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EXPLORING THE RELATIONSHIP BETWEEN KNOWLEDGE MANAGEMENT AND TRANSFORMATIONAL LEADERSHIP

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ABSTRACT

As we move rapidly into the 21st century leaders face the challenge of being effective in a global knowledge environment. Now, more than ever, leaders must play the key role in helping organizations cope with the challenges they face from expanding knowledge and knowledge systems. This study (N = 845) investigated the relationship between transformational, transactional, and laissez-faire leadership and knowledge management. Knowledge management behaviors were a predictor variable for transformational leadership, and a negative predictor of laissez-faire leadership. Knowledge management behaviors was not related to transactional leadership overall, but was related to each subscale. This finding warrants further investigation. Implications for leadership educators are discussed.

INTRODUCTION

Nearly every modern organization is confronting the change in information systems, from ledger cards to a digital era. Today, information flows in directions and with speed that only 10 years ago we could not even imagine. The change has been nothing short of a revolution. This trend toward "informatics" effects the process of leadership by speeding up the inputs, requiring faster and more personal transformation of the product, all in a business climate that builds competition through "response time" to customer demands. To be certain, the role of leaders in the short-term future is impacted by the current information revolution.

Additionally, the information age has put great pressure on organizational outcomes. "Just in time" solutions have replaced "on hand" inventory, and product quality is more important than ever before. One of the most serious issues facing the modern organization comes in the form of an uncertain future and a rate of change that seems staggering today, but will only geometrically intensify as information systems become widely instituted. In short, the modern organization is forced to produce something faster than ever and better than ever for a rapidly evolving market.

AN EMERGING KNOWLEDGE ORGANIZATION

Over the past 15 years the term "knowledge management" has evolved to represent the changing nature of the workplace – a true paradigm shift. In coining the phrase "knowledge society" Peter Drucker convincingly argued that land, labor, and capital – the classical factors of production – had been largely replaced by knowledge (Drucker, 1993), "that knowledge has become *the* resource, rather than *a* resource, is what makes our society 'post-capitalist'"(p. 45). The modern knowledge organization has become a social environment designed by the specialists, to meet the needs of the market and the specialists, in the most efficient and quickest way possible. Lang (2001) clarified the importance of the knowledge worker in this new age, "while the knowledge worker may need the tools of production the organization owns, while she may well have to work in organizations, she nevertheless owns the means of production" (p. 44). Hitt (1995) further argued, "It seems evident that the learning organization is a paradigm shift from the more traditional organization. Indeed, it is a paradigm shift of the highest order. We are witnessing the emergence of a radically new perspective of organization: how they should function, how they should be managed, and how they should cope with change" (Hitt, 1995, p. 17). Rowley (1999) suggested that "the knowledge based society has arrived, and those organizations that can succeed in the global information society are those that can identify, value, create, and evolve their knowledge assets" (p. 416). Rowley continued by noting that effective management of knowledge, change, and innovation are central or "core competencies" that must be mastered for organizations to succeed. Neef (1999) expanded the more micro-level view of knowledge management by commenting,

> A knowledge-based revolution is taking place, and it comes in a matching set: knowledge management for organizations and the knowledge-based economy for nations themselves. Both are part of a major evolutionary economic movement which is beginning to reshape the global economic structure, and knowledge management should be seen as one of the most concrete and important set of practices and policies than an organization can adopt, marking a significant step in an enterprise's evolution toward becoming a global, learning organization that can survive in the knowledge based economy (p. 72).

BASICS OF KNOWLEDGE MANAGEMENT

As a preliminary consideration, it seems important to define the seemingly self-evident term – knowledge. While *prima facie* it seems obvious, the reality is that knowledge is quite complex (Clark & Rollo, 2001). Of central importance is the type of knowledge that organizations are forced to manage. If all knowledge were codified and formal, or explicit, then the function of knowledge management would be little more than compliance and management. Nevertheless, the reality is that much of the information that organizations try to manage is held within the personal and collective experiences of the workforce; it is tacit knowledge. Bollinger and Smith (2001) explained, "Tacit knowledge is unarticulated knowledge that is in a person's head that is often difficult to describe and transfer. It includes lessons learned, know-how, judgment, rules of thumb, and intuition…it is key characteristic of team-based learning organizations" (p. 9). Further clarifying this point, Lang (2001) stated that, "knowledge is both produced and held collectively rather than individually in tightly knit groups or 'communities of practice'…organizational knowledge is social in character" (p. 46). Tacit knowledge is an important resource of organizations given that 42% of corporate knowledge is held within employee's minds (Clarke & Rollo, 2001).

