THE ROLE OF SOCIAL EXCHANGE RELATIONSHIPS IN FACILITATING INDIVIDUAL INNOVATIVE PERFORMANCE

by

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Table of Contents

List of Tables

List of Figures

Abstract

THE ROLE OF SOCIAL EXCHANGE RELATIONSHIPS IN FACILITATING INDIVIDUAL INNOVATIVE PERFORMANCE

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As organizations turn to innovation as a way to cope with global competition and economic uncertainty, understanding how to measure and predict individual innovative performance at work has become more important. Current measures of individual innovative performance tend to confound related, but distinct aspects of individual innovative performance, leading to inconsistent or ambiguous findings. This research aims to advance our understanding of individual innovative performance in the following ways. First, individual factors (e.g., task domain expertise, openness to experience, and political skill) were investigated in order to determine whether these factors differentially predict *how* an employee is innovative based on the nine dimensions of individual innovative performance identified by Brooks-Shesler and Tetrick (2010): problem identification, idea generation, idea solicitation, idea evaluation, experimentation, idea promotion, innovation promotion, innovation adoption, and resource acquisition. Second, the role of social exchange relationships in promoting individual innovative performance

was investigated. Participants in this study were 860 individuals who worked 30 or more hours per week and who were located in the United States and India. Findings suggest that individual factors were more important than the quality of the social exchange relationship in promoting individual innovative performance. Political skill was positively related to all aspects of individual innovative performance, while openness to experience and expertise were positively related to at least three aspects of individual innovative performance. In contrast, the quality of the social exchange relationship was positively related only to idea solicitation. Furthermore, the quality of the social exchange relationship was negatively related to resource acquisition and unrelated to the other aspects of individual innovative performance. Implications of these findings and paths for future research are discussed.

Introduction

Over 20 years ago, Amabile (1988) wrote: "Domestic and international competition, changing government regulations, and rapidly shifting market conditions demand constant and visionary innovation" (p. 123). This sentiment is relevant today as organizations cope with global competition, economic downturns, environmental sustainability, and government oversight. Innovative organizations can overcome challenges by developing new products and services, improving existing products and services, and becoming more efficient (Anderson & West, 1998). Because innovation is critical for organizations to survive (Kanter, 1988; West & Farr, 1990; West, Hirst, Richter, & Shipton, 2004), the current research aims to increase our understanding of how and why employees are innovative.

This research explores how the quality of the social exchange relationship between employers and employees interacts with individual factors to influence an employee's individual innovative performance. The quality of the social exchange relationship, which has been positively linked to various types of performance (see Kuvaas & Dysvik, 2009; Shore, Tetrick, Lynch, & Barksdale, 2006), might motivate employees to innovate by fostering trust, which promotes knowledge sharing (Andrews & Delahaye, 2000), and by creating a perceived obligation for the employee to reciprocate the organization's investment in the social exchange relationship (Shore et al.). The individual factors under investigation, e.g., expertise, personality, and skill, are

exemplars of knowledge, skills, abilities, and other characteristics (KSAOs) that are commonly used to predict performance at work. Furthermore, these individual factors are hypothesized to relate differentially to dimensions of individual innovative performance.

Innovation

Innovation refers to creative idea development and implementation that help organizations survive and grow (Kanter, 1988; West & Farr, 1990; West et al., 2004). Creativity is the generation and refinement of novel and applicable ideas (Mumford & Gustafson, 1988), and is necessary but not sufficient for innovation. Innovation encompasses both creativity and the actual implementation of creative ideas (West & Farr, 1990), and it pertains to the implementation of new or improved products, services, and processes (West, 2002).

The current research focuses on incremental innovations, which are improvements to existing products, services, and processes, as opposed to radical innovations, which entail the creation and implementation of products, services, or processes that are new to the organization (Ettlie, Bridges, & O'Keefe, 1984). Because radical innovation places greater knowledge demands on employees than does incremental innovation (Dewar & Dutton, 1986), more employees are likely able to engage in incremental rather than in radical innovation. For example, relatively few employees might possess the skills to write a new software program; however, more employees might be able to offer suggestions for improving an existing software program. Consequently, the quality of the social exchange relationship, which can be conceptualized as a motivational construct,

might be especially important for increasing individual innovative performance for incremental innovation rather than for radical innovation.

Individual Innovative Performance

Given that innovation refers to the development and implementation of creative ideas, individual innovative performance refers to individual employee behaviors that support innovation (Brooks-Shesler & Tetrick, 2010). Spanning both in-role and extra-role performance (George & Jones, 1997; Unsworth, 2001), individual innovative performance is a multi-dimensional performance construct, and its performance dimensions correspond to innovation's two main phases: creativity and implementation (West, 2002).

Table 1 categorizes individual innovative performance dimensions according to innovation phase and performance criterion type, either cognitive or interpersonal. The categorization of innovative performance dimensions according to creativity or implementation phase is based on theoretical and empirical support for nine individual innovative performance dimensions (Brooks-Shesler & Tetrick, 2010). Brooks-Shesler and Tetrick found that five individual innovative performance dimensions pertain to the creativity phase of innovation (West, 2002): problem identification, idea generation, idea evaluation, idea solicitation, and experimentation. In addition, Brooks-Shesler and Tetrick found that the four remaining individual innovative performance dimensions pertain to the implementation phase of innovation (West): idea promotion, innovation promotion, innovation adoption, and resource acquisition.

The categorization of innovative performance dimensions as either cognitive or

interpersonal is based on the author's preliminary examination of the required activities for each dimension. The activities in the creativity phase appear primarily cognitive in nature, as people interpret and synthesize information. For example, the creativity phase involves identifying and defining a problem facing an organization (Farr, Sin, & Tesluk, 2003), generating ideas to solve a problem (Amabile, 1983), evaluating ideas (Farr et al.), and experimenting with the idea in order to understand the idea's potential and applicability (Brooks-Shesler & Tetrick, 2010). Encouraging others to generate ideas (Choi, 2004) is perhaps the one dimension of the creativity phase that is more interpersonally oriented since it involves initiating social contact or making requests of others.

While the activities in the creativity phase appear primarily cognitive, the activities in the implementation phase appear primarily interpersonal. Successful idea implementation relies heavily on an individual's ability to influence the thoughts and actions of others. For example, implementation involves persuading others of the idea's benefits prior to receiving official approval from the work group or organization (Scott & Bruce, 1994), persuading others to adopt an organizationally endorsed innovation into their work routines (Kleysen & Street, 2001), and persuading key decision-makers to provide the financial and material resources for implementation (Kleysen & Street; Tierney & Farmer, 2004). Actually adopting the innovation into one's own work routines (Klein & Knight, 2005) is perhaps the one dimension of the implementation phase that might be more cognitive in nature because it likely relies most heavily on cognitive processes related to knowledge and skill acquisition.

Social Exchange and Individual Innovative Performance

Developing high quality social exchange relationships with employees represents a promising opportunity for organizations to increase employee innovation. High quality social exchange relationships can be fostered through praise, high wages, promotion, and training and development, which employees may view as verification of their value and importance to the organization (Takeuchi, Lepak, Wang, & Takeuchi, 2007). Employee motivation to perform at a high level is predicated on a perceived obligation to reciprocate the organization's investments in the social exchange relationship (Shore et al., 2006). Although the relation between the quality of the social exchange relationship and individual innovative performance has not been investigated, the quality of the social exchange relationship has been positively related overall job performance (manager-rated) (Shore et al.), task performance (self-report) (Kuvaas & Dysvik, 2009), and organizational citizenship behaviors (OCB) (Kuvaas & Dysvik; Shore et al.). Given that innovative performance spans both in-role and extra-role behaviors (Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Van Dyne, Graham, & Dienesch, 1994), the quality of the social exchange relationship is likely positively associated with individual innovative performance.

Furthermore, key elements of social exchange and individual innovative performance suggest that social exchange and innovation are positively related. A social exchange relationship is characterized by trust, investment in the relationship, and a long-term orientation (Shore et al., 2006). Likewise, trust, investment, and a long-term orientation are also inherent in innovation, which is risky, requires significant investment,

and tends to provide benefits in the long-term rather than in the short-term (Janssen, van de Vliert, & West, 2004; West, 2002). Innovation can be construed as a knowledge management process in which organizational members collaborate to create or improve a product, service, or process (Farr et al., 2003). Trust and psychological contract fulfillment, an indicator of the quality of the employment relationship, have been positively related to employee knowledge sharing (Andrews & Delahaye, 2000; Thompson & Heron, 2006). Because high quality social exchange relationships are characterized by trust and employees, who perceive themselves to be in high quality employment relationships, engage in more knowledge sharing, high quality social exchange likely leads to increased individual innovative performance.

H1: The quality of the social exchange relationship is positively related to each dimension of individual innovative performance.

Individual Factors

This research investigates whether individual factors relate differentially to innovative performance dimensions. Few studies link different predictors to different aspects of performance, which can obscure insights into when and how a given predictor might be important. The current research provides a theoretical basis for suggesting that individuals can be innovative in different ways at different times. Investigating the specific ways that employees can be innovative capitalizes on individuals' particular strengths, and might be more beneficial than attempting to differentiate "innovative" employees from "non-innovative" employees.

The individual factors under investigation are task domain expertise, openness to

experience, and political skill. They were selected for this study for the following reasons. First, they are hypothesized to exhibit differential relations with innovative performance dimensions. For example, openness to experience might facilitate idea generation but be of limited use for acquiring resources for innovation. Second, three types of individual factors are represented: openness to experience is an aspect of personality; task domain expertise is a type of knowledge; and, political skill is a specific skill. Together, these three individual factors comprise three of the four types of KSAOs that are commonly used to predict various types of performance. Finally, two of these individual factors are cognitively oriented (e.g., openness to experience and task domain expertise) and the other is interpersonally oriented (e.g., political skill), which correspond to the cognitively and interpersonally oriented innovative performance dimensions. Inclusion of task domain expertise, openness to experience, and political skill therefore enables a rich exploration of who might excel at various aspects of innovative performance.

The theoretical model for this research, presented in Figure 1, posits both direct and moderated effects with respect to these individual factors. The quality of the social exchange relationship is posited to relate positively to each of the innovative performance dimensions, and the strength of this relationship is posited to depend on the level of the individual factor in question, e.g., openness to experience, task domain expertise, and political skill. Openness to experience and task domain expertise are posited to relate more strongly to the cognitively oriented innovative performance dimensions than to the interpersonally oriented innovative performance dimensions, whereas political skill is

posited to relate more strongly to the interpersonally oriented innovative performance dimensions than to the cognitively oriented innovative performance dimensions.

Task Domain Expertise

Expertise is a prerequisite to creativity and innovation (Amabile, 1988). It is acquired through deliberate practice and leads to superior performance within a particular domain (Ericsson & Charness, 1994). As experiences are repeated, knowledge structures, or schemata, become increasingly complex and organized (Fiske & Dyer, 1985). Indeed, Simonton (2000a) found that domain-relevant experience was positively related to creative accomplishment. Given that expertise relates to the acquisition and structure of knowledge, expertise is likely more positively related to the cognitively oriented innovative performance dimensions that rely more heavily on problem-solving and information synthesis than to the interpersonally oriented innovative performance dimensions that rely more heavily on interpersonal persuasion.

It is important to acknowledge that expertise can lead to "expert power," a base of power identified by French and Raven (1960). In the context of innovation, expert power might be useful for the interpersonal aspects of creative idea implementation, such as persuading coworkers to adopt the idea or innovation, or acquiring the resources to implement the innovation, such as financial support, labor, and materials. Although task domain expertise might relate positively to each dimension of individual innovative performance, the sections that follow provide a rationale for task domain expertise relating more strongly to each of the cognitively oriented dimensions than to any of the interpersonally oriented dimensions.

Task Domain Expertise and Problem Identification. Albert Einstein once said: "If I had an hour to save the world I would spend 59 minutes defining the problem and one minute finding solutions." Problem identification is the critical first step of the innovative process (Farr et al., 2003). Wakefield (1991) described "problem finding" as the process of defining open and ambiguous problems prior to generating creative solutions. Job incumbents are thought to be best able to identify problems and obstacles to their work because of their job-related expertise (Zhou & George, 2003); however, few studies have investigated antecedents to problem identification (for exceptions, see Basadur, Graen, & Green, 1982; Zhang & Bartol, 2010). Typically, items measuring problem identification are included in measures of overall creativity and innovation, which also include items pertaining to idea generation, idea evaluation, and/or various aspects of idea implementation (Hammond, Neff, Farr, Schwall, & Zhao, 2011). Binnewies et al. (2007) investigated problem identification as the first step in the creative process, but did not examine the factors that related to individuals identifying problems requiring creativity. Basadur et al. (1982) found that training improved individuals' problem finding, which suggests that knowledge improves problem identification. Individuals with greater expertise have more complex schemata, which aid in making sense of complex, ambiguous situations (Mumford & Hunter, 2005). Therefore, individuals with higher levels of expertise are likely more adept at defining and identifying problems requiring creativity.

H2a: Task domain expertise is more strongly positively related to problem identification than to any of the interpersonally oriented dimensions of individual

innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Task Domain Expertise and Idea Generation. Prior knowledge facilitates creativity by enabling individuals to make new associations and connections (Cohen & Levinthal, 1990). Simonton (2000b) asserted that "creative individuals do not produce new ideas de novo, but rather those ideas must arise from a large set of well-developed skills and a rich body of domain-relevant knowledge" (p. 152). Ericsson and Charness (1994) explained that an expert compiles a structured representation of the problem as information is acquired. According to Larkin et al.'s (1980) knowledge-development model, experts recognize patterns of information from which they can develop new information. Hunter, Bedell-Avers, Hunsicker, Mumford, and Ligon (2008) found that the usage of multiple knowledge structures, i.e., schematic and case-based knowledge, led to the most original and highest quality solutions to a social innovation problem used in a laboratory experiment with undergraduate students. These findings provide empirical support that an individual knowledgeable in a given domain is more likely to exhibit higher creativity than a less knowledgeable person in that domain.

H2b: Task domain expertise is more strongly positively related to idea generation than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Task Domain Expertise and Idea Evaluation. In order to maximize innovative performance, the best ideas must be selected and developed, which requires domain-

relevant knowledge (Rietzschel, De Dreu, & Nijstad, 2007; Rietzschel, Nijstad, & Stroebe, 2007). Domain experts have been considered to be the most qualified to rate the creativity of a product or idea (Amabile, 1996). Amabile's Consensual Assessment Technique (CAT) stipulates that experts in the domain in which the creative act occurred rate the creative product. The product is deemed creative to the extent that the experts agree that it is creative. The argument that experts are best able to rate a creative product suggests that experts are best able to evaluate creative ideas.

H2c: Task domain expertise is more strongly positively related to idea evaluation than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Task Domain Expertise and Experimentation. Experts engage in routine, deliberate practice in order to increase their knowledge and skills in a given domain (Ericsson & Charness, 1994). Practice appears consistent with the experimentation component of innovative performance in which individuals test new methods or approaches to solving a problem creatively. Through experimentation, which could perhaps be construed as a form of practice, experts acquire insights and knowledge for developing creative solutions. In their organizational level study of technical process innovations, Dewar and Dutton (1986) suggested that organizations with larger numbers of engineers were more successful in adopting radical innovations because engineers are better able to experiment with innovations that require new knowledge acquisition. Therefore, individuals with higher knowledge levels likely experiment more.

H2d: Task domain expertise is more strongly positively related to experimentation than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Task Domain Expertise and Innovation Adoption. Few studies have investigated how expertise at the individual level facilitates the actual implementation of a creative idea in an organizational setting (for an exception, see Muñoz-Doyague, González-Álvarez, & Nieto, 2008). Expertise likely promotes the adoption of an innovation if the innovation occurs within the individual's area of expertise. Because innovations frequently require new skill acquisition (Clayton, 1997), an expert can incorporate the innovation into his or her schemata or knowledge structures more easily than a novice. Expertise is important to innovation adoption in that individuals who are more familiar with the given domain in which the innovation occurs are more likely to assimilate the innovation into their work routines. Choi and Price (2005) found that employees who believed that their technical abilities were sufficient for implementing a technological innovation, which they termed "ability fit," were more likely to engage in implementation behaviors, i.e., activities in which employees engage in order to assimilate new technologies or work methods into their jobs. Examining innovation at the organizational level, Dewar and Dutton (1986) found that organizations with greater knowledge depth, operationalized as the number of technical experts, adopted more radical innovations. Task domain expertise and innovation adoption are likely positively related, given the importance of an individual's current knowledge in integrating new

knowledge.

H2e: Task domain expertise is more strongly positively related to innovation adoption than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

The Moderating Role of Task Domain Expertise. Task domain expertise likely strengthens the positive relationship between the quality of the social exchange relationship and the cognitively oriented innovative performance dimensions. While a high quality social exchange relationship likely motivates employees to increase their innovative performance, people with higher levels of expertise have access to more knowledge, which they can apply to innovation-related activities (Mumford & Hunter, 2005), such as diagnosing problems, generating solutions, critiquing ideas, experimenting with ideas, and adopting innovations. Despite the increased motivational effects of a high quality social exchange relationship, individuals with lower levels of expertise likely do not possess the requisite knowledge to increase their innovative performance. Thus, the expected positive associations between the quality of the social exchange relationship and various dimensions of innovative performance are likely strengthened for individuals with higher levels of task domain expertise.

H3: Task domain expertise moderates the relation between the quality of the social exchange relationship and problem identification, idea generation, idea evaluation, experimentation, and innovation adoption.

Openness to Experience

Similar to task domain expertise, openness to experience is likely related more strongly to the cognitively oriented innovative performance dimensions and less so to the interpersonally oriented innovative performance dimensions. Openness to experience is the personality trait of the five-factor model (FFM) that is most strongly associated with creativity (McCrae, 1987). Open individuals tend to be intellectually curious, to enjoy thinking about abstract concepts, to appreciate the arts, to enjoy complex problem solving, and to seek new perspectives and experiences (McCrae, 1987). Openness is especially well suited to creativity in the workplace, which requires generating novel yet practical ideas, solving challenging problems, and figuring out how to do things better. Indeed, Scratchley and Hakstian (2001) found that openness was positively related to managerial creativity. Furthermore, open individuals tend to be less conformist (Feist, 1998) and are therefore more likely to suggest ideas that challenge the status quo. Associated with problem solving and considering abstract ideas, openness to experience is therefore likely more strongly related to each of the cognitively oriented innovative performance dimensions than to any of the interpersonally oriented innovative performance dimensions, which emphasize effective social interaction. The following sections provide a rationale for openness to experience relating more strongly to each of the cognitively oriented dimensions than to any of the interpersonally oriented dimensions.

Openness to Experience and Problem Identification. Amabile (1988) asserted that the start of any creative task is the identification of a problem that requires a creative solution. Although problem identification has been implicated as the critical first step in

the innovative process (Farr et al., 2003), innovation research has tended to group problem identification with idea generation and implementation as a composite outcome (Bains & Tran, 2006). Therefore, little is known about the antecedents to problem identification. Given the propensity of open individuals to be intellectually curious and to enjoy complex problem-solving (McCrae, 1987), open individuals are likely disposed to diagnosing the problem currently facing the organization or work group.

