The Role of Leadership in Knowledge Transfer

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Abstract

This is a theoretical paper aiming to probe the existing literature regarding how the transfer of knowledge within modern organizations is influenced by leadership. It analyzes the difficulties of knowledge transfer resulting from the characteristics of modern organizations such as organization culture, geographical barrier and the misuse of IT. The author argues that leadership, especially team/shared leadership is a key to solve these problems. It is not enough to simply identify patterns of behavior and routines as existing knowledge transfer studies do. To better understand knowledge transfer, more attention should be paid to individuals and their interaction with the environment, particularly leadership, the micro aspect of organizational behavior.

Key words: knowledge management; Knowledge transfer; leadership

INTRODUCTION

Knowledge is a vastly complex entity as it operates in the real world and in the business setting. However, there are multiple ways of modeling the manner in which it is transferred, stored, and distributed; these models are becoming increasingly essential for optimizing the spread of knowledge within the modern business environment. Globalization, Information Technology, and the general trend of global homogenization have all served to increase competitiveness; this, in turn, has increased the importance of knowledge transfer and knowledge management—or KM—within individual organizations. To a large extent, knowledge transfer can be manipulated through the methods of organizational leadership that a business employs; in other words, the hierarchical manner in which a business is organized can either help or hinder the appropriate distribution of knowledge.

The fundamental purpose of this paper is to probe the existing literature regarding how the transfer of knowledge within modern organizations is influenced by leadership. Although there has been a substantial amount of research conducted analyzing the way knowledge is transferred within organizations, and there has been research illuminating the significance of leadership within these organizations, few have taken a truly comprehensive look at the issue. At the heart of this matter is the question of how the business environment influences the patterns of behavior that occur within it, and how this environment, in turn, can potentially be manipulated to seek a desired outcome. So, what is often overlooked is that the environment—particularly, the organization and distribution of leadership can either be beneficial or detrimental to the transfer of knowledge. Consequently, we should anticipate that different problems associated with

knowledge transfer, such as tacitness, can be overcome by organizational leaders through deliberate restructuring. However, as some of the literature contends, the models for how this may be conducted will vary depending upon the organization—its goals, its personnel, and its leadership.

KNOWLEDGE MANAGEMENT AND TRANSFER

Constructing appropriate models of knowledge is exceptionally difficult; this is centrally because it must be treated as a theoretical variable when, in fact, its actual functioning is likely to be vastly more complex than any model can actually approximate. Nevertheless, the errors involved in such approximations should not lead us to believe that modeling knowledge transfer is not a beneficial endeavor. After all, such models can both serve as goals to which organizations should strive and as tools with which to uncover some underlying inefficiencies within a given organization. According to David Vance and Jim Eynon at Southern Illinois University, a common knowledge transfer function can be written mathematically as:

$$K1 = [(I \times Wsystem \times BWsource) + (K0 \times Wreceiver)]$$[1]

In this formula, K1 is the amount of knowledge held by the receiver, whereas K0 is the knowledge originally held, I is the target information to be transferred, Wsystem is the warrant of the knowledge management system, Wsource is the warrant of the knowledge provider, while B is simply a probability coefficient. The usefulness of this formulaic model is that it clearly identifies the optimal purpose of knowledge transfer: to maximize the amount of knowledge gained by the receiver through the transferal process (K1 – K0). So, although it may not be a completely straightforward mathematical operation, the model puts a quantitative slant on what might otherwise be conceived of as a qualitative dilemma. It is a handy formula also because it attempts to approximate some of the key factors contributing to the efficiency of knowledge transfer: cultural, economic, political, and geographical barriers. Even though there may not be an obvious

[1] Liebowitz, Jay. *Building Organizational Intelligence: a Knowledge Management Primer*. New York: CRC Press, 2000. Page 37.

way to enter these concerns into a mathematical formula, a simple glance at this formula will suggest to anyone that they must be taken into consideration. Still, with the face of the global marketplace changing so rapidly, it is important to recognize the newly emerging ways in which such barriers could possibly be overcome or addressed to some extent.

Knowledge management is increasingly linking itself with information technology—IT—in ways that help businesses to bring together multiple pieces of information, from diverse locations, and mold them into a form that is easily accessible and understandable. Some companies are finding not only that bringing IT into the picture with respect to KM is beneficial, but that in the growing global focus of modern business this marriage is becoming almost essential: "As merger deals become increasingly global, law firm Baker and McKenzie has found electronic collaboration a necessity to serve far-flung clients and their transactions."[2] This approach is advantageous not only because clients, lawyers and business-partners for this particular firm are located across the world, but also because the IT application being used manages to consolidate information from such a variety of sources into a program that is easy to access and utilize. In other words, if the application did not exist, an individual lawyer, for example, would need to contact or meet with numerous individuals in order to even obtain the information that is readily available through their application. Baker and McKenzie has chosen to use NextPage Inc.'s Matrix peer-to-peer software; it is an application that allows individuals working for and with the firm to simply store pertinent information upon their own personal computers, and this information is automatically shared with everyone else who can access the business software. Fundamentally, the advantages of such an approach include decreased costs—associated with travel—and increased productivity and time management—associated with the immediacy of the transfer of information.

However, such benefits only come if both the software is easy to use, and the business is willing to sometimes alter their established practices in order to ease the transfer of information through such systems. Broadly, "The challenge in reducing such waste and increasing productivity is to help employees to find what they need, when they

[2] Mosquera, Mary. "Law Firm Collaborates Globally." *InternetWeek*, iss. 883, Oct. 22, 2001.

need it."[3] Although it may almost always seem like a good idea to hand KM over to a computer program, it should come as no surprise that computer programs can often be very difficult to navigate for individuals who are unfamiliar with them. As a result, there is a call for software developers to put together programs that are easy to use, and for companies to be very careful to make sure that the applications they choose are appropriate to their business needs.

One way to develop a KM system that can be easily used by any given company is to intimately look at major Internet corporations that have succeeded, largely, upon the shoulders of their ease of use: "A good place to start is to consider how the innovative giants of the Internet—Google, EBay and Amazon.com—have built business models around attracting and retaining customers."[4] Such companies have succeeded, in part, because searching for specific products on their sites can be done in multiple ways, and related information is automatically provided. Essentially, if the basics of developing a good website are followed when putting together appropriate KM software, then employees are much more likely to be able to locate the information they are seeking and to do so more readily.

Another obstacle to making the most of KM through the use of IT can sometimes be the general attitude of employees within a business organization. One analyst argues that "companies need to convince people to reject old-school thinking that they are being measured by what they know and do individually. Such thinking only perpetuates knowledge hoarding, an unproductive remnant of an era when workers were trained to play it close to the vest."[5] The overall idea is that the free transfer of knowledge within most organizations is beneficial to overall productivity. The feeling of many employees that they are competing with one another, however, detracts from the overarching goals of the business; as a result, convincing employees to make proper use of IT in the workplace requires employers to minimize the sense that knowledge hoarding is advantageous to anyone. So, "Why do not more organizations make the necessary improvements and achieve a speedy recovery? Because their cultures do not support the

[3] Weiss, Leigh et al. "Learning from the Internet Giants." *Harvard Business School Press*, 2003. Page 79.
[4] Weiss 79.
[5] Woods, Bob. "Sharing the Intellectual Wealth." *Chief Executive*, July 2001. Page 20.

knowledge sharing and transfer process."[6] Consequently, organizations need to develop incentives to thwart the counterproductive desire of some employees to keep valuable knowledge to themselves. The most obvious way to accomplish this is to organize the work environment such that the focus is upon group work and problem solving; if this is accomplished the goal of each individual employee will to be advance the interests of the team and knowledge will be shared much more readily.

Craig L. Pearce offers a comprehensive examination of how vertical and shared forms of leadership can be used most effectively in the context of KM. He believes that vertical leadership and shared leadership are positively associated and that they are not mutually exclusive.[7] He argues that there is a trend in knowledge work heading towards shared leadership, but offers little concrete evidence as to why this trend should be so; instead, he supplies some broad patterns that have generally led to what he calls "the shift toward team-based knowledge leadership."[8] Essentially, he argues that the needs of many organizations are increasingly being filled by teams with members of varying skills and areas of specialty. As a result, organizations addressing their needs in this way cannot reliably depend upon vertical leadership from single individuals; this is because one person can no-longer be expected to fully grasp all of the intricacies that may go into the decision-making process, or to be able to properly acquire and apply the numerous forms of knowledge that modern organizations are forced to deal with. He fails to mention as a motivation for his discussion that, "There is a need to develop a systematic approach to building leadership capacity," yet much of the article handles this issue.[9] The answer, in many cases, is some form of shared leadership and what many have termed the "developmental perspective" in leadership.[10]

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[6] Cameron, Preston. "Managing Knowledge Assets." *CMA Management*, vol. 76, iss. 3, May 2002. Page 21.
[7] Ascher, B. "Vertical Versus Shared Leadership as Predictors of the Effectiveness of Change Management Teams." *Leadership Review*, 2003. Available: http://www.leadershipreview.org/2003fall/article4_fall_2003.asp.
[8] Pearce, C. "The future of leadership: combining vertical and shared leadership to transform knowledge work." *Academy of Management Executive*, vol. 18, no. 1, 2004. Page 47.
[9] West-Burnham, J. "Building Leadership Capacity—Helping Leaders Learn." *National College for School Leadership*, 2004. Available: //www.ncsl.org.uk/media/F7B/92/randd-building-lead-capacity.pdf.
[10] Cook-Greuter, S. R. "Making the Case for a Developmental Perspective." *Industrial and Commercial Training*, vol. 36, iss. 7, 2004. Page 1.

