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Knowledge Sharing and the Psychological Contract: Managing Knowledge Workers Across Different Stages of Employment

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KNOWLEDGE SHARING AND THE PSYCHOLOGICAL CONTRACT:
Managing Knowledge Workers Across Different Stages of Employment

In today's dynamic global economy, knowledge is viewed as a key strategic and competitive resource by organizations, and effective management of individual knowledge within the work place has become critical to business success (Cohen & Leventhal, 1990; Grant, 1996; Ipe, 2003). An organization that does not have formal knowledge sharing practices in place fails to leverage its employees' intellectual capital for business innovation and growth. In the past, implementing cutting-edge technology was the typical first step towards promoting knowledge sharing. However, such technological infrastructure, while essential to knowledge capture and exchange, is only effective to the extent it is utilized in a continuous manner. To achieve sustained knowledge sharing that improves organizational profitability and enhances employee morale, firms such as Ernst and Young and Siemens have found that technological investments must be complemented with management practices that motivate employees to share knowledge on a continuous basis (Davenport & Prusak, 2000, Hislop, 2003). But, how does an organization develop a workforce committed to knowledge sharing, especially when employees have different perceptions of knowledge sharing expectations?

Adopting new ways of managing existing knowledge and creating new knowledge can mean a change in the playing field for employees. Such changes can cause employees to believe that components of their psychological contracts have been altered. Psychological contracts (hereafter PCs) are beliefs that individuals hold regarding terms and conditions of the reciprocal exchange agreement between themselves and their employer (Rousseau, 1995). Because of their implicit nature, a key to successful psychological contracting involves recognition of the reciprocal nature and mutuality of the contract (Koh, Ang & Straub, 2004). With intellectual

capital driving innovation and growth in most companies, employees' education and skills have become highly marketable and quite portable (Flood, Turner, Ramamoorthy & Pearson, 2001). Employees who may be more committed to their careers than the organization must be motivated to voluntarily share their knowledge, as efforts to legislate or mandate such behavior will be largely unsuccessful (Stevens, 2000). Thus, when organizations make the philosophical and strategic shift towards enhanced knowledge sharing, how can managers foster a "mutually beneficial, interdependent connection" with others in the organization (Hall & Mirvis, 1996, p. 17)? Essentially, what does it take to shift employees from a "what's in it for me" mentality to a "what's in it for us" mentality? Understanding the type of PCs employees hold is the first step.

Organizations looking to capitalize on the knowledge resources of their employees must understand that employees are likely to have very different PC perceptions at various stages of employment. It is important to examine employment stage (as opposed to career stage, for example) in order to better contextualize and focus managerial efforts to a specific phase of an employee's relationship with the organization. The fluid nature of PCs, coupled with the significant interdependency of knowledge sharing behaviors from one interaction to another (Conway & Briner, 2005) makes it especially important to understand knowledge sharing perceptions among individuals via employment stages rather than career stages.

In this paper, we examine organizational factors that are likely to influence cooperative knowledge sharing within the regular employee stage, the newcomer stage, and the applicant stage, and offer prescriptions for how best to reduce perceptions of contract breach. As we do so, we examine multiple streams of literature to help understand the reciprocal obligations between employers and employees, with a specific focus on knowledge workers. From existing research, we develop an integrative model that highlights different attitudes among individuals towards

their own knowledge sharing obligations and the obligations of the organization. We explore several types of PCs thought to exist and how different PCs are likely to function throughout the employment relationship. Several propositions suitable for empirical testing are also offered.

KNOWLEDGE WORKERS AND THE PSYCHOLOGICAL CONTRACT

Knowledge management involves the creation, sharing, validation, utilization, and management of tacit and explicit organizational knowledge through "harnessing of people, processes, and technologies" (Thite, 2004, pg. 28). Knowledge is difficult to manage because it is multi-faceted, complex, distributed, often tacit, abstract, and contextual (Blackler, 1995), requiring significant cooperation from its owners - knowledge workers who carry knowledge as a powerful resource which they, rather than the organization own (Drucker, 1989). Often triggered by organizational "ignorance," knowledge is generated through organizational dialogue that results in reciprocal exchange of messages in a specific context (Harvey, Novicevic, Buckley & Ferris, 2001). Knowledge workers, as motivated individuals who possess the capacity to create new insights, can be instrumental in facilitating such reciprocal exchange by communicating, coaching, and facilitate the implementation of these new insights (Vogt, 1995).

Knowledge workers are "autonomous people who enjoy occupational advancement and mobility and resist [a] command and control culture" (Horwitz, Heng & Quazi, 2003, pp 24). Their commitment is more occupational and less organizationally motivated. Consequently, while their knowledge is critical to long-term organizational success, turnover of knowledge workers can be significantly higher than for other employee groups (Despres & Hiltrop, 1995) unless the employing organization's values and goals are similar to employees' professional values and goals (Lee, Carswell & Allen, 2000). Turnover is expensive (Mitchell, Holtom & Lee, 2001) not only due to typical costs associated with recruiting, socializing, and training

employees, but also because of costs that may be difficult to quantify when irreplaceable knowledge assets are lost. Difficulties may also arise when knowledge workers fall prey to the "not invented here syndrome" (Davenport & Prusak, 2000). Here, employees from well-reputed, knowledge intensive organizations demonstrate blind faith in their own ability to generate the highest quality knowledge. Such attitudes can severely limit the infusion of new ideas into the organization and shortchange it with respect to innovation and the serendipitous success that open knowledge sharing organizations rely on for their competitive edge.

The most successful organizations are able to attract and retain top talent by entering into psychological contracts with their employees that "motivate them to generate and share knowledge in return for nurturing and nourishing their professional skills" (Thite, 2004, pg. 29). Most knowledge workers are motivated by either institutional or communitarian loyalty (Alvesson, 2000), where the former refers to cultures, norms, and stories that might create institutional loyalty and the latter refers to perceived common interests and social identification with a certain group. Horwitz and colleagues (2003) suggest that both types of loyalty are important in motivating and retaining knowledge workers. In addition to loyalty, trust also compensates when knowledge about another's motives, interests or personal background is unknown (Von Krogh, Ichijo, & Nonaka, 2000). And, since occupational commitment may be stronger than organizational commitment among knowledge workers (Vandenberg & Scarpello, 1994), any perceived breach of their PC translates quickly into a breach of trust (Robinson, 1996). Therefore, organizations must deliberately formulate PCs that establish trust between the parties and promote employee obligations to share knowledge and motive workers towards the type of knowledge sharing contributions that are essential to their mutual success (Rousseau, 2004). Doing so is likely to reduce the self-interest inherent in many social exchange

relationships (Whitener, Brodt, Korsgaard & Werner, 1998). Any long-term approach must be geared towards enhancing the overall quality of knowledge that is shared rather than simply increasing its volume or flow. True organizational benefits will only emerge when value—not volume—is added to the intellectual capital of the firm. Quality knowledge that does not address needs of the knowledge seeker will often fall into disuse (Markus, 2001). In the short-term, however, simply increasing the quantity of knowledge sharing may yield recognizable benefits leading to greater information use and enhanced quality. In addition, it provides the unique opportunity to enhance initial trust between the parties, and reinforces future trust intentions (McKnight, Cummings & Chervany, 1998).