Knowledge management is jointly a goal and a process. As an outcome or goal, knowledge management is entirely focused on sharing information for the benefit of the organization, as Bollinger and Smith (2001) concluded. They reasoned, "the knowledge management process is not so much about control as it is about sharing, collaboration, and making the best possible use of a strategic resource" (p. 14). Explicit knowledge is generally easy to access and manage, but tacit knowledge often defies capture given its highly personal and subjective, but critical, nature. Knowledge management is primarily about making tacit knowledge more accessible since it accounts for a majority of an organization's collective knowledge (Clarke & Rollo, 2001). Lang (2001) explicated the goal of knowledge management, "Knowledge management systems must connect people to enable them to think together and to take time to articulate and share information and insights they know are useful to their company" (p. 44). Stonehouse and Pemberton (1999) also suggested, "it is the role of knowledge management to ensure that individual learning becomes organizational learning" (p. 132). Birkinshaw (2001) referred to this process as 'recycling' old knowledge. Knowledge management is a complex process without end, but effective knowledge management can be a goal for any organization.

The process of knowledge management is based on the ability of all members of the organization to add value to the basic business processes through the creation, communication, codification, and coordination of both explicit and tacit knowledge stores (Nonaka & Takeuchi, 1995). Specifically, Nonaka and Takeuchi (1995) theorized that the flow of knowledge transitions from socialization, to externalization, to combination, and finally to internalization – basically from the raw experience, to understanding, then to categorization, and finally to the creation of personal mental models that transcend the experience.

Various authors discuss the specific processes associated with knowledge management. Galagan (1997) proposed the following sample list of knowledge management processes:

- Generating new knowledge,

- Accessing knowledge from external sources,
- Representing knowledge in documents, databases, software, etc.,
- Embedding knowledge in products, processes, or services,
- Transferring existing knowledge around an organization,
- Using accessible knowledge in decision making,
- Facilitating knowledge growth through culture and incentives,
- Measuring the value of knowledge assets and the impact of knowledge management.

Baines (1997) put the knowledge management process squarely at the intersection of technology, organizational structures, and cognitive based strategies. In this case, technology becomes the tool, the organizational structure becomes the context, and the knowledge becomes the 'stuff' of great advances. Seng, Zannes, and Pace (2002) developed five distinct steps in the process of managing knowledge:

1. Capturing knowledge. Record steps involved in solving a problem.
2. Storing knowledge. Capture information must be stored in a database, warehouse, application, or some other production system.
3. Processing knowledge. Sorting, filtering, organizing, analyzing, comparing, correlating, and mining the knowledge.
4. Sharing knowledge. Distributing knowledge through information systems or through personal interaction, synchronously or asynchronously.
5. Using knowledge. Solving problems to advance the objectives of the organization.

Finally, Barth (2003) detailed several distinctive personal knowledge management tools. The framework that Barth details provides perhaps the most effective and developed comprehensive categorization of personal knowledge management tools. They included:

1. Accessing. Search strategies, research, inquiry.
2. Evaluating. Judgment, confirmation of information, qualification.
3. Organizing. Filtering, discarding, filing and archiving.
4. Analyzing. Critical thinking, sense-making, testing hypotheses.
5. Conveying. Explaining, presenting, written and spoken conveyance.
6. Collaborating. Messaging, sharing documents, meetings and conversations.
7. Securing. Self-discipline, backup, inoculation, threat awareness.

Of the conclusions that could be drawn regarding the specific processes of knowledge management, two quickly come to mind for these authors. First, each of the knowledge management process has been traditionally the domain of leaders and managers. Second, these processes, as in the past, require much more than just a technological solution.