Still, Pearce does not imply that all organizational situations will benefit from shared leadership—merely that it is a growing trend that should be formally considered. Centrally, "Skills, performance and value creation are now intimately connected in the overall organization of a company."[11] In this light, Pearce unfurls the heart of his discussion: he aims to enumerate the types of situations in which shared leadership might be most beneficial, how these forms of leadership might best be attained and sustained, as well as how vertical and shared leadership might best be fitted together in the most efficient manners possible. From this perspective, leadership, to Pearce, is likely to be efficiently shared within organizations with high levels of interdependence, high levels of creativity, or high levels of complexity.

Once he has identified where shared leadership may be desirable, Pearce offers suggestions as to how it may be implemented. Fundamentally, he finds two main ways in which shared leadership can be developed: through the strict focus of the vertical leader, and through the specific formation of organizational systems. The vertical leader, in particular, needs to be concerned with the team's design and with managing the team's boundaries. Not disregarding these criteria, Pearce investigates the organizational systems that he believes facilitate the development of shared leadership most effectively. Specifically, these are: "(1) training and development systems; (2) reward systems; and (3) cultural systems."[12] Pearce discusses the extent to which knowledge transfer may be maximized by these systems, and then turns his attention to how the vertical leader should be able to lead, while encouraging leadership in those around him or her. He identifies three types of individual leadership which lend themselves nicely to shared leadership teams—transactional leadership, empowering leadership, and transformational leadership—and emphasizes the importance of maintenance on the part of the vertical leader. Finally, he concludes his article by reasserting his main points and warning against abruptly removing effective authoritarian leaders—change can come about gradually.

One immediate trouble with Pearce's conclusion is that he fails to mention the obvious contradiction associated with what he is promoting as the modern model for

[11] Bigras, Y. 2002, 'Transforming SMEs', *CMA Management*, vol. 76. Iss. 6.
[12] Pearce 51.

leadership: "hierarchical leaders are charged with creating less hierarchical organizations."[13] Certainly, this is a difficulty, but he offers no way for the vertical leader to navigate through it, and sticks to vague oversimplifications. One author suggests an answer that Pearce ignores, "it can be done cost-effectively, especially with the help of a trained guide."[14]

Overall, he tackles the topic of KM through leadership from a perspective of high generality and though he covers the consequences of his early claims, he seems to do so only superficially. It is obvious that Pearce holds that vertical leadership is preferable in certain circumstances, but at no point does he explicitly state what circumstances these may be. It would seem that the reader is forced to deduce what types of organizations need pure vertical leadership merely from their absence in his discussion.

Additionally, while Pearce is successful in making some points by citing scientific data, these instances appear to be far too few. The article is comprehensive, but the demand for more detailed analysis plagues it from the beginning. For instance he states, "Unfortunately, organizational reward systems are often out of sync with organizational leaders hope employees will do."[15] For this assertion, he cites a 1975 article from the *Academy of Management Review*; however, he fails to stop and elaborate upon exactly when and in what kind of organizations such phenomena occur. This is a recurrent problem with most of his scientific references: they are too general and leave many questions unanswered.

The largest flaw in Pearce's article, however, is that he fails to adequately back why shared leadership approaches should be more seriously considered. Elsewhere he formally develops a model for "how shared leadership moderates the relationship between vertical leadership by a sales manager and team responses" in marketing, but this particular article seems to leave him unable to cite many specifics.[16] Since he fails to take the hard position that they are overrunning vertical styles of leadership, he is left with a discussion of the major forces at work within shared leadership and not why it can

[13] Fletcher, J. K. and Kaufer, K. "Shared Leadership: Paradox and Possibility." In C. L. Pearce and J. A. Conger, *Shared Leadership: Reframing the Hows and Whys of Leadership*, Sage Publications, Thousand Oaks, 2003.
[14] Morgan, J. "Team Research News." *Team Trainers Consulting*, vol. 1, no. 11, 2004.
[15] Pearce 51.
[16] Perry, M. L. and Pearce C. "Who's leading the Selling Team? Vertical versus Shared Leadership in Team Selling." *Marketing Theory*, vol. 10, 1999. Page 169.

be a more efficient way to run an organization. Yet, even this could have been rectified had he provided more examples as to what fields of work creative, complex, and interdependent teams commonly appear in.

Nevertheless, Pearce's article is fairly compelling in presenting a new approach towards addressing the problems of knowledge transfer through organizational structure and shared leadership. One human resources strategist summarizes the change of perspective that is needed to most efficiently make use of knowledge capital through an analogy: "I think we're switching from football to soccer. Football is the game we played historically, where we get together in a huddle, talk about things, assign roles, and you go up to the line and execute. Soccer involves constant interaction, ongoing innovation, me feeding you, adjusting for one another. We're not fully interchangeable, but we support one another in an ongoing and non-hierarchical fashion."[17] The key to this possibility is the non-hierarchical nature of the modern business team; if the members of the team are not constantly jockeying for position against one another, then the free transfer of knowledge is not only possible, but is encouraged by such a system.

Broadly, the key to making the best use of IT for the purposes of KM has to do with handling employees' attitudes with respect to knowledge and ensuring that the way in which knowledge is shared is actually conducive to the overall goals of a particular business. Of the many companies that have implemented KM software over the past few years, many have still found that it has yet to make much of a positive impact upon their overall productivity; most likely, this is because many of these companies view IT as the automatic cure to their already existing KM problems—it is not. Although it superficially seems that IT should be able to come in and clean-up all the major information slowdowns and opportunity costs, this is not the case unless each individual company commits itself to putting together a KM system that addresses their specific needs. In short, the system does not stop merely with the purchasing of KM software.

Precisely what IT allows within a global business is the ability to operate in a far more flexible manner: "Previously, bankers, lawyers, accountants and auditors would have to meet regularly in person to review documents, discuss financials and complete a

[17] Woods, Bob. "Taking Stock of what You Know." *Chief Executive*, July 2001. Page 9.

merger."[18] In other words, they would huddle-up, develop a plan, and then independently execute that plan; IT can make this much easier if an overall paradigm is understood by those operating within the system, such that they can dynamically execute their overall plans by tapping into the necessary information as their schedule allows and adjusting to new developments more quickly. The way this knowledge is handled through the software must be a reflection of an understanding of precisely what forms of information employees need to look for, as well as an understanding of auxiliary bits of information that employees may find useful. In general, building tailor-made IT software is most beneficial, but caution should be used when doing so, and the tried and true staples of IT success should be implemented.

In general terms, structure within a business environment is at an idea state when it facilitates and establishes clear paths of communication. So, one of the key goals of altering the hierarchical approach towards leadership and KM is to eliminate or minimize isolation of individuals or groups: "Many structures in use today permit—or even depend on—inter-unit communications as a way of encouraging innovation. They also push decisions downward to the lowest levels, so the company can be more responsive to its customers and external environment."[19] In some cases, it may be advantageous for decisions and knowledge to flow throughout an organization, but in other cases, it is important to designate precisely who needs to know certain bits of information, so that this information is properly and efficiently used.

Knowledge transfer sometimes pertains to groups and it sometimes pertains to individuals. Many organizations today have developed competency models to identify the precise set of skills than a group or individual may need to fill certain roles within the organization. In some businesses, individual training plans are developed so that certain people can be identified as those that need to possess certain forms of knowledge. Of course, it is not always this simple. Some organizations are forced to have their employees meet certain criteria—sometimes governmentally determined industry requirements, for example—before they can advance to the point where they are allowed to hold certain types of knowledge: "Descriptions of manufacturing processes, for

[18] Mosquera.
[19] Pratner, Charles W. and Lisa K. Gundry. *Blueprints for Innovation*. New York: American Management Association, 1995. Page 77-9.

instance, require the raw material and equipment used, the appropriate environmental conditions to be realized, the treatment times, ect."[20]

This can sometimes be the case even in the absence of formal hierarchical guidelines, and it can have the effect of misapplying the transfer of knowledge based upon rather arbitrary qualifications: "A problem in many teams and organizations is that they either undervalue their own experience and expertise (low internal Knowledge Source), and hence overvalue the experiences of others, or undervalue the experiences of others and suffer the 'not-invented-here' syndrome."[21] The importance of the knowledge source is often misidentified in many organizations; this is ultimately because people within organizations make implicit judgments about whose opinions are relevant and whose are not. In many instances, people place mental barriers before the types of individuals who they believe can or will possess certain types of information: "valuable knowledge assets are often complex, intangible and tacit organizational attributes imbedded in organizational routines and are hard to mobilize."[22] Diversity, in short, is the most successful solution to this limiting factor in knowledge transfer: "To shift along the dimension of Knowledge Source requires a shift in the identification and appreciation for the experiences of others."[23]