H4a: Openness to experience is more strongly positively related to problem identification than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Openness to Experience and Idea Generation. Openness to experience is positively related to idea generation (Feist, 1998; Zhang & Huang, 2001) and has been associated with higher levels of knowledge sharing (Cabrera, Collins, & Salgado, 2006), which is important during the idea generation stage. Because open individuals are intellectually curious, they likely enjoy sharing knowledge with others (Wang & Yang, 2007). Open individuals identify themselves as inventive and unconventional (McCrae, 1987), and are therefore more likely to suggest new ideas that challenge the status quo (McCrae & Costa, 1997). The current study seeks to replicate findings from previous research (e.g., Zhang & Huang, 2001) that openness to experience is positively related to idea generation.

H4b: Openness to experience is more strongly positively related to idea generation than to any of the interpersonally oriented dimensions of individual

innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Openness to Experience and Idea Evaluation. Idea evaluation is critical for determining an idea's feasibility and appropriateness (Amabile, 1983). Zhou and George (2003) asserted that the most creative idea arises during the idea evaluation stage. Open individuals are likely sufficiently curious and analytical to evaluate an idea from multiple perspectives, to suggest improvements or modifications to an idea, and to discard inadequate ideas.

H4c: Openness to experience is more strongly positively related to idea evaluation than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Openness to Experience and Experimentation. Innovation typically requires a series of trial-and-error attempts and an innovator likely experiences multiple failures in order to achieve ultimate success (Shalley & Gilson, 2004). Individuals high on openness to experience are learning-oriented (McCrae, 1987) and demonstrate a higher level of interest in things (Silvia & Sanders, 2010). Experimentation provides individuals with the opportunity to test concepts and ideas, and to learn from their successes and failures. Arguing that open individuals are motivated to learn, Barrick and Mount (1991) found that openness predicted success in training. Openness to experience has been associated with a learning goal orientation (Klein & Lee, 2006) in which individuals seek mastery of a given task or topic in order to improve their skills and abilities (Elliott & Dweck, 1988).

Open individuals likely engage in higher levels of experimentation given their motivation to learn.

H4d: Openness to experience is more strongly positively related to experimentation than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

Openness to experience and Innovation Adoption. Though related primarily to the creativity stage, openness to experience likely relates to the innovation implementation stage of innovative performance. Innovation adoption refers to the extent to which an individual utilizes new technologies or work methods in order to improve his or her productivity, efficiency or work quality. An open individual likely welcomes new ways to perform his or her work provided that the new method or technology offers a promising likelihood of improving one's performance (George & Zhou, 2001). Frequently, a new technology or work method requires employees to acquire new skills or to attempt to adopt untried and potentially ambiguous processes (Klein & Knight, 2005). An open individual likely welcomes the opportunity to take advantage of new technologies or work methods.

H4e: Openness to experience is more strongly positively related to innovation adoption than to any of the interpersonally oriented dimensions of individual innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, or resource acquisition).

The Moderating Role of Openness to Experience. A high quality social exchange relationship likely increases performance in the cognitively oriented innovative performance dimensions for individuals with higher levels of openness to experience. Previous research has supported an "interactionist" perspective in which individual and contextual factors interact to facilitate creative and innovative behavior in organizations (Woodman, Sawyer, & Griffin, 1993). George and Zhou (2001) found that openness to experience, feedback, and task characteristics interacted such that individuals who were high in openness to experience exhibited the greatest creativity when they received positive feedback when performing heuristic tasks. Heuristic tasks were described as complex tasks having unclear ends and unclear means, i.e., there was uncertainty about what should be accomplished and how it should be accomplished. Oldham and Cummings (1996) found that creative personality and supervisory style interacted such that employees with creativity-relevant personal characteristics exhibited increased creative performance when their supervisors were supportive and noncontrolling. Although these researchers did not identify openness or creative personality as a moderator, subsequent creativity and innovation researchers have conceptualized personality as a moderator (e.g., Shalley, Zhou, & Oldham, 2004). For example, Baer and Oldham (2006) found that openness to experience moderated the creative time pressure – creative performance relation for individuals who reported receiving support for creativity from supervisors and coworkers.

Because open individuals constantly seek new experiences and perspectives, they possess more of the "raw material" (Baer & Oldham, 2006, p. 964) that can be converted

into creative ideas. In contrast, individuals who are low on openness have fewer experiences from which to draw. When these individuals perceive an increased obligation to contribute to their organizations, they might attempt to be more innovative; however, they lack the wealth of experiences that open individuals can apply to innovation-related activities.

H5: Openness to experience moderates the relation between the quality of the social exchange relationship and problem identification, idea generation, idea evaluation, experimentation, and innovation adoption.

Political Skill

In contrast to expertise and openness to experience, political skill is likely more strongly related to each of the interpersonally oriented innovative performance dimensions than to any of the cognitively oriented innovative performance dimensions. Political skill is "the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives" (Ferris et al., 2005, p. 127). Building on the early work of Mintzberg (1983), Ferris et al. (2005) developed a measure of political skill that includes four dimensions: social astuteness, interpersonal influence, networking ability, and apparent sincerity. Political skill is especially effective for performance in socially-based contexts (Ferris et al., 2005) and is therefore likely more relevant to the dimensions of innovative performance that emphasize interpersonal performance demands as opposed to cognitive performance demands. For example, creative idea implementation requires social acumen and the ability to understand the perspectives of those being asked to adopt

the innovation (King, 1995). The sections that follow provide a rationale for political skill relating more strongly to each of the interpersonally oriented innovative performance dimensions than to any of the cognitively oriented innovative performance dimensions.

Political Skill and Idea Promotion. Researchers have identified the critical importance of "idea champions" in promoting creative ideas (Howell & Boies, 2004; Kleysen & Street, 2001). Creative ideas are new, unproven and have a high likelihood of failure (Anderson, De Dreu, & Nijstad, 2004). Persuading others to adopt the ideas, i.e., obtaining "buy-in," is critical to moving the innovative process forward (Baer, 2007). "Coalition-building" is an extremely important aspect of innovative performance, as achieving a "critical mass" of support facilitates social approval for the idea. Bains and Tran (2006) identified coalition building and selling as a way for creative ideas to reach higher levels of the organization where decision-makers can provide organizational endorsement for the idea. Politically skilled individuals are especially good at persuading others due to their calm confidence and their focus on others rather than on themselves (Ferris et al., 2007).

H6a: Political skill is more strongly positively related to idea promotion than to any of the cognitively oriented dimensions of individual innovative performance (e.g., problem identification, idea generation, idea evaluation, experimentation, or innovation adoption).

Political Skill and Innovation Promotion. Once the organization has decided to implement the innovation, employees must adopt the innovation, i.e., effectively incorporate it into their work routines, in order for the innovation to yield its anticipated

benefits (Klein & Knight, 2005). Implementing something new requires that individuals change their work routines, which can lead to resistance to change. Unless individuals are persuaded and committed to the idea, then the innovation implementation will fail, even if the innovation itself is sound from a technical perspective (Klein & Sorra, 1996). Politically skilled individuals are better able to manage conflict, which helps lower resistance to change (Janssen, 2003), and are effective at motivating others to adopt innovations (Kleysen & Street, 2001). Ferris et al. (2005) identified networking ability as a key dimension of political skill, which has been associated with networking behaviors (Treadway, Breland, Adams, Duke, & Williams, 2010). Ibarra (1993) found that social network centrality predicted the successful implementation of administrative innovations such as introducing a new performance appraisal system, an employee information database, and conflict management training, which suggests that politically skilled individuals are likely effective innovation implementers given their networking ability.

Resistance to an innovation implementation can also arise from legitimate concerns about the innovation's suitability and effectiveness in accomplishing its espoused aims (Ford, Ford, & D'Amelio, 2008). Politically skilled individuals are also good listeners (Ferris et al., 2005). Therefore, they are receptive to employee concerns and, depending on the circumstances, can incorporate employee feedback into the implementation process, or communicate employee feedback to relevant organizational members. Therefore, politically skilled individuals are likely adept at promoting innovations.

H6b: Political skill is more strongly positively related to innovation promotion

than to any of the cognitively oriented dimensions of individual innovative performance (e.g., problem identification, idea generation, idea evaluation, experimentation, or innovation adoption).

Political Skill and Resource Acquisition. A requisite amount of resources is needed for innovation (Nohria & Gulati, 1996). The extent to which an individual must persuade others to provide resources for innovation depends on the individual's decision-making authority and on the innovation's magnitude. Similar to persuading others of a creative idea's merits, innovative employees must persuade organizational decision-makers to provide the financial, material, and labor resources to develop and implement the innovation (Kleysen & Street, 2001). Innovations vary greatly in terms of scope and magnitude (Anderson & West, 1998), with risk increasing as the innovation's magnitude increases. Micro or incremental innovations, such as changing a work routine within a work group, incur fewer resources than macro or radical innovations, such as developing a new product.

Decision-making discretion typically increases as individuals climb the organizational hierarchy (Karasek, 1979; Zaccaro & Klimoski, 2001). If the resources required for the innovation fall within the individual's decision-making discretion, then the individual does not need to persuade others to provide financial resources for the innovation. Nonetheless, it is likely that an individual must persuade organizational members at some point during the innovative process to provide resources for innovation. Even so, individuals higher in the organizational hierarchy tend to have more advanced political skill (Mintzberg, 1983) and emotional intelligence (e.g., George, 2000; Harms &

Credé, 2010; Wang & Huang, 2009). Therefore, politically skilled individuals are likely better able to acquire the resources needed for innovation.

H6c: Political skill is more strongly positively related to resource acquisition than to any of the cognitively oriented dimensions of individual innovative performance (e.g., problem identification, idea generation, idea evaluation, experimentation, or innovation adoption).

Political Skill and Idea Solicitation. A politically skilled individual might see the importance of getting contributions from all organizational members involved in the innovative process in order to obtain "buy-in," which increases the likelihood of the innovation's success (Baer, 2007). A politically skilled individual might function well as a facilitator of ideas among the team members working on the creative task. Zhou and George (2003) proposed that leaders high on emotional intelligence, a construct related to political skill (Ferris et al., 2005), are instrumental in eliciting employee creativity. Therefore, politically skilled individuals likely excel at soliciting creative ideas.

H6d: Political skill is more strongly positively related to idea solicitation than to any of the cognitively oriented dimensions of individual innovative performance (e.g., problem identification, idea generation, idea evaluation, experimentation, or innovation adoption).

The Moderating Role of Political Skill. Political skill likely strengthens the positive relationship between a high quality social exchange relationship and the interpersonally oriented innovative performance dimensions. Ferris et al. (2007) argued that political skill is effective in acquiring scarce organizational resources while Perrewé

et al. (2005) argued that political skill functions as a type of interpersonal control in that politically skilled individuals are adept at managing their work relationships and influencing others. Assuming that a high quality social exchange relationship motivates employees to be more innovative, politically skilled people will likely be more innovative than politically unskilled people because their greater skill enables them to influence others more effectively.

H7: Political skill moderates the relation between the quality of the social exchange relationship and idea promotion, innovation promotion, resource acquisition, and idea solicitation.

Summary of Hypotheses

This study's hypotheses have outlined the expected relations among the quality of the social exchange relationship, individual differences, and individual innovative performance. The quality of the social exchange relationship is expected to relate positively to each dimension of individual innovative performance, while individual differences are expected to have both direct and moderating relations with dimensions of individual innovative performance.

Required Innovativeness

Various researchers (e.g., Smith, Organ, & Near, 1983; Van Dyne et al., 1994) conceptualized innovative behaviors as a type of OCB. Therefore, employee engagement in these behaviors was thought to be largely at the discretion of the employee. Nevertheless, certain jobs require innovativeness as part of their formal job descriptions. For example, research and development scientists and product development teams are

explicitly tasked to be innovative. Innovativeness as a job requirement and creativity as a job requirement have been shown to predict creativity and innovation robustly and consistently (e.g., Hammond et al., 2011). Given these findings, the effects of innovativeness as a job requirement are included as a control variable so that the personal and contextual factors related to discretionary individual innovative performance can be understood more clearly.

Method

Participants

Participants were members of the researcher's professional network, who worked primarily in the East coast region of the United States, and members of Amazon.com's e-lancing service called Amazon Mechanical Turk (MTurk). Of the 2,296 people who completed the survey, 924 people reported working fewer than 30 hours per week, and their responses were excluded from subsequent analyses, resulting in a sample size of 1,372. Data were inspected for evidence of satisficing. Satisficing involves taking "mental short-cuts" to reduce the cognitive load of the survey to the minimum required to complete the survey (Krosnick, Narayan, & Smith, 1996). Satisficers alter their response patterns in order to appear to the researcher as though they are completing the survey responsibly when, in fact, they are not (Krosnick et al.). Satificing is prevalent on MTurk, where some respondents complete surveys as quickly as possible in order to maximize their hourly pay rate (Kapelner & Chandler, 2010). Response patterns from satisficers can exhibit nondifferentiality (Krosnick et al., 1996; Malhotra, 2008). For example, responses can be uniform (i.e., participants respond identically to items with Likert-type response options) or responses to online surveys containing Likert-type response options can form a "zig-zag" pattern when displayed on a computer screen.

In the current study, participants whose responses formed a "zig-zag" pattern had

a median survey completion time of 7 minutes. Uniform responders' median survey completion time was 8 minutes. Because data from satisficers might adversely affect study results (Krosnick et al., 1996; Malhotra, 2008), the researcher deleted responses from 428 people, who completed the survey in 8 minutes or fewer. After inspecting the resulting dataset, the researcher deleted responses from 43 uniform responders and from 10 "zig-zag" responders, resulting in a dataset containing 891 respondents. Next, the researcher deleted responses from 17 people whose task area descriptions were unclear (e.g., "business") or not applicable to the study (e.g., "homemaker"). The researcher deleted 7 responses from people who reported identical, or nearly identical, values for organizational tenure and age. Finally, the researcher deleted 7 political skill outliers (z-score > 3.29) (Tabachnick & Fidell, 2007). The final sample consisted of 860 participants; 73.0% were MTurk members located in India, 18.3% were MTurk members located in the United States and 8.7% were the researcher's professional contacts. The median survey completion time was 15 minutes. Table 2 presents demographic information.

Measures

Predictors & Moderators of Innovative Performance

Social exchange. The quality of the social exchange relationship was measured with Shore et al.'s (2006) social exchange measure on a 7-point Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Sample items include: My organization has made a significant investment in me; I don't mind working hard today – I know I will

eventually be rewarded by my organization. Coefficient alpha was .84. See Appendix A for complete measures and items.

Task domain expertise. Task domain expertise was measured with an original item developed for this study. On a 7-point Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree), participants rated themselves on the following item: Compared to others in my field, I am an expert.

Openness to experience. Goldberg et al.'s (2006) scale was used to measure openness to experience. This openness to experience measure is publicly available and part of the personality inventory from the International Personality Item Pool. Similar to the process described by Lievens, De Corte and Schollaert (2008), the original 20 items from Goldberg et al.'s scale were inspected to determine whether they could be situated within the work context. Seven items were eliminated because they could not be situated within the work context. These items were: "I believe in the importance of art," "I tend to vote for liberal political candidates," "I do not like art (R)," "I do not enjoy going to art museums (R)," "I tend to vote for conservative political candidates (R)," "I do not like poetry (R)," and "I believe that too much tax money goes to support artists (R)." Thirteen items were retained, and responses to these items were averaged to form an index. Sample items include: I have a vivid imagination; I carry the conversation to a higher level. Items were rated on a 7-point, Likert-type scale from 1 (very inaccurate) to 7 (very accurate). Previous research indicates that contextualizing personality measures reduces error variance and increases the measure's validity (e.g., Robie, Schmit, Ryan, & Zickar, 2000; Schmit, Ryan, Stierwalt, & Powell, 1995). In accordance with the procedure used

by Hunthausen et al. (2003) and Lievens et al., the openness to experience items were contextualized by providing written instructions to the participants to consider how they are at work when responding to each statement. Coefficient alpha was .81. The measure included a manipulation check to ensure that individuals described themselves as they are at work rather than as they are in general.

Political skill. Political skill was measured with Ferris et al.'s (2005) Political Skill Inventory (PSI), which contains four dimensions: networking ability, interpersonal influence, social astuteness, and apparent sincerity. Several researchers have collapsed the political skill dimensions into a single measure and obtained overall coefficient alphas for self-reports ranging from 0.90 to 0.93 (e.g., Blickle et al., 2009; Brouer, Duke, Treadway, & Ferris, 2009; Meurs, Gallagher, & Perrewé, 2010). Consistent with this research, the political skill dimensions were collapsed into a single political skill measure for this study. Items were rated on a 7-point Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Sample items include: I am able to make most people feel comfortable and at ease around me; It is important that people believe I am sincere in what I say and do. Coefficient alpha was .92.

Measurement Model

In order to validate the underlying factor structure of the social exchange, openness to experience, and political skill measures, one third of the data were randomly selected for inclusion in an exploratory factor analysis using principle axis factoring with oblimin rotation. The underlying single factor structure of social exchange (see Table 3), openness to experience (see Table 4), and political skill (see Table 5) was consistent with

previous research that had yielded one factor solutions for each of these measures. The remaining two thirds of the data set were used to conduct a confirmatory factor analysis to test the measurement model, which specified three factors: social exchange, openness to experience, and political skill. The first three factor model exhibited poor model fit (RMSEA = .10; SRMR = .11). Modification indices, generated by Mplus, suggested that model fit could be improved by freeing four parameters among negatively worded indicators for openness to experience. Freeing the four parameters among negatively worded openness to experience indicators resulted in acceptable model fit (RMSEA = .08; SRMR = .10). This three factor model fit the data significantly better than did a one factor model, $\chi^2(3) = 1{,}320.00$, $p < .001$ (see Table 6). Table 7 presents the standardized path coefficients for the measurement model.

Innovative Performance Outcome

Innovative Performance. Brooks-Shesler and Tetrick's (2010) innovative performance measure was used to measure individual innovative performance. The innovative performance measure consists of nine dimensions: problem identification, idea generation, idea solicitation, idea evaluation, experimentation, idea promotion, innovation promotion, innovation adoption, and resource acquisition. Items were rated on a 7-point Likert-type scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Sample items include: I explain why a new company product or service is unsuccessful; I suggest improvements to products or services. Coefficient alpha was .74 for problem identification, .79 for idea generation, .74 for idea solicitation, .77 for idea evaluation, .76 for experimentation, .73 for idea promotion, .83 for innovation promotion, .83 for

innovation adoption, and .86 for resource acquisition.

Using principle axis factoring with oblimin rotation, the exploratory factor analysis for the innovative performance measure (see Table 8), which was expected to consist of nine factors, yielded only a one factor solution, which explained 38.72% of the total variance, a finding that was corroborated by a Scree plot analysis. The remaining two thirds of the data set were used to conduct a confirmatory factor analysis to test the measurement model for the innovative performance measure. Although the exploratory factor analysis results suggested a one factor solution, a nine factor solution was expected for theoretical reasons (Brooks-Shesler & Tetrick, 2010). A confirmatory factor analysis, specifying nine factors, yielded acceptable model fit (RMSEA = .07; SRMR = .06). The nine factor solution fit the data significantly better than did a one factor solution (RMSEA = .10; SRMR = .07), $\chi^2(36) = 1{,}534.29$, $p < .05$ (see Table 9). Therefore, the nine factor solution was retained for hypothesis testing (see Table 10).

Control Variables

Required Innovativeness. Required innovativeness was measured using an original measure created for this study. The measure stem was: My job requires me to…, which was followed by the items. The items corresponded to each of the nine dimensions of innovative performance included as the performance outcome for this study. For example, the item "Define problems facing my organization or work group" corresponded to the problem identification dimension, and the item "Come up with ideas for how to solve work-related problems" corresponded to the idea generation dimension. Items were rated on a 7-point Likert-type scale ranging from 1 (Strongly Disagree) to 7

(Strongly Agree). Coefficient alpha was .91. Required innovativeness was treated as a single factor in the analyses.

