The findings imply the following characteristics of the internals that are relevant to knowledge organization leadership: Internals are more likely to work for achievements, to tolerate delays in rewards, and to plan for long-term goals. After failing a task, they re-evaluate future performances and lower their expectations of success. They are better able to resist coercions and tolerate ambiguous situations. Internality correlates negatively with anxiety and depression, and positively with deriving benefit from social support.

A number of researchers have investigated Rotter's (1966) Internal-External scale in the context of leadership. Adeyemi-Bello (2001) validated Rotter's (1996) locus of control scale with a sample of 558 not-for-profit leaders, and Ness and Macaskill (2003) used this scale to investigate coping strategies for anxiety management, discovering that the internals have better coping strategies. All these studies confirm Proposition 3.

Proposition 3. *In any organization where the use of authority is low, such as a knowledge* organization, an individual with "in-control" behavior (as reflected by the "Internalizer"

classification based on the scores on Rotter (1966) Internal-External scale) will increase the likelihood of his success as a leader.

Knowledge Organization is a Mutualism

Wituk et al. (2003) investigate the concept of community leadership programs that emphasize the importance of relationships and skills to develop them, so that everyone has an opportunity to use one's personal strengths and power (Gardner, 1993, p. 137; Kouzes & Posner, 1995; Northouse, 2006; Rost, 1991, p. 78; Sandmann & Vandenberg, 1995; Walter & Bruch, 2010; Westaby et al., 2010). Rost (1991, p. 106) considers leadership as an influential relationship between leaders and followers that results in changes based on their mutual purposes. According to Gardner (1993, p. 137), leaders provide other individuals the opportunities to utilize their strengths and talents, while at the same time seeking opportunities for their own "renewal." Many of these are rooted in the concept that a leader is a servant to one's community, and has a natural feeling to make sure that the needs of others in the community are met (Greenleaf, Spears & Covey, 2002). They are based on the notion that there are leaders everywhere in a community (with distributed power), including civic groups, volunteer agencies, neighborhood associations and interest groups. Gardner (1993, p. 113) suggests that communities comprised of individuals who have a shared sense of identity and belonging are critical to successful leadership development. Buchen (1998) investigated the concept of servant leadership that encourages reciprocity and circular relationship between leaders and followers, emphasizes the need to lead from behind, and that no one is as smart and as capable as is the team. Motivation in team comes from operating it as a mutualism where all members act that individual strengths of members come in focus and their weaknesses are compensated. The group achieves mutualism by operating as a symbiosis (Amar, 2001) by coaching and supporting so that all members work for everyone else in their group and for the success of the group.

Summarizing the above, we formulate Proposition 4:

Proposition 4. *Motivation in workers to engage in behaviors that result in innovation comes from creating and operating organization as a mutualism, resulting in a collective reward or punishment for all members.*

Practicing Lax Control

Dominant traditional leadership paradigm focuses on influencing others to work to attain desired objectives within the frameworks of the hierarchical organizational structures (Heifetz and Linsky, 2002; Uhl-Bien et al., 2007) by cascading a visionary approach from top to bottom and using centralized control (Child and McGrath, 2001; Huxham and Vangen, 2000; Yukl, 1999). The main task of a knowledge organization leader becomes infusing workers with the energy for tasks at hand, tasks that may have been conceived by others. Because knowledge tasks that give rise to innovation are not structured, clear, and consistent, there may be a constant need to update or revise the goals of the tasks (Mintzberg, 1998). Imposing controls externally may not just impede the progress and bring suboptimal performance; it runs contrary to the behavior that brings innovation (Amar, 1998). Because it is impossible to have absolute control in any environment, leaders in such situations need to give up even the perception of control and concentrate on setting a larger collective vision from where creativity of the employees can arise, differences between leaders and followers are blurred, and leadership emerges from the interactions as a process (Coveney, 2003; Marion & Uhl-Bien, 2003; Pearce, 2004; Pfeffer, 2005; Reiter-Palmon & Illies, 2004; Robertson & Swan, 2003; Uhl-Bien et al., 2007). When leaders loosen the control, more

creativity and a culture of care emerges that will lead to better productivity (Pfeffer, 2005; Plowman et al., 2007; Reiter-Palmon & Illies, 2004). Leaders should be accessible, respond to the needs of the workers, acknowledge and value their contributions at all levels, create opportunities for them, and take the time to build trusting relationships. They should also be comfortable leading with a hands-off approach, which needs to be monitored and adjusted according to the situation (Lewin & Regine, 1999; Osborn & Hunt, 2007; Sidle, 2007). Having their followers organize themselves and work in harmony towards mutual objectives and vision is the ideal way to lead (Fairholm, 2004).