Traditionally, many careers have been subject to gender specific designations. Obviously, numerous broad fields of work like medicine and law have historically been dominated by men, while women have been relegated to secretarial, nursing, or other subordinate positions. In recent decades this trend has come under fire and gender is no-longer widely accepted as an appropriate way to designate workers to specific realms. Not only has this pattern been questioned by advocates of equality, but is has also raised the question of how effectively an organization can actually be run in the presence of such discriminatory practices. So, the question of workplace diversity has come to the forefront of organizational theory because, if exercised properly, if can lead to more

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[20] Amaravadi, Chandra S. and In Lee. "The Dimensions of Process Knowledge." *Knowledge and Process Management*, Jan-March 2005. Page 67.
[21] DiBella, Anthony J. *Learning Practices*. Upper Saddle River: Prentice Hall, 2001. Page 73.
[22] Szulanski, Gabriel and Robert J. Jensen. "Overcoming Stickiness: an Empirical Investigation of the Role of the Template in the Replication of Organizational Routines." *Managerial and Decision Economics*, Vol. 25, 2004. Page 347.
[23] DiBella 79.

efficient knowledge transfer; but meanwhile, individual prejudices can serve to hinder the optimization of knowledge transfer.

One of the major examples of this deals with gender. Of course, there remain many occupational roles that tend to be dominated by one gender or anther, and accordingly contribute to individually held stereotypes. However, although these stereotypical roles are not formally endorsed anymore, women are still struggling to break into male dominated spheres while men appear relatively uninterested in careers dominated by females. Improvement in achieving a more diverse and evenly distributed workforce has been observed in numerous lines of work, but opportunities for women to reach positions of power and leadership remain limited. Not surprisingly, nontraditional career roles, like female mechanics and male nurses, remain the areas most lagging in this gradual trend of change.

Although numerous fields are seeing more equal amounts of men and women holding careers, the upper levels of power continue to be predominantly inhabited by men. A recent study by Marie Byrd-Blake revealed that, "There are current inequalities in the representation of females in higher administrative positions in public schools that are a product of historical and societal patterns."[24] Essentially, even in fields with as large a base of female workers as public education, the typical male position of authority is generally maintained; "The patriarchal values of white males still permeate throughout public school administration despite the gains women and minorities have made in recent years."[25] This fact makes it difficult to explicitly define lines of work as either traditionally male or traditionally female; although many may argue that education is traditionally female, men still dominate the upper echelons of administration. Accordingly, if one wished to define nontraditional workers they would be presented with numerous grey areas in which women dominate the field but men dominate the system.

Gradually, the organizational drawbacks of these trends have been being addressed within numerous businesses; the basic premise impelling companies to seek common ground among employees has been the notion that a cultural work environment

[24] Byrd-Blake, Marie. Female Perspectives on Career Advancement. *Advancing Women in Leadership*. Spring, 2004. Available: www.advancingwomen.com/spring2004/BYRD_BLAKE.
[25] Byrd-Blake.

needs to be established. It has been recognized in recent years that one of the limiting functions upon the appropriate transfer of knowledge is the culture of any given company. Naturally, if a company possesses a very narrow cultural base, or way of thinking about the world or business, then that company's capacity to learn is comparatively limited. In many ways, an organization becomes more intelligent by opening itself up to more avenues through which to learn: "McGill and Slocum point out that any strong culture company will be limited in its capacity to learn by the very nature of its culture. Employees are to use their understanding of the company culture to relate to their jobs and guide their behaviors."[26] Accordingly, a company that employs people who, on some level, only accept male leadership will inevitably create boundaries upon the ways in which problems can be addressed through the transfer of knowledge within that organization. So, if the goal within any organization is to attain some level of strategic advantage over their competitors, it is doubtlessly within their best interest to explore ways in which company culture can be expanded, enriched, and opened-up to new ways of thinking.

It should not be surprising that the evolution of the modern business world is rewarding companies that do just this—allow cultural integration and knowledge to flow more freely than may have been possible in the past. For many companies to survive in today's marketplace it is almost essential that they spread their resources overseas. Today, multinational companies are more important than at any time in the past. Your typical product, whether it is automobiles or army men, is manufactured in different locations all across the planet: "Sourcing strategies—where and to whom we assign units of work to be completed—now include technologists who may not speak our language, who come to work in their morning as we leave the office at night. The trend toward workplace diffusion increases our anxiety about retaining or intellectual capital."[27] The workplace is becoming more diverse in almost an exponential rate; as a result, knowledge transfer may be becoming more difficult, because it is forced to leap more cultural, geographical, and linguistic hurtles than ever in the past.

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[26] Leibowitz 49.
[27] Robbins, Stuart. "Some Thought about Sourcing." *Information Systems Management*, vol. 21, iss. 3, 2004. Page 86.

So clearly, there is often a business interest to outsource certain portions of their human resources once the business grows beyond a certain point; by doing so they can, usually, reduce costs while increasing efficiency. From the corporate standpoint, it is not only a matter of seeking to become more profitable, but the fact remains that if one company—like Best Buy—does not outsource its IT functions, then another company will; and in do doing, the competing company will automatically become more competitive. In other words, outsourcing can also be looked at as a demand upon a company to remain competitive or even to remain afloat. Consequently, it should be anticipated that other corporations will soon begin to make similar human resources decisions along the lines of Best Buy's recent outsourcing, if for no other reason then simply to compete. Consequently, "Even those firms who have not seen their knowledge needs change dramatically—who perhaps operate in mature industries or rely little on innovation—recognize an increasing need for knowledge management."[28]

The need to integrate far-flung operations is moving KM to the forefront of many organization's business approaches because of the change in technology that has allowed for globalization to truly take shape: "Internal transfers of practices are important for all types of organizations, but they are critical for multinational corporations, for a primary advantage that a multinational firm brings to foreign markets is its superknowledge, which can be utilized in its subsidiaries worldwide."[29] Personal computers and the internet are as much a result of global markets as the markets are a result of them. Originally, only wealthy corporations had the capability to transfer data across vast distances electronically, but as communications technology became more efficient and cheap this option became more readily available. "For networking, switches or nodes were necessary to transmit data quickly and efficiently from one source to another. Fiber optics increased the number of transmissions that could be carried on a cable."[30] Such advances have reached the point where individual consumers can make a business transaction thousands of miles apart cheap, easily, and almost instantaneously. Yet, what remains in our modern globalized world is the mentality that a singular world is possible,

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[28] Prusak, Laurence. *Knowledge in Organizations*. Boston: Butterworth-Heinemann, 1997. Page xii.
[29] Kostova, Tatiana. "Transnational Transfer of Strategic Organizational Practices: a Contextual Perspective." *Academy of Management Review*, Vol. 24, No. 2, 1999. Page 308.
[30] Brown, D. Clayton. *Globalization and America since 1945*. Wilmington, DE: Scholarly Resources Inc., 2003. Page 49.

and the trend of smaller organizations coming together under a single banner. Consequently, many organizations are finding that virtual organizations need to be founded to better optimize their operations; meanwhile, others, like Amazon.com possesses no actual physical facilities and owns no inventory, yet it still promotes, sells and delivers millions of products. Overall, "Any organizational structure that is not based on geography places greater demands on knowledge management."[31]

In all of these cases, it should come as no surprise that there has been a growing call for organizations to reorganize structurally in ways that better facilitate the appropriate spread of knowledge within the organization. Yet, of course, this reorganization must be tailor-made to the particular firm's business needs. So, given the importance of both tacit and explicit knowledge, it is essential that organizations begin to think of their knowledge base in a far broader than traditional approaches would suggest. At the heart of this approach is designing ways to determine what knowledge is relevant and what knowledge is irrelevant. As aforementioned, one of the first steps towards broadening this base is simply though encouraging diversity. This step will, to some extent, allow the cultural organization of the firm to reach out in directions that may have previously been ignored. Clearly, this method is vital in the developing global economy, because cultural boundaries are being crossed daily in the aim of conducting more efficient and productive business. Nevertheless, one of the lessons to be taken away from the need to promote this type of organizational environment is to not deliberately imitate what other organizations have done; ultimately, this is because each organization's needs are unique.

Broadly, the appeal of a form of shared leadership is that it is highly conducive to the idea of combining knowledge within an organization: "As knowledge is accumulated, combined, and then generated, the organization's knowledge base should grow and the organizational intelligence should, hopefully, increase."[32] Idea processing systems can, accordingly, be employed to create new knowledge within an organization. According to Liebowitz, decision support software such as "Expert Choice," can help in putting subjective judgments arrived at through a round of brainstorming into a quantitative

[31] Prusak xiii.
[32] Liebowitz 39.

analysis for appropriate decision making: "Expert Choice follows the 'Analytic Hierarchy Process' whereby pairwise comparisons are made to determine the importance of the decision criteria vs. the goal and then the alternateives vs. each criterion."[33] This is merely one example of the way in which modern technology can be used to aid in the overall decision making process and, thereby, generate more knowledge within an organization.