It is important to recognize that one size does not fit all when it comes to PCs. In fact, Rousseau (2004) identified four types of PCs, each reflecting patterns of behavior between employers and employees - transactional, relational, balanced and transitional contracts. These PCs are distinct on two dimensions, the promised duration or time frame of the relationship between the parties (e.g., short-term or long-term) and the performance requirements (see Figure 1). Transactional contracts typically involve a short-term exchange of specific contributions and benefits that are usually highly monetary or economic in focus (Hui, Lee & Rousseau, 2004). Characteristics of this type of contract include job opportunities with very narrow duties and/or positions with a limited or short-term duration. Workers perceiving this type of PC may seek other employment opportunities when specific terms fail or they are not perceived to be adequately fulfilled. If turnover does not occur, overall performance is reduced to exhibiting only those behaviors consistent with the contributions one is paid to make (Rousseau, 2004).

Relational contracts, on the other hand, are typically found when a long-term arrangement is perceived to exist that does not have specific performance-reward contingencies.

Instead, we observe a mutually satisfying relationship between the parties, with open-ended arrangements that include both socio-emotional and economic terms (Hui et al., 2004). We see this type of PC in situations in which there is loyalty between the employer and the employee, and the parties believe an open-ended commitment to the future exists (Rousseau, 2004). Hall (1996) calls this the "relational approach" when considering the interdependence and mutuality that many workers develop as they become more concerned about their careers and less concerned about a particular job. Workers with relational contracts are very upset when the PC is violated, and they are more inclined to seek remedies that maintain their relationship with the employer. Only when a situation cannot be remedied will they reduce their contributions or consider leaving altogether (Rousseau, 2004).

The third type of PC combines a relational emphasis with the transactional feature of well-specified performance-reward contingencies (Hui et al., 2004). These balanced contracts are a combination of the open-ended time frame and mutual concern found in relational contracts and the performance demands and renegotiation efforts found in transactional contracts (Rousseau, 2004). Balanced contracts combine employer commitments to develop workers with expectations that workers will be flexible and willing to adjust if economic conditions change.

A fourth form is not really a psychological contract at all and is called "transitional arrangements." This arrangement exists in the *absence* of a reciprocal agreement between the parties or the breakdown of a PC—perhaps in unstable situations—in which the reciprocal commitments between the parties erode (Hui, et al., 2004). Although not the typical PC, as we will show below, this type of arrangement describes quite well the type of relationship thought to exist among individuals in the applicant stage.

INSERT FIGURE 1 ABOUT HERE

We argue that the expectations and psychological contract perceptions regarding employer/employee obligations are defined by one's stage of employment (regular employee, newcomer, and applicant). By carefully aligning knowledge sharing expectations with strategic business objectives at each stage, organizations may be able to effectively reap maximum knowledge sharing benefits. Using the types of PCs as our framework, we discuss the issues that need to be addressed within each stage of employment and examine how organizations can best manage expectations for knowledge sharing and encourage these behaviors

THE PSYCHOLOGICAL CONTRACT ACROSS THREE STAGES OF EMPLOYMENT

Rousseau (2004) argues that one cannot determine the type of PC that is operating simply by looking at the employment status of the individual. She suggests, for example, that many part-time workers can be very devoted to the organization and perceive a strong relational PC, whereas some full-time workers and veteran employees might see only a limited commitment between themselves and the organization. Although status may be an insufficient PC identifier, we suggest that different *stages* of employment may be useful for understanding the type of PCs operating between employers and employees. Taking a prescriptive approach, we examine how managers and HR professionals can best encourage perceptual obligations favoring knowledge sharing among workers and potential workers to decrease perceptions of PC breach. We begin by examining the regular employee stage, as this stage is likely to be the most challenging, with the broadest array of PC perceptions. These employees are distinguished from newcomers because of the differences their increased tenure has for changing patterns of behavior within the organization. We then consider the PCs likely to be driving newcomer behavior, followed by a brief discussion of individuals in the applicant stage.

The Regular Employee Stage

In the regular employee stage, understanding which PC exists among knowledge workers is likely to be most challenging. Employees who successfully make it to this stage may have been with the organization for varying periods of time, and there may be as many different motives for remaining with the organization as there are employees. However, they all have one thing in common: they have successfully learned "the ropes." They differ from newcomers in that their organizational tenure puts them in the best position to have observed and experienced the existing relationship between performance expectations and accompanying rewards. For these employees, a change in strategic focus to an emphasis on knowledge sharing is likely to have a greater impact on their PC perceptions than employees who are new to the firm and have not yet developed strong expectations and patterns of behavior. Unlike newcomers, the once-understood "rules of the game" are being changed, and the employer is requiring new obligations from them. Based on an already-existing relationship between workers and employers, Rousseau (2004) succinctly describes three types of PCs that may exist among regular employees: transactional, relational and balanced (see Figure 2). The challenge with regular employees will be to adequately address a wide variety of concerns regarding performance criteria and rewards to minimize perceptions of PC breach in any shift to a collaborative work environment.

Because of the more explicit nature of the employment relationship, managers must first identify those knowledge workers in their departments possessing transactional contracts. These individuals will have a short-term focus and seek to maximize their benefits in exchange for any contributions. These employees typically view themselves more as individual contributors, exhibiting little perceived need to coordinate with others (Rousseau, 2004). Recognizing that knowledge is power, these employees may withhold knowledge in order to enhance their value

in the organization. They may regularly threaten to leave the organization, taking their knowledge resources with them if the employment exchange does not meet their expectations. It will take explicit negotiation and, in some cases, more formal arranging of the performance-reward relationship (i.e., a strong link to monetary and economic benefits) to motivate these employees to share what they know and to avoid breach perceptions that can lead to non-cooperative behaviors or turnover. However, making PC arrangements explicit enough to satisfy such employees may be difficult, particularly in organizations with a strong command and control management style (Conway & Briner, 2005).