The importance of reduced role of leadership control and the need for authority and responsibility to be delegated downward in organizational hierarchies has achieved a noticeable prominence among the leadership theories (Marion & Uhl-Bien, 2001; Pearce, 2004; Pearce & Manz, 2005; Pearce & Sims, 2002). According to De Geus (2002), the most successful companies treat their businesses as living work communities rather than as pure economic machines. Lax control should be practiced ubiquitously in knowledge organizations. Collinson (2005) found that the relations and practices of leaders and followers should be mutually constituting and co-produced.

Based on the above, Proposition 5 is formulated to reflect the research findings that lax control of knowledge workers, and their leaders alike, improves learning and the quality of outcomes of the organizations that are innovation driven:

Proposition 5. *In an organization, such as a knowledge organization, that works to produce innovation, lax control should be ubiquitous for building a fluid, distributed and trust-based community.*

From Chaos to Homeostasis

From the previous propositions, we understand that leadership for innovation in organizations should be shared with those who through their knowledge, skills and experience would naturally take on the leadership of the team at certain points. The main task of leadership in such organizations is to establish a dynamic system where bottom-up structuration emerges and moves the organization to a more desirable level of adaptability and efficiency (Marion & Uhl-Bien, 2001; Osborn & Hunt, 2007). An important driver of innovation in adaptive leadership occurs when the interactions among agents spark tension (Prigogine, 1997). Although leading to adaptive change, the tension creates a semblance of chaos. Nevertheless, the tension, in the form of pressures on and challenges to their personal knowledgebase, brings out homeostasis in the form of adaptive leadership (Carley & Hill, 2001; Carley & Lee, 1998; Lichtenstein et al., 2006; McKelvey, 2001, 2007; Meyer, Gaba, and Colwell, 2005; Uhl-Bien et al., 2007).

However, the concept of managing knowledge workers for getting innovation from them without the use of formal power is as recent as the importance of knowledge as an organizational production factor.

A synthesis of research delineated leads us to the formulation of Proposition 6:

Proposition 6. *Semblance of chaos in groups engaged in innovation work is normal to occur when a functioning leader frequently relinquishes power which one of the other members of the group can assume; however, from such a chaos, a leadership homeostasis emerges and establishes an order according to which the leadership, rather than being concentrated in a leader, becomes distributed and dormant in all group members.*

Knowledge Workers and Allegiance

There is a general consensus in the literature that values serve as foundations for decision-making, problem solving and resolving conflicts, as well as affect leader behavior and organizational performance (Kouzes & Posner, 1995, 2003; Russell, 2001). The following are several reasons that would suggest asking members of a knowledge organization to not avow their allegiance to any individual leader: (1) When a group practices distributed leadership, individuals at the helm will frequently come and go, making it infeasible to avow allegiance to them, which will delay or devoid the functioning of an incoming leader. (2) In a typical knowledge organization, most situations that arise are too complex for its members to remain loyal to a replaced leader whose expertise is not suited to the current situation faced by the organization (Uhl-Bien et al., 2007). (3) Professionals have allegiance to their professional, organizational, and ethics codes.

Group members' allegiance to ethics, values, professional codes, corporate mission and vision, and the broader goals of the organization would prove to be better for the long-run good of the organization where the use of power is low. This echoes in many newer approaches to leadership, such as the ethical leadership, the principle-centered leadership, the dispersed leadership, the systemic leadership, the authentic leadership, the transformational leadership, spiritual leadership, and the servant leadership (Bass & Riggio, 2006; Bolden, Gosling, Marturano, & Dennison., 2003; Burns, 1978; Caldwell, Bischoll & Kaari, 2002; Covey, 2004; Dvir, Eden, Avolio & Shamir, 2002; Edgeman & Scherer, 2002; Eisler & Montouori, 2003; Fairholm, 1996; Fry, 2003; Greenleaf, Spears & Covey, 2002; Jaworski, 1999; Korac-Kakabadse, Kouzmin & Kakabadse, 2002; Luthans & Avolio, 2003; Mendonca, 2007; Milton-Smith, 1985; Piccolo & Colquitt, 2006; Russell, 2001; Russell & Stone, 2002; Sparrowe, 2005; Zhu, May & Avolio, 2004).