The trend within all modern organizations is the integration of people and technology, while the importance of geography, tradition, and the hoarding of knowledge are being continually minimized. This is a clear consequence of the ongoing evolution of the global marketplace and the increasing demand for businesses to gain some small form of competitive edge. In this arena, KM has been moved to the forefront, and models for optimizing knowledge transfer must be measured by their flexibility. Although leadership still maintains an important role, in many cases, our basic conception of what leadership is must change.

LITERATURE REVIEW

Superficially, the transfer of knowledge throughout an organization might seem like nothing more than a communications problem. However, there are many very basic obstacles towards the most efficient distribution of knowledge in virtually any existing organization; these include tacitness, stickiness, complexity, and context specificity. In many ways, these problems are interrelated, and they require a comprehensive approach to be effectively overcome. Consequently, knowledge transfer within organizations has emerged as a vital area of study relating to theories of organizational power structures, leadership, decision making, and routines. Falling beneath the mere transfer of knowledge is the issue of what form the knowledge should take after it is transferred; in other words, it may be sometimes beneficial for knowledge to simply be replicated, yet in other instances, it may be beneficial for this knowledge to be adapted into a new form. As a result, an appropriate understanding of knowledge transfer within organizations requires, to some extent, a grasp of the current studies being conducted in all of these areas.

[33] Liebowitz 39.

Baden-Fuller and Winter in their article, "Replicating Organizational Knowledge: Principles or Templates," present a framework within which organizations can attempt to shape small-scale successes into large ones through a particular approach to knowledge transfer.[34] The running premise that Baden-Fuller and Winter work with is the notion that replication is often useful because it skips the sometimes time-consuming and costly process of developing a specific approach or technique from the ground up: "If processes can be copied successfully and cheaply, first mover advantages may be eroded."[35] While the article mentions the importance of overall knowledge transfer methods, such as socialization, the authors are most concerned with the aspects of knowledge transfer as they pertain directly to some form of replication. They argue that there is an entire spectrum of methods by which different organizations attempt to replicate knowledge throughout their ranks. Yet, they find it beneficial to investigate what they perceive to be the opposite poles of this spectrum: principles and templates.

Essentially, the authors put forward the idea that there are two fundamentally different ways of transferring knowledge by way of replication. The method governed by principles, according to them, stems from a conceptual approach to knowledge transfer. Basically, it involves learning with the general aim of conveying "why" a specific task is carried out in a particular manner. The goal is to impart a blanket understanding to the student, within the organization, so that the same broad technique might be used in other, perhaps more varied, situations. In many ways, this way of replicating knowledge is more flexible than the alternative, and asks the recipient of the knowledge to grasp the underlying motivations behind the actions of the organization.

The template approach, on the other hand, is more centrally concerned with conveying "how" something is accomplished within a particular organization. So, this manner of replicating knowledge can be conceived of as something like an algorithm; in other words, there is a clearly defined set, number, and arrangement of steps involved in completing some specific task; and this set, number, and arrangement should be utilized every time a certain issue is encountered. Clearly, if we consider the template approach from the far end of the spectrum, the recipient of the knowledge is not required to possess

[34] Baden-Fuller, Charles and Sidney Winter. "Replicating Organizational Knowledge: Principles or Templates." *City University*, Oct. 19, 2005.
[35] Baden-Fuller et al.

any conception of why operations are conducted in such a manner; all that is required is a working knowledge of how to solve certain problems.

The authors conclude that although the template method may be beneficial in some form, if the question is whether principles or templates are most effective alone, then the answer must be that principles are usually more advantageous. They point out a handful of key factors that, according to them, account for the advantages of the principle method in the cases they studied. Of course, the nature of the knowledge to be transferred is very important when considering which of the two approaches to be used. The authors argue that the template approach is most useful in situations where an assortment of basic skills need to be absorbed on a short time scale, such as in the fast food industry. More complex knowledge, however, is more efficiently replicated through the principle approach—it provides the causal framework within which the smaller details of a task can be inferred.[36] Additionally, it is concluded that the nature of the leadership structure within an organization can greatly aid in replicating information more efficiently, in addition to the presence of personal motivation, and the presence of a well-used learning environment.

Another article by Argote and Ingram, "Knowledge Transfer: a Basis for Competitive Advantage in Firms," takes a more comprehensive look at the issues surrounding organizational knowledge transfer.[37] According to the authors, the basic problems that various firms are faced with when they attempt to address the problems of knowledge transfer stem from the forms of knowledge that are tacit, as well as those that are best conveyed through socialization. Furthermore, they point out that knowledge itself is a particularly difficult entity to measure within most organizations because of the prevalence of tacit knowledge: "Tacit knowledge may not be captured through the verbal reports often used to measure knowledge."[38] Essentially, much tacit knowledge resides in what the authors call "knowledge reservoirs."[39] These are locations, sometimes individuals and sometimes segregated groups, which possess substantial amounts of knowledge, but tend to operate with it autonomously. Accordingly, the task of

[36] Baden-Fuller et al
[37] Argote, Linda, and Paul Ingram. "Knowledge Transfer: a Basis for Competitive Advantage in Firms." *Organizational Behavior and Human Decision Processes*, Vol. 82, No. 1, May 2000. Pages 150-169.
[38] Argote et al. page 152.
[39] Argote et al. page 153.

organizations seeking to facilitate better knowledge transfer is two fold: first, determine the type and amount of tacit knowledge that such reservoirs might possess; and second, open avenues up through which the individuals possessing this knowledge might be more inclined to share it outside of their reservoir.

One of the key methods towards overcoming the negative effects of tacit knowledge to the overall goals of knowledge transfer is simply to move reservoirs of knowledge within a particular organization. The authors point to evidence that suggests that although the implementation of new information technologies has a certain level of success when it comes to knowledge transfer, the entire process tends to be more successful when it is accompanied by the rearrangement of personnel. As a result, it is concluded that one of the ways in which to prevent important bits of knowledge from escaping to competitors is to keep much information in the form of personal interactions; these types of knowledge are difficult to replicate with the use of modern technologies: "Compatibility across contexts of the subnetworks involving people is more problematic than compatibility of the other subnetworks because people are likely to vary more across contexts than tools or tasks."[40] So, if the goal of an organization is to maximize knowledge transfer while guarding against the transfer of knowledge externally, the movement of personnel is essential. However, if there is relatively no need to guard against the transfer of knowledge externally, then information technologies can be utilized to a greater degree, as can the use of templates.

Garavelli et al. investigates the impact that technology can have upon the knowledge transfer process in more detail, and the authors indicate specific instances in which the traditional barriers to knowledge transfer can be either overcome or amplified due to the use to technology. So, contrary to the widespread belief that current technological advancements commonly aid in the transfer of knowledge, the authors put forward the notion that when misapplied these technologies can hinder the spread of knowledge throughout an organization: "This can be due, from one side, to the determinant role of organization's and individual's values, involvement and motivation.

[40] Argote et al. page 164.

From another side, it can be due to the inherent limits of some technologies, which may not effectively support KM."[41]

As aforementioned, the basic patterns and routines of business in certain organizations may result in the organization's inability to utilize a certain form of technology to its full potential, in terms of knowledge transfer. The authors use Lotus Notes, which was used by Texaco, to illustrate an application with a potential for a wide range of uses that was used, instead, primarily for email within the organization. This underscores the significance of routines—both individual and group-based—and how, once established, they can become entrenched in the daily operations of a business.

The authors offer a relatively novel way of conceiving of knowledge within an organization; they contend that the distribution and flow of knowledge is essentially a cognitive entity. In other words, the basic operations of the mind—even in terms of an individual—can be used as a model for how knowledge can be effectively used within an organization. To them, this is true because the transfer of a bit of knowledge, such as a book, does not correspond to the actual transferal of that knowledge to another portion of an organization; this is fundamentally because a human mind must subsequently interact with that physical piece of knowledge. This way of understanding knowledge transfer illuminates a few key features of how technology can actually be expected to perform within this context: "Since technologies are often address to build and convey knowledge objects more than to support the user interpretation process, in such a case all the efforts made to support codification may vanish."[42] This stands as yet another way of illustrating the idea that knowledge templates can, in some cases, actually hinder the transferal of knowledge between individuals and groups.

In this way, information technologies are sometimes used as a crutch; they are simply implemented with the assumption that they will automatically apply themselves where they are needed and solve the problems of KM on their own. However, as the authors argue, this is not nearly the case. In reality, the patterns of behavior within an organization may be completely incongruous to the overall functioning of a particular

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[41] Garavelli, Claudio et al. "Managing Knowledge Transfer by Knowledge Technologies." *University of Lecce*, 2006. Available: http://www.knowledgeboard.com/library/c_garavelli_knowledge_transfer_through_knowledge_technologies.pdf.

[42] Garavelli et al.

technological strategy. Of course, the solution must be to either augment the personnel structure of the organization, or to search for alternative uses of knowledge technology.