Sample. Two dummy-coded variables were created to reflect the three study samples: one dummy-coded variable representing the distinction between the MTurk USA and MTurk India samples and another dummy-coded variable representing the distinction between the researcher's professional contacts and the MTurk India samples. The MTurk India sample was selected as the comparison group for the dummy-coded variables in order to help explain variance in individual innovative performance accounted for by the cultural distinction between people located in the USA and those located in India.

Procedure

The researcher recruited his professional contacts to participate in this research by sending his professional contacts an email that contained a link to the study's online survey. Clicking on this link launched the online survey, and participants completed the survey. Participants, who wished to enter a drawing for 1 of 10 $25 Amazon.com gift certificates, provided their email addresses.

The researcher also recruited participants through Amazon.com's e-lancing service, called Amazon Mechanical Turk (MTurk). The link to the online survey was posted on the MTurk platform as a Human Intelligence Task (HIT). The HIT described the survey task, duration, and financial compensation (i.e., $0.50 for the current study). Clicking on the survey link launched a new browser window that contained the survey, which was hosted on SurveyMonkey.com. At the end of the survey, people entered a

passphrase into the HIT information page on the MTurk platform in order to verify that they had completed the survey.

Analyses

Hypotheses were tested in the Mplus statistical analysis software program, which utilizes a Latent Moderated Structural Equations (LMS) approach (Klein & Moosbrugger, 2000). LMS uses the Expectation-maximization (EM) algorithm (see Dempster, Laird, & Rubin, 1977) to yield maximum likelihood and error estimates for parameters, which, in contrast to product indicator approaches (e.g., Kenny & Judd, 1984), account for the nonnormality of nonlinear effects (Kelava et al., 2011).

Using the full dataset, item parcels were formed for social exchange, political skill, required innovativeness, and openness to experience. In order to form item parcels for social exchange, openness to experience, and required innovativeness, items for each measure were randomly ordered and grouped into parcels. Parcel scores were the mean of the items contained in each item parcel. Social exchange had 3 item parcels. Two item parcels consisted of 3 items each; 1 item parcel consisted of 2 items. Required innovativeness had 3 item parcels, each consisting of 3 items. Political skill had 4 item parcels. The item parcels for political skill were comprised of items relating to political skill's 4 theoretical dimensions: networking ability contained 6 items; interpersonal influence contained 4 items; social astuteness contained 5 items, and apparent sincerity contained 3 items. A confirmatory factor analysis, using the item parcels and specifying four latent factors for the independent variables, yielded acceptable model fit (RMSEA = .08; SRMR = .06). A confirmatory factor analysis, specifying nine latent factors for the

innovative performance dependent variable, also yielded acceptable model fit (RMSEA = .07; SRMR = .05).

Results

Descriptive statistics for the study variables are presented in Table 11. Study variable correlations and reliabilities are presented in Table 12. Correlations among the innovative performance dimensions ranged from $r = .41$ to $r = .71$. Required innovativeness, the quality of the social exchange relationship, task domain expertise, and political skill were positively correlated with all of the innovative performance dimensions. Additional noteworthy correlations are as follows: the quality of the social exchange relationship was positively related to job level ($r = .17$); task domain expertise was positively related to age ($r = .14$), organizational tenure ($r = .26$), hours worked per week ($r = .15$), education ($r = .10$), and job level ($r = .33$); and, political skill was positively related to organizational tenure ($r = .10$), hours worked per week ($r = .08$), education ($r = .09$), and job level ($r = .19$).

The dummy-coded variable representing the distinction between the MTurk – USA sample and the MTurk – India sample was uncorrelated with idea generation, idea evaluation, and innovation adoption. However, this variable was negatively correlated with the other innovative performance dimensions, indicating that, overall, MTurk participants located in India reported higher levels of innovation than did MTurk participants located in the USA. The dummy-coded sample variable representing the distinction between the researcher's professional contacts and the MTurk – India sample

was positively correlated with idea solicitation, idea evaluation, and idea promotion, indicating that the researcher's professional contacts reported higher levels of these innovative activities than did MTurk respondents located in India. However, this variable was negatively correlated with resource acquisition, indicating that MTurk respondents located in India reported higher levels of resource acquisition than did the researcher's professional contacts.

Table 13 presents goodness-of-fit indicators and Chi-square difference tests, which were calculated for three structural models and, which treated the nine innovative performance dimensions as separate latent variables in SEM: Model 1 (RMSEA = .06; SRMR = .09), which freely estimated the structural coefficients of the control variables; Model 2 (RMSEA = .06; SRMR = .07), which freely estimated all of the structural coefficients; and, Model 3, which freely estimated all of the structural coefficients and which included the latent variable interactions. LMS in Mplus does not include RMSEA, SRMR, or Chi-square estimates of model fit; however, a Chi-square difference test between Model 2 and Model 3, which was computed based on H_0 loglikelihood estimates, demonstrated that inclusion of the interaction terms in the SEM increased model fit, $\chi^2(27) = 126.63$, $p < .001$.

R-square values were not provided in the Mplus software statistical output, nor could they be computed manually from this output. Therefore, R-square estimates were computed using ordinary least squares hierarchical regression in SPSS. Each of the 9 innovative performance dimensions was regressed separately onto the control variables, study variable main effects, and interaction terms. As shown in Table 14, inclusion of the

study variable main effects increased R-square significantly for each of the 9 innovative performance dimensions. With the exception of resource acquisition and idea generation, the interaction terms increased R-square significantly over and above the control variables and the study variable main effects, which suggests that inclusion of the interaction terms increases our understanding of the factors that influence individual innovative performance.

Hypotheses were tested with statistical significance tests of parameter estimates representing the regression of endogenous variables onto exogenous variables, i.e., gamma (γ) values, and with Wald tests to test for statistically significant differences between pairs of gamma values. Wald tests enabled the testing of hypotheses positing that the relation between a pair of exogenous and endogenous variables is stronger than the relationship between another pair of exogenous and endogenous variables. Table 15 presents LMS results.

As shown in Table 15, the quality of the social exchange relationship was positively related to idea solicitation ($\gamma = .28$, $p < .05$) and negatively related to resource acquisition ($\gamma = -.22$, $p < .05$), but it was unrelated to the other innovative performance dimensions. Because the quality of the social exchange relationship was not positively related to all of the innovative performance dimensions, Hypothesis 1 was not supported.

Table 16 presents a summary of Wald test results for Hypotheses 2a through 2e, which tested for significant differences between the strength of the relations between task domain expertise and the cognitively oriented and interpersonally oriented innovative performance dimensions. Task domain expertise was positively related to the cognitively

oriented dimensions idea generation ($\gamma = .13$, $p < .05$) and experimentation ($\gamma = .12$, $p < .05$), as well as to the interpersonally oriented dimension innovation promotion ($\gamma = .10$, $p < .05$). As shown in Table 16, task domain expertise was not related more strongly to a single cognitively oriented innovative performance dimension than to each of the other interpersonally oriented innovative performance dimensions. Therefore, Hypotheses 2a through 2e were not supported.

As shown in Table 15, the task domain expertise x social exchange interaction term was not related to any of the innovative performance dimensions. Because task domain expertise did not moderate the relationship between the quality of the social exchange relationship and the cognitively oriented innovative performance dimensions, Hypothesis 3 was not supported.

Table 17 presents a summary of Wald test results for Hypotheses 4a through 4e, which tested for significant differences between the strength of the relations between openness to experience and the cognitively oriented and interpersonally oriented innovative performance dimensions. Openness to experience was positively related to all innovative performance dimensions (see Table 17), except for the interpersonally oriented dimensions innovation promotion and resource acquisition. Contrary to expectations, openness to experience was not related more strongly to a single cognitively oriented innovative performance dimension than to each of the other interpersonally oriented innovative performance dimensions. Therefore, Hypotheses 4a through 4e were not supported.

Hypothesis 5 was not supported. As shown in Table 15, the structural paths from

the openness to experience x social exchange interaction term were statistically significant in predicting four cognitively oriented innovative performance dimensions: problem identification (γ = -.28, p < .01), idea generation (γ = -.22, p < .01), idea evaluation (γ = -.22, p < .01), and experimentation (γ = -.17, p < .05). These interaction plots are presented in Figures 2, 3, 4, and 5, respectively. However, contrary to the prediction of Hypothesis 5, for these innovative performance dimensions, increasing the quality of the social exchange relationship tended to decrease performance for individuals who were high on openness to experience and to increase performance for individuals who were low on openness to experience.

Contrary to expectations, the openness to experience x social exchange interaction term predicted three interpersonally oriented innovative performance dimensions: idea solicitation (γ = -.41, p < .01), idea promotion (γ = -.17, p < .05), and resource acquisition (γ = .12, p < .05). These interaction plots are presented in Figures 6, 7, and 8, respectively. For idea solicitation and idea promotion, increasing the quality of the social exchange relationship tended to decrease performance for individuals who were high on openness to experience and to increase performance for individuals who were low on openness to experience. For resource acquisition, increasing the quality of the social exchange relationship tended to decrease performance for individuals who are high on openness to experience and to decrease performance even more sharply for individuals who are low on openness to experience.

Table 18 presents a summary of Wald test results for Hypotheses 6a through 6d, which tested for significant differences between the strength of the relations between

political skill and the cognitively oriented and interpersonally oriented innovative performance dimensions. Political skill was positively related to all innovative performance dimensions (see Table 18); however, political skill was not more strongly related to an interpersonally oriented innovative performance dimension than to the other cognitively oriented innovative performance dimensions. Therefore, Hypotheses 6a through 6d were not supported.

As shown in Table 15, Hypothesis 7 was partially supported. The political skill x social exchange interaction term was positively related to only one interpersonally oriented innovative performance dimension, innovation promotion ($\gamma = -.21$, $p < .05$). Contrary to expectations, the political skill x social exchange interaction term predicted three cognitively oriented innovative performance dimensions: idea generation ($\gamma = .15$, $p < .05$), idea evaluation ($\gamma = .14$, $p < .05$), and innovation adoption ($\gamma = -.11$, $p < .05$). These interactions are presented in Figures 9 through 12. For politically skilled individuals, the quality of the social exchange relationship appeared to have a slightly positive effect on idea evaluation, no effect on idea generation, and a slightly negative effect on innovation promotion and innovation adoption. For individuals who were low on political skill, the quality of the social exchange relationship had a slightly positive effect on innovation promotion, no effect on innovation adoption, and a slightly negative effect on idea generation and idea evaluation. These results must be interpreted with caution, however, given their small effect sizes and the comparably larger and positive main effects of political skill on all of the innovative performance dimensions.

Discussion

The aim of this dissertation was to investigate the role of the quality of the social exchange relationship and various individual factors in predicting innovative performance. High quality social exchange was hypothesized to relate positively to all nine of the innovative performance dimensions. Expertise and openness to experience, which were the cognitively oriented individual factors, were hypothesized to relate more strongly to the cognitively oriented innovative performance dimensions, while political skill, which was the interpersonally oriented individual factor, was hypothesized to relate more strongly to the interpersonally oriented innovative performance dimensions. In sum, the pattern of findings suggests that, indeed, innovative performance consisted of nine dimensions that are differentially related to various antecedents. However, the form and nature of these relationships were different than hypothesized.

The findings will be described in two sections corresponding to the major goals of this dissertation. Specifically, I first discuss results concerning the direct and moderating effects of the quality of the social exchange relationship on innovative performance. Second, I discuss the results as they relate to the differential relations between expertise, openness to experience, and political skill and the dimensions of innovative performance. This section also describes the categorization of innovative performance dimensions as cognitively or interpersonally oriented, as well as the influence of required

innovativeness on innovative performance.

Social Exchange Relationship and Individual Innovative Performance

As described above, a major aim of this dissertation was to illuminate the relationship between the quality of the social exchange relationship and individual innovative performance. This study's results suggest that the quality of the social exchange relationship's influence on innovative performance is surprisingly *inconsistent*. The quality of the social exchange relationship was positively related to idea solicitation, negatively related to resource acquisition, and unrelated to the other innovative performance dimensions. Since high quality social exchange involves reciprocal investments from the parties in the exchange relationship, perhaps employees who perceive high quality social exchange are more likely to solicit ideas and feedback from their coworkers if they feel that their organization welcomes and appreciates their own ideas. Contrary to expectations, high quality social exchange was negatively related to resource acquisition. Perhaps employees, who perceive themselves to be in high quality social exchange relationships with their employers, might receive innovation resources without having to persuade key organizational members to provide them.

The lack of direct relationships between the quality of the social exchange relationship and the remaining seven innovative performance dimensions was puzzling. Individual innovative performance spans both in-role and extra-role behaviors (George & Jones, 1997; Unsworth, 2001), and high quality social exchange has been associated with increased job performance and OCB (Kuvaas & Dysvik, 2009; Shore et al., 2006). In fact, Choi (2007) argued that change-oriented OCB, which encompasses voice behaviors,

innovative behaviors, personal initiative, taking charge, and task revision, is a type of OCB that aims to change the status quo by breaking from past practices, as opposed to other forms of OCB, which aim to strengthen the status quo. However, changing the status quo, which is implicit in innovation, is often stressful and risky, and can create tensions with coworkers (Janssen, 2004). If an organization ignores or resists an employee's innovative contributions, or if the employee seeks to avoid potential conflicts with coworkers for being innovative, then the employee might invest in the social exchange relationship in ways other than by behaving innovatively.

The moderating effects of individual factors on the relationship between the quality of the social exchange relationship and innovative performance were also inconsistent. Surprisingly, expertise did not moderate the relation between the quality of the social exchange relationship and any of the innovative performance dimensions, indicating that the quality of the social exchange relationship did not increase innovative performance for either experts or non-experts. If individuals lack the requisite expertise, then perhaps increased motivation will not improve an individual's performance on innovative tasks that require expertise. On the other hand, experts might have more complex jobs, which are typically more challenging and less routine (Amabile, 1988). For such jobs, innovativeness might be required rather than volitional. If these job incumbents are performing innovatively already, then the positive motivational effects of high quality social exchange might not be able to boost innovative performance above current levels.

Unlike expertise, openness to experience and political skill moderated the

relationship between the quality of the social exchange relationship and various innovative performance dimensions, although, not in the expected direction. Overall, high quality social exchange relationships tended to increase or to have no effect on innovative performance for those who were *low* in openness to experience. The same pattern of results was true for political skill as well. These findings suggest that the sense of obligation to reciprocate an employer's investments in the social exchange relationship motivates some of these employees to be more innovative. As stated previously, the current study investigated incremental rather than radical innovation. Incremental innovation entails improving existing products, services, or procedures (Ettlie et al., 1984), which might require lower levels of openness to experience, and political skill than radical innovation, which entails creating and implementing new products, services, or procedures (Ettlie et al.). Therefore, the positive motivational effects of high quality social exchange might increase innovative performance for individuals who have lower levels of individual factors that foster innovation.

There were, however, three notable exceptions to this general pattern of results just described for openness to experience and political skill. First, high quality social exchange *decreased* resource acquisition for individuals low in openness to experience. As stated previously, social exchange relationship quality was negatively related to resource acquisition. Perhaps this negative relationship was especially pronounced for individuals who were low in openness to experience because these individuals, who are not inclined to try new things or to engage in complex problem solving, are even less inclined to attempt to acquire financial or material resources for engaging in such

activities. Second, high quality social exchange decreased idea generation for individuals low in political skill; and, third, high quality social exchange decreased idea evaluation for individuals low in political skill. For these latter two exceptions, perhaps individuals who are low in political skill are unable to voice new ideas or criticism of others' ideas tactfully or persuasively. Consequently, these individuals might stop trying to be innovative in order to avoid appearing overly critical of the organization and its members, which might jeopardize high quality social exchange. Furthermore, if these individuals are unable to express new ideas or criticisms in a politically skilled manner, then organizations might be more likely to reject or to ignore the ideas outright rather than to develop or to implement the ideas. In such situations, a political unskilled employee might simply stop sharing new ideas or critiques with coworkers.

Surprisingly, the quality of the social exchange relationship tended to decrease or to have no effect on innovative performance for those who were high in openness to experience or political skill. Deci and Ryan's (1985) cognitive evaluation theory (CET) might explain why a high quality social exchange relationship tended to decrease innovative performance for individuals who were high on individual factors thought to promote innovation. While at first this theory might seem counterintuitive, a high quality social exchange relationship creates a sense of obligation on the part of the employee to reciprocate the employer's investment in the social exchange relationship (Shore et al., 2006). It is quite possible that this sense of obligation might be perceived as controlling and, therefore, decreases these individuals' intrinsic motivation to innovate. Given the positive association between intrinsic motivation and individual innovation (Hammond,

et al., 2011), this study's findings are consistent with CET.

Unfortunately, these findings do not provide clear guidance to organizations wishing to increase innovation by improving the quality of the social exchange relationship with their employees. On the one hand, individuals, who are low on individual factors that foster innovation, might increase their innovative performance. On the other hand, increasing the quality of the social exchange relationship, and thus the sense of perceived obligation, might decrease innovative performance for individuals who are high on individual factors that foster innovation. More research is needed to understand how and when improving the quality of the social exchange relationship is beneficial and feasible for organizations.

Individual Factors and Individual Innovative Performance

A second aim of this dissertation was to investigate the differential relationships between predictors of the cognitively and interpersonally oriented innovative performance dimensions. Task domain expertise, openness to experience, and political skill were included in this study because they were expected to relate to innovative performance differentially and because they represent three types of individual factors, e.g., knowledge (task domain expertise), personality (openness to experience), and skill (political skill). Findings indicated that none of the hypotheses pertaining to whether an individual factor was more strongly related to the cognitively or interpersonally oriented dimensions was supported, which suggests that innovative performance dimensions might contain a more equal balance of cognitive and interpersonal performance demands. However, each individual factor was positively related to 3 or more innovative

performance dimensions. These results suggest that innovative performance dimensions are not meaningfully categorized into cognitively and interpersonally oriented performance dimensions, and that knowledge, skill, and personality factors contribute to innovative performance.

The dimensions originally categorized as cognitive, which include identifying problems, generating ideas, evaluating ideas, and adopting innovations, involve communicating ideas, presenting criticisms, and asking questions. These activities likely require tact and consideration in order to be performed effectively. Similarly, dimensions originally categorized as interpersonal, such as idea solicitation, idea promotion, and innovation promotion, likely include cognitive performance demands, such as understanding the problem or idea sufficiently in order to solicit meaningful feedback and to explain the idea's purpose, benefits, and implications to others. Although researchers (e.g., Farr et al., 2003) have characterized innovation as a social process involving numerous stakeholders, this finding suggests that innovative performance is perhaps more interpersonally oriented than researchers had realized.

Task domain expertise was positively related to idea generation, experimentation, and innovation promotion, but it was not related more strongly to the cognitively oriented dimensions than to the interpersonally oriented dimensions. Given that expert power (French & Raven, 1960) can be used to persuade others, experts likely promote organizational innovations effectively. Furthermore, experts might understand an innovation more thoroughly than non-experts, and therefore be able to explain the innovation's properties and benefits more effectively than non-experts. These findings

suggest that organizations may wish to rely on experts not only to create innovations but also to promote them. This finding underscores the social aspect of innovation: experts might promote innovations persuasively due to their expert power (French & Raven, 1960) and thorough understanding of the innovation.