Principles and values are of particular importance to knowledge workers. Pearce and Manz (2005) and Pearce (2004) find that knowledge workers desire more from work than just a paycheck. Logan, King, and Fisher-Wright (2008) find that once organizations move away from a culture of command-and-control to a culture of collaboration with distributed power, values, not individuals, become central for sustained excellence in organizational performance. This is in line with the theories on mental self-leadership and spirituality-based leadership where people continually expand their capacity to create the results that they truly desire; where new and expansive patterns of thinking are nurtured, collective aspiration is set free, and people continually learn to see the whole together, practice new ways of relating, and promote values, trust, commitment, sharing and the ownership (Fry, 2003; Korac-Kakabadseet et al., 2002; Giberson et al., 2009; Kofman & Senge, 1993).

A knowledge organization leadership should let its workers have their allegiance to principles, values, ethics and legal codes, corporate mission and vision statements or some other higher order goals. Knowledge organization leaders should expect and the workers should reflect a behavior consistent with this concept of allegiance.

The seventh, and the last, proposition of this effort toward a theory of leading knowledge organizations is formulated and presented below, summarizing the research quoted and the *Propositions 2a and 2b* given earlier:

> ***Proposition 7.*** *Because of the practice of shared leadership in knowledge organizations, expecting workers to give their unquestioned loyalties to their superiors or other individuals may be detrimental to the functioning of the organization. Instead, the workers should be encouraged to commit to a set of principles.*

Integrating the Findings for Leading Knowledge Organization

On synthesizing the seven propositions, quantified in Table 1, we develop a process model of leadership for knowledge organizations where the power to lead is either not used or not made available. The findings convey that the leadership function in a knowledge organization is quite different from the same function in a traditional firm. We also learn that the first step in drafting a model of leadership for innovation requires eschewing authority, creating an environment that makes power ubiquitously available among all members (Hollander & Offermann, 1990; Monostori & Ueda, 2006; Osborn & Hunt, 2007; Pascale et al., 2000; Pearce & Manz, 2005; Pepper, 2003; Plowman et al., 2007a, 2007b; Uhl-Bien et al., 2007). It results in shared and revolving leadership (Heifetz & Linsky, 2002; Plowman & Duchon, 2008; Uhl-Bien et al., 2007).

Since work that leads to innovation is non-routine and creative, it is important that every member of the team have an *internalizer* behavior. This is how a knowledge worker or manager will find control of one's environment. It is important that this in-control belief comes from within the individual and leads to the increased intrinsic motivation for the improved performance. Our research shows that the leadership function will perform best in a low-power work environment where every member of the team is motivated to lead because of the presence of a mutualism that permits everyone in the group to draw a benefit from it in a well-understood manner.

Findings and Practical Implications

Knowledge organization management's goal should not be exclusively focused on releasing the external controls, but on how to turn the knowledge workers from the "controlled" into "in-control." This is where the role of symbiosis comes into play. It should endeavor to create a mutualism that looks after the specific drivers of intrinsic motivation of each knowledge worker. Mutualism will substitute the control lifted by the dilution of the organizational authority. Our findings ask for a lax control on the leader and the workers. Lax control is essential to encourage freedom, harbor creativity and bring out innovation (Pfeffer, 2005; Reiter-Palmon & Illies, 2004; Robertson & Swan, 2003). A perceived lack of the use of formal power in a work environment, where leadership is shared and shifts frequently, may cause a semblance of chaos, although short-lived. To avoid much disruption in the focus and outputs from the group, the system should provide an instrumentality for the switch to be smooth and quick. The required transition period should become much shorter as the group gets used to the frequent shifts in leadership without avowing them their allegiance. With the passage of time, the switch will become smooth. It is for this reason that the organizations have to be prepared to accept and tolerate chaos that eventually will turn into a homeostasis. Table 1 depicts how these findings were evolved from the leadership literature.