Doubtlessly, the internet has revealed itself to be one of the most powerful tools in the realms of commerce, trade, and general research, but some of its most useful applications as a public service are still in infantile stages. The possibility of utilizing the World Wide Web for knowledge transfer and exchange was recognized immediately upon its conception and is currently in process, yet, the system is far less developed in some areas than others. According to the authors, this is because of the general disorder shaping the structure of the internet; for its optimum use as a knowledge transfer tool a more rigid organizational structure needs to be built. Nevertheless this has not hampered the spirits of those seeking to develop a future that might hold is a nationwide electronic database capable of immediately cataloging vital bits of business information. Fortunately, the evolution of the internet as a knowledge resource is being attacked from both the standpoint of librarians—seeking to synthesize more efficient sorting systems—and the business community—seeking to adopt strategies and data interchanges more matched with the internet setting.

The difficulty with using the internet as a comprehensive tool for research within a business or organizational setting, presently, is that the internet has no real directorial structure. The internet is analogous to a very large library where all the books are scattered on the floor. This is because it contains so much information, but there is no efficient procedure for sorting through the information. This, traditionally, has been the greatest problem with using the internet for massive amounts of data interchange between companies or other organizations. Although the internet was founded upon business programs called Electronic Data Interchange—or EDI—which where very organized, when the internet expanded to the consumer it needed to be less standardized. The issue today is: now that there is so much useful information on the internet there needs to be a way for companies and other agencies to access this information in a more efficient manner.

From the librarian's standpoint this problem is being addressed with the gradual implementation of eXtensible Markup Language, or XML. The XML processor is able to interface with an application, such as a word processing document, which allows further

manipulation of the document. This flexibility of XML is what makes it so useful. With XML data can be handled in a variety of formats without expensive programming, or delays due to data conversions. XML promises to be the new language of the internet, and to bring more organized electronic commerce to small businesses, and the medical community. Accordingly, the future of electronic exchanges of information is most likely to take place over the World Wide Web rather than some private form of the internet. So, the current work being done by librarians attempting to organize the internet will make the eventual application of knowledge transfer methodologies to the World Wide Web much simpler.

Of course, all of these devices for making the most efficient use of information technologies in terms of knowledge transfer are subject to the routines of individuals and groups within any organizational body. As the authors argue, such ingrained practices tend to determine which types of knowledge technologies will be most effective, and those that will need to be accompanied with other KM approaches. Cohendet and Llerena put forward the idea that there are two basic types of settings that commonly result in the development of patterned routines. In other words, it is their position that the individual mechanics of any given routine are of less concern to those attempting to understand knowledge transfer than are the social situations out of which they arise. The two fundamental situations, according to them, out of which routines often arise, only make sense if the organization is viewed as a form of community; consequently, we find that communities usually form in structures that are either hierarchical or autonomous.

Of course, this is another way of conceptualizing the leadership structure within an organization, and the resulting patterns of knowledge transfer. From the authors' point of view, these are communal settings; the outward indication of which type of setting the knowledge resides in is simply the manner in which problems are addressed and decisions are made. Accordingly, the context of a routine is most centrally determined, on an individual level, by the information that a particular individual holds, and the distribution of that information across the community that individual interacts with.

In some ways, Cohendet and Lleren's perspective is analogous to the aforementioned cognitive model of the organization; essentially, they contend that the community-based relationships between organizational members are what constitute the

memory of the organization.[43] So, this is yet another way of modeling the way in which knowledge is distributed and transferred in organizations: the information itself can be thought of as the individual and discrete electrical impulses within the brain, while the invisible framework of person-person and person-group relationships is what constitutes the physical organization of the brain—its tissue and differing lobes. In this way, the authors hope to expand on the flawed aspects of routine theories by placing them within a more well-developed theory of organizational settings—namely, within the context of communities. Cohendet and Llerena argue that such a model should be regarded as valid and useful because it has already proven applicable in related fields of study: "What the evolutionary theory proposes is more ambitious: it is the setting-up of governance mechanisms based on the need for co-coordinating distributed knowledge and distributed learning processes."[44] If we operate under the assumption that organizations evolve and form around a determined set of problems that need to be solved, according to them, then it is possible for us to both explain the distribution of hierarchical power within an organization and the way in which knowledge is utilized throughout it. So, in other words, their model is designed to approach knowledge transfer comprehensively by equating the decision-making mechanisms of an organization with its routines, and placing this facet of communal behavior at the center of all related theories. Doubtlessly, it is an ambitious and, largely, compelling line of reasoning.

Kostova, in her article "Transnational Transfer of Strategic Organizational Practices: a Contextual Perspective," offers yet another way of modeling the transfer of knowledge but, this time, within the specific context of multinational companies.[45] To Kostova, there are three contexts within which we should be concerned with the transfer of knowledge within such organizations: social, organizational, and relational. The first context is most closely associated with the mindset or cognitive capabilities of the individuals working within the organization; the second is concerned with the structural framework of the organization; meanwhile, the third is a result of the external structure of the multinational company. According to Kostova, these are important distinctions

[43] Cohendet, Patrick and Patrick Llerena. "Routines and Theory of the Firm: the Role of Communities." Prepared for the Nelson and Winter Conference, Aalborg, June 12-15. Page 4.
[44] Cohendet and Llerena 18.
[45] Kostova, Tatiana. "Transnational Transfer of Strategic Organizational Practices: a Contextual Perspective." *Academy of Management Review*, Vol. 24, No. 2, 1999. Page 313.

because they are often overlooked when theorists simply examine knowledge transfer within smaller organizations; nevertheless, these same forces may still be at work, though perhaps to varying degrees. Still, the overall trend must be understood as the process by which knowledge is forced to overcome these obstacles and progress from merely being transferred to being internalized.

It is further argued by the author that at each level, and in each context within which knowledge transfer can occur, there are elemental barriers that must be overcome—though they are often not. Specifically,

> First, regarding the regulatory institutions, if a practice is perceived by the employees at a recipient unit to be in conflict with the regulatory institution in their country, it is highly unlikely that they will engage in transferring and implementing it. Second, if a practice is inconsistent with the cognitive institutions in the recipient environment, employees again will be unlikely to engage in its implementation, for they probably will have difficulties understanding, interpreting, and judging it correctly.[46]

So, in a number of respects, the problems faced by multinational companies when they attempt to transfer knowledge across national boundaries is analogous to the problems faced by smaller organizations, merely to a greater order of magnitude. The most important bit of information to take away from this portion of the author's discussion is the notion that these obstacles are all consequences of socialization factors; so while laws, regulations, and customs may be vastly different from one country to the next and inhibit the transfer of knowledge proportionally, it is simultaneously important to conceptualize this phenomenon on a smaller scale. Basically, different organizations and different businesses may have different routines, rules, and operational procedures; so these embedded practices can automatically limit the extent to which knowledge will be adopted and then internalized. Kostova's method is intended to extend this idea to the largest and most complex organizations in existence today—multinational companies—

[46] Kostova 315.

yet her conclusions remain pertinent with regard to knowledge transfer in general. Fundamentally, the importance of embedded operations is often overlooked or attributed solely to personal preferences or cognitive routines; however, they can also manifest themselves in more rigid regulations and can influence companies in a top-down manner.

Amaravadi and Lee, by contrast, believe that the most severely lacking research in the area of knowledge transfer and KM is the literature pertaining to a given organization's operating procedures. The authors suggest that the four major regions within which knowledge can be said to reside within organizations is in employees, structure, culture, and processes; yet, according to them, an undue amount of attention has been paid to the employees themselves: "Of these, the knowledge management literature has tended to focus on identifying employee knowledge, particularly their tacit knowledge, on the grounds that this is where useful knowledge resides."[47] From the authors' point of view, the essential component missing from most discussions of knowledge transfer is the extent to which operational procedures impress themselves upon the overall knowledge an organization can possess.

Of course, this idea can be viewed as another—perhaps more rigorous—way of understanding the role of routines within an organization. Just as Kostova argued, these routines often take the form of operational plans, procedures, and rules. So, in many ways, the international laws that Kostova identified as barriers to knowledge transfer within multinational companies can be seen on the micro-scale as a smaller company's operating procedures. However, it is not centrally Amaravadi and Lee's argument that these operational procedures generally hinder the transfer of knowledge within the modern business context; instead, they indicate that the procedures themselves are actually a form of organizational knowledge, which most students of knowledge transfer and KM tend to undervalue.

The authors develop a model of organizational knowledge that places organizational processes prior to the development of individual routines and ways of cognitively perceiving the workplace. According to them, work processes, change processes, behavioral processes, and managerial processes are all the product of

[47] Amaravadi, Chandra S. and In Lee. "The Dimensions of Process Knowledge." *Knowledge and Process Management*, Jan-March 2005. Page 65.

organizational processes. Typically, knowledge can be said to reside in the resulting operational processes especially in cases where the knowledge required to complete a certain task may be exceptionally complex: "The redesign of an engine could require retooling of assembly plants, modification to components that are purchased, and perhaps changes in supplier ownership as well."[48] A consequence of these conditions is that the operational knowledge inherent in a given system becomes increasingly valuable as the system is tweaked and augmented to increase efficiency in one way or another. So the tools and methodologies that a particular organization chooses to adopt, according to the authors, needs to be reflective of the demands upon that organization. In this way, operational procedures encompass a form of knowledge all of their own; so the transfer of knowledge in this respect pertains not only to relaying the specifics of the procedures, but comes into play when organizations need to alter these procedures in order to adapt to the demands of the changing business environment.