Next, identifying individuals with relational contracts is important since these individuals are eager to learn from others that are perceived to be trusted and respected (O'Dell & Grayson, 1998). Doing so also reduces perceptions of the risk involved in exchanging information between the parties (Whitener et al., 1998). Employees with relational contracts are more willing to work overtime regardless of whether they are explicitly paid to do so, they help co-workers on the job, and they are more likely to support necessary organizational changes (Rousseau, 2004). Getting these employees to support collaborative knowledge sharing will be pivotal as they are likely to be the strongest proponents of collaborative work arrangements due to their preference for the socio-emotional benefits that collaborative relationships provide (Conway & Briner, 2005; Hui et al., 2004). An organization may benefit from moving such employees into key knowledge management roles to permeate a culture of knowledge sharing, which may further enhance their knowledge sharing motivations.

The most difficult group of knowledge workers to identify in a shift towards greater collaborative knowledge sharing may be those with balanced contracts. These employees have a more open-ended view of their employment arrangement and prefer a combination of economic

and socio-emotional rewards in exchange for their contributions (Hui et al., 2004). Minimizing breach perceptions among these employees requires managers to carefully balance transactional and relational contract features in all interactions, as these individuals might seem to prefer intangible benefits one day and tangible, monetary benefits at other times. This balance, however, may enable them to effectively model collaborative behaviors when conflicting viewpoints threaten productivity among employees with transactional and relational PCs.

To minimize PC breach perceptions among knowledge workers in the regular employee stage, managers will have to carefully reconstruct the performance-reward requirements as they relate to employee knowledge sharing expectations and employer reward obligations. We suggest a three-pronged approach to successfully changing the PC that includes developing an appropriate communication strategy, providing opportunities for employee training, and establishing clear performance criteria oriented towards increased knowledge sharing.

INSERT FIGURE 2 ABOUT HERE

Communication Strategy. For successful knowledge sharing, employers must work to reduce the fear and insecurity that such changes are likely to evoke. Developing an effective communication strategy and linking tactical training initiatives to business outcomes then becomes critical. Managers must themselves begin sharing knowledge with employees upfront, actively modeling knowledge sharing behaviors they desire from employees (Bandura, 1997), and properly channeling employee negativity and cynicism into energy towards the benefits of innovation (Clampitt, DeKoch & Cashman, 2000). Any disparity employees perceive between the quantity and quality of the information may trigger information seeking behaviors (Rousseau & Tijoriwala, 1999) which could result in incomplete, invalid, and misdirected knowledge initiatives that hinder acceptance of knowledge sharing goals. Cynicism and lack of

organizational trust can result if employees do not receive consistent messages through formal channels and informal channels (Hoogervorst, van der Flier & Koopman, 2005). This in turn can result in lower morale and productivity, inefficiency and greater turnover (Clampitt et al., 2000).

To be most compelling, specific communication tactics must be deployed using a top-down approach. First, top management must foster open and honest communication with lower level managers early in the process to develop trust and help them manage their own PCs (Rousseau & Tijoriwala, 1999). Atkinson and Butcher (2003) provide a good overview of the importance of establishing trust among managers due to their ability to control the vertical exchange of information throughout the organization. Although many of these managers may have been involved in the planning process that resulted in a shift towards knowledge sharing, they themselves may be uncertain about the personal and professional impact of these changes. Helping managers at all levels adjust their own PC perceptions can also lead to greater credibility which will be useful in establishing trust during unit-level knowledge sharing implementation.

Next, among employees with transactional contracts, complaints that "this is not part of my job description" will run rampant unless specific behavioral changes and rewards are clearly communicated and understood. Managers must utilize rich communication media (e.g., face-to-face meetings) to prepare these employees for the anticipated changes and to promote acceptance of these changes (Evans, 2003). In addition to redirecting employees' obligations for knowledge sharing, managers must acknowledge and emphasize the employer's recognition of reciprocal obligations to provide rewards for increased knowledge sharing. This is critical for workers with transactional contracts as the outcomes from any change initiative influence whether employees experience benefits from the change and adjust to it (Rousseau & Tijoriwala, 1999). In addition,

demonstrating such mutuality will be crucial for establishing trust that knowledge sharing efforts will be appropriately rewarded.

Employees with relational contracts are more likely to see the value of increased knowledge sharing and will demand fewer tangible rewards in exchange for modified behaviors (Conway & Briner, 2005). Consequently, explicit communication regarding social and professional benefits of collaborative work will motivate them more than explicit promises of monetary rewards in exchange for increased knowledge sharing. Such employees may be motivated by opportunities of shared leadership wherein they are encouraged to lead themselves and share knowledge with peers in order to accomplish organizational innovation (Bligh, Pearce, & Kohles, 2006). Relational employees may be further motivated by increasing task complexity and interdependences, both of which are hypothesized to encourage knowledge creation behaviors (Bligh, et al 2006). For these individuals, the trust and commitment they have developed with their employer and peers will stimulate them to act in a way that furthers strategic objectives. Discussions with these employees should indicate how the success of knowledge sharing initiatives will result in enhanced organizational resources and a more rewarding work environment.

For those employees perceiving a more balanced contract, managers need to specifically address both tangible rewards (Rousseau & Tijoriwala, 1999) as well as intangible, socio-economic rewards including improved achievement of projects and work objectives, peer recognition, and richer and more rewarding work (O'Dell & Grayson, 1998). For balanced contract employees, a combination of our recommendations for the two groups above would be effective in motivating knowledge sharing behaviors. Such employees can also serve as

effective coaches because of their appreciation of both the tangible and intangible effectives of knowledge sharing initiatives.

In order to obtain buy-in from all three employee groups, a well-developed and executed communications strategy can be a key success factor. Such a strategy must address three dimensions of communications: (1) an identification of the target audience for buy-in, (2) identification of the message to be delivered to each group, and (3) the medium and frequency for such communication. Management must also customize the message to each such group by clearly describing the performance criteria and reward mechanisms that are being developed in exchange for achieving knowledge sharing objectives. For communication strategies to be successful, managers must also involve employees early on, regardless of the nature of PC, to increase awareness and gather their input as to how the employer can best minimize perceptions of contract breach (Rousseau, 1995). Failure to do so can cause negative changes in employee behavior (Lester, Turnley, Bloodgood & Bolino, 2002) in the form of low organizational citizenship behaviors (Coyle-Shapiro, 2002), reduction in trust and job satisfaction, and increased turnover intentions (Robinson & Rousseau, 1994). Communications must also remind employees about the resources available to enable greater knowledge sharing (e.g., opportunities to meet, the spaces to congregate, access to other employees, and available collaborative groupware) (Ulrich, 1998). Such communications must be frequent and consistent among all employees to reinforce the mutual benefits of collaborative knowledge sharing. Furthermore, they should reach target audiences using media that provide richness of context (i.e., quality) as well as reaching target audiences with desired frequency (i.e., quantity).