As expected, openness to experience was positively related to the cognitively oriented innovative performance dimensions. Openness to experience was also positively related to the interpersonally oriented dimensions pertaining to effective idea solicitation and idea promotion. However, contrary to expectations, openness to experience was not more strongly related to the cognitively oriented dimensions than to the interpersonally oriented dimensions. Given that an open person enjoys complex problem solving and is more likely to challenge the status quo (Feist, 1998; McCrae & Costa, 1997), an open person might participate in all or most phases of the innovative process.

Surprisingly, political skill was positively – and robustly – related to all of the innovative performance dimensions, and it was not related more strongly to either the cognitively or interpersonally oriented dimensions. The cognitively oriented performance dimensions, such as problem identification, idea generation and idea evaluation, likely require political skill in order to be performed diplomatically and effectively. Furthermore, given the potential career advancement opportunities, awards and recognition, and financial incentives of successful innovation, a politically skilled person might indeed be motivated to experiment with new ideas. Finally, a politically skilled person might adopt innovations, which the organization has endorsed, as a politically savvy move to comply with organizational expectations.

These novel findings suggest that organizations might increase innovation by selecting for politically skilled employees or by training their current employees to be more politically skilled. Politically skilled individuals, who tend to be adept at using their knowledge of others to accomplish personal or organizational goals (Ferris, et al., 2005), might be especially well suited for incremental innovation because improving existing products, services, and processes might rely more on tact and diplomacy than on deep technical knowledge. For example, many employees may notice if something is not working well or could be improved; however, a politically skilled person might be better at bringing attention to these issues in a constructive and cooperative manner that motivates the organization to change rather than to defend its current practices. In summary, this study's findings suggest that further research into political skill's positive effects on innovation might yield valuable insights into how organizations may benefit from selecting politically skilled applicants or from training their current employees to be more politically skilled.

Finally, required innovativeness, which was treated as a control variable in this study, was strongly related to all of the innovative performance dimensions. This finding is consistent with Hammond et al.'s (2011) meta-analytic finding that required innovativeness was the strongest predictor of innovative behaviors. This finding suggests that organizations might increase innovation by including individual innovative performance requirements in formal job descriptions or by creating a climate for innovation through organizational policies and practices. As stated earlier, this study investigated incremental innovation, which likely places fewer demands than radical

innovation on employees. For example, an employee might be unable to write a new software program from scratch; however, an employee, who is familiar with the software program, might be able to suggest functionality to improve the software program. In short, many employees might possess the requisite KSAOs for incremental innovation, but not those for radical innovation. Therefore, organizations might increase innovative performance for incremental innovation effectively by requiring incremental innovation as part of employees' formal job descriptions.

Limitations

As with all studies, this one was not without limitations. First, the study utilized a cross-sectional, self-report design. One of the primary concerns with self-report data such as these is common method variance. To explore this potential issue, the researcher carefully examined a sub-set of data that included supervisor ratings, self-report ratings from people who had recruited their supervisors, and self-report ratings from people who did not recruit their supervisors. The findings revealed mean differences among supervisor ratings and self-report ratings on only one dimension of innovative performance, problem identification. Furthermore, the findings demonstrated a consistent pattern of results for both self and supervisor reports. With that said, clearly, future research should seek to rule out common method variance by obtaining other ratings, such as supervisor ratings, of innovative performance. Furthermore, a longitudinal study that includes multiple measures of innovative performance and the quality of the social exchange relationship would provide insights into intra-individual variations in individual performance and their linkages to changes in the quality of the social exchange

relationship over time.

A second limitation concerns the participant sample. Specifically, the majority of participants were recruited through MTurk. While this study's measures demonstrated sufficient psychometric properties, I am unable to confirm these individuals' identities independently, which might weaken the generalizability of this study's findings. However, recent research has indicated that the quality of data obtained through MTurk is comparable to the quality of data obtained through conventional methods (Buhrmester, Kwang, & Gosling, 2011). Third, given the sample's cross-cultural nature, this study would have benefitted from measures that account for cross-cultural differences in innovative performance. Nonetheless, the pattern of results is consistent with previous innovation research, which supports the generalizability of the results.

A final notable limitation is that the computation of R-square for the structural model containing the latent variable interactions, which would have provided estimates for the amount of variance in the dependent variables accounted for by the interaction terms, was infeasible. The SEM software program did not provide estimates for the covariances among the 3 exogenous single-item indicator variables and the exogenous latent variables, which are necessary for computing the variances of the dependent latent variables. Consequently, R-square values could not be computed for the full structural model. Instead, R-square values were computed by regressing each of the 9 innovative performance dimensions separately onto the study variables. Although these R-square estimates provide a sense of the amount of variance accounted for in the dependent variables, estimates derived from a full SEM likely would have been more precise. Given

the increasing popularity of SEM, and of LMS approaches in particular, improvements to statistical software programs that perform these analyses could benefit our field greatly.

Directions for Future Research

This study's findings suggest several potential paths for future research. First, this study's most unexpected finding was the pivotal role of political skill in promoting innovative performance. For many jobs, innovative performance is at least partially, if not completely, volitional (Van Dyne et al., 1994). Schnake and Dumler (1997) argued that individuals engage in citizenship behaviors at least partially with the expectation that they will be indirectly rewarded for them at some point in the future. Despite the risk of failure, innovation represents great potential for personal and financial gain. Politically skilled individuals might persist with various citizenship performance behaviors, including innovative performance, because they are convinced that they will eventually be rewarded for them (M. C. Andrews, Kacmar, & Harris, 2009). Future research might explore whether politically skilled individuals excel at innovative performance for selfish or altruistic reasons.

A second path for future research is to explore the role of the quality of the social exchange relationship in fostering innovation for different types of people. This study's findings suggest Deci and Ryan's (1985) cognitive evaluation theory (CET) might explain how the quality of the social exchange relationship decreases innovative performance for individuals who are high on KSAOs that are positively related to innovative performance. Greater research is needed in order to understand these relations, and to advance innovation theory development in understanding the roles of intrinsic and

extrinsic motivation.

A third path for future research is to explore additional social or interpersonally related individual factors, such as persuasion skill, emotional intelligence, agreeableness, and extraversion, that might foster various innovative performance dimensions. Researchers (e.g., Farr et al., 2003) have long stated that innovation is a social process and researchers (e.g., Hammond et al., 2011) have shown that supportive contextual and relationship factors, e.g., supportive climate and leader-member exchange, promote creativity and innovation. Yet, relatively little research has investigated the role of interpersonally oriented individual factors in fostering innovative performance. Because innovation can be stressful and risky (Janssen, 2004), individuals with strong social and empathy skills are perhaps well suited to developing and implementing creative ideas.

Conclusion

In summary, this study's findings support the multi-dimensionality of innovative performance, but they do not support categorizing innovative performance dimensions according to cognitive or interpersonal performance demands. This research suggests that the quality of the social exchange relationship might be less important in facilitating innovative performance than individual factors, such as openness to experience and political skill. Finally, this research highlights the previously under-appreciated role of political skill in fostering all aspects of innovative performance.

Table 1

Innovative Performance Dimensions According to Innovation Stage and Performance Criterion Type

Innovative performance dimension	Creativity or implementation stage	Cognitive or interpersonal performance criterion
Problem identification	Creativity	Cognitive
Idea generation	Creativity	Cognitive
Idea solicitation	Creativity	Interpersonal
Idea evaluation	Creativity	Cognitive
Experimentation	Creativity	Cognitive
Idea promotion	Implementation	Interpersonal
Innovation promotion	Implementation	Interpersonal
Innovation adoption	Implementation	Cognitive
Resource acquisition	Implementation	Interpersonal

Table 2

Study Demographics

Demographic Variable	*M*	*SD*
Age	32.27	9.91
Organizational Tenure	4.80	4.71
Hours worked per week	46.09	10.67
Gender		
Men	493	57.3%
Women	362	42.3%
Education Level		
Some high school	10	1.2%
High school diploma	49	5.7%
Associate's degree	54	6.3%
Bachelor's degree	423	49.2%
Some graduate school	48	5.6%
Master's degree	250	29.1%
"All but dissertation" doctoral work	8	0.9%
Ph.D. degree	17	2.0%
Job Level		
Entry-level individual contributor	119	13.8%
Mid-level individual contributor	273	31.7%
Senior-level individual contributor	180	20.9%
First-level manager	105	12.2%
Mid-level manager	125	14.5%
Senior-level manager	58	6.7%

Note. N's range from 855-860.

Table 3

Factor Loadings for Social Exchange (One Third Data Set; N = 280)

Item	Factor
My relationship with my organization is based on mutual trust.	.81
I try to look out for the best interest of the organization because I can rely on my organization to take care of me.	.79
The things I do on the job today will benefit my standing in this organization in the long run.	.73
Even though I may not always receive the recognition from my organization I deserve, I know my efforts will be rewarded in the future.	.71
I don't mind working hard today - I know I will eventually be rewarded by my organization.	.69
There is a lot of give and take in my relationship with my organization.	.68
My organization has made a significant investment in me.	.68
I worry that all my efforts on behalf of my organization will never be rewarded. (reverse-scored)	.37

Table 4

Factor Loadings for Openness to Experience (One Third Data Set; N = 272)

Item	Factor
I enjoy hearing new ideas.	.72
I enjoy thinking about things.	.67
I carry the conversation to a higher level.	.66
I get excited by new ideas.	.64
I have difficulty understanding abstract ideas. (reverse-scored)	.59
I have a vivid imagination.	.52
I am not interested in theoretical discussions. (reverse-scored)	.50
I rarely look for a deeper meaning in things. (reverse-scored)	.50
I avoid philosophical discussions. (reverse-scored)	.46
I can say things beautifully.	.45
I am not interested in abstract ideas. (reverse-scored)	.44
I have a rich vocabulary.	.41
I enjoy wild flights of fantasy.	.23

Table 5

Factor Loadings for Political Skill (One Third Data Set; N = 280)

Item	Factor
I understand people very well. (PS-Social astuteness)	.69
I am able to communicate easily and effectively with others. (PS-Interpersonal influence)	.69
I am good at building relationships with influential people at work. (PS-Networking ability)	.68
I am able to make most people feel comfortable and at ease around me. (PS-Interpersonal influence)	.67
It is easy for me to develop good rapport with most people. (PS-Interpersonal influence)	.63
When communicating with others, I try to be genuine in what I say and do. (PS-Apparent sincerity)	.63
I have good intuition or savvy about how to present myself to others. (PS-Social astuteness)	.62
At work, I know a lot of important people and am well connected. (PS-Networking ability)	.62
I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done. (PS-Networking ability)	.62
I am good at getting people to like me. (PS-Interpersonal influence)	.62
I always seem to instinctively know the right things to say or do to influence others. (PS-Social astuteness)	.61
I spend a lot of time at work developing connections with others. (PS-Networking ability)	.60
I try to show a genuine interest in other people. (PS-Apparent sincerity)	.59
I am good at using my connections and network to make things happen at	.59

Item	Factor
work. (PS-Networking ability)	
It is important that people believe I am sincere in what I say and do. (PS-Apparent sincerity)	.59
I spend a lot of time and effort at work networking with others. (PS-Networking ability)	.55
I pay close attention to people's facial expressions. (PS-Social astuteness)	.52
I am particularly good at sensing the motivations and hidden agendas of others. (PS-Social astuteness)	.52

Table 6

Goodness-of-Fit Indicators of Independent Variable Measurement Model (N =513)

Model	χ^2	*df*	$\Delta\chi^2$	RMSEA	SRMR
Single Factor	4,486.82***	698		.10	.11
Three Factor	3,166.84***	695	1,320.00***	.08	.10

***$p < .001$.

Table 7

Confirmatory Factor Analysis Results for the Independent Variable Measurement Model (N = 513)

Item	Unstand-ardized	Stand-ardized
I spend a lot of time and effort at work networking with others. (political skill - networking ability)	1.00 (--)	.54
I am good at building relationships with influential people at work. (political skill - networking ability)	1.21 (.10)	.72
I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done. (political skill - networking ability)	1.04 (.09)	.68
At work, I know a lot of important people and am well connected. (political skill - networking ability)	1.18 (.10)	.73
I spend a lot of time at work developing connections with others. (political skill - networking ability)	1.23 (.11)	.65
I am good at using my connections and network to make things happen at work. (political skill - networking ability)	1.17 (.10)	.70
I am able to make most people feel comfortable and at ease around me. (political skill - interpersonal influence)	.88 (.08)	.64
I am able to communicate easily and effectively with others. (political skill - interpersonal influence)	.84 (.08)	.66
It is easy for me to develop good rapport with most people. (political skill - interpersonal influence)	.92 (.08)	.68
I am good at getting people to like me. (political skill - interpersonal influence)	.94 (.08)	.69
I understand people very well. (political skill - social astuteness)	.85 (.08)	.65

Item	Unstand-ardized	Stand-ardized
I am particularly good at sensing the motivations and hidden agendas of others. (political skill - social astuteness)	.91 (.09)	.58
I have good intuition or savvy about how to present myself to others. (political skill - social astuteness)	.95 (.09)	.66
I always seem to instinctively know the right things to say or do to influence others. (political skill - social astuteness)	1.04 (.09)	.68
I pay close attention to people's facial expressions. (political skill - social astuteness)	.84 (.09)	.55
When communicating with others, I try to be genuine in what I say and do. (political skill - apparent sincerity)	.61 (.07)	.47
It is important that people believe I am sincere in what I say and do. (political skill - apparent sincerity)	.62 (.07)	.48
I try to show a genuine interest in other people. (political skill - apparent sincerity)	.68 (.08)	.48
My organization has made a significant investment in me. (social exchange)	1.00 (--)	.62
The things I do on the job today will benefit my standing in this organization in the long run. (social exchange)	.93 (.07)	.66
There is a lot of give and take in my relationship with my organization. (social exchange)	.92 (.08)	.62
I worry that all my efforts on behalf of my organization will never be rewarded. (reverse-scored) (social exchange)	.52 (.10)	.26
I don't mind working hard today - I know I will eventually be rewarded by my organization. (social exchange)	1.09 (.09)	.65

Item	Unstand-ardized	Stand-ardized
My relationship with my organization is based on mutual trust. (social exchange)	1.04 (.08)	.72
I try to look out for the best interest of the organization because I can rely on my organization to take care of me. (social exchange)	1.17 (.08)	.79
Even though I may not always receive the recognition from my organization I deserve, I know my efforts will be rewarded in the future. (social exchange)	1.18 (.09)	.77
I have a vivid imagination. (openness)	1.00 (--)	.52
I carry the conversation to a higher level. (openness)	1.13 (.11)	.65
I enjoy hearing new ideas. (openness)	1.04 (.09)	.77
I enjoy thinking about things. (openness)	1.00 (.09)	.74
I can say things beautifully. (openness)	1.02 (.11)	.56
I enjoy wild flights of fantasy. (openness)	.88 (.13)	.37
I get excited by new ideas. (openness)	1.09 (.10)	.71
I have a rich vocabulary. (openness)	1.08 (.11)	.58
I am not interested in abstract ideas. (reverse-scored) (openness)	.38 (.13)	.15
I avoid philosophical discussions. (reverse-scored) (openness)	.59 (.14)	.22
I rarely look for a deeper meaning in things. (reverse-scored) (openness)	.62 (.14)	.22
I am not interested in theoretical discussions. (reverse-scored) (openness)	.76 (.14)	.28
I have difficulty understanding abstract ideas. (reverse-scored) (openness)	.74 (.13)	.29
I am not interested in abstract ideas. (reverse-scored) (openness) with I avoid philosophical discussions. (reverse-scored) (openness)	1.86 (.16)	.61

Item	Unstand-ardized	Stand-ardized
I rarely look for a deeper meaning in things. (openness) with I have difficulty understanding abstract ideas. (openness)	1.93 (.16)	.62
I am not interested in theoretical discussions. (openness) with I avoid philosophical discussions. (openness)	1.95 (.17)	.62
I am not interested in theoretical discussions. (openness) with I am not interested in abstract ideas. (openness)	1.61 (.15)	.54

Note: Dashes (--) indicate the standard error was not estimated.

Table 8

Factor Loadings for Innovative Performance (One Third Data Set; N =265)

Item	Factor
I explain how a new company process increases quality. (IP - innovation promotion)	.75
I explain how an organization's new ways of doing things increase efficiency. (IP - innovation promotion)	.72
I assess the strengths and weaknesses of new ideas. (IP - idea evaluation)	.70
I explain the advantages of new products and services. (IP - innovation promotion)	.69
I identify the most promising ideas. (IP - idea evaluation)	.69
I try to apply new ideas to work-related problems. (IP - experimentation)	.68
I make suggestions for improving how things operate within the organization. (IP - idea generation)	.68
I encourage others to come up with good ideas for work-related challenges. (IP – idea solicitation)	.65
I suggest work improvement ideas to others. (IP - idea generation)	.65
I diagnose the cause of the current issue or challenge. (IP - problem identification)	.64
I utilize new technology to perform my job. (IP - innovation adoption)	.64
I accurately describe key challenges to the organization. (IP - problem identification)	.63
I anticipate consequences of implementing a given idea. (IP - idea evaluation)	.63
I use new approaches to work tasks that improve efficiency. (IP - innovation adoption)	.63
I actively listen to others' ideas to solve work-related problems. (IP - idea	.63

Item	Factor
solicitation)	
I convince coworkers that a new technology will help them perform their jobs. (IP - innovation promotion)	.63
I try to find new ways to use existing technology to solve work-related problems. (IP - experimentation)	.63
I support good ideas even in the face of opposition. (IP - idea promotion)	.62
I suggest improvements to products or services. (IP - idea generation)	.62
I welcome new perspectives on work-related challenges. (IP - idea solicitation)	.61
I "talk up" good ideas. (IP - idea promotion)	.61
I take advantage of new technology offered by my organization. (IP - innovation adoption)	.60
I take advantage of new technologies that improve efficiency. (IP - innovation adoption)	.60
I try out new methods for completing assignments. (IP - experimentation)	.60
I defend good ideas against critics. (IP - idea promotion)	.57
I obtain the materials needed to implement new ideas. (IP - resource acquisition)	.57
I assess the practicality of ideas. (IP - idea evaluation)	.57
I stress the importance of idea-sharing among colleagues. (IP - idea solicitation)	.57
I explain why a new company practice is not working. (IP - problem identification)	.56
I develop new ways of obtaining resources needed to implement new ideas. (IP - resource acquisition)	.55
I share good ideas with coworkers. (IP - idea promotion)	.55
I suggest changes to unproductive rules or policies. (IP - idea generation)	.54

Item	Factor
I test new uses for existing methods or equipment. (IP - experimentation)	.52
I investigate sources of funding for implementing new ideas. (IP - resource acquisition)	.50
I secure the funds needed to implement new ideas. (IP - resource acquisition)	.37
I explain why a new company product or service is unsuccessful. (IP - problem identification)	.33

Table 9

Goodness-of-Fit Indicators of Innovative Performance Measurement Model (N =528)

Model	χ^2	*df*	$\Delta\chi^2$	RMSEA	SRMR
1. Single Factor	3,589.88***	594		.10	.07
2. Two Factor (Creativity and Implementation)	3,419.21***	593	170.67***	.10	.07
3. Two Factor (Cognitive and Interpersonal)	3,510.99***	591	78.89***	.10	.07
4. Six Factor	2,399.81***	579	1,019.40***	.08	.06
5. Nine Factor	2,055.54***	558	344.27***	.07	.06

Notes: Model 2 combined problem identification, idea generation, idea solicitation, idea evaluation and experimentation into a single factor, and it combined idea promotion, innovation promotion, innovation adoption and resource acquisition into a single factor. Model 3 combined problem identification, idea generation, idea evaluation and innovation adoption into a single factor, and it combined idea solicitation, idea promotion, innovation promotion and resource acquisition into a single factor. Model 4 combined problem identification, and idea evaluation into a single factor, and it combined idea promotion and innovation promotion into a single factor. The other factors were idea solicitation, experimentation, innovation adoption, and resource acquisition. Model 5 included the nine hypothesized separate factors for innovative performance.