TRANSFORMATIONAL LEADERSHIP THEORY

The original formulation of transformational leadership theory comes from Burns (1978). At the core of transformational leadership is the concept of transformation, or change of the organization. Tichy and Devanna (1986) noted that companies were being asked to make fundamental changes. Transformational leadership best reflects this change (Bass, 1985). Burns (1978) defined transformational leadership as a process in which "leaders and followers raise one another to higher levels of morality and motivation" (p. 20). A chief element of transformation is the ability to cultivate the needs of the follower in a follower centered (person-centered) manner. According to Burns, focusing on needs makes leaders accountable to the follower. First, Burns contended that followers are driven by a moral need, the need to champion a cause, or the need to take a higher moral stance on an issue. People like to feel that a higher

organizational spiritual mission guides their motives. The second need is a paradoxical drive for consistency and conflict. Transforming leaders must help followers make sense out of inconsistency. Conflict is necessary to create alternatives and to make change possible. The process of transformation is founded on empathy, understanding, insight, and consideration; not manipulation, power wielding, or coercion. Tichy and Devanna (1986) defined transformation best, "Transformational leadership is about change, innovation, and entrepreneurship" (p. viii).

Few researchers address the link between information management and leadership, and even fewer address the relationship between transformational leadership and knowledge management. According to Klenke (1994), information technology and the actions of leaders create new organizational forms. Leadership is at the center of the interaction between task demands, people, technology, and organization structure. The relationship between innovation and leadership is difficult to articulate given the variety of functional leadership behaviors and the range of information technologies. Technology and leadership have reciprocal effects on each other; a change in one necessitates a change in the other. Brown (1994) speculated that transformational leadership is needed in an evolving technological society. Societal, we are moving from controlled change to accelerated change nearly beyond control. Both attitude and behavior must be the target of transformational leaders. The primary reason for technological change failure was fear. The role of transformational leaders was to reform fear into motivation. Transformational leaders must meet market demands faster and better than before, given the increasingly interdependent economy.

Limited research addressed the relationship between innovation and transformational leadership. Howell and Higgins (1990a, 1990b, 1990c) contended that champions of innovation were significantly more transformational than non-champions. Champions are generally considered to be key organizational decision-makers that advocate enhanced use of technological solutions, but often are not as technologically literate as specialists in the organization. Champions operate in three ways:

- Implement rational methods that promote sound decision making based on organizational rules and procedures,
- Engage in a participative process, enlisting others' help to gain approval and implementation of the innovation,
- Work outside the formal channels of bureaucratic rules and engage in the renegade process (Howell & Higgins, 1990a, 1990b, 1990c).

Howell and Higgins (1990c) compiled a list of attributes of champions: high self-confidence, persistence, energy, risk taking, credible, and winning. They concluded that champions are found in all organizations and without champions "organizations may have lots of ideas but few tangible innovations" (p. 36). Their research was deficient in the methods used in identifying champion status.

In a series of articles, Crawford (1998), Crawford and Strohkirch (1997a, 1997b, 2000), and Crawford, Gould, and Scott (2003) established the argument that transformational leadership was related to personal innovation. In their findings, transformational leaders were significantly more innovative than transactional and laissez-faire leaders. Innovation is often noted as one of the important characteristics of knowledge managers. The behavioral manifestation of innovation is the ability to create and manage information and knowledge. Given the substantial relationship between innovation and transformational leadership, research looking at the

relationship of the outcome of innovation (knowledge management) and transformational leadership seems more than deserving of investigation (Bryant, 2003; Crawford & Strohkirch, 2002).

LEADERSHIP IN KNOWLEDGE ORGANIZATIONS

Mahoney (2000) crystallized the position well, "Let me say from the start that in my view leadership must exist at all levels in an organization, regardless of the size, for it to consider itself a learning organization….there is no excuse for them [leaders] not creating an environment where everyone can participate in this process" (p. 241). Bailey and Clarke (2000) highlighted the disconnect in how leadership has not kept pace with the need to understand the role of knowledge, "for some reason many managers have yet to grasp the clear personal relevance, utility, and organizational significance of knowledge management" (p. 235). They further reported that many leaders felt that knowledge management was more fad than reality, or struggled to both conceptualize and practice knowledge management.

Baines (1997) suggested that leaders, first and foremost, were responsible for learning – both personally as well as organizationally. Scharmer (2001) charged leaders with a nearly impossible task, "Leaders…face a new challenge. Leaders must be able to see the emerging opportunities before they become manifest in the marketplace" (p. 137). Leaders play a crucial role in building and maintaining an organizational culture of learning. They specifically infer that leaders must attach a high value to knowledge, encourage questioning and experimentation through empowerment, build trust, and facilitate experiential learning of tacit knowledge (Stonehouse & Pemberton, 1999). Bollinger and Smith (2001) echoed the same sentiments when suggesting that leaders need to focus on:

- Establishing a culture that respects knowledge, reinforces its sharing, retains its people, and builds loyalty to the organization,
- Ensuring that anyone in a supervisory position receive training, empowerment, and support to promote the desired culture,
- Establishing a knowledge infrastructure and support system that enhances and facilitates sharing and application of knowledge.