The model

The seven propositions of our findings on the leadership function have been integrated into a model to help managers unleash creativity and innovation of knowledge organizations. The model is represented in Figure 1. It starts by requiring all members of a team planning to operate in a knowledge organization to begin the process by unlearning traditional leadership style. Beginning the new process by distributing/sharing leadership as observed from Propositions 2a and 2b. The knowledge-organization leadership process will be complete when it incorporates the additional propositions, i.e., Propositions 3-7.

For the effective functioning of leadership in an environment where the use of formal power to manage is low, it is essential that the organization, or group and the individual members

of the group, must understand that the leadership will not work unless they all play their part in leading. This will transform everyone into an anabolic leader, resulting in increased energy levels in the organization, leading to greater productivity, efficiency and profits (Schneider & Somers, 2006).

     Operationalizing the model. To operationalize the model, the essential contexts for the group or organization and the individual members have to be considered. At the individual level, it is important to shed the traditional leadership process, refrain from using formal power, adopt internalizer behavior, expect and give allegiance to codes and ethics, and develop some tolerance for chaos. For effective leadership without the use of formal power, it will be important for the organization to engage in developing managers based on the individual contexts given here.

     For the organization, it is important to facilitate mutualism, devise lax control and develop a willingness to accept some chaos. Finally, it is important that leadership becomes available in all members throughout the organization. The low power use mechanism sets all members free, making them more powerful to lead and make decisions. The power to lead becomes ubiquitous and gets promulgated among all members of the group, and thus gives the organization much greater collective power.

     It is interesting to note that whilst diverse backgrounds and experiences of knowledge workers can facilitate creativity, it is important that a formal senior leader motivate everyone to step up and provide leadership depending on one's skills, expertise and the situation. This would also require a formal leader to practice lax control and not use authority to facilitate leadership for innovation organization so that the function of leading may emerge through interactions and informal networks as and when needed.

Conclusion, Discussion and Directions for Future Research

     Based on our survey of leadership literature, we have arrived at seven important facts collected as propositions. Each one of them is loaded with facts from the literature and has implications for the leadership. Each has takeaways for the managers of knowledge workers. The main theme of the findings is to lead the knowledge workers so that they feel free to do whatever they prefer to do as long as their acts fall within the broader goals of the organization. Managers should assume that they couldn't lead their knowledge workers better than they would lead themselves. We have posed challenges to the traditional leadership practices and addressed them in the context of knowledge work groups and knowledge organizations. A real-world example of traditional leadership that did not follow these precepts and the one that did is given in Table 2, depicting two CEOs at Hewlett-Packard.

     Given increasing globalization, importance of innovation as a competitive strategy, knowledge skill, and team-based work, we find that the utility of traditional leadership model is limited for knowledge organizations. Furthermore, there is a consensus for a need for the new governance approaches for the knowledge organizations (Leung, 2010; Amar et al., 2012). Over-reliance on a vertical leadership model in the context of knowledge workers can undermine the knowledge creation process and the creativity of workers (Hooker & Csikszentmihalyi, 2003; Pearce, 2004; Pfeffer, 2005; Reiter-Palmon & Illies, 2004; Robertson & Swan, 2003). According to the traditional model, organizational environmental controls that are grounded in authority have to be replaced by the intrinsic drivers to allow knowledge workers to remain in-control and be working for the overall good of the organization. To achieve this will also require devising and

making available to the workers certain supportive resources and management policies. The work on these should make the future research agenda on leadership for knowledge organizations.

There are also several other lines for further research in the context of leading knowledge organizations. Future research may involve testing of our proposed model under various conditions in several knowledge organizations. Moreover, since all contemporary organizations are moving towards the model of a knowledge organization, some aspects of the model presented here can be gainfully employed in any organization. It may be worthwhile conducting further research in this area. It would also be an important contribution to the literature if we could empirically know how it impacts the levels of creativity, innovation, and productivity of knowledge organizations that use it.

Another possible line for further research could be to investigate the shift in organizational motivation and performance if it used the leadership model developed here. It may also be interesting to explore the individual concepts presented in the seven propositions to study how organization size will moderate their applicability. One may ask if every one of these propositions is transferrable as is to any sized knowledge organizations, or would they need some adaptations. Overall, it is understood from the literature that the research is not anywhere close to arriving at this goal in the foreseeable future.