> Proposition 1a: A well-developed and executed communication strategy results in increased knowledge sharing behaviors and fewer perceptions of psychological contract breach among employees.

Employee Training and Education. Effective communication strategies by themselves are insufficient to transform employees into active knowledge workers. Managers must educate employees on how to share knowledge in ways that benefit the organization as well as their own careers (Stevens, 2000). This necessitates familiarity about effective knowledge sharing practices, processes, and supporting technologies. Since about 70% of learning occurs informally (Evans, 2003), employees need to discover that "it is in their best interest to share knowledge" (Stevens, 2000, p. 55). Social cognitive theory (Bandura, 1997) describes how informal learning can occur through both observation and enactive mastery. By observing colleagues sharing knowledge and benefiting from it, or by sharing knowledge themselves and experiencing successful outcomes, individuals may become highly motivated to seek out their own opportunities. In return, these employees may become adept at modeling such behavior for newcomers or for more hesitant regular employees (Bandura, 1997).

Knowledge exchange opportunities by themselves, however, may be uninspiring for individuals with purely transactional contracts. If these individuals truly have a short-term orientation, they may be less inclined to actively participate in knowledge exchange events without a demonstration of explicit job or career benefits. Managerial discretion should be used to determine the commitment of these individuals to knowledge sharing objectives, while emphasizing the direct benefits they can expect to receive in return. Stories and personal anecdotes providing concrete examples of how collaborative knowledge sharing has been rewarded may help employees with transactional contracts grasp the benefits they can reap from increased knowledge sharing. Ongoing education via internal outlets such as company-wide emails, newsletters, and intranets can raise awareness of the mutuality of knowledge sharing exchanges and help employees visualize opportunities for collaborative exchange.

Since most individuals are eager to learn from others who are perceived to be trusted and respected (O'Dell & Grayson, 1998), individuals with relational contracts may be motivated by the informal exchange itself. Convincing these employees that it is increasingly more difficult for one individual to possess all the knowledge necessary for organizational innovation and, in this context, promoting the need for coordinated and integrated knowledge sharing activities may be adequate to obtain commitment for sharing behaviors (Bligh, et al 2006). Such knowledge workers may demonstrate greater willingness to utilize employee databases and expertise location systems (ELS) to connect with colleagues who have expertise a particular area and who can provide access to expert advice (Marwick, 2001). Employees with expert knowledge can also be enlisted to participate in more formal training initiatives in both job-related and non-job-related areas to help expand the knowledge repertoire of the entire organization (Lengnick-Hall & Lengnick-Hall, 2003). Increased status, visibility, and recognition as a consequence of this knowledge transfer will not be overlooked by those with relational contracts.

For employees with balanced contracts, awareness of palpable benefits that co-workers accrue from knowledge sharing behaviors is likely to motivate them to act similarly (Cohen & Prusak, 2001). Thus, observing modeled behavior—in this case, knowledge sharing behavior—can also be an effective way for employees to learn (Bandura, 1997). Even the most serendipitous interactions such as hallway conversations can be opportunities for learning and knowledge sharing when habits become established. In addition to facilitating a multitude of informal learning opportunities, individuals with balanced contracts are likely to be motivated when the organization offers opportunities for more formal learning (e.g., paying for conferences, offering reimbursement for classes). Managers must, however, create an environment that enables transfer of formal knowledge into the specific work contexts by

facilitating and sponsoring forums for attendees to share their knowledge with colleagues. Especially for tacit knowledge transfer, such direct interactions between learners and experts are necessary (May, Puffer & McCarthy, 2005). These forums can be touted as enhancements to employees' portfolio of skills and as career development opportunities (Flood et al., 2001). Such interactions can provide the necessary link between behaviors and outcomes that employees with balanced contracts need in order to successfully adapt their PCs for increased knowledge sharing.

> Proposition 1b: Training and knowledge exchange opportunities that focus on educating employees and actively promoting collaborative learning results in increased knowledge sharing behaviors and fewer perceptions of psychological contract breach among employees.

Establishing Performance Criteria. In most organizations, what gets measured and rewarded is what employees do (Evans, 2003; Greene, 2002). Along with effective communication and training/education strategies, a strong performance management system is needed to mitigate serious breach perceptions among knowledge workers, regardless of the type of PC. Employees with transactional contracts need to see performance criteria that are specifically linked to key results in their department and the organization (Evans, 2003). Human resource professionals need to work closely with managers to develop performance systems that align individual competencies and capabilities towards ongoing, collaborative employee behavior (Lengnick-Hall & Lengnick-Hall, 2003) and illustrate how such collaborative behaviors will be rewarded. Examples of performance criteria include items such as, "contributions to organizational effectiveness," and "contribution to the effectiveness of others/the team" (Greene, 2002). Measures of knowledge acquisition, knowledge sharing, knowledge reuse, and knowledge development need to be incorporated into the performance management system (Evans, 2003). Attitudes—and not just behaviors—that are pivotal for ongoing knowledge creation and dissemination also need to be an integral part of performance appraisal criteria

(Liebowitz & Beckman, 1998). Attitudes that align with principles of teamwork, collaboration, and stakeholder involvement should be rewarded. Individuals with transactional contracts may also require more overt involvement by managers to see the link between behaviors and consequent rewards before adjusting their obligations to contribute.

Organizations that openly embed knowledge sharing behaviors in performance evaluations may find a need for managers to individually motivate workers, as the benefits derived from knowledge sharing are likely to be intrinsically motivating to employees on their own and in the moment (Rudolph & Kleiner, 1989). The now extinct Anderson Consulting integrated criteria to assess knowledge sharing behaviors in their annual performance reviews. McKinsey & Company, which struggled to re-skill its workforce to be T-shaped managers who had specialized as well as broad organizational knowledge, eventually determined that promotion and incentive criteria were most effective in this shift. Similar outcomes were observed at the World Bank in 1988 when knowledge sharing was determined to be one of four "core behaviors" that employees were evaluated on. Care must be taken, however, to reward the correct behavior. At Ernst & Young, incentives were initially focused on knowledge utilization which discouraged managers from packaging, filtering, and distributing knowledge. This was successfully changed when one-fifth of an employee's performance evaluations were based on knowledge sharing behaviors (Sarvary & Chard, 1997).