Davenport and Prusak (1998) also gave very specific recommendations to would be leaders regarding their role in knowledge management. They suggest that leaders:

- Advocate the importance of learning and knowledge in an organization,
- Design, implement, and oversee an organization's learning infrastructure,
- Manage relationships with external knowledge providers,
- Provide ideas to improve the process of knowledge creation in the organization,
- Design and implement a knowledge codification approach.
- Measure and manage the value of knowledge,
- Manage the organization's professional knowledge managers,
- Lead the development of learning and knowledge strategies, focusing the organization's resources.

Lang (2001) provided further substance when arguing that human relationships within an organization are crucial for knowledge creation, sharing, and utilization. Lang expressed, "The real task of knowledge management is to connect people to people to enable them to share what expertise and knowledge they have at the moment" (p. 55). Hitt (1995) also identified that

leaders needed to empower all members of the learning organization by developing a shared vision, providing resources, delegating authority, celebrating success, and most important, by being a learning architect.

Some limited empirical findings on the role of leadership in the knowledge organization have been published, but this type of investigation has not been the norm. On the basis of several case studies of knowledge organizations Waldersee (1997) concluded that leaders should target five specific areas:

- Maximize message reception,
- Create and embed an intellectual transformation of the workforce,
- Motivate to learn,
- Raise self-confidence,
- Enable navigation through a changing environment.

In a limited interview of leaders Johnson (2002) found a common theme, "A critical point, though, is that they paid attention themselves [sic] to the learning organization initiative….The idea that everyone in the organization pay attention to learning ran through the data" (p. 246). Johnson (2002) made several conclusions based on the data, but of most significance is the idea that knowledge management applies to the entire organization, from top to bottom. Finally, in a more substantial empirical piece, Politis (2001) looked at the relationship between self-management, transformational/ transactional leadership, and various knowledge management attributes. Politis found that self-management, transformational, and transactional leadership styles are related to dimensions of knowledge acquisition. Specifically, Politis concluded:

> It is the participative and self-management leadership style that encourages and facilitates these attributes (behavioral skills and traits of knowledge workers) that are essential for knowledge management (acquisition) and knowledge sharing. It is the participative and self-management leadership style that has clear and conscious knowledge strategy if the enterprise is to take advantage of the knowledge available in impacting efficiency, effectiveness, productivity, and competitive position (p. 362).

Politis further commented about the need for leaders to act within an empowered environment. The empirical findings, though limited, seem to lend some support to the theoretical assumptions made by many authors speaking of the need for participative collaborative leadership in the face of the transition to the knowledge society.

Finally, Bryant (2003) argued that there is a clear relationship between transformational leadership and knowledge management in organizations. While his piece is pre-empirical, this foundation serves as ample motivation for further investigation of the relationship between the two concepts. Bryant (2003) made the point very clearly,

> The greatest need in this area is empirical testing of the organizational knowledge constructs. Researchers may want to explore…the link between transformational leadership and managing knowledge at the individual and group levels and the link between transactional leadership and managing knowledge at the organizational level (p. 41).

These findings lead one to speculate about the causal relationship between transformational leadership and knowledge management. Bryant's research provides some basis from which to speculate that knowledge management behaviors might be a causative factor influencing greater transformational leadership.

METHODS

Subjects

Subjects (N = 845) were selected from a sample of students (and other associated individuals) taking classes in a non-traditional graduate degree program. Over 50% of the subject population was over 30 years of age. There were slightly more females completing the assessment than males. Well over 50% had been employed for over 5 years, and well over 50% were in positions of management (ranging from supervisory to executive level). Finally, over 90% of the sample indicated that they used computer technology more than irregularly, and by far, most used computer technology on a daily basis.

Procedure

The entire instrument battery was administered to subjects following a brief set of instructions. Subjects were asked to grant legal consent and to indicate if they wished for more information following the accumulation of results. Subjects were given ample time to complete the instrument (generally 20 minutes was sufficient). Participants were asked to return the instrument to an instructed location when they completed it. Following administration of the instrument battery data analysis occurred.