In contrast to the Baden-Fuller and Winter article, a piece published by Szulanski and Jensen presents evidence that they believe justifies the use of templates for the transfer of knowledge. Szulanski and Jensen use the problems of tacit knowledge and stickiness as motivations for why templates should be widely adopted in the efforts of organizations to transfer knowledge more effectively. The notion is that such forms of organizational knowledge are fundamentally hard to mobilize, and cannot generally be addressed in vague or open-ended terms. So, once again, these authors suggest that adopting proven strategies is the most promising method for knowledge transfer within an organization: "The challenge of the firm leveraging knowledge assets is to replicate, or re-use spatially, knowledge embedded in superior routines before competitors can imitate them."[49] The article is intended to handle many of the issues presented by Winter and others, but with the underlying thesis that templates generally serve to be more beneficial than the use of less easily defined or replicated strategies—such as principles. The method used by the authors is quasi-experimental, in that they use the case study of Rank Xerox as an example of how the template approach can be utilized to facilitate

[48] Amaravadi et al. 72.
[49] Szulanski, Gabriel and Robert J. Jensen. "Overcoming Stickiness: an Empirical Investigation of the Role of the Template in the Replication of Organizational Routines." *Managerial and Decision Economics*, Vol. 25, 2004. Page 348.

replication. In the case study analyzed, the authors determine that the decisive factor in the production of results was whether or not a working example of proven success was used as a template for the transfer of knowledge.

Although the results in the particular example used by the authors suggests the strength of the template model, the study, as a whole, is far from being a balanced look at the approach. Unlike the Baden-Fuller and Winter article, Szulanski and Jensen use an exploratory methodology. Essentially, they use the investigated situation as a template for how templates can be used; in this respect, it is can only stand as an individual example. Therefore, the conclusions reached are far less conclusive than a more comprehensive study would have been capable of accomplishing. Of course, the authors admit this obvious drawback of their research: "These particular results were obtained by a single company in a particular industry and pertain specifically to marketing practices and hence must be generalized to other types of practices and other organizations with caution."[50] Accordingly, at best, the argument put forward by the authors can best be viewed as a single success story of the template method in overcoming the obstacles of routine and stickiness; it should only be used as a model in very similar circumstances.

In summary, all of the studies investigating the impact of routines and related barriers to knowledge transfer agree upon a handful of key concepts. First, there is the recognition that there is a need for some blanket model explaining how such patterns of behavior within an organization act upon more traditional or well-established theories of knowledge and knowledge transfer. Second, all of the studies suggest that routines themselves are not the fundamental problem, because they can always be overcome by implementing certain strategies to force them to work in the favor of knowledge transfer. And third, explicit in some of the studies—while implicit in others—is the notion that routines are, for the most part, a feature of socialization or communal practices within the organization. Of course, these practices may be formed either by cognitive relationships with the organization, or by the simple power structures and leadership roles in the organization. Nevertheless, these behavioral patterns tend to act upon the transfer of knowledge in ways that can either be molded into methods of efficiently solving problems and making decisions or they can inhibit these functions. Ultimately, how such

[50] Szulanski et al. 360.

phenomena actually operate and influence an organization depends partially upon the organization's needs and partially upon the leadership. Still, a conscious understanding of knowledge transfer and the possible manifestations of routines remain vital to developing a workable strategy of KM.

APPLICATION TO ORGANIZATIONAL LEADERSHIP

Regardless of the value of any of the positions offered by the aforementioned studies regarding the issue of knowledge transfer, if any method whatsoever is to be adopted within an organization, then it must be accomplished through the ranks of leadership. In other words, if there is not a conscious effort from within an organization to efficiently transfer knowledge or develop a KM strategy, then the result will almost inevitably be a less efficient distribution of knowledge; to remain competitive in the global market of today, organizational leadership, in many cases, has found that it must respond to the embedded routines and practices of knowledge transfer as they have evolved in their firm. So, the status of the modern firm is that competition has increased, just as the availability of information technologies has increased, and the level of integration across countries, cultures, races, and genders has also increased. This demands that most firms, in order to remain competitive, must make deliberate efforts to monitor and bend the flow of knowledge within their ranks, as well as to other organizations. This deliberate or conscious effort grows out of leadership that is willing to evolve with the evolving characteristics of the global business environment.

Leadership, in all situations tends to follow distinctive patterns: it occurs as an event, it involves the relationship between the leaders and followers, it reaches beyond formal authority, it develops in times of need, it requires individual perception, and it requires application of that perception. Leadership is a complex phenomenon and can be difficult to understand, especially from the standpoint of those involved. Yet, its continual emergence in nearly all social situations suggests some natural, human necessity to find leaders, and for these leaders to validate their status. Nevertheless, leaders of any organization must have followers, and these followers can only truly be won through trust. Similarly, an organization that is devoted to teamwork must have trust running throughout its ranks; this will allow for shared leadership structures, and more

efficient decision-making. Since leadership is event-based, it can best be applied within teams with varying specialties and the trust to allow any one of their members to assume command should the need arise. Generating an organization that adheres to these maxims is the true key to forming a team-based approach to the modern world.

Leadership, in many respects, is a deferral of the decision making process from a group to an individual. This can make the process far more efficient, but it also runs the risk of reaching the wrong conclusions. The military, for example, requires the most expedient form of decision-making—indecision can cost lives. Therefore, for ages humans have endorsed the practice of assigning military rank; a system where orders are to be followed without question and without hesitation. However, people are not machines. Everyone—even in the military—ultimately must use their own rationality to determine whether they will or will not follow an order. It is in this way that the decisions made by leaders have a very intimate relationship with their followers.

Basically, leaders need to make the right choices. This notion adds an additional requirement to the model of a leader: a leader must possess a heightened capacity for information processing and perception. Broadly, "A leader gains followers when he or she performs an action that influences the followers so they accept the leader's direction. In effect, the two become one of mind. Consciousness—the capacity to process information—is the underlying source of leadership power."[51] Even though the followers allow an individual to make decisions for them, they reserve the right to pass judgment on these decisions.

So, in virtually any context, a leader is willing to step outside of the boundaries governing conventional behavior to achieve his or her aims: "Leaders gain followers because people and organizations need direction. Although managers also provide direction, leaders chart direction in a different domain. . . . Eventually in every organization, the established path becomes blocked, or people get stuck in a rut, or a new possibility exists that is not on the existing course. The leader steps up when no defined path exists."[52] People admire this quality; reaching beyond traditional paradigms allows

[51] Blank, Warren. *The 9 Natural Laws of Leadership*. New York: American Management Association, 1995. Page 19.
[52] Blank 16.

the convictions of the leader and his followers to transcend the organizational structures that appear to limit them.

Obviously, an all too common rut that organizations can find themselves in is relying too much upon one established leader: "Formal leaders, those in vertical positions of authority, may view the shift to shared leadership as a potential loss of control, and thus may require training, development and ongoing coaching."[53] Once one individual has proven to be an effective leader, there is a tendency to thrust this person into the role of leadership even when another member of the team might be a better choice, and there is a tendency for this individual to be less than open to the notion of shared leadership. Organizations as a whole need to be conscious of how adaptable they are in order to foster the most effective forms of shared leadership.

Centrally, "To raise the productivity of professionals, big corporations must change their organizational structures dramatically, retaining the best of the traditional hierarchy while acknowledging the heightened value of the people who hatch ideas, innovate, and collaborate with peers to generate revenues and create value through intangible assets such as brands and networks."[54] However, simply defining the different tasks of individuals within an organization is not going to facilitate effective team behavior or overcome existing routines, which may be hindering effective transfers of knowledge; instead, jobs should be defined along the lines of how much leadership responsibility each individual will be allotted. This allows the members of a team to decide what the possible outcomes of any particular decision might be, rather than relying upon a set delegation of their duties to guide their actions; "One of the keys to effective followership is the concept of 'self-management.' This is the ability to determine one's own goals within a larger context, to take control of one's own development, and to decide what role to take at any given time."[55] Again, this requires trust; managers must decide who to put upon a team based upon the level of self-management that the individual exhibits.

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[53] Pearce, C. "The future of leadership: combining vertical and shared leadership to transform knowledge work." *Academy of Management Executive*, vol. 18, no. 1, 2004. Page 51.
[54] Bryan, Lowell. "The 21st Century Organization." *The McKinsey Quarterly*, August 16, 2005.
[55] Deiss, Kathryn J. "The Shared Leadership Principle." *Association of Research Libraries*, 2004. Available: http://www.arl.org/diversity/leading/issue2/shared.html.