Fairness perceptions are heightened when employees are held to performance standards that require greater commitment and ownership of knowledge sharing activities (Rousseau & Shperling, 2003). Perceptions of individual and organizational ownership of knowledge have been found to increase the propensity for sharing (Jarvenpaa & Staples, 2001). And, knowledge workers are most motivated when they perceive freedom to design their work environment

(Horwitz et al., 2003) and are able to develop ownership over their work (Rousseau & Shperling, 2003). Managers can capitalize on these ownership motives among employees holding both relational and balanced contracts in managing PC perceptions. For example, the performance management systems at Buckman Laboratories linked both evaluation and promotion processes to employee behaviors, and monitored how consistently all employees conformed to ongoing knowledge sharing. Employees there agreed to own responsibility for creating and sharing knowledge among the organization's stakeholders, and the performance management process successfully reinforced this responsibility (Stevens, 2000).

In addition to perceptions of ownership, a good incentive system for knowledge workers with relational and balanced contracts provides not only the extrinsic rewards that are traditionally expected in this type of employment exchange (e.g., monetary incentives or bonuses), but would emphasize the intrinsic rewards to be gained. These might include better, easier, and more efficient achievement of project objectives, peer recognition or being viewed as an expert, and the design of richer and more rewarding work (O'Dell & Grayson, 1998). At Siemens, even though bonus points earned for documented knowledge sharing could be redeemed for a variety of premiums, "despite accumulating large numbers of shares, however, few users ever converted them into prizes. ShareNet managers speculated that the knowledge had become its own reward, and users did not want to relinquish the status of a high share holder by redeeming it" (Voelpel, Dous & Davenport, 2005, p. 16). Developing more stable work groups with social norms that support sharing and promise keeping are also likely to be intrinsically rewarding, thus reinforcing obligations for subsequent exchanges of knowledge (Cohen & Prusak, 2001). To this extent, there is also benefit in providing group incentives for

knowledge sharing to mitigate the negative impact that individually tailored incentives can have on intrinsic motivation of employees (Carr, Hodgson, Vent & Purcell, 2005).

In return for employees accepting personal responsibility and ownership for knowledge sharing, incentive programs that offer the type of equity and stock options typically accorded by more traditional firm owners are likely to fulfill the need for reciprocity inherent in all types of PCs (Rousseau & Shperling, 2003). In addition to pay practices described earlier, such variable incentives are more effective at motivating employees towards better performance quicker adaptation to new technologies and work processes, and development of more collaborative relationships which yield crucial competitive advantages (Milkovich & Newman, 2005). When reward systems demonstrate mutuality in the employment relationship, employees tend to believe that their PC expectations are being met and will feel more obligated to contribute to the good of the organization (Flood et al., 2001).

> Proposition 1c: Performance criteria that reinforce ownership and personal responsibility for knowledge sharing behaviors are positively related to employee psychological contract obligations for knowledge sharing.

> Proposition 1d: Performance criteria that clearly link knowledge sharing behaviors to organizational rewards are positively related to employee knowledge sharing behaviors and negatively related to psychological contract breach.

The Newcomer Stage

A newcomer's initial attraction to the organization results from a perceived match between their goals and values and those of the organization, and they begin to actively search for evidence to confirm these expectations (Bretz & Judge, 1994). They also begin to visualize how well they can realistically conform to those expectations (Riordan, Weatherly, Vandenberg & Self, 2001). Rousseau also notes that, "unlike veterans, (new hires) are more likely to notice, seek out, and observe information related to the condition of their employment" (e.g., job

demands or requirements, inducements and rewards) (1995, p. 32). Consequently, early socialization of newcomers can enhance the development of initial trust (McKnight et al., 1998). It also provides an opportunity for managing employee expectations and emphasizing the importance of conformity to organizational norms (Cooper-Thomas & Anderson, 2006; Wanous, 1992). Although new employee orientation is considered to be different from socialization, and much shorter in duration, this is probably the first place to start in managing newcomer reduce stress surrounding knowledge sharing expectations since it is thought to be the first place for managers to convey PC obligations among employees (Wanous & Reichers, 2000).

For many newcomers, insufficient tenure with the organization will most likely result in PC perceptions of a more transactional nature, and for many individuals, insufficient time to establish trust and commitment. Although some individuals are predisposed to trust others as a function of their personality (McKnight et al, 1998), many individuals will only trust coworkers conditionally; that is, as long as each party behaves appropriately (Jones & George, 1998). In addition, Robinson (1996) also found that trust mediates the relationships between breach perceptions and subsequent behaviors. Therefore, expecting subsequent knowledge sharing behavior in the face of any uncertainty over PC fulfillment is contingent on existing levels of trust. Without limited opportunities to create a strong bond of trust among employees with very little tenure, a more direct relationship between PC fulfillment and subsequent knowledge sharing behaviors is likely to exist. As a result, we see the existence of a more transactional PC.

Compared to regular employees, unrewarded knowledge sharing behaviors among newcomers result in perceptions of contract breach more quickly, possibly due to perceptions of unmet expectations. Such perceptions are associated with negative attitudes and behaviors (Cooper-Thomas & Anderson, 2006). Therefore, behavioral attempts at knowledge sharing are

likely to extinguish quickly unless employer obligations to reward are quickly met. DeVos, Buyens and Schalk (2003) found that newcomers' PC perceptions and expectations develop primarily from reciprocity norms. Following changes to reciprocal norms, trust develops only when newcomers are able to make sense of the experience (Louis & Sutton, 1991), which may occur slowly. Therefore, early socialization practices (including new employee orientation and on-the-job training) must reinforce existing expectations towards collaborative knowledge sharing. They must also enable newcomers to revise their perceptions and/or shape subsequent work attitudes and behaviors for knowledge sharing without triggering breach perceptions (DeVos et al, 2003; Jones, 1986).

Knowledge workers with a strong sense of occupational commitment may hold more balanced PC perceptions as newcomers, as their prior work experiences or educational training would have instilled in them values favoring collaboration (see Vandenberg & Scarpello, 1994, for more discussion of occupational commitment). For newcomers possessing either transactional or balanced PCs, managers must make explicit the organization's willingness to fulfill its own obligations for rewarding sustained knowledge sharing. A partial array of organizational obligations useful for rewarding knowledge sharing include, but are not limited to: (1) providing merit pay plans that include accurate assessment and overt recognition of knowledge sharing; (2) rewarding individual knowledge sharing behaviors that lead to increased team performance; (3) recording and measuring the value of knowledge contributions; and (4) linking profit sharing, gain sharing and employee stock ownership plan rewards to both individual and team knowledge efforts (Bartol & Srivastava, 2002).