Instrumentation

The first instrument utilized in this instrument battery was the Knowledge Management Inventory (KMI). This inventory focused exclusively on the behavioral aspects of knowledge management and the content of the questions was derived from the Barth (2003) typology of personal knowledge management categories. Barth had seven categories of personal knowledge management and four questions from each of the categories were selected for the KMI. Once created, the KMI was administered to a pilot sample (N = 99) for the purposes of establishing reliability estimates ($\alpha = .86$). Two of the questions were further clarified based on this analysis to improve the instrument. The KMI achieved an alpha reliability of .88 in this sampling.

The second instrument, the Multifactor Leadership Questionnaire (Version 5-S) created by Bass (1985), is a 70 item survey consisting of four subscales of transformational leadership acts (charisma, individual consideration, intellectual stimulation, and inspiration), two subscales of transactional leadership acts (contingent reward and management by exception), and one scale measuring laissez-faire leadership. Subject's self-reported specific leadership attributes using five point Likert scales ranging from strongly agree to strongly disagree. The MLQ has been found to be very reliable (Howell & Higgins, 1990a) as either a self-report measure or as a measure of a superior's performance. In the present application the MLQ was used as a self-report of transformational, transactional, and laissez-faire leadership attributes and had an $\alpha = .89$ reliability score, which was consistent with prior research.

Finally, several questions regarding basic demographics of the sample were deemed important for this investigation. Subjects were asked to report on the following: age, sex, years employed, education, type of career, use of technology.

RESULTS

Table 1 details the descriptive statistics for each of the variables involved in this study.

Table 1
Select Descriptive Statistics

Variable Name	**n**	**Min**	**Max**	**Mean**
Knowledge Management Inventory	803	73	140	115.16
Transformational	726	89	176	135.49
Transformational - Charisma	762	22	50	36.59
Transformational - Individual Consideration	764	24	50	39.04
Transformational – Intellectual Stimulation	761	21	50	37.34
Transformational – Inspiration	766	14	35	22.77
Transactional	734	44	91	64.90
Transactional – Contingent Reward	749	22	48	34.05
Transactional – Management by Exception	761	16	44	30.84
Laissez-faire	767	10	43	22.62

The primary goal of this investigation was to assess the relationship between transformational leadership and knowledge management behaviors. The research by Bryant (2003) speculated that knowledge management behaviors may influence the overall level of transformational leadership. To determine the extent of the relationship between transformational, transactional, and laissez-faire factors, several correlations were computed. They are detailed in Table 2.

Table 2
Correlation Coefficients and Significance with Knowledge Management

Variable Correlated with Knowledge Management	**R Coefficient**	**Significance**
Transformational	.462 **	.000
Transformational - Charisma	.414 **	.000
Transformational - Individual Consideration	.430 **	.000
Transformational – Intellectual Stimulation	.453 **	.000
Transformational – Inspiration	.227 **	.000
Transactional	-.023	.547
Transactional – Contingent Reward	.153 **	.000
Transactional – Management by Exception	-.175 **	.000
Laissez-faire	-.400 **	.000

** indicates significant

Based on the highly significant correlations, a regression analysis was performed looking at the amount of variance in transformational leadership accounted for by knowledge management behaviors. The results of that analysis indicates that 21% of the variance of transformational leadership was accounted for by knowledge management ($F = 186.08$; $df = 1, 687$; $p > .0001$).

Table 3
Summary of Regression Analysis for Knowledge Management Predicting Transformational Leadership

Variable	***B***	**SE *B***	**β**	**t**	**Prob**
Knowledge Management Inventory	.598	.044	.462	13.64	.001

A regression model looking at the impact of knowledge management on transactional leadership indicated no significant finding (F = .364, ns). Finally, the impact of knowledge management on laissez-faire leadership was explored. The resulting regression model showed that 16% of the variance of laissez-faire leadership was accounted for by knowledge management (F = 138.13; df = 1, 687; p > .0001).

Table 4
Summary of Regression Analysis for Knowledge Management Predicting Laissez-faire Leadership

Variable	***B***	**SE *B***	**β**	**t**	**Prob**
Knowledge Management Inventory	-.195	.017	-.400	11.753	.001

Given the highly significant negative correlation, the relationship is inverse. This indicates that as knowledge management behaviors increase, the level of laissez-faire leadership decreases.

DISCUSSION

Without question, the results of this study provide ample support for the notion that knowledge management and follower-centered leadership are strongly related to each other. Many of the researchers that have theorized about the relationship have lacked empirical data on which to base their ideas, but this study clearly details the link. Researchers like Bryant (2003), Johnson (2002), and Politis (2001) provided the theoretical basis, but without empirical support the relationship was assumed, but unproven.

Among the most specific findings in this research study is the strong relationship between transformational leadership and knowledge management behaviors. In an initial investigation of the relationship, a correlation procedure demonstrated the undeniable link. This link led to a further investigation through the use of a regression analysis to establish the validity of a causal relationship. The regression analysis provided strong evidence of the causal nature of the link between the two variables. The strong R squared value associated with the relationship suggests that a substantial amount of variance in transformation leadership can be accounted for by knowledge management skills (21%). This research finding is certainly in parallel with prior research by Crawford (1998, 2000, 2003) that isolated the strong link between transformational leadership and innovation. That set of studies demonstrated that 30.8% of the variance of transformational leadership could be attributed to personal innovativeness. One might reason that innovation, as a personal construct, may be manifest outward through knowledge management behaviors.

Another interesting finding in this present investigation deals with the relationship between transactional leadership and knowledge management. Due to the technical nature of knowledge management, one might reasonably argue that effective managers need only adopt

transactional strategies. Transactional strategies tend to be less focused on the personal development of the followers and more centered on goal attainment. However, this study did not find that to be the case. The only significant findings that related transactional leadership to knowledge management were significant correlations between knowledge management and contingent reward, and a significant negative correlation with management by exception. The overall relationship between knowledge management and transactional leadership did not approach any level of significance. Given these interesting and conflicting findings, further investigation into the relationship is warranted.

A final interesting finding emerging from this data surrounds the relationship between laissez-faire leadership and knowledge management. This study found that knowledge management was a strong negative predictor of laissez-faire leadership. This finding, while not surprising, provides further basis for the assumption that knowledge management is more related to active follower-centered leadership. In this model, knowledge management accounted for 16% of the variance of laissez-faire leadership. The correlation was negative, demonstrating an inverse relationship between the two.

Implications for Leadership Educators

The real importance of these findings centers less on the statistical models and much more on how leadership educators use this information to make better experiences for students. This research points to a few inescapable conclusions. First, part of the essence of leadership must be the ability to manage technical knowledge. This finding has been echoed many times, in both theoretical and empirical investigations. Leadership educators would be remiss if they sought to teach the value of follower growth without some focus on the necessity of dealing with the technical aspects of organizational knowledge as Johnson (2002) opined. In every modern organization, the drive to become more knowledge focused is nearly inherent. As organizations have realigned over the last 20 to 30 years to include substantial IT departments, and as more business is conducted in the realm of electronic world, it seems that leaders must not just cope with this change. They must be on the cutting edge of these rapid organizational changes. Leadership educators should be at the forefront in teaching students how to manage knowledge through both technical and human solutions. To avoid the technical is to miss part of our essence.

Second, and seemingly contradictory, leadership educators must remain true to their basic assumption that leadership is more about personal interaction and empowerment, and less about the technical aspects. To lose track of that which separates us from technical training and management would be to lose part of our distinctive character and mission as a field. What must be done is to seek an appropriate balance between understanding the immutable role of knowledge management and technology and the actual teaching of technical skills. Some will seek to take leadership education to a new plateau by implementing knowledge management into the curriculum, by making every student engage in technical exercises for the purpose of making them computer savvy "power users". We must approach this path with caution if we are to retain a focus on followers. Clearly, the educational environment has become much more focused on the use of technology, but in the leadership class there must always be a realization that the technology is secondary to the human interaction that knowledge management skills support.

In our digital world, facing the reality of learning and utilizing knowledge management tools is extremely important. Leaders at all levels must adapt to these changes in order to propel our rapidly evolving organizations to greater successes. This study has demonstrated an empirical link between transformational follower-centered forms of leadership and knowledge management behaviors. This link simply provides basis from which to grow new theories of leadership to help members of the new knowledge organization turn implicit knowledge into significant organizational outcomes.

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