It should not be surprising that an important component of knowledge transfer is the capability of these reservoirs of knowledge to teach and of others in the organization to learn. As aforementioned, the learning process is influenced both by the organizational environment, and by the cognitive relationship the individuals possess with this environment. In many ways, the organizational structure that results from a devotion to shared leadership and teamwork is also one that is devoted to education. In the increasingly specialized workplace, those who become fluid leaders are going to be those that are good teachers; they can briefly and effectively inform the members of their team of the aspects of the enterprise for which they are responsible. With this in mind, it should be apparent that effective teams cannot be haphazardly thrown together, because the nature of the education that teams will impart upon one another will be flexible and demand an overall focus upon purpose. While the leaders themselves may fluctuate, the goals of the team—including a devotion to work relationships—must remain singular. This, in turn, will generate an atmosphere in which leadership itself will be nurtured and brought to life in individuals who may have otherwise occupied a weak or specialized position in the organization. In other words, leaders will both emerge from teams and be taught by their experiences within them. Leadership capacity must be taught in order for organizations to make the move from hierarchical to team-based structures. Doubtlessly, leaders cannot simply be appointed, nor should workers be subjected to an abstract seminar on leadership; leadership is learnt, but it is only leant through experience.

Yet, this introduces a number of problems that arise when organizations attempt to restructure themselves to engender teams. Essentially, the first two problems are the main forces driving rigidity within modern organizations; they inhibit change through individual positions of egoism and as reflections of broader social trends. Just as there is no easy solution to the problem of sexism in society, there is no easy way to eliminate these forces from the workplace. Evaluating new applicants' values is the key component to minimizing these retrograde threats to shared leadership. The third difficulty, as aforementioned, can at least be somewhat overcome by hiring practices that regard leadership capacity and experience as more valuable than the more traditional measures of applicants. In this respect, the restructuring of an organization with the aim of

increasing the effectiveness of teams is as much a reformation of the values that underlie that organization as it is a redistribution of power and autonomy.

Leaders, by their very nature, require the support of their followers. Rank and social position do not determine who is a leader and who is a follower—leadership is determined by events. Leaders possess unique levels of perception with reference to these particular events and are willing to take unusual measures to achieve their goals. These goals must, however, be in harmony with their followers' ambitions. Grasping the nature of knowledge transfer, and seeking to optimize it, demands that many of the traditional hierarchical distributions of power must be reevaluated for their effectiveness. Although having one strong leader is efficient for making some decisions, teams are able to delegate who that leader is, and accordingly, adapt to changing situations. This engenders a flow of knowledge that is not static; it changes with time, and with the changing face of the business world; the flow of knowledge will, in this situation, often adapt to the pressures placed upon the organization.

Organizations, indeed to stay competitive, must be built upon the ideals that justify team-based leadership and abandon the antiquated notions of power that excuse egoism, sexism, and racism. This can only be done with trust gained through experience, and the empowerment which results. Tolstoy's definition of leaders held that they were merely, "the labels that serve to give a name to an end, like labels, they have the least possible connection with the event."[56] This remains a true evaluation of leadership, and recognizing that a leader is merely someone who reacts best to a certain change and, in doing so, alters the flow of information accordingly, all but demands teams as the basis for decision-making.

THE NEED FOR THEORETICAL INTEGRATION

The common thread running throughout this investigation of knowledge transfer is the notion that although it can be modeled, to some extent, along analytical parameters, it is fundamentally an entity that spans or interacts with virtually every other aspect of organizational theory: "The range of issues and disciplines encompassed by the field of

[56] Schlesinger, Arthur M. *Johnson*. New York: Chelsea House Publishers, 1988. Page 7.

strategy continues to expand."[57] This means that it intimately interacts with individuals' cognitive relationship with knowledge, the concrete pressures put upon an organization, and the foundational structure of an organization. So, although it has been argued by some that the specific processes of problem solving that organizations employ is, perhaps, the most overlooked feature of the transfer of knowledge and routines, the strong focus in the literature upon the individual is, in many respects, justified. The individual is, after all, the one who interacts with his or her environment, with the knowledge, and either learns or does not learn effectively. Consequently, a basic psychological focus upon how individuals learn within an organizational setting is exceedingly pertinent to the discussion of knowledge transfer. In other words, it is not enough to simply identify patterns of behavior and routines in order to better fit them to the demands of the business; instead, it is likely to be more beneficial to also understand the way in which these patterns evolved independently of deliberate attempts at KM.

There are many theories that pertain to the interaction of individuals and their environments, and how this influences learning; perhaps one of the most useful for the purposes of organizational theory and affecting knowledge transfer is the theory of behaviorism. Freud writes, "We possess no criterion which enables us to distinguish exactly between a psychical process and a physiological one, between an act occurring in the cerebral cortex and one occurring in the sub-cortical substance; for 'consciousness,' whatever that may be, is not attached to every activity of the cerebral cortex, nor is it always attached in an equal degree to any particular one of its activities; it is not a thing which is bound up with any locality in the nervous system."[58] In this way, Freud argued that the task of the psychoanalyst was not to attempt to understand consciousness from a strictly physical standpoint, but to insert workable models into the input-output mechanism that is the human mind. Freud approached the mind as if it were a "black box"; we cannot ever fully know the electric and physical activities that may be responsible for the workings of the human mind; instead, we must treat consciousness without concern for the particular physical phenomena which may play a role.

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[57] Spencer, J. C. and Robert M. Grant. "Knowledge and the Firm: Overview." *Strategic Management Journal*, Vol. 17, winter 1996. Page 1.

[58] Freud, Sigmund. The Standard Edition of the Complete Psychological Works of Sigmund Freud. London: Hogarth Press, 1966. Page 84.

Accordingly, if a model can be developed of human consciousness and unconsciousness that can accurately predict and diagnose, then we must accept that this model is correct in the absence of physical observations of the brain. This is the basic premise that later psychologists, philosophers and researchers adopted to develop the theory of behaviorism.

Within the context of transferring knowledge between individuals within an organization, the behaviorist stance suggests a number of things. First, it suggests that the learning environment is perhaps the single most important feature of teaching. After all, if language is nothing more than the output of a finite number of physical inputs, then it is exceptionally important to organize an organization such that the proper inputs are provided and reach the recipients of knowledge appropriately. Second, it suggests that once an appropriate template has been determined—one that produces the appropriate results—then this very same template should produce the same results every time it is employed within the context of similar organizational pressures. Of course, this is exactly what the literature implies—even among those analysts who are skeptical of the template approach. And third, it suggests that language itself cannot be conceived of as anything other than a response to an external stimulus; therefore, organizational leaders as well as reservoirs of knowledge should not be concerned with the internal, conceptual aspects of attaining a certain bit of knowledge, and only with the observable demonstration of that knowledge among their students. Of course, these stand as direct consequences of accepting the theory of behaviorism within the context of organizational knowledge transfer.

Such a point of view, of course, is likely to be the most useful tool within the organizational context. After all, a leader charged with the task of managing knowledge, cannot be intimately concerned with the mental characteristics of each individual functioning within that organization. Instead, he or she must focus upon generating a working environment that produces the optimum flow of knowledge, which, in turn, results in the achievement of specific goals. Understanding this psychological model of human behavior, and accepting it within such a setting, exists as a key factor in conceiving of knowledge transfer in any useful manner. Essentially, these theories of organizational behavior and psychology must be viewed as tools with which to

manipulate the knowledge transfer environment; they are important because it is then possible to conceive of the work environment as a laboratory experiment, in which the leader managing knowledge provides certain inputs, and analyzes their effectiveness by measuring the corresponding outputs. Rearranging knowledge reservoirs, for example, may be an input within this experiment, and the output would be the relative speed and efficiency with which subsequent decisions are made.

According to many theorists, this sort of controlled manipulation is the key toward finding optimum arrangements of knowledge and personnel and attaining a competitive advantage: "Central has been the prescribed role of the firm as the developer of novel resources—that is, firms are encouraged to innovate by searching out new resources, as the basis for future organizational rents."[59] So, the organization as a whole, within this theoretical framework, must continually seek out new avenues of business, and introduce new pressures to the organizational environment; this is done with the purpose of devising ways to force the restructuring of routines inhibiting effective knowledge transfer. In this way, it is an experimental operation at the same time as it is a business strategy. Of course, simply placing these pressures within a given firm is not likely to overcome the central hindrances to knowledge transfer; instead, these pressures are, ideally, expected to provide a knowledge manager with the information necessary to improve the flow of knowledge within their respective organization.

So, although there may certainly be a defined set of actions that leaders can take within KM, it is ultimately up to the individual leader or leaders to interpret the results of these input-output data sets. Accordingly, an appropriate theory of leadership, and the willingness to implement its consequences, remains crucial to the continuing success of KM strategies that are designed to evolve along with the fluid patters of the global business setting. So, from this point of view, a conceptual and theoretical grasp of knowledge transfer theories exists as one of the bits of knowledge that effective leaders must propagate throughout his or her organization.