In essence, we find that leading knowledge organizations is essentially about enabling and stabilizing a sense of responsibility in their knowledge workers rather than improving how to organize and delegate tasks, or control their outcomes. To achieve this effectively, the management should aim to change the organizational systems from within to enable the creation of new modes of behavior that would fill in for the lack of leadership that needs power to operate. This is particularly relevant when it is becoming apparent that leadership models being practiced currently do not produce sustainable results, and impede the emergence of creativity and innovation in knowledge organizations.

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Table 1
Major Themes from the Scholarly and Applied Research on Leadership and the Deduced Propositions for Leading Knowledge Organizations for Innovation

Theme	Selective Evidence	Prop.	Proposition Substance
Leading knowledge workers is different from leading traditional workers	Rank et al., 2009; Martin, 2007; Mintzberg, 2008; Mumford et al, 2002, Mumford & Licuanan, 2004; Pearce, 2004; Pearce & Manz, 2005; Pearce & Sims, 2000, 2002	*P1*	Leading knowledge organizations is not the same as leading traditional organizations.
Formal leader eschew power	Vecchio *et al.,* 2010; Nemanich and Vera, 2009; Konradt and Andresen, 2009; Kirkman et al, 2009; Amar *et al.,* 2009; Amar, 2002; Cilliers, 2001; Fairholm, 2004; Guastello, 2007; Monostori & Ueda, 2006; Osborn & Hunt, 2007; Scott, 2004; Uhl-Bien et al., 2007; Weick et al., 2005; Yoo & Alavi, 2004	*P2 a) and b)*	In an organization, such as the knowledge organization, where a variety of specialized, unrelated or little-related tasks are executed, it is unlikely for one individual to effectively carry out the leadership responsibilities. A knowledge organization will benefit if the formal leader eschewed power and created an environment of shared leadership.
In-control behavior as measured by Rotter (1966)	Adeyemi-Belo, 2001; Lipton, 2005; Ness & Macaskill, 2003; Schultz & Schultz, 2005;	*P3*	In any organization where power use is low, such as a knowledge organization, a leader with an "in-control" behavior as reflected by "Internalizer" classification based on the scores on Rotter (1966) Internal-External scale will increase one's likelihood of success.
Create a mutualism that benefits all involved	Walter and Bruch, 2010; Buchen, 1998; Gardner, 1993, p.75; Northouse, 2006; Wituk et al., 2003, Westaby, 2010.	*P4*	The key source of the power to lead of a manager of a knowledge organization is his/her ability to create a mutualism that results in a benefit for all stakeholders of the knowledge work, i.e. the organization, the team members, the manager, and others.
Lax control of leaders and workers	(Coveney, 2003; Heifetz & Linsky, 2002, p. 25, 102; Pearce, 2004; Robertson & Swan, 2003; Pfeffer; 2005;	*P5*	In a low-power use organization, such as a knowledge organization, lax control should be ubiquitous to build a fluid, distributed and trust-based community. Lax control of leaders

			and workers improves the performance and quality of outcomes of the organization.
Chaos can occur but a natural order emerges on attaining homeostasis	Ashforth, 1989; Carley & Lee, 1998; Lichtenstein et al., 2006; McKelvey, 2001, 2007; Meyer et al., 2005; Osborn & Hunt, 2007	P6	Semblance of chaos in groups appears when a functioning leader frequently relinquishes power which one of other members of the group can fill. However, from chaos, a leadership homeostasis emerges and establishes an order according to which leadership becomes dormant and distributed in all group members.
Allegiance to principles and values instead of the individuals	Giberson *et al.*, 2009; Bolden et al., 2003; Caldwell et al., 2002; Dvir et al., 2002; Edgeman & Scherer, 2002; Mendonca, 2007; Pearce & Sims, 2002; Piccolo & Colquitt, 2006; Sparrowe, 2005; Zhu et al., 2004	P7	Because of the practice of shared leadership in knowledge organizations, it may be detrimental to the organization if workers gave their allegiance to the individuals, such as the current leaders. Instead, the workers should avow their allegiance to a set of principles and values, such as the ethics, professional codes, legal codes, and the organizational mission and vision.