To avoid development of proprietary expertise and creation of "knowledge fiefdoms … (which work) against the interests of the company as a whole" (O'Dell & Grayson, 1998, p.76),

strong leadership and support must come from a variety of organizational levels and sources (e.g., senior management, direct supervisors, expert colleagues). Newcomers would also benefit from developing communities-of-practice and attending social gatherings that extend interactions beyond formal job descriptions and official reporting lines. Such social interactions, largely with colleagues, supervisors, and mentors (Cooper-Thomas & Anderson, 2006), provide an opportunity to share tacit knowledge between individuals (Nonaka, 1994) through collaborative, face-to-face activities rather than through formal written and verbal media (Nonaka & Takeuchi, 1995). And, as a richer form of communication, face-to-face interactions are critical for creating trust among all workers (Ross, 2006), especially newcomers. Regular employees should not only model knowledge sharing behaviors, but they should also use familiar indoctrination techniques (e.g., storytelling, rituals, symbolic language) to help newcomers learn how collaborative efforts have resulted in successful business outcomes (Schein, 1999). This is likely to strengthen the bond between them and further enhance the trust building necessary for knowledge sharing. Challenges faced by newcomers in developing collaborative relationships must be addressed early on to preclude a reliance on past hoarding behaviors (Evans, 2003) or those modeled by uncooperative colleagues (Bandura, 1997).

In addition to informal socialization practices, structured socialization processes can be useful for reducing PC breach perceptions (Cooper-Thomas & Anderson, 2006; Robinson & Morrison, 2000). Using existing orientation practices to introduce newcomers to organizational life, expert databases, knowledge-intensive intranets, collaborative workspaces, and communication technologies may be an effective way of conveying the organization's commitment to fulfilling its obligations for encouraging knowledge sharing while also familiarizing newcomers with supporting technology infrastructure. In addition, the relational

needs of newcomers with more balanced PCs would be met by focusing on employee development through mentoring programs. Existing mentoring programs can be leveraged to match newcomers with regular employees possessing more relational PCs. Although formal mentoring relationships are not usually as effective as spontaneous, informal ones made between parties (Ragins, Cotton, & Miller, 2000; Ragins & Cotton, 1999), providing opportunities for input into the mentor-protégé match may increase commitment from both parties, thus further enhancing trust between the parties. Such informal developmental opportunities are consistent with the movement towards the protean career desired by many professionals, wherein responsibility for their career is individually owned rather than relying on the organization for career growth (Hall & Mirvis, 1996). As occupational commitment becomes more prevalent than organizational commitment, matching mentors and protégés from different departments and with dissimilar backgrounds can not only encourage learning in the workplace (Allen, Eby & Lentz, 2006), but can nicely parallel knowledge workers' overall career goals and aspirations.

Regardless of whether newcomers hold transactional or balanced PCs, managers need to be aware of and reinforce any and all initial attempts at creating new knowledge. The roles of both managers and HR professionals can be enhanced to include searching employee databases to coordinate opportunities for development of personal relationships (e.g., offer new employee luncheons or receptions) and assist in identifying common areas of interest and expertise among existing employees to facilitate future ad hoc conversations. For instance, following a new hire, HR and managers should disseminate his/her skills and experiences to regular employees to increase their performance expectations (Cooper-Thomas & Anderson, 2006). In fact, a recent Wall Street Journal article (May 29, 2004) discussed how organizations are redesigning their office architecture to accommodate such ad hoc conversations in stair wells and open spaces.

In summary, reinforcing or realigning PC perceptions through employee interactions, activities and networking opportunities, and establishing early familiarity with technology increases knowledge sharing rather than hoarding among newcomers. Such activities can increase trust between employees and increase the probability that a newcomer becomes so "passionate about his knowledge that he is happy to share it whenever he gets a chance" (Davenport & Prusak, 2000, p. 33).

> Proposition 2a: Socialization practices that reinforce norms for engaging in knowledge sharing among newcomers enhance the norm of reciprocity between the parties and result in increased knowledge sharing behaviors and fewer perceptions of psychological contract breach.
>
> Proposition 2b: Socialization practices that reinforce the organization's norms for fulfilling obligations for recognizing and rewarding knowledge sharing among newcomers enhance the norm of reciprocity between the parties and result in increased knowledge sharing behaviors and fewer perceptions of psychological contract breach.

Perceptions of the organization prior to entry frequently differ from newcomer's actual experiences and those of regular employees. Consequently, it is important to distinguish between the pre-entry stage of employment and the newcomer stage (Riordan et al., 2001). This is particularly true when considering the congruence between what applicants are told prior to hire and the actions they observe as a newcomer. The next section examines the PC implications of knowledge sharing among our final employment stage, the applicant stage.

The Applicant Stage

In the applicant stage, because there is no formal employment relationship between the applicant and the organization, true psychological contracts do not exist (Guest, 1998). In the absence of an agreement between the parties, applicants still form expectations about an organization based on its reputation and whatever other information is available, creating a transitional arrangement with the organization (Hui et al., 2004). Firms with positive reputations

attract not only more applicants, but also attract higher-quality applicants even when top level salaries are unavailable (Turban & Cable, 2003). Among knowledge workers, higher-quality applicants are likely to be those individuals with knowledge-intensive training (with or without extensive experience in any specialized field). Since these workers are seeking organizations that allow them to define their work processes and their working environment, organizational representatives meeting with this type of applicant (e.g., recruiters, managers, co-workers) must clearly identify and clarify the knowledge sharing obligations and the accompanying rewards that can be expected between the parties when a formal employment relationship is established. This is also the point at which trust between the parties can be initiated.

The best recruiting efforts will focus on those individuals with an already-established pattern of knowledge sharing behavior. Since HR is typically responsible for overseeing all job postings, they are best suited to ensure that knowledge sharing behaviors are identified as essential functions of the job. Resume screening and introductory telephone interviews can then narrow the pool of applicants to those with a demonstrated track record of collaborative, knowledge sharing experiences, and eliminate individuals expressing a propensity towards hoarding behavior. Bock, Zmud, Kim and Lee (2005) developed a measure of attitudes towards knowledge sharing which might be useful here. For example, an item from their scale asks individuals to rate how valuable and enjoyable their knowledge sharing experiences have been with others and then to provide behavioral examples to support and illustrate their ratings. For those applicants without prior knowledge sharing experiences (e.g., recent college graduates) interview questions should elicit experiences illustrating transferable skills favoring knowledge sharing. Examples here might include the ability to listen, keeping colleagues and supervisors informed of progress on work tasks, and expressing an eagerness to learn (Babcock, 2004).