***$p < .001$.

Table 10

Unstandardized Loadings (Standard Errors) and Standardized Loadings for the Nine Factor Confirmatory Model of Innovative Performance (N = 528)

Item	Unstand-ardized	Stand-ardized
I explain why a new company product or service is unsuccessful. (problem identification)	1.00 (--)	.46
I accurately describe key challenges to the organization. (problem identification)	1.33 (.13)	.79
I explain why a new company practice is not working. (problem identification)	1.18 (.12)	.67
I diagnose the cause of the current issue or challenge. (problem identification)	1.22 (.12)	.76
I suggest improvements to products or services. (idea generation)	1.00 (--)	.57
I suggest changes to unproductive rules or policies. (idea generation)	1.05 (.09)	.66
I suggest work improvement ideas to others. (idea generation)	1.14 (.09)	.79
I make suggestions for improving how things operate within the organization. (idea generation)	1.22 (.09)	.81
I welcome new perspectives on work-related challenges. (idea solicitation)	1.00 (--)	.54
I actively listen to others' ideas to solve work-related problems. (idea solicitation)	1.05 (.09)	.67
I encourage others to come up with good ideas for work-related challenges. (idea solicitation)	1.39 (.12)	.77
I stress the importance of idea-sharing among colleagues. (idea solicitation)	1.35 (.13)	.66
I assess the practicality of ideas. (idea evaluation)	1.00 (--)	.52
I assess the strengths and weaknesses of new ideas. (idea evaluation)	1.24 (.11)	.77

Item	Unstand-ardized	Stand-ardized
I identify the most promising ideas. (idea evaluation)	1.36 (.12)	.77
I anticipate consequences of implementing a given idea. (idea evaluation)	1.27 (.12)	.71
I test new uses for existing methods or equipment. (experimentation)	1.00 (--)	.47
I try out new methods for completing assignments. (experimentation)	1.15 (.11)	.72
I try to find new ways to use existing technology to solve work-related problems. (experimentation)	1.39 (.13)	.77
I try to apply new ideas to work-related problems. (experimentation)	1.37 (.13)	.82
I share good ideas with coworkers. (idea promotion)	1.00 (--)	.56
I "talk up" good ideas. (idea promotion)	1.44 (.13)	.70
I defend good ideas against critics. (idea promotion)	1.36 (.13)	.64
I support good ideas even in the face of opposition. (idea promotion)	1.25 (.12)	.65
I convince coworkers that a new technology will help them perform their jobs. (innovation promotion)	1.00 (--)	.62
I explain how an organization's new ways of doing things increase efficiency. (innovation promotion)	1.15 (.08)	.80
I explain how a new company process increases quality. (innovation promotion)	1.27 (.09)	.84
I explain the advantages of new products and services. (innovation promotion)	1.34 (.09)	.84
I take advantage of new technology offered by my organization. (innovation adoption)	1.00 (--)	.58
I utilize new technology to perform my job. (innovation adoption)	1.47 (.11)	.81
I take advantage of new technologies that improve efficiency. (innovation adoption)	1.35 (.10)	.82

Item	Unstand-ardized	Stand-ardized
I use new approaches to work tasks that improve efficiency. (innovation adoption)	1.27 (.10)	.79
I secure the funds needed to implement new ideas. (resource acquisition)	1.00 (--)	.65
I investigate sources of funding for implementing new ideas. (resource acquisition)	1.16 (.07)	.84
I obtain the materials needed to implement new ideas. (resource acquisition)	.97 (.06)	.81
I develop new ways of obtaining resources needed to implement new ideas. (resource acquisition)	1.14 (.07)	.87

Note: Dashes (--) indicate the standard error was not estimated.

Table 11

Descriptives for Study Variables

Scale	*N*	*M*	*SD*	Range	Min	Max
Required Innovativeness	860	5.33	0.99	6.00	1.00	7.00
Expertise	859	5.17	1.29	6.00	1.00	7.00
Political Skill	860	5.61	0.70	3.89	3.11	7.00
Social Exchange	858	5.11	0.94	6.00	1.00	7.00
Openness to Experience	860	5.10	0.81	4.77	2.23	7.00
Problem Identification	860	5.12	0.95	6.00	1.00	7.00
Idea Generation	860	5.57	0.91	5.25	1.75	7.00
Idea Solicitation	860	5.80	0.79	5.00	2.00	7.00
Idea Evaluation	860	5.70	0.79	5.00	2.00	7.00
Experimentation	860	5.74	0.80	4.75	2.25	7.00
Idea Promotion	860	5.76	0.78	5.75	1.25	7.00
Innovation Promotion	860	5.63	0.93	6.00	1.00	7.00
Innovation Adoption	860	5.91	0.82	5.25	1.75	7.00
Resource Acquisition	860	5.18	1.22	6.00	1.00	7.00

Table 12

Study Variable Correlations and Reliabilities

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1.	Age	-																					
2.	Gen	.15	-																				
3.	Ten	.55	.06	-																			
4.	Hrs	.00	-.14	.11	-																		
5.	Ed	.13	.05	.05	.01	-																	
6.	JL	.29	-.05	.38	.13	.23	-																
7.	RI	-.04	-.06	.04	.10	.15	.25	(.91)															
8.	Prof	.22	.06	.02	-.06	.22	.12	.04	-														
9.	MU	.25	.17	.08	-.19	-.28	-.14	-.29	-.15	-													
10.	SE	-.08	-.01	.08	.09	.10	.17	.49	-.11	-.25	(.84)												
11.	Expert	.14	-.01	.26	.15	.10	.33	.24	-.02	-.11	.19	-											

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
12.	Open	.10	.01	.01	-.06	.06	.09	.21	.23	.21	.18	.16	(.81)										
13.	PS	.03	.11	.10	.08	.09	.19	.47	.03	-.09	.51	.34	.38	(.92)									
14.	Prob	.03	-.06	.08	.04	.05	.25	.53	.04	-.12	.36	.25	.32	.51	(.74)								
15.	Gen	.13	-.01	.13	.06	.11	.28	.57	.07	-.06	.36	.29	.36	.54	.68	(.79)							
16.	Sol	.11	.05	.09	.00	.17	.21	.52	.14	-.09	.40	.23	.44	.57	.58	.64	(.74)						
17.	Eval	.11	.03	.10	.07	.13	.22	.53	.12	-.05	.35	.24	.43	.55	.56	.66	.69	(.77)					
18.	Ex	.09	-.03	.07	.06	.09	.20	.54	-.03	-.08	.37	.27	.39	.54	.55	.60	.66	.67	(.76)				
19.	Idea	.09	-.04	.11	.04	.11	.21	.54	.13	-.09	.36	.24	.36	.55	.56	.64	.66	.64	.59	(.73)			
20.	Inno	-.01	-.08	.05	.04	.07	.22	.64	-.04	-.09	.45	.28	.31	.56	.65	.68	.63	.63	.69	.69	(.83)		
21.	Adopt	.02	-.04	.04	.02	.03	.11	.51	-.06	-.02	.41	.22	.35	.52	.53	.56	.62	.57	.71	.59	.71	(.83)	
22.	Acq	-.15	-.13	.02	.20	.04	.20	.64	-.17	-.35	.41	.20	.10	.44	.50	.46	.41	.44	.50	.41	.58	.45	(.86)

Notes. N's range from 857-860. Coefficient alphas shown on the diagonal. Age = The Log10 of Age (measured in years). Gen = Gender (men = 1; women = 2). Ten = The Log10 of Organizational Tenure (measured in years). Hrs = Hours Worked per Week. Ed = Education Level. JL = Job Level. RI = Required Innovativeness. Prof = Professional Contacts (MTurk – India is the comparison group). MU = MTurk – USA (MTurk – India is the

comparison group). SE = Social Exchange. Expert = Task Domain Expertise. Open = Openness to Experience. PS = Political Skill. Prob = Problem Identification. Gen = Idea Generation. Sol= Idea Solicitation. Eval = Idea Evaluation. Ex = Experimentation. Idea = Idea Promotion. Inno = Innovation Promotion. Adopt = Innovation Adoption. Acq = Resource Acquisition.

Correlations greater than |.07| are significant at $p < .05$. Correlations greater than |.09| are significant at $p < .01$

Table 13

Goodness-of-Fit Indicators of Structural Equation Models (N =786)

Model	χ^2	*df*	H_0 Loglikelihood	$\Delta\chi^2$	Δdf	AIC	BIC	RMSEA	SRMR
1. Control Variables	5,152.41***	1,256	-45,616.50			91,671.00	92,693.06	.06	.09
2. Control and Study Variables	4,793.82***	1,220	-45,437.20	358.59***	36	91,384.41	92,574.48	.06	.07
3. Control Variables, Study Variables, and Latent Variable Interactions			-45,373.89	126.63***	27	91,311.77	92,627.86		

Notes: Model 1 freely estimates the structural paths of the control variables: required innovativeness, MTurk - USA, and professional contacts. Model 2 freely estimates the structural paths of the control variables and the main effects: quality of the social exchange relationship, task domain expertise, openness to experience, and political skill. Model 3 freely estimates the structural paths of the control variables, the main effects, and the latent variable interactions: quality of the social exchange relationship x task domain expertise, quality of the social exchange relationship x openness to experience, and quality of the social exchange relationship x political skill. For Model 3, estimates of Chi-square, RMSEA, and SRMR are unavailable for LMS approaches; however, a Chi-square difference test was conducted using H_0 loglikelihood estimates.

***$p < .001$.

Table 14

Summary of R-square Values Based on Hierarchical Regression Analyses for each Innovative Performance Dimension (N = 857)

Innovative Performance Dimension	Step 1 R^2	Step 2 R^2	Step 2 ΔR^2 from Step 1 to Step 2	Step 3 R^2	Step 3 ΔR^2 from Step 2 to Step 3
Problem Identification	.28	.38	.10**	.39	.01**
Idea Generation	.33	.44	.11**	.45	.01
Idea Solicitation	.29	.47	.18**	.48	.01**
Idea Evaluation	.31	.46	.15**	.47	.01*
Experimentation	.29	.43	.14**	.44	.01*
Idea Promotion	.31	.43	.13**	.44	.01*
Innovation Promotion	.41	.51	.10**	.52	.01**
Innovation Adoption	.28	.41	.13**	.41	.01*
Resource Acquisition	.49	.52	.03**	.52	.00

Note: Step 1 includes the control variables: required innovativeness, MTurk - USA, and professional contacts. Step 2 includes the control variables and

the main effects: quality of the social exchange relationship, task domain expertise, openness to experience, and political skill. Step 3 includes the control variables, the main effects, and the interaction terms: quality of the social exchange relationship x task domain expertise, quality of the social exchange relationship x openness to experience, and quality of the social exchange relationship x political skill.

*p <.05. **p <.01.

Table 15

Standardized Structural Parameter Estimates for each Innovative Dimension in the Full Structural Equation Model (Standard Errors in Parentheses; N = 786)

	Innovative Performance Dimension								
Var-iable	Problem Identification	Idea Generation	Idea Solicitation	Idea Evaluation	Experimen-tation	Idea Promotion	Innovation Promotion	Innovation Adoption	Resource Acquisition
	γ	γ	γ	γ	γ	γ	γ	γ	γ
RI	.69 (.08)**	.75 (.08)**	.68 (.09)**	.69 (.08)**	.65 (.08)**	.71 (.09)**	.85 (.08)**	.56 (.07)**	.95 (.08)**
MU	-.09 (.06)	.06 (.05)	-.09 (.07)	.05 (.06)	.01 (.05)	.01 (.06)	-.02 (.05)	.12 (.05)*	-.33 (.05)**
Prof	-.02 (.05)	-.02 (.05)	.12 (.06)*	.07 (.05)	-.13 (.05)*	.14 (.06)*	-.13 (.05)*	-.13 (.05)*	-.37 (.05)**
SE	.13 (.08)	-.02 (.08)	.29 (.10)*	-.01 (.09)	-.01 (.08)	.00 (.09)	-.01 (.08)	.08 (.08)	-.22 (.08)*
Expert	.10 (.05)	.13 (.05)*	-.02 (.06)	.03 (.05)	.12 (.05)*	.05 (.06)	.10 (.05)*	.03 (.05)	.01 (.05)
Open	.30 (.08)**	.22 (.07)**	.49 (.09)**	.35 (.07)**	.32 (.07)**	.22 (.08)**	.12 (.07)	.16 (.06)*	-.03 (.06)
PS	.38 (.09)**	.57 (.10)**	.60 (.12)**	.63 (.10)**	.51 (.10)**	.62 (.11)**	.43 (.09)**	.44 (.09)**	.39 (.09)**
SExE	-.08 (.05)	.03 (.05)	.05 (.06)	-.01 (.06)	-.02 (.05)	.01 (.06)	.01 (.05)	.08 (.05)	-.03 (.05)
SExO	-.28 (.07)**	-.22 (.06)**	-.41 (.08)**	-.22 (.07)**	-.17 (.07)*	-.17 (.08)*	.02 (.06)	-.05 (.06)	.12 (.06)*
SExPS	.11 (.06)	.15 (.06)*	.07 (.07)	.14 (.06)*	.05 (.06)	-.09 (.07)	-.21 (.06)*	-.11 (.06)*	.01 (.05)

Notes. RI = Required Innovativeness. MU = MTurk – USA (MTurk – India is the comparison group). Prof = Professional Contacts (MTurk – India is the comparison group). SE = Social Exchange. Expert = Task Domain Expertise. Open = Openness to Experience. PS = Political Skill. SExE = Social Exchange x Task Domain Expertise. SExO = Social Exchange x Openness to Experience. SExPS = Social Exchange x Political Skill.

*p <.05. **p <.01.

Table 16

Wald Tests for Structural Path Coefficients from Task Domain Expertise to Innovative Performance Dimensions Pertaining to Hypotheses 2a to 2e (N = 786)

Cognitively Oriented IPD	γ_{cog}	Interpersonally Oriented IPD	γ_{int}	*Wald statistic* (γ_{cog}, γ_{int})	*p*
		Hypothesis 2a			
Problem Identification	.10	Idea Solicitation	-.02	3.30	.07
		Idea Promotion	.05	.47	.49
		Innovation Promotion	.10*	.00	.99
		Resource Acquisition	.01	2.23	.14
		Hypothesis 2b			
Idea Generation	.13*	Idea Solicitation	-.02	5.73	.02
		Idea Promotion	.05	1.55	.21
		Innovation Promotion	.10*	.31	.58
		Resource Acquisition	.01	3.65	.06
		Hypothesis 2c			
Idea Evaluation	.03	Idea Solicitation	-.02	.74	.40
		Idea Promotion	.05	.13	.72
		Innovation Promotion	.10*	1.45	.23
		Resource Acquisition	.01	.13	.72
		Hypothesis 2d			
Experimentation	.12*	Idea Solicitation	-.02	5.55	.02
		Idea Promotion	.05	1.14	.29
		Innovation Promotion	.10*	.17	.68
		Resource Acquisition	.01	3.25	.07
		Hypothesis 2e			
Innovation Adoption	.03	Idea Solicitation	-.02	.81	.37
		Idea Promotion	.05	.11	.75
		Innovation Promotion	.10*	1.66	.20
		Resource Acquisition	.01	.16	.69

Notes: IPD = Innovative Performance Dimension. Cog = Cognitively Oriented. Int = Interpersonally Oriented.

*p <.05. **p <.01.

Table 17

Wald Tests for Structural Path Coefficients from Openness to Experience to Innovative Performance Dimensions Pertaining to Hypotheses 4a to 4e (N = 786)

Cognitively Oriented IPD	γ_{cog}	Interpersonally Oriented IPD	γ_{int}	*Wald statistic* $(\gamma_{cog}, \gamma_{int})$	*p*
		Hypothesis 4a			
Problem Identification	.30**	Idea Solicitation	.49**	3.85	.05
		Idea Promotion	.22**	.70	.40
		Innovation Promotion	.12	5.48	.02
		Resource Acquisition	-.03	15.07	.00
		Hypothesis 4b			
Idea Generation	.22**	Idea Solicitation	.49**	8.14	.00
		Idea Promotion	.22**	.00	1.00
		Innovation Promotion	.12	2.18	.14
		Resource Acquisition	-.03	8.47	.00
		Hypothesis 4c			
Idea Evaluation	.35**	Idea Solicitation	.49**	2.18	.14
		Idea Promotion	.22**	2.24	.13
		Innovation Promotion	.12	9.02	.00
		Resource Acquisition	-.03	19.32	.00
		Hypothesis 4d			
Experimentation	.32**	Idea Solicitation	.49**	3.53	.06
		Idea Promotion	.22**	1.15	.28
		Innovation Promotion	.12	6.94	.01
		Resource Acquisition	-.03	15.85	.00
		Hypothesis 4e			
Innovation Adoption	.16*	Idea Solicitation	.49**	13.00	.00
		Idea Promotion	.22**	.60	.44
		Innovation Promotion	.12	.38	.54
		Resource Acquisition	-.03	5.10	.02

Notes: IPD = Innovative Performance Dimension. Cog = Cognitively Oriented. Int = Interpersonally Oriented.

*p <.05. **p <.01.

Table 18

Wald Tests for Structural Path Coefficients from Political Skill to Innovative Performance Dimensions Pertaining to Hypotheses 6a to 6d (N = 786)

Cognitively Oriented IPD	γ_{cog}	Interpersonally Oriented IPD	γ_{int}	*Wald statistic* $(\gamma_{cog}, \gamma_{int})$	*p*
		Hypothesis 6a			
Idea Promotion	.62**	Problem Identification	.38**	3.80	.05
		Idea Generation	.57**	.18	.67
		Idea Evaluation	.63**	.00	.95
		Experimentation	.51**	.77	.38
		Innovation Adoption	.44**	2.35	.13
		Hypothesis 6b			
Innovation Promotion	.43**	Problem Identification	.38**	.23	.61
		Idea Generation	.57**	1.93	.17
		Idea Evaluation	.63**	3.38	.07
		Experimentation	.51**	.62	.43
		Innovation Adoption	.44**	.01	.93
		Hypothesis 6c			
Resource Acquisition	.39**	Problem Identification	.38**	.01	.93
		Idea Generation	.57**	2.44	.12
		Idea Evaluation	.63**	4.32	.04
		Experimentation	.51**	1.14	.29
		Innovation Adoption	.44**	.21	.64
		Hypothesis 6d			
Idea Solicitation	.60**	Problem Identification	.38**	3.06	.08
		Idea Generation	.57**	.05	.83
		Idea Evaluation	.63**	.07	.80
		Experimentation	.51**	.53	.47
		Innovation Adoption	.44**	1.81	.18

Notes: IPD = Innovative Performance Dimension. Cog = Cognitively Oriented. Int = Interpersonally Oriented.

*p <.05. **p <.01.

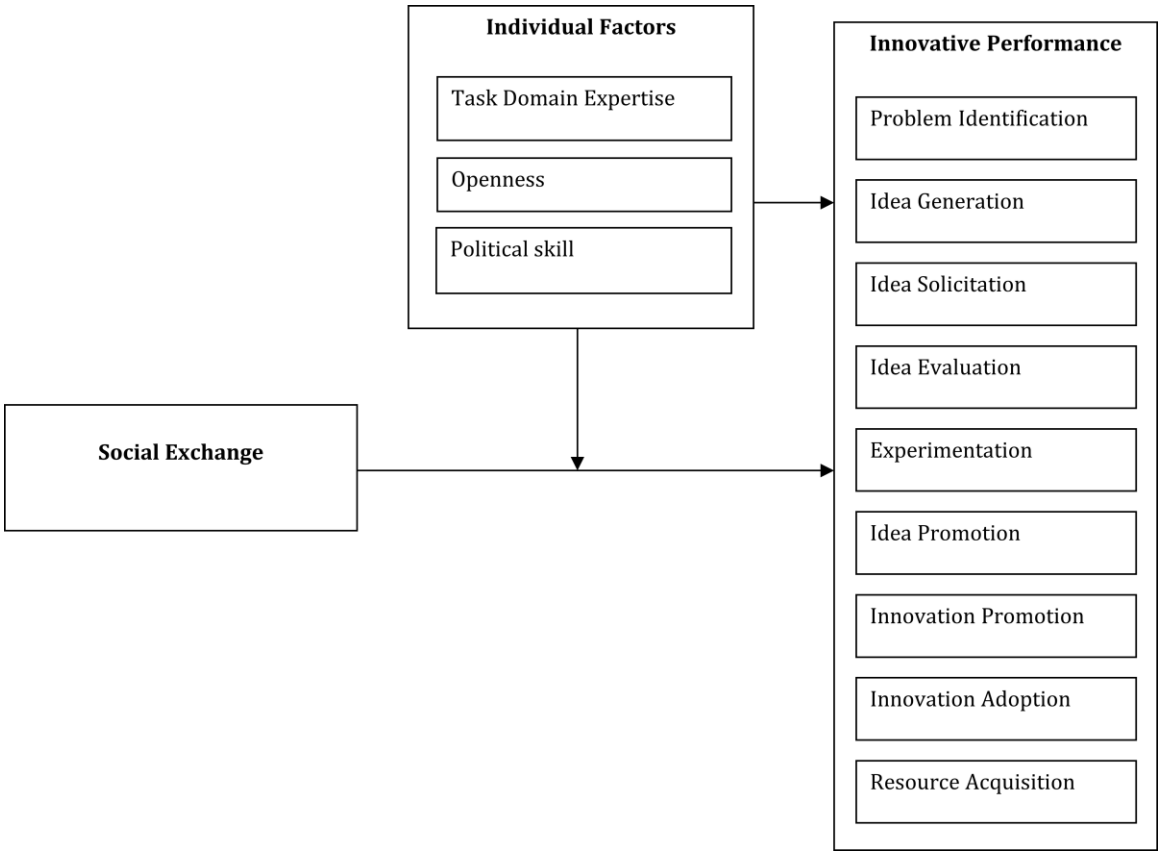

Figure 1. Theoretical model of innovative performance dimensions and antecedents.

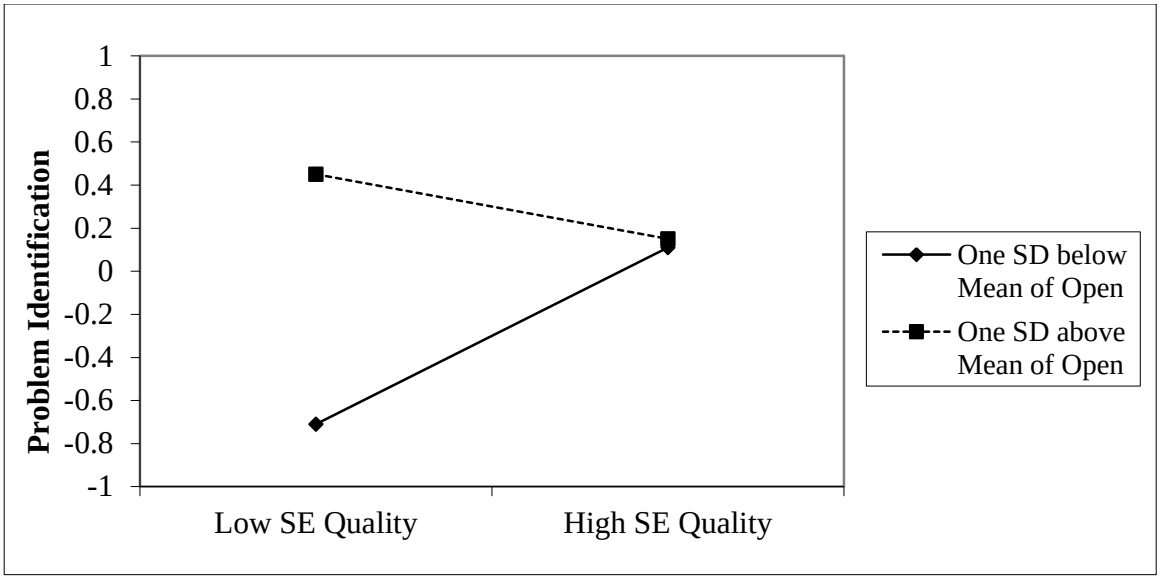

Figure 2. Interaction between social exchange and openness to experience on problem identification.

Note. SE = Social Exchange. Open = Openness to Experience. SD = Standard Deviation.

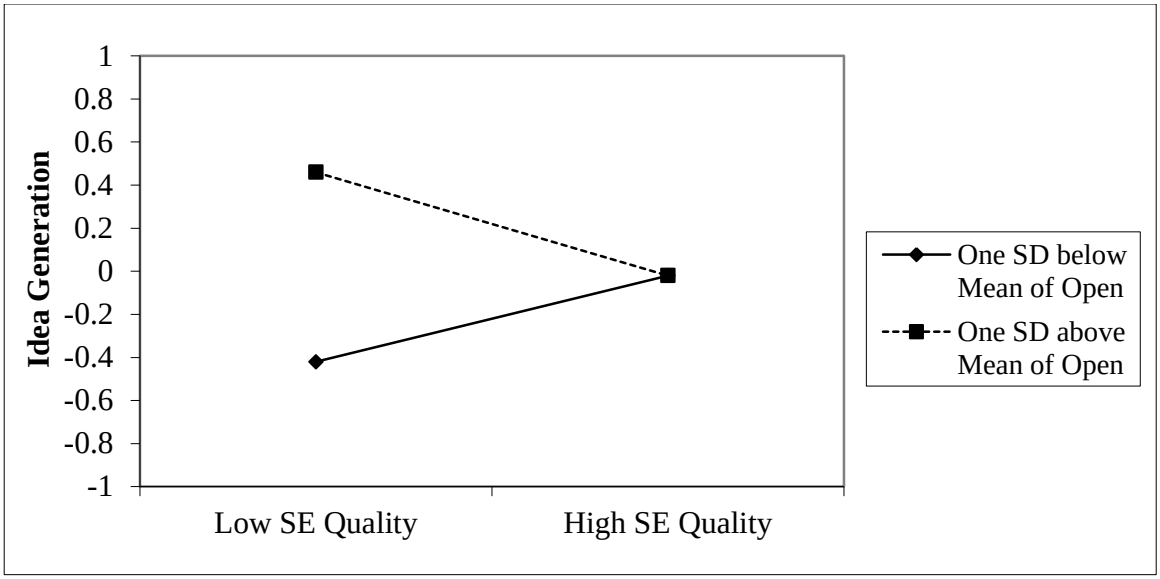

Figure 3. Interaction between social exchange and openness to experience on idea generation.

Note. SE = Social Exchange. Open = Openness to Experience. SD = Standard Deviation.

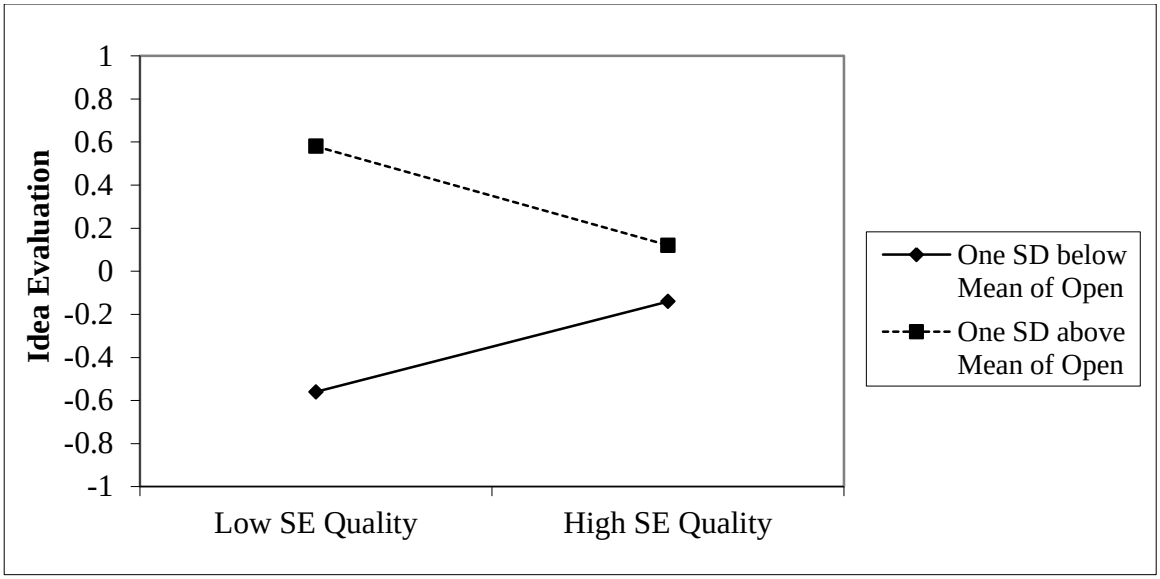

Figure 4. Interaction between social exchange and openness to experience on idea evaluation.

Note. SE = Social Exchange. Open = Openness to Experience. SD = Standard Deviation.

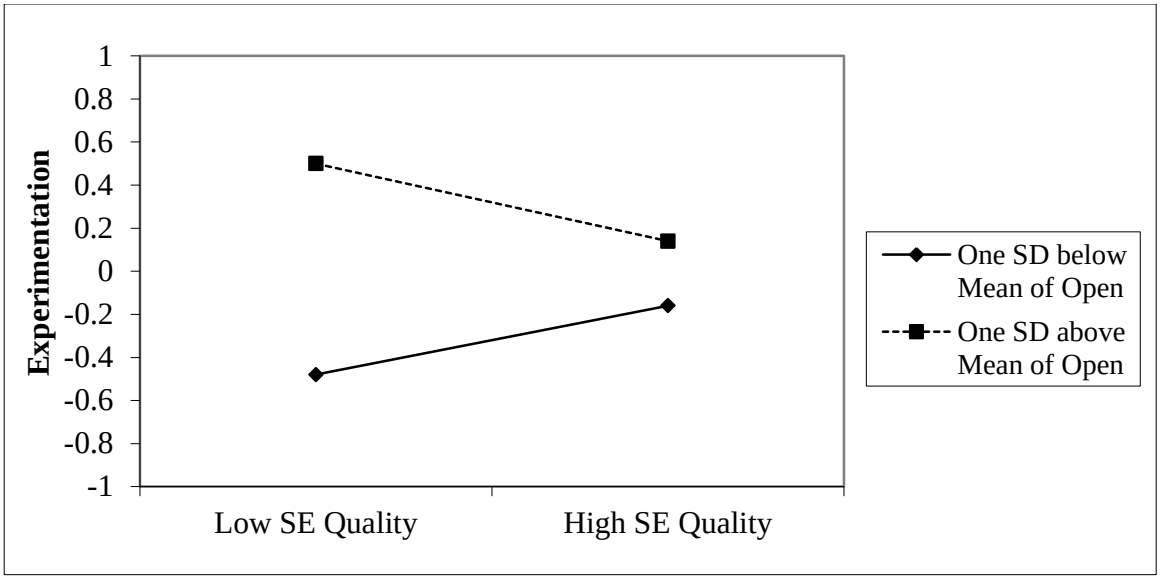

Figure 5. Interaction between social exchange and openness to experience on experimentation.

Note. SE = Social Exchange. Open = Openness to Experience. SD = Standard Deviation.

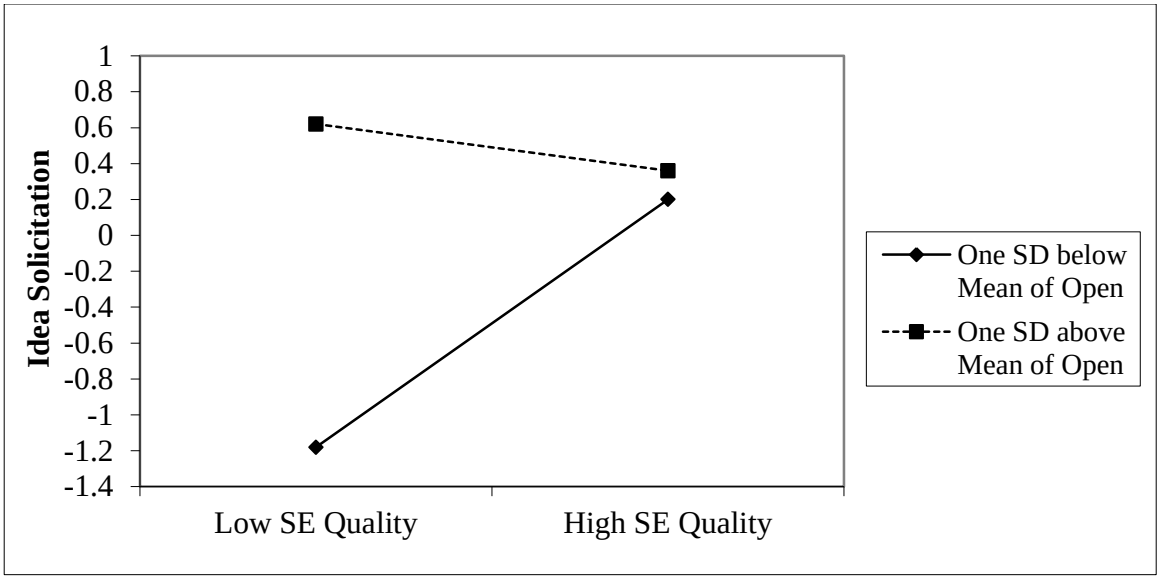

Figure 6. Interaction between social exchange and openness to experience on idea solicitation.

Note. SE = Social Exchange. Open = Openness to Experience. SD = Standard Deviation.

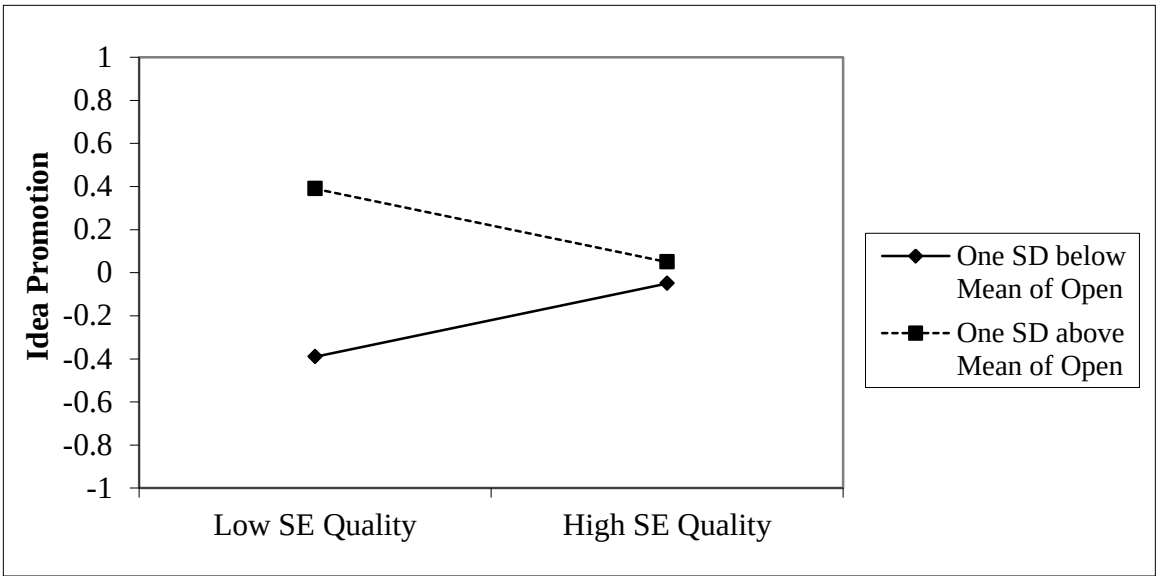

Figure 7. Interaction between social exchange and openness to experience on idea promotion.

Note. SE = Social Exchange. Open = Openness to Experience. SD = Standard Deviation.

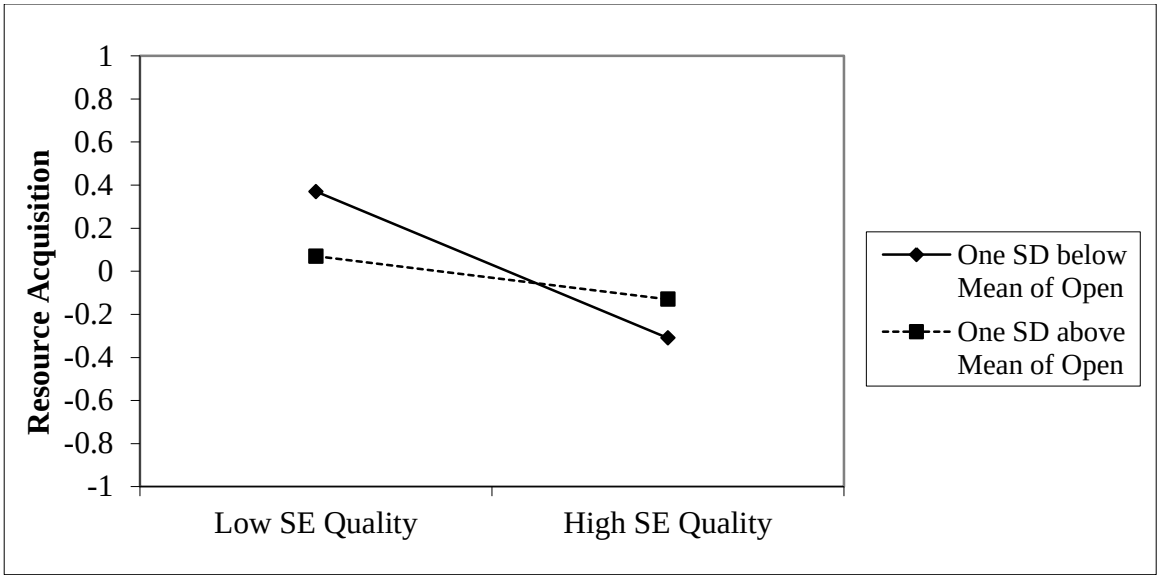

Figure 8. Interaction between social exchange and openness to experience on resource acquisition.

Note. SE = Social Exchange. Open = Openness to Experience. SD = Standard Deviation.

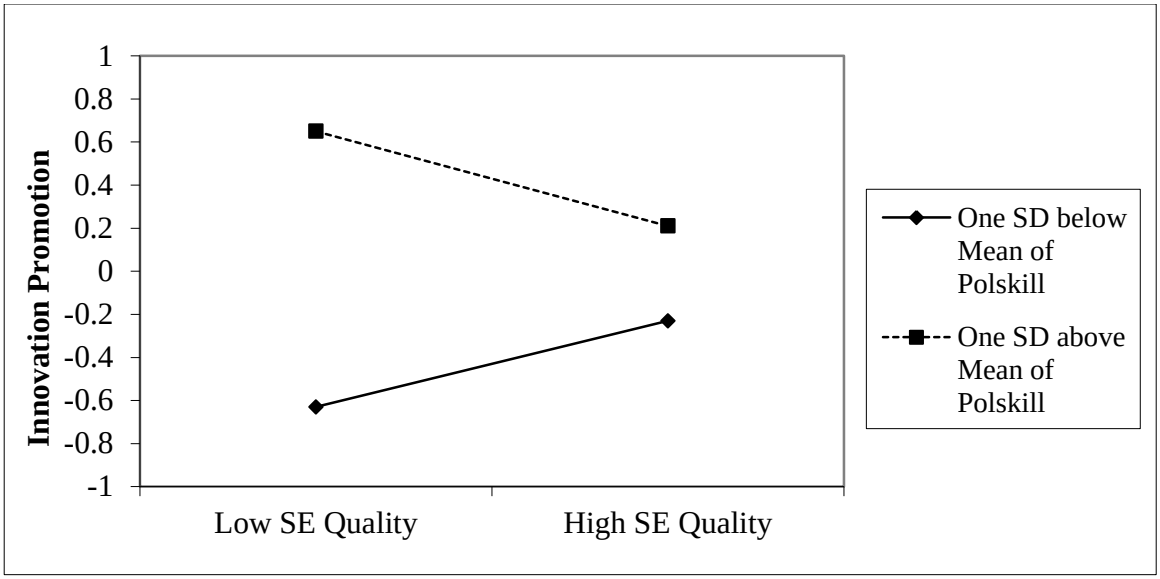

Figure 9. Interaction between social exchange and political skill on innovation promotion.

Note. SE = Social Exchange. Polskill = Political Skill. SD = Standard Deviation.

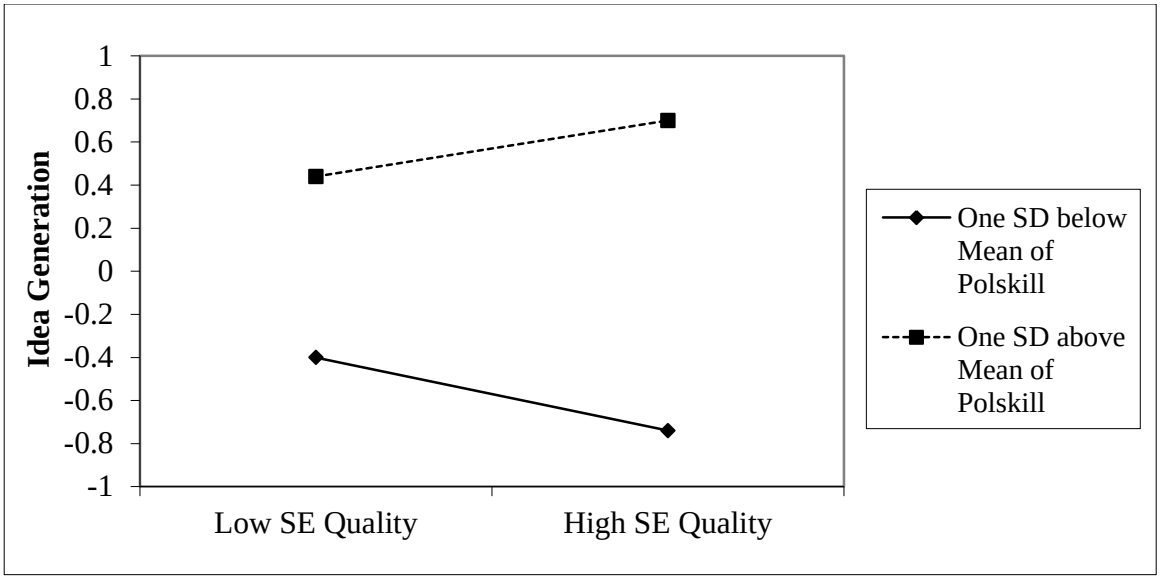

Figure 10. Interaction between social exchange and political skill on idea generation.

Note. SE = Social Exchange. Polskill = Political Skill. SD = Standard Deviation.

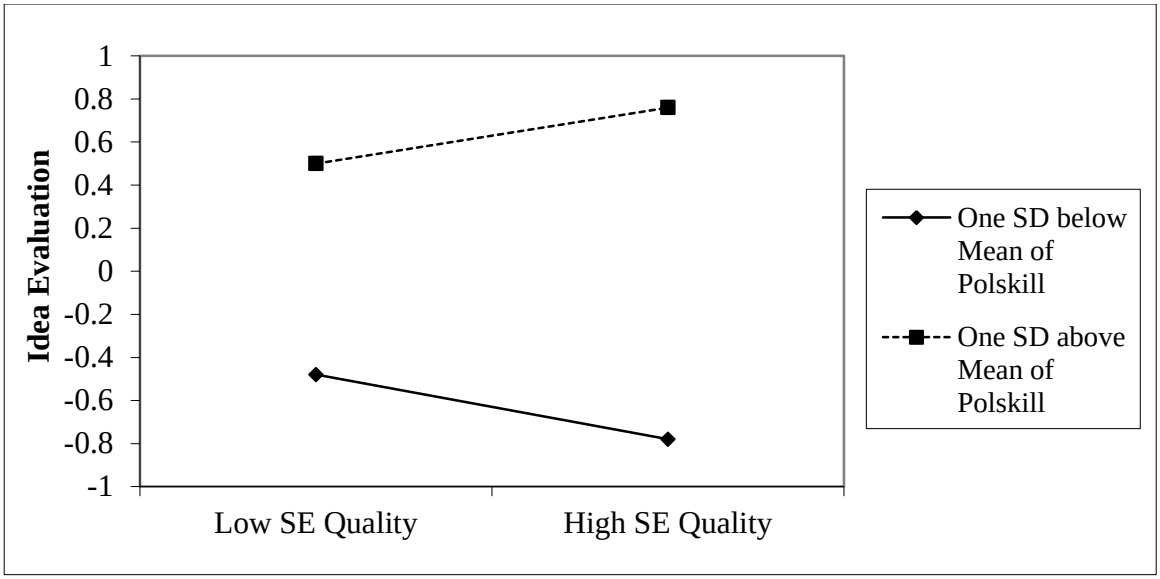

Figure 11. Interaction between social exchange and political skill on idea evaluation.

Note. SE = Social Exchange. Polskill = Political Skill. SD = Standard Deviation.

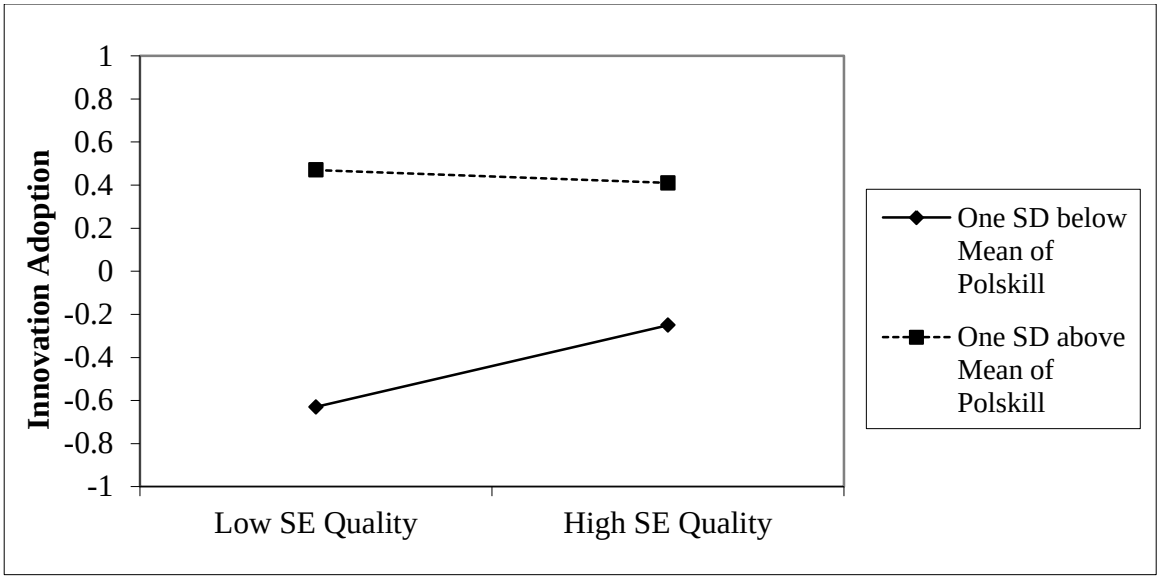

Figure 12. Interaction between social exchange and political skill on innovation adoption.

Note. SE = Social Exchange. Polskill = Political Skill. SD = Standard Deviation.

Appendix A: Study Measures

Openness to Experience (modified)
Goldberg et al. (2006)

Below are phrases describing people's behaviors **at work**. Please use the rating scale below to describe how accurately each statement describes you **at work**. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself **at work**, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence.

1	2	3	4	5	6	7
Very Inaccurate	Moderately Inaccurate	Slightly Inaccurate	Neither Inaccurate nor Accurate	Slightly Accurate	Moderately Accurate	Very Accurate

---

1. I have a vivid imagination.
2. I carry the conversation to a higher level.
3. I enjoy hearing new ideas.
4. I enjoy thinking about things.
5. I can say things beautifully.
6. I enjoy wild flights of fantasy.
7. I get excited by new ideas.
8. I have a rich vocabulary.
9. I am not interested in abstract ideas. (R)
10. I avoid philosophical discussions. (R)
11. I rarely look for a deeper meaning in things. (R)
12. I am not interested in theoretical discussions. (R)

13. I have difficulty understanding abstract ideas. (R)

When responding to the items above, which frame of reference did you use?

I described myself **at work**.

I described myself **in general**.

Political Skill Inventory (PSI)
Ferris et al. (2005)

Instructions: Using the following 7-point scale, please indicate how much you agree with each statement about yourself.

1	2	3	4	5	6	7
Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree

Networking ability

1. I spend a lot of time and effort at work networking with others.
2. I am good at building relationships with influential people at work.
3. I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done.
4. At work, I know a lot of important people and am well connected.
5. I spend a lot of time at work developing connections with others.
6. I am good at using my connections and network to make things happen at work.

Interpersonal influence

7. I am able to make most people feel comfortable and at ease around me.
8. I am able to communicate easily and effectively with others.
9. It is easy for me to develop good rapport with most people.
10. I am good at getting people to like me.

Social astuteness

11. I understand people very well.
12. I am particularly good at sensing the motivations and hidden agendas of others
13. I have good intuition or savvy about how to present myself to others.
14. I always seem to instinctively know the right things to say or do to influence others.
15. I pay close attention to people's facial expressions.

Apparent sincerity

16. When communicating with others, I try to be genuine in what I say and do.
17. It is important that people believe I am sincere in what I say and do.
18. I try to show a genuine interest in other people.

Social Exchange Relationship
Shore, Tetrick, Lynch, & Barksdale (2006)

1	2	3	4	5	6	7
Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree

1. My organization has made a significant investment in me.
2. The things I do on the job today will benefit my standing in this organization in the long run.
3. There is a lot of give and take in my relationship with my organization.
4. I worry that all my efforts on behalf of my organization will never be rewarded. [R]
5. I don't mind working hard today - I know I will eventually be rewarded by my organization.
6. My relationship with my organization is based on mutual trust.
7. I try to look out for the best interest of the organization because I can rely on my organization to take care of me.
8. Even though I may not always receive the recognition from my organization I deserve, I know my efforts will be rewarded in the future.

Innovative Performance

Brooks-Shesler & Tetrick (2010)

Instructions: Using the following 7-point scale, please indicate how much you agree with each statement.

1	2	3	4	5	6	7
Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree

---

Problem Identification

1. I accurately describe key challenges to the organization
2. I explain why a new company product or service is unsuccessful
3. I explain why a new company practice is not working
4. I diagnose the cause of the current issue or challenge

Idea Generation

5. I suggest changes to unproductive rules or policies
6. I suggest work improvement ideas to others
7. I suggest improvements to products or services
8. I make suggestions for improving how things operate within the organization

Idea Solicitation

9. I actively listen to others' ideas to solve work-related problems
10. I welcome new perspectives on work-related challenges
11. I encourage others to come up with good ideas for work-related challenges
12. I stress the importance of idea-sharing among colleagues

Idea Evaluation

13. I assess the strengths and weakness of new ideas
14. I identify the most promising ideas
15. I assess the practicality of ideas
16. I anticipate consequences of implementing a given idea

Experimentation

17. I try out new methods for completing assignments
18. I try to find new ways to use existing technology to solve work-related problems
19. I try to apply new ideas to work-related problems
20. I test new uses for existing methods or equipment

Idea Promotion

21. I share good ideas with coworkers
22. I "talk up" good ideas
23. I defend good ideas against critics
24. I support good ideas even in the face of opposition

Innovation Promotion

25. I explain how an organization's new ways of doing things increase efficiency
26. I explain how a new company process increases quality
27. I convince coworkers that a new technology will help them perform their jobs
28. I explain the advantages of new products and services

Innovation Adoption

29. I utilize new technology to perform his or her job
30. I take advantage of new technology offered by his or her organization
31. I take advantage of new technologies that improve efficiency
32. I use new approaches to work tasks that improve efficiency

Resource Acquisition

33. I secure the funds needed to implement new ideas
34. I investigate sources of funding for implementing new ideas
35. I obtain the materials needed to implement new ideas
36. I develop new ways of obtaining resources needed to implement new ideas

Required Innovativeness

1	2	3	4	5	6	7
Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree

My job requires me to…

1. Define problems facing my organization or work group.
2. Come up with ideas for how to solve work-related problems.
3. Seek my coworkers' ideas for how to solve work-related problems.
4. Critique proposed solutions to problems.
5. Try to use resources in new, more effective ways.
6. Generate enthusiasm for implementing new ideas.
7. Generate enthusiasm for using new work methods, practices, or technologies.
8. Apply to my job new work methods, practices, or technologies.
9. Obtain the funding and materials needed to implement new ideas.

Appendix B: Dissertation Proposal Literature Review

Over 20 years ago, Amabile (1988) wrote: "Domestic and international competition, changing government regulations, and rapidly shifting market conditions demand constant and visionary innovation" (p. 123). This sentiment is even more relevant today as the financial, automotive, energy, news media, and real estate sectors recover from crises. Organizations must adjust their strategies to align with leaner economic realities, environmental sustainability, and increased government oversight. In order to do so, innovative organizations rely on the ingenuity of their workforces to develop and implement creative ideas. Understanding how and under what conditions employees are innovative is therefore critical for today's organizations to survive.

This research investigates how individual factors are associated with innovative performance at work. Innovative performance refers to individual employee behaviors that support the development and implementation of creative ideas intended to benefit the organization (Brooks-Shesler & Tetrick, 2010). Because innovativeness is not formally required of most jobs, creative idea generation and implementation tend to be the exception rather than the norm (Zhou & George, 2003). Yet, employees' creative potential represents a promising means for organizations to meet and overcome challenges. Innovative performance requires a variety of complex behaviors (Farr, Sin, & Tesluk, 2003). Prior investigations of innovative performance have tended to group these disparate behaviors together (e.g., Scott & Bruce, 1994), leading to inconsistent or ambiguous findings. Some antecedents might relate differently to aspects of innovative performance rather than uniformly to all aspects of innovative performance (Hammond, Neff, Farr, Schwall, & Zhao). This research aims to identify antecedents to different types of innovative performance above and beyond formal job requirements to be innovative.

This research also explores how the quality of the social exchange relationship is associated with innovative performance. A social exchange relationship emphasizes the socioemotional aspects of the employer-employee exchange relationship (Shore, Tetrick, Lynch, & Barksdale, 2006). It is characterized by trust, investment in the relationship, and a long-term orientation. In this research, particular emphasis is placed on the importance of rewards in sustaining high quality social exchange. A high quality social exchange relationship is characterized by a employee's belief that his/her efforts will be rewarded, although the timing and the type of reward (e.g., monetary or nonmonetary) are unspecified (Shore et al.) West (2002) cited the paucity of research on the role of rewards in innovation as an important research gap to be filled. An investigation of the social exchange relationship, with a particular emphasis on the importance of rewards in sustaining high quality social exchange, might represent a promising avenue for

investigating the research gap concerning the role of rewards in innovation.

Innovation

Innovation is the development and implementation of creative ideas deemed essential to organizational growth and survival (Kanter, 1988; West & Farr, 1990; West, Hirst, Richter, & Shipton, 2004). Researchers have used the terms creativity and innovation interchangeably, or used them in tandem, i.e., "creativity and innovation," to imply a unitary construct (Ford, 1996). However, the distinction between creativity and innovation is critical to understanding how organizations develop and implement creative ideas. Creativity refers to the generation and development of creative ideas and forms the basis for innovation (Scott & Bruce, 1994). Innovation refers to the generation and development of creative ideas, as well as to their actual implementation (West & Farr, 1990). Creativity is therefore a component of innovation, and innovation requires the successful implementation of a creative idea (West, 2002).

Three general types of innovation are products, services, and procedures. Product and service innovations include creating new products and services, and improving existing ones (Anderson & West, 1998). Procedural innovations refer to efficiency improvements in administrative tasks and business processes, and frequently occur in conjunction with technology implementations. This research focuses on incremental innovations, which are improvements to existing products, services, and procedures, as opposed to radical innovations, which entail the creation and implementation of product, services or procedures that are new to the organization (Ettlie, Bridges, & O'Keefe, 1984).

Stage models of innovation are helpful in organizing the complex elements of the innovative process into groups of related activities (e.g., Farr et al., 2003; West, 2002). Innovation's two main stages are creativity and implementation (West, 2002). The creativity stage occurs first, and consists of problem identification, idea generation, idea evaluation, idea solicitation, and experimentation. The implementation stage occurs after the creativity stage and consists of idea promotion, innovation promotion, innovation adoption, and resource acquisition (Brooks-Shesler & Tetrick, 2010; Farr et al., 2003; Kanter, 1988). The innovative process is iterative in that problems encountered during implementation can lead to a resumption of the creativity phase in which ideas and solutions are developed and refined for subsequent implementation. Dimensionalizing innovative performance suggests that individuals can be innovative in different ways at different times. Investigating the specific ways that employees can be innovative capitalizes on individuals' particular strengths, and might be more beneficial than attempting to differentiate "innovative" employees from "non-innovative" employees.

An objective of the research is to investigate whether individual factors (e.g., openness to experience, task domain expertise, and political skill) relate differentially to types, or dimensions, of innovative performance. This research extends the work of Brooks-Shesler and Tetrick (2010), who found empirical support for the dimensionality of innovative performance described above. Table 1 contains innovative performance dimensions and brief descriptions. For a more detailed description of the innovative performance dimensions, see Brooks-Shesler and Tetrick (2010).

Table 2 organizes innovative performance dimensions according to innovation

stage and type of performance demand. Innovative performance dimensions are categorized according to innovation stage, creativity or implementation, as described above. In subsequent sections of this research, predictors of innovative performance are discussed in terms of their overall relations to the creativity and implementation stages, as well as to their dimension-specific relations within each stage.

Innovative performance dimensions are also categorized according to the type of performance demand, cognitive or interpersonal. Innovative performance dimensions that are predominantly cognitive are problem identification, idea generation, idea evaluation, experimentation, and innovation adoption. These performance dimensions require cognitive processes of evaluating and synthesizing information. Problem identification represents the first phase of the innovative process and entails interpreting relevant information in order to diagnose the problem facing the organization or work group (Farr et al., 2003). Idea generation requires the cognitive process of developing solutions to the problem that has been identified (Amabile, 1983). Idea evaluation involves assessing the feasibility of the ideas that have been suggested and deciding which ideas are worth pursuing (Farr et al., 2003). Experimentation is the trial-and-error process through which individuals acquire knowledge and insights into the practical application of their ideas (Brooks-Shesler & Tetrick, 2010). Finally, innovation adoption refers to the extent to which individuals apply new technologies or work methods to their jobs, and often requires knowledge and skill acquisition (Klein & Knight, 2005).

Innovative performance dimensions that are predominantly interpersonal are idea solicitation, idea promotion, innovation promotion, and resource acquisition. These performance dimensions rely on effective social interaction. Idea solicitation involves encouraging others to share creative ideas, as well as to being receptive to new ideas (Choi, 2004). Idea promotion involves persuading others of the creative idea's benefits before the idea has been supported and endorsed by the organization or work group (Scott & Bruce, 1994). Innovation promotion entails overcoming resistance to change and motivating others to adopt the innovation (Kleysen & Street, 2001). Finally, resource acquisition refers to obtaining the resources necessary for innovation, which can include persuading key decision-makers to allocate resources to innovation (Kleysen & Street, 2001; Tierney & Farmer, 2004).

This taxonomy contains two notable insights. First, the innovative performance dimensions of the creativity stage consist of cognitive performance demands, except for the "idea solicitation" dimension, which entails interpersonal performance demands. The innovative performance dimensions of the implementation stage consist of interpersonal performance demands, except for the "innovation adoption" dimension, which entails cognitive performance demands. Second, this framework provides a theoretical basis for suggesting the individual factors that are likely more or less relevant for given dimensions of innovative performance. For example, expertise, a cognitively oriented individual difference factor, might be related to idea generation whereas political skill, an interpersonally oriented individual difference factor, might be related to idea promotion.

Rewards and Innovation

Another objective of this research is to explore the role of rewards in promoting innovative performance. Previous research has stressed that effective reward systems are

important for facilitating creativity and innovation (e.g., Ford, 1996; Locke & Kirkpatrick, 1995). The influence of rewards on creativity (e.g., Amabile, Hennessey, & Grossman, 1986; Eisenberger & Rhoades, 2001) has received more research attention than the influence of rewards on implementation (Klein & Knight, 2005) or innovation in general (West, 2002). Findings have been mixed regarding the role of rewards in fostering or hindering creativity (Shalley, Zhou, & Oldham, 2004). Amabile et al. found that rewards decreased creative performance. In contrast, Eisenberger and Rhoades found that rewards increased creative performance.

Researchers have focused extensively on the extent to which rewards promote or hinder creativity through their effects on intrinsic motivation (Amabile et al., 1986; Eisenberger & Rhoades, 2001). According to cognitive evaluation theory (CET) (Deci & Ryan, 1985), individuals perceive extrinsic rewards as controlling, which reduces intrinsic motivation. Deci, Koestner and Ryan (1999) found meta-analytic support for the negative effects of extrinsic rewards on intrinsic motivation. Amabile (1996) argued that intrinsic motivation is important for creativity and that extrinsic rewards for creativity are detrimental to creativity through their negative effect on intrinsic motivation. Amabile, Hennessey and Grossman (1986) suggested that general rewards – as opposed to those tied directly to specific behaviors – are most supportive of creativity because they are not perceived as controlling and therefore they do not decrease intrinsic motivation. Indeed, rewards may increase creative performance if the individual perceives rewards as an affirmation of competence, a means toward pursuing creative ventures in the future, or as a bonus (Amabile et al., 1986).

Eisenberger's (1992) theory of learned industriousness offers a competing perspective on the relation between rewards and creativity. Adopting a behaviorist perspective, Eisenberger argued that rewards are reinforcers: organisms determine the behaviors that are rewarded and increase their engagement in those behaviors. In a series of studies, Eisenberger and colleagues (Eisenberger & Aselage, 2009; Eisenberger & Rhoades, 2001; Eisenberger & Shanock, 2003) demonstrated that rewards for creativity increased intrinsic interest and subsequent performance, findings that are contrary to the predictions of CET.

Research on the role of rewards in fostering creative idea implementation is sparse and tends to focus on the organizational level of analysis (e.g., Damanpour, 1991; Dewar & Dutton, 1986); however, the consensus among existing research is that rewards foster innovation implementation (Kanter, 1988; Klein & Knight, 2005). Kanter suggested that rewards build a "culture of pride" for past accomplishments. Rewards motivate employees to innovate as they see how their contributions will be commended and remembered (Kanter). Abbey and Dickson (1983) found that reward-performance dependency was related to the number of innovations in R&D teams in the semiconductor industry, leading the researchers to conclude that "the work climate of innovative R&D subsystems is characterized, first, by a reward system that recognizes and equitably rewards excellent performance, and, second, by a willingness to take risks and experiment with innovative ideas and proposals" (p. 366). Indeed, West (2002) argued that employees should be rewarded for good-faith attempts to innovate rather than for successful innovation. Otherwise, employees will "play it safe" and not pursue

groundbreaking ideas that challenge existing paradigms. In a study of executives who received training on how to promote innovation through more effective management practices, Baumgartel and Jeanpierre (1972) found that managers were more likely to implement innovative management practices in organizations whose top management provided financial support for training, a type of nonmonetary reward (Chiang, Birtch, & Kwan, 2009).

Meta-analytic evidence suggests that the effect of intrinsic motivation on creativity has been overstated (Hammond et al.). Meanwhile, the effect of extrinsic motivation on creativity and innovation has not only been understated, but has also been portrayed as undermining creativity and innovation over time, i.e., the "paradox of rewards" (Zhou & Shalley, 2003). Despite the emphasis on intrinsic motivation's relation to innovation, "the motivations for innovation are, in the main, quite clearly extrinsic; to increase productivity and profitability, to overcome competition, or to respond to some unanticipated threat or crisis" (King, 1995, p. 86). Hammond et al.'s meta-analysis of individual creativity and innovation obtained the expected result of a positive correlation between intrinsic motivation and creativity ($\rho = .27$), as well as the unexpected results of a positive modest correlation between extrinsic motivation and creativity ($\rho = .15$). Furthermore, both intrinsic and extrinsic motivation were positively correlated with overall innovation ($\rho = .24$ and .15, respectively). The difference in magnitude between these two correlations of intrinsic and extrinsic motivation with creativity is small. The empirical evidence is thus at odds with significant theoretical work on creativity and innovation. Task-contingent rewards are thought to undermine intrinsic motivation while non-task-contingent rewards increase it (Ryan, Mims, & Koestner, 1983). The meta-analytic evidence calls into question whether intrinsic motivation is of central importance to the generation and implementation of creative ideas, i.e., innovation.

Subsequent sections of this research explore how the quality of the social exchange relationship is associated with innovative performance, how individual factors might exhibit differential relationships with innovative performance dimensions, and how individual factors might moderate the relation between the quality of the social exchange relationship and dimensions of innovative performance. A key aspect of a high quality social exchange relationship is the extent to which employees believe that their organization will reward them for their efforts (Shore et al., 2006). The nature of the reward, i.e., whether the reward is monetary or nonmonetary, is unspecified. The timing of the reward is also unspecified. Thus, a hallmark of a high quality social exchange relationship is that an employee believes that his/her efforts will be rewarded at an unspecified time in the future and that the nature of the reward (e.g., monetary or nonmonetary) is also unspecified (Shore et al.).

The individual factors under investigation are task domain expertise, openness to experience, and political skill. They were selected for this study for the following reasons. First, they are hypothesized to exhibit differential relations with innovative performance dimensions. Second, they represent three types of individual factors, e.g., personality (openness to experience), knowledge (task domain expertise), and skill (political skill). Third, they reflect individual factors that are both cognitively oriented (e.g., openness to experience and task domain expertise) and interpersonally oriented

(e.g., political skill).

Traditionally, openness to experience has been treated as a trait rather than as a cognitively oriented individual factor; however, more recent research suggests that openness to experience is in fact comprised of both a dispositional factor, commonly referred to as "openness," and a cognitive factor, commonly referred to as "intellect" (John & Srivastava, 1999). The openness factor reflects an individual's propensity for experiencing newness and complexity whereas the intellect factor reflects how an individual processes information. DeYoung, Peterson and Higgins (2005) described openness to experience as "motivated cognitive flexibility" (p. 825) and found support for openness to experience as a predominantly cognitive trait. For the purposes of the current research, openness to experience is treated as a cognitively oriented individual factor.

Inclusion of task domain expertise, openness to experience, and political skill enables a rich exploration of who might excel at various aspects of innovative performance. The theoretical model for this research is presented in Figure 1. Table 3 presents the hypotheses, which are based on the theoretical model in Figure 1 and justified in the sections that follow. Table 4 depicts the hypothesized differential relations between these individual factors and dimensions of innovative performance.

Social Exchange and Innovative Performance

According to social exchange theory (Blau, 1964), human interaction entails the exchange of valuable social and material resources. Researchers have applied social exchange theory to the organizational context. For example, Eisbenberger and colleagues (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Eisenberger, Huntington, Hutchison, & Sowa, 1986) proposed that employees exchange their commitment to the organization for perceived organizational support (POS). In addition, Rousseau (1995) posited that employees develop a psychological contract in which employers and employees exchange the fulfillment of their obligations to one another. These applications of social exchange theory focus on the content of the exchange. More recently, Shore et al. (2006) investigated the form the exchange relationship. Drawing on social exchange theory (Blau), Shore et al. argued that employee-employer exchange relationships can be both socioemotional and economic. Economic exchange tends to focus on the financial or material aspects of the exchange (e.g., pay and benefits), whereas social exchange tends to focus on the socioemotional aspects of the exchange (e.g., perceptions that the organization takes care of its employees) (Shore et al.). Differentiators between social and economic exchange include trust, investment, and time orientation (Shore et al.). Economic exchange is impersonal, and is therefore not based on trust, and entails specific expectations about the timing and the form of the return, e.g., payment for completing a task (Shore et al.). In contrast, social exchange entails a mutual investment in the relationship with the inherent risk that the investment will not be returned (Blau). The timing and the specific form of return in a social exchange relationship are unspecified; thus, a social exchange relationship is based on trust (Blau). Given the levels of risk, ambiguity, and investment inherent in innovation, a high quality social exchange relationship between the employer and the employee likely has important implications for employee innovative performance.

The quality of the social exchange relationship has been associated with numerous behavioral and attitudinal outcomes, including overall job performance (Shore et al., 2006), organizational citizenship behaviors (Shore et al., 2006), commitment (Kuvaas & Dysvik, 2009; Shore, Coyle-Shapiro, Chen, & Tetrick, 2009), and intent to leave the organization (Shore et al., 2009). Employees may view praise, high wages, promotion, and training and development as verification of their value and importance to the organization (Takeuchi et al., 2007). These investments by the organization in the employee foster an incentive and sense of obligation for the employee to perform at a high level. Although the relation between the quality of the social exchange relationship and innovative performance has not been tested, the quality of the social exchange relationship is likely positively associated with innovative performance, especially given that innovative performance spans both in-role and extra-role behaviors (Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Van Dyne, Graham, & Dienesch, 1994).

H1: The quality of the social exchange relationship is positively related to each dimension of innovative performance.

Task Domain Expertise

Expertise is a prerequisite to creativity and innovation (Amabile, 1988). Expertise can be thought of as schemata, also referred to as schemas, acquired through persistent engagement within a particular knowledge domain (Gobet, 2005). "The schema concept refers to cognitive structures of organized prior knowledge, abstracted from experience with specific instances; schemata guide the processing of new information and the retrieval of stored information" (Fiske & Linville, 1980, p. 543). Schemata impose structure and meaning onto information in order to make that information understandable and actionable (Gioia & Poole, 1984). As experiences are repeated, schemata become increasingly complex and organized (Fiske & Dyer, 1985). "Sensemaking" relies on schemata in order for individuals to infer meaning from a situation (Poole, Gioia, & Gray, 1989), and is a critical component of the creative process as individuals interpret complex, ambiguous situations and attempt to take creative action (Drazin, Glynn, & Kazanjian, 1999).

Creativity and innovation researchers most often operationalize expertise as education, organizational tenure, or job tenure (e.g., Tierney & Farmer, 2004; Zhang & Bartol, 2010). Hammond et al. (in press) found inconsistent relations between expertise, operationalized as educational level and job tenure, and individual creativity and innovation. These inconsistent relations might result from an individual's occupation being in a different domain than their formal education or from a lack of criterion specificity. In their meta-analytic review, Hammond et al. included only four dimensions of innovative behaviors, potentially obscuring relations between expertise and the more specific dimensions identified by Brooks-Shesler and Tetrick (2010). For example, expertise might relate differently to idea solicitation in the creativity stage than to innovation adoption in the implementation stage. Overall, expertise likely relates to the cognitively oriented innovative performance dimensions: problem identification, idea generation, ideal evaluation, experimentation, and innovation adoption. With the exception of innovation adoption, these performance dimensions pertain to the creativity phase of innovation. Indeed, Mumford and Hunter (2005) argued that expertise aids in

creative problem-solving, and Simonton (2000b) found that expertise was associated with creative accomplishment.

Task Domain Expertise and Problem Identification

Albert Einstein once said: "If I had an hour to save the world I would spend 59 minutes defining the problem and one minute finding solutions." Problem identification is the critical first step of the innovative process (Farr et al., 2003). Wakefield (1991) described "problem finding" as the process of defining open and ambiguous problems prior to generating creative solutions. Job incumbents are thought to be best able to identify problems and obstacles to their work because of their job-related expertise (Zhou & George, 2003); however, few studies have investigated antecedents to problem identification (for exceptions, see Basadur, Graen, & Green, 1982; Zhang & Bartol, 2010). Typically, items measuring problem identification are included in measures of overall creativity and innovation, which also include items pertaining to idea generation, idea evaluation, and/or various aspects of idea implementation (Hammond et al.). Binnewies et al. (2007) investigated problem identification as the first step in the creative process, but did not examine the factors that related to individuals identifying problems requiring creativity. Basadur et al. (1982) found that training improved individuals' problem finding, which suggests that knowledge improves problem identification. Individuals with greater expertise have more complex schemata, which aid in making sense of complex, ambiguous situations (Mumford & Hunter, 2005). To the author's knowledge, previous research has not investigated the relation between task domain expertise and problem identification; however, individuals with higher levels of expertise are likely more adept at defining and identifying problems requiring creativity.

Task Domain Expertise and Idea Generation

Prior knowledge facilitates creativity by enabling individuals to make new associations and connections (Cohen & Levinthal, 1990). Simonton (2000a) asserted that "creative individuals do not produce new ideas de novo, but rather those ideas must arise from a large set of well-developed skills and a rich body of domain-relevant knowledge" (p. 152). Ericsson and Charness (1994) explained that an expert compiles a structured representation of the problem as information is acquired. According to Larkin et al.'s (1980) knowledge-development model, experts recognize patterns of information from which they can develop new information. Hunter et al. (2008) found that the usage of multiple knowledge structures, i.e., schematic and case-based knowledge, led to the most original and highest quality solutions to a social innovation problem used in a laboratory experiment with undergraduate students. These findings provide empirical support that an individual knowledgeable in a given domain is more likely to exhibit higher creativity than a less knowledgeable person in that domain. The current study seeks to replicate these findings.

Task Domain Expertise and Idea Evaluation

In order to maximize innovative performance, the best ideas must be selected and developed, which requires domain-relevant knowledge (Rietzschel, De Dreu, & Nijstad, 2007; Rietzschel, Nijstad, & Stroebe, 2007). Domain experts have been considered to be the most qualified to rate the creativity of a product or idea (Amabile, 1996). Amabile's Consensual Assessment Technique (CAT) stipulates that experts in the domain in which

the creative act occurred rate the creative product. The product is deemed creative to the extent that the experts agree that it is creative. The argument that experts are best able to rate a creative product suggests that experts are best able to evaluate creative ideas. To the author's knowledge, the relation between task domain expertise and idea evaluation has not been tested; however, the assertion that domain-relevant knowledge is necessary to develop ideas (Rietzschel et al., 2007) suggests that such a relation exists.

Task Domain Expertise and Experimentation

Experts engage in routine, deliberate practice in order to increase their knowledge and skills in a given domain (Ericsson & Charness, 1994). Weisberg (1999, 2006) argued that expertise facilitates creativity because the deliberate practice associated with acquiring expertise leads to increasingly higher levels of accomplishment. Practice appears consistent with the experimentation component of innovative performance in which individuals test new methods or approaches to solving a problem creatively. Through experimentation, which could perhaps be construed as a form of practice, experts acquire insights and knowledge for developing creative solutions. In their organizational level study of technical process innovations, Dewar and Dutton (1986) suggested that organizations with larger numbers of engineers were more successful in adopting radical innovations because engineers are better able to experiment with innovations that require new knowledge acquisition. The amount of knowledge that an individual possesses is related to the ease with which the individual can integrate new knowledge (Fiske & Linville, 1980). To the author's knowledge, the relation between task domain expertise and experimentation has not been tested; however, knowledgeable individuals are likely better able to benefit from experimenting because they can more readily integrate knowledge gained from experimenting into their existing knowledge structures.

Task Domain Expertise and Innovation Adoption

Few studies have investigated expertise at the individual level relative to the actual implementation of a creative idea in an organizational setting (for an exception, see Muñoz-Doyague, González-Álvarez, & Nieto, 2008). Expertise likely promotes the adoption of an innovation if the innovation occurs within the individual's area of expertise. Because innovations frequently require new skill acquisition (Clayton, 1997), an expert can incorporate the innovation into his or her schemata or knowledge structures more easily than a novice. Expertise is important to innovation adoption in that individuals who are more familiar with the given domain in which the innovation occurs are more likely to assimilate the innovation into their work routines. Choi and Price (2005) found that employees who believed that their technical abilities were sufficient for implementing a technological innovation, which they termed "ability fit," were more likely to engage in implementation behaviors, i.e., activities in which employees engage in order to assimilate new technologies or work methods into their jobs. Examining innovation at the organizational level, Dewar and Dutton (1986) found that organizations with greater knowledge depth, operationalized as the number of technical experts, adopted more radical innovations. To the author's knowledge, the relation between task domain expertise and innovation adoption has not been tested; however, task domain expertise and innovation adoption are likely positively related, given the importance of an

individual's current knowledge in integrating new knowledge.

It is important to acknowledge that expertise can lead to "expert power," a base of power identified by French and Raven (1960). In the context of innovation, expert power might be useful for the interpersonal aspects of creative idea implementation, such as persuading coworkers to adopt the idea or innovation, or acquiring the resources to implement the innovation, such as financial support, labor, and materials. Nonetheless, for the reasons described in the preceding sections, task domain expertise is likely more strongly associated with the cognitively oriented dimensions of innovative performance than with the interpersonally oriented dimensions.

H2: Task domain expertise