Table 2
A Real-World Illustration of Leadership Model for Knowledge Organization with Its Converse

Flamboyant versus Symbiotic Leadership
The Case of Two CEOs of Hewlett-Packard—Carleton S. "Carly" Fiorina and Mark V. Hurd (Amar, 2007)
(Compiled by Professor A. D. Amar from the reports appearing in the popular press.)

| FLAMBOYANT	SYMBIOTIC
Visibility	**Visibility**
• **(i)** Fiorina had her portrait hung in HP lobby between its two founders, William R. Hewlett and David Packard	• **(i)** Hurd refused to have his picture put up.
• **(ii)** Fiorina traveled in an entourage	• **(ii)** Hurd came to HP Iowa plant driving in a rented Hertz car
• **(iii)** Emerged as one most recognized celebrity CEO	
Communication	**Communication**
• **(i)** Fiorina's public presentations were choreographed like rock stars	• **(i)** Hurd avoided press and mass media
• **(ii)** Fiorina's credo was "management is a performance"	• **(ii)** Hurd made standing-room-only talk in the cafeteria using flip charts
	• **(iii)** Hurd talked to his subordinates like their favorite professor, leading them through issues until they understood them
Management Style	**Management Style**
• "Look-at-me" management style	• Cranked up earnings through smart cost-cutting moves
Organization	**Organization**
• Fiorina resisted sharing operating duties	• Split time equally among employees, customers, and investors
• Fiorina will take credit for HP's comeback even after she was fired from HP.	
Reinforcement	**Reinforcement**
• Subordinates walked out with her like "bad children going to be punished"	• Hurd is likely to challenge than chastise
Outcomes	**Outcomes**
• **(i)** Company remained in doldrums.	• **(i)** Took market share in printers and PCs.
• (II) Stock was in a malaise.	• **(ii)** Boosted operating margins from 4% to 6.9%
• **(ii)** Boardroom in-fights were common; got pushed into courts for external intervention.	
Subordinate Response	**Subordinate Response**
• Colleagues and workers did their jobs.	• Colleagues and workers really wanted him to succeed.
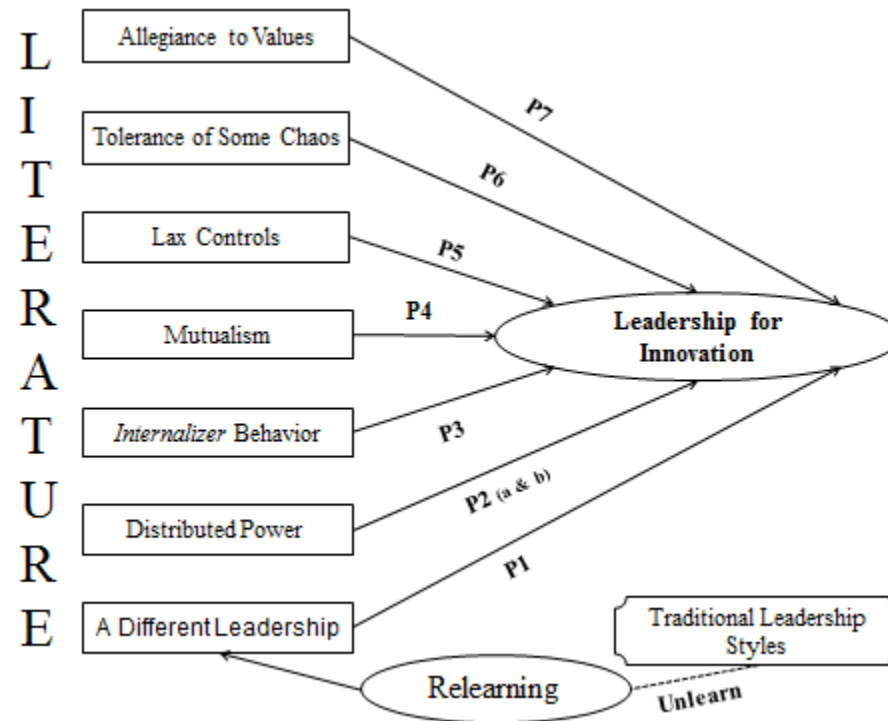
Figure 1
The Seven Knowledge Organization Leadership Characteristics Drawn from the literature