Pre-employment information may be inaccurate or imperfect (Mohamed, Orife & Slack, 2001). Therefore, pre-application activities must provide precise information about the reputation and culture of the organization relative to knowledge sharing to help applicants assess their fit with the culture (Schein, 1999). External resources such as corporate websites, articles posted on the internet and those in trade or business publications (i.e., *Fortune* magazine's annual survey of top employers), job fairs and campus recruitment activities, will frequently be relied upon by applicants for corporate information. They should be leveraged to further develop knowledge sharing expectations. Examples illustrating the congruence between knowledge sharing behaviors and corporate values can enable applicants to more accurately visualize firm expectations. HR professionals and public relations specialists need to coordinate activities to routinely audit website links to policies, benefits, and job opportunities to ensure that information about organizational philosophies on sharing knowledge and the accompanying benefits available for individuals successfully doing so are well-publicized and accurate. Any organizational literature and handouts should clearly communicate the organization's commitment to knowledge sharing as an integral part of its culture. The accuracy of these resources can become a building block for establishing a trusting, collaborative relationship among applicants who eventually become newcomers.

Applicants also rely on other sources for firm information such as personal experiences with an organization (e.g., as a consumer) or discussions with others (e.g., peers, campus career offices, relatives) (Cable, Aiman-Smith, Mulvey & Edwards, 2000). Collaboration with these stakeholders can be useful in further reinforcing the organization's image as a knowledge-based entity. Therefore, recruiters and hiring managers need to continually build relationships with vendors, suppliers and customers of the organization while maintaining a close relationship with

other entities within the organization that may already be involved in building such relationships (e.g., public relations, purchasing, customer service) (Lengnick-Hall & Lengnick-Hall, 2003). Active communication of the organization's commitment to ongoing knowledge sharing among all stakeholders will help applicants develop a clearer vision of knowledge sharing expectations.

> Proposition 3a: Communications that accurately depict an organization's knowledge sharing culture are positively associated with applicant expectations for knowledge sharing on the job.

Qualified applicants who pass early recruitment stages become candidates in the interview and selection stage. Here recruiters should focus on presenting a realistic job preview (RJP) that accurately depicts the collaborative behaviors expected within the specific position as well as the corporate values to be adopted upon successful entry into the organization. Wanous (1992) encourages the use of RJPs when an organization wishes to address a particular factor, and is desirous of reducing dissatisfaction and positively influencing job survival. When organizations adopt effective knowledge management as a strategic initiative, applicants must be absolutely clear about expectations for knowledge sharing. The absence of clear expectations for such behaviors may cause the most qualified applicants to fail as newcomers.

Although RJP's are frequently used to convey negative aspects about a particular job in order to lower grandiose expectations among applicants and newcomers, Meglino and DeNisi (1987) suggest that they can also be a successful mechanism when seeking individuals who will be highly committed to the organization. This sets the stage for future development of balanced and relational psychological contracts. RJP's that clearly articulate knowledge sharing expectations allow candidates who perceive these behavioral expectations negatively to self-select out of the recruitment process (Wanous, 1992). Conversely, those candidates who find the expectations attractive demonstrate greater organizational commitment once hired (Meglino &

DeNisi, 1987). Work samples can also be used by HR to assess candidate skills and present an accurate picture of the job (Rousseau, 1995). Although RJPs may not successfully influence job choice among those individuals with few job alternatives, they may help reduce the inflated expectations many newcomers often have (Wanous, 1992).

In addition to providing candidates with a realistic picture of the job, selection procedures must also yield a realistic picture of the candidate. Techniques such as structured and behavioral-based interviews can explore in greater detail those applicant experiences that demonstrate past competencies related to knowledge sharing behaviors (Barclay, 1999). Evans (2003) suggests asking candidates questions related to how well networked they are, how they contribute to networks to which they belong, the type of communities of practice they belong to, examples of how they have helped develop their colleagues and how they keep their own knowledge and skills up to date. Such questions can provide a good indication of their future knowledge sharing behavior, and can be used to discourage applicants who may be perceived as unlikely to adapt to such collaboration upon hire (Wanous, 1992).

The interview process is also an excellent opportunity to explain performance criteria and expectations for collaboration with other employees, and discuss how team-based rewards may operate (e.g. gain sharing, profit sharing). It also provides an effective medium for attribution of organizational progressiveness to knowledge sharing and collaborative work. With clear and concise communication in this stage, applicants' expectations can be managed in such a way that sharing knowledge obligations are realistically outlined. Such expectations can then become fine-tuned and solidified later on in the newcomer stage.

> Proposition 3b: Interview and selection procedures that clearly communicate expectations for knowledge sharing and provide realistic examples of knowledge sharing are positively associated with applicants' perceptions of obligations for knowledge sharing on the job.

RESEARCH IMPLICATIONS

Our discussions have focused on the theme that, depending on the stage of employment, different PCs exist among knowledge workers. Although PC perceptions exist across a multitude of workplace dimensions (e.g., promotions promised, working conditions, schedule flexibility), our emphasis on the knowledge sharing component of PCs is intended to highlight the importance of one aspect of the employment exchange. Most organizations now find themselves in a global marketplace where knowledge is power and innovation and maintaining a competitive edge depends primarily on the extent to which employee knowledge can be exploited for mutual gain. In addition to the practical implications derived from understanding the type of PC to manage for enhanced knowledge sharing, several research implications can be drawn from such a focus. First, our theoretical arguments suggest that several types of PCs exist among knowledge workers and empirical studies should seek to investigate whether such distinctions actually exist within a field setting. Next, the static nature of our prescriptions is based upon individuals' PCs at a single point in time. Examination of the dynamic nature of relationships between co-workers sharing knowledge, the evolution of the employer-employee relationship as tenure and knowledge sharing increase, and the relationship between other organizational agents and knowledge workers goes well beyond the scope of this paper. In addition, we do not presume to say that employees beyond the newcomer stage are all alike. Personality factors, impending retirement, family growth, and a host of other phenomena are likely to result in shifts from one type of psychological contract to another. The influence of such factors offers a rich opportunity for both qualitative and quantitative research to flourish and should be explored in greater detail. Theoretical and empirical research can also compare the manifestation of such PCs and behaviors across a variety of professions, including

information technology, product development, and engineering, to advance our knowledge of the importance of effective PC management.

Ideally, the relational benefits of knowledge sharing experienced among employees with transactional PCs should move them towards a more balanced PC. However, little or no research to date has empirically examined how or why employees with transactional PCs might shift to a balanced or relational PC. Recently, Conway and Briner (2005) reviewed several studies that examined the relationship between different types of psychological contracts and a variety of work outcomes, and their overall conclusions were mixed. From a social exchange perspective, we might logically predict that a by-product (perhaps an unintended by-product) of knowledge sharing among knowledge workers with transactional contracts would be a shift towards a more balanced contract, particularly as organizational tenure increases. And, among those with balanced contracts, shifting to a more relational contract would seem a natural by-product of increased knowledge sharing. We can also expect that as newcomers became more familiar with the mutual obligations between employees and the employer, managers who actively assisted them in transitioning from a transactional contract (e.g., "If I share knowledge or collaborate, I'll get a bonus") to a balanced PC (e.g., "If I share knowledge or collaborate, I'll build my network, meet more employees, begin building a solid reputation") would find increased organizational tenure and greater collaboration across a range of employees who could subsequently drive even greater knowledge sharing and innovation. Such was the case at a private college when several junior faculty were simultaneously hired into the same department. As a result of these junior colleagues actively collaborating and sharing research ideas, senior faculty who had been research-inactive for an extended period of time became similarly active in collaborative projects with junior faculty and increased their research output via knowledge sharing. The result was an

overall increase in publications for the department and more active mentoring of junior faculty. Such anecdotal evidence suggests that empirical investigations of this nature would be a fruitful avenue for future psychological contract and knowledge sharing research across a variety of knowledge-intensive environments.

While the domains of knowledge management and psychological contract are not new in and of themselves, the measurement of these concepts, like many other emerging management concepts, are challenging and complex. For researchers desiring to empirically test our propositions, however, several measures currently exist. Those measures that currently do not exist provide opportunities for future theoretical and developmental work. Jarvenpaa and Staples (2001) developed measures to evaluate employee perceptions of individual and organizational ownership of knowledge as well a propensity to share knowledge. These measures could be modified and validated to extend research examining the influence of performance criteria on knowledge sharing and PC breach among employees. Such criteria can also be adapted to the examination of applicants' propensity to share knowledge resulting from explicit knowledge sharing communications. Researchers may also find measures developed by Sabherwal and Becerra-Fernandez (2003) useful for measuring socialization and in assessing the value of social interactions on newcomers. The collection of chapters in Hall's (1996) work on the changing nature of careers offers several scales for measuring career development and culture issues.

Constructs proposed in the literature on organizational communications, media richness (Daft & Lengel, 1986), and message-media fitness (Daft, Lengel & Trevino, 1987) can be used for measuring communication strategies and training/collaborative learning effectiveness. Further, Gold, Malhotra, and Segars (2001) describe measures that determine an organizations readiness for KM initiatives at three levels – organizational culture, organizational processes, and

technological infrastructure. These measures, particularly those related to organizational culture and processes, can be combined with measures from organizational communication to empirically test propositions 3(a) and (b) among applicants.

Finally, empirical research on psychological contracts has significantly advanced in the past decade. A variety of scales exist for measuring psychological contract breach, including a longitudinal study conducted by Robinson (1996), which examined both trust and psychological contract breach across both newcomers and employees at 18 months and 30 months of employment. And, an assessment of psychological contract methodologies was conducted in 1998 by Rousseau and Tijoriwala that provides an interesting perspective on both qualitative and quantitative assessments of psychological contracts.

SUMMARY AND CONCLUSION

With the prevalence of knowledge workers and knowledge-intensive firms, management of individual knowledge and organizational memory is critical to business success. Two factors often hamper knowledge sharing in organizations: turnover and an unwillingness to share knowledge. Where employee turnover is not the issue, an employee's unwillingness to share knowledge can be equally damaging. Although a detailed discussion of personality is beyond the scope of this paper, a broad array of traits are likely to influence willingness to share knowledge (propensity to trust, Big 5 personality traits, Machiavellianism, political skill, to name a few). Recognizing that knowledge is power, employees may also withhold knowledge in order to enhance their personal value. To successfully thwart the proliferation of such hoarding behaviors, knowledge sharing practices must be integrated into strategic business objectives, human resources practices, and the organization's culture so as to encourage and support on-going collaborative behavior.

Throughout this paper, we suggested that managers must properly assess the nature of PCs maintained by knowledge workers so that knowledge sharing messages may be customized to address individual motivators. A variety of motivations likely to influence individuals' knowledge sharing behaviors based on the type of PC they possess at different stages of employment were explored. In an ideal knowledge sharing environment, everyone would have a relational contract, high levels of trust in management and co-workers, and knowledge hoarding would be unthinkable. Yet, the reality of most contemporary organizations is such that individual motives for power, control and personal outcome maximization vary as a result of differing perceptions of how well mutual obligations are fulfilled throughout the employment exchange. Admittedly, there are likely to be a variety of differences between employees with varying lengths of tenure, not the least of which is their concern over the changing nature of work. The increased emphasis on managing one's own career and the explosion of global project work teams are just two obvious changes to the traditional work environment that are likely to influence trust among workers and motives for or against collaboration. Therefore, managing highly portable knowledge resources becomes more challenging and highly contingent on successful psychological contracting. Understanding how the changing work environment leads to perceptions of PC breach can help mitigate threats against the relationship and trust that seasoned workers have developed with management and may help establish stronger relationships among newcomers.

Other ways to enhance knowledge sharing among workers with any level of tenure may be in targeted management development programs. For example, drama workshops that explore psychological themes and psychodynamic personal development groups can encourage employees to better understand their patterns of behavior as well as the impact of these behaviors

on organizational productivity (Lee, 1999). Reciprocity dictates that organizational leaders lead the way in demonstrating a commitment to knowledge sharing. For instance, at Daimler Chrysler, despite the integration of knowledge sharing in annual performance reviews, overall employee reactions to knowledge sharing was mixed. Consequently, the CEO began participating in knowledge forums and emphasized knowledge sharing as a way to move up the corporate ladder. He successfully shifted focus away from the more transactional approach of rewarding overt behaviors to an emphasis on how knowledge sharing can enhance one's career objectives (Rukstad & Coughlin, 2001). Similar knowledge centers can be established to manage the processes, outcomes, and infrastructure for knowledge management initiatives. Successful knowledge centers such as those found at GM University, Toyota University, and KPMG Peat Marwick are illustrations of how initiatives can not only demonstrate management's overall commitment to employee knowledge sharing, but also highlight career enhancement opportunities that such centers can provide.

Throughout this paper, we offered several prescriptions for effectively managing a variety of PCs and reducing perceptions of breach. We briefly explored how saavy managers knowledgeable about the variety of PCs that exist might move employees from the quid pro quo mindset of transactional contracts to a more mutually satisfying relational contract. With a relational contract, the relationship seeks to maximize workers' economic and socio-emotional needs, and leads to deeper levels of trust (Whitener et al., 1998). We also highlighted how the mutual interdependence that collaborative knowledge sharing requires also creates an environment in which occupational loyalty and outcomes are jointly enhanced. Woven throughout our discussions was the idea that to sustain successful knowledge sharing initiatives, managers must actively partner with HR—the relationship experts—who possess significant

expertise in performance management (Lengnick-Hall & Lengnick-Hall, 2003). The successful partnering between these sources of knowledge can become the model for effective knowledge sharing among workers as they move from one stage of employment in the organization.

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