Fundamentally, theoretical integration stands as the most basic and necessary goal of knowledge transfer models. Since it is so deeply interconnected with virtually every

[59] Galunic, D. C. and Simon Rodan. "Research Notes and Communications." *Strategic Management Journal*, Vol. 19, 1998. Page 1193.

other theory of KM, it is impossible to present a comprehensive characterization of it without outlining the related theories that grant it any sort of credibility. Knowledge is a variable that is, for most purposes, impossible to isolate. Naturally, the larger and more complex that organizations become, the more difficult this task becomes; this explains why comprehensive models are becoming evermore important within the global marketplace—where multinational corporations are forced to design organizational structures, knowledge templates and principles that can span the cultural, linguistic, and geographical obstacles set before them.

However, a clear drawback of this emerging picture is that large organizations often look to information technology as the cure-all solution to the problems associated with inefficient routines and non-productive modes of knowledge transfer. Superficially, it seems as if such an approach should lend itself naturally to large organizations; however, the peculiar nature of knowledge often places unexpected pressures upon organizations, which IT alone cannot address. Once again, this is why the conscious presence of KM leadership is of utmost importance toward directing the lifeblood of organizations—its knowledge—in the most productive manner possible.

FURTHER INVESTIGATION

As the literature suggests, there has be an ever-increasing amount of research and theoretical analysis of the phenomenon of knowledge transfer within organizations in the past decade. There is little doubt that this trend will continue in the foreseeable future. Since there are a myriad of ways in which KM can be approached from a management perspective, this means that there are substantial amounts of data that have not yet been obtained by experimentalists and theorists. As this data eventually finds itself within the literature, it will contribute further to the broad and interconnected theory of knowledge transfer and, clearly, refine the models that have already been developed. It is this fact that suggests that studies like those conducted by Baden-Fuller and Winter are likely to carry the most weight in our current investigation of routines in knowledge transfer. In other words, we should be inclined to accept the premise that since organizations are so widely varied and the pressures upon the so diverse, that a continuous spectrum of methodologies may be applicable to different organizations.

Nevertheless, this is not to suggest that an all-encompassing conceptual framework cannot be developed. In fact, the contrary position is likely to be accurate: knowledge transfer and its critical obstacles—non-productive routines and the peculiar characteristics of knowledge—can be placed within a qualitative theory of human psychology, the environment, and leadership patterns. It is within this comprehensive area that future studies must focus if they are to possess any applicability to the modern, ever-evolving, and fluid nature of the business world in the age of IT. It is this comprehensive model that researchers and theorists must strive; the alternative is the creation of a host of individualized case studies, from which organizations can only approach knowledge transfer and replication through the template method—by copying, step by step, the processes that led to success in other areas of business. Needless to say, this lacks the malleability to apply itself to more than a handful of circumstances, and will only benefit a select few. Still, this methodology will certainly occupy much of the future literature on knowledge transfer, though its conversion into an analytic tool for KM managers will likely be derived from studies utilizing a varied set of data, from a diverse range of organizations.

CONCLUSION

Routines remain the invisible infrastructure of any organization. They infuse themselves within the organization, and emerge naturally as ways to address problems, and manage decision-making processes. However, the natural occurrence of these routines is not often the most optimum arrangement for an organization to achieve its goals. In order for these routines to be reorganized in a manner that does succeed in this aim, there is a need for leadership, and the conscious effort of this leadership to employ knowledge management methodologies. As the literature has shown, haphazardly applying possible solutions can often magnify existing knowledge transfer problems, and even create new problems. Although there is an exceptional amount of IT currently available, and it is continually evolving, a critical understanding of an individual organization is necessary to choose an appropriate application. Clearly, such knowledge requires a form of leadership, and this leadership much be attuned to the pressures of the organization, and be willing to analyze input-output patterns with reference to its intents

and planned outcomes. So, from the theoretical perspective, the best tool to provide these knowledge managers is a comprehensive model—or what could even be called a comprehensive principle method of replication—from which to start, and to subsequently alter as individual pressures demand. This should be the purpose of current studies in KM, and these studies should make use of the growing amount of data becoming available to them.

Works Cited

Amaravadi, Chandra S. and In Lee. "The Dimensions of Process Knowledge." *Knowledge and Process Management*, Jan-March 2005. Page 65.

Argote, Linda, and Paul Ingram. "Knowledge Transfer: a Basis for Competitive Advantage in Firms." *Organizational Behavior and Human Decision Processes*, Vol. 82, No. 1, May 2000.

Ascher, B. "Vertical Versus Shared Leadership as Predictors of the Effectiveness of Change Management Teams." *Leadership Review*, 2003. Available: http://www.leadershipreview.org/2003fall/article4_fall_2003.asp.

Baden-Fuller, Charles and Sidney Winter. "Replicating Organizational Knowledge: Principles or Templates." *City University*, Oct. 19, 2005.

Bigras, Y. 2002, 'Transforming SMEs', *CMA Management*, vol. 76. Iss. 6.

Blank, Warren. *The 9 Natural Laws of Leadership*. New York: American Management Association, 1995.

Brown, D. Clayton. *Globalization and America since 1945*. Wilmington, DE: Scholarly Resources Inc., 2003.

Bryan, Lowell. "The 21st Century Organization." *The McKinsey Quarterly*, August 16, 2005.

Byrd-Blake, Marie. Female Perspectives on Career Advancement. *Advancing Women in Leadership*. Spring, 2004. Available: www.advancingwomen.com/spring2004/BYRD_BLAKE.

Cameron, Preston. "Managing Knowledge Assets." *CMA Management*, vol. 76, iss. 3, May 2002.

Cohen, M. D. et al. "Routines and Other Recurring Action Patterns of Organizations." *Industrial and Corporate Change*, Vol. 5, No. 3, 1996.

Cohendet, Patrick and Patrick Llerena. "Routines and Theory of the Firm: the Role of Communities." Prepared for the Nelson and Winter Conference, Aalborg, June 12-15.

Conger. *Shared Leadership: Reframing the Hows and Whys of Leadership*, Sage Publications, Thousand Oaks, 2003.

Cook-Greuter, S. R. "Making the Case for a Developmental Perspective." *Industrial and Commercial Training*, vol. 36, iss. 7, 2004.

Deiss, Kathryn J. "The Shared Leadership Principle." *Association of Research Libraries*, 2004. Available: http://www.arl.org/diversity/leading/issue2/shared.html.

DiBella, Anthony J. *Learning Practices*. Upper Saddle River: Prentice Hall, 2001.

Fletcher, J. K. and Kaufer, K. "Shared Leadership: Paradox and Possibility." In C. L. Pearce and J. A.

Freud, Sigmund. The Standard Edition of the Complete Psychological Works of Sigmund Freud. London: Hogarth Press, 1966.

Galunic, D. C. and Simon Rodan. "Research Notes and Communications." *Strategic Management Journal*, Vol. 19, 1998.

Garavelli, Claudio et al. "Managing Knowledge Transfer by Knowledge Technologies." *University of Lecce*, 2006. Available: http://www.knowledgeboard.com/library/c_garavelli_knowledge_transfer_through_knowledge_technologies.pdf.

Kostova, Tatiana. "Transnational Transfer of Strategic Organizational Practices: a Contextual Perspective." *Academy of Management Review*, Vol. 24, No. 2, 1999.

Liebowitz, Jay. *Building Organizational Intelligence: a Knowledge Management Primer*. New York: CRC Press, 2000.

Morgan, J. "Team Research News." *Team Trainers Consulting*, vol. 1, no. 11, 2004.

Mosquera, Mary. "Law Firm Collaborates Globally." *InternetWeek*, iss. 883, Oct. 22, 2001.

Pearce, C. "The future of leadership: combining vertical and shared leadership to transform knowledge work." *Academy of Management Executive*, vol. 18, no. 1, 2004.

Perry, M. L. and Pearce C. "Who's leading the Selling Team? Vertical versus Shared Leadership in Team Selling." *Marketing Theory*, vol. 10, 1999.

Pratner, Charles W. and Lisa K. Gundry. *Blueprints for Innovation*. New York: American Management Association, 1995.

Prusak, Laurence. *Knowledge in Organizations*. Boston: Butterworth-Heinemann, 1997.

Reynolds, Janice. *A Practical Guide to DSL*. New York: CMP Books, 2001.

Robbins, Stuart. "Some Thought about Sourcing." *Information Systems Management*, vol. 21, iss. 3, 2004.

Schlesinger, Arthur M. *Johnson*. New York: Chelsea House Publishers, 1988.

Spencer, J. C. and Robert M. Grant. "Knowledge and the Firm: Overview." *Strategic Management Journal*, Vol. 17, winter 1996.

Szulanski, Gabriel and Robert J. Jensen. “Overcoming Stickiness: an Empirical Investigation of the Role of the Template in the Replication of Organizational Routines.” *Managerial and Decision Economics*, Vol. 25, 2004.

Weiss, Leigh et al. “Learning from the Internet Giants.” *Harvard Business School Press*, 2003.

West-Burnham, J. “Building Leadership Capacity—Helping Leaders Learn.” *National College for School Leadership*, 2004. Available: //www.ncsl.org.uk/media/F7B/92/randd-building-lead-capacity.pdf.

Woods, Bob. “Sharing the Intellectual Wealth.” *Chief Executive*, July 2001.

Woods, Bob. “Taking Stock of what You Know.” *Chief Executive*, July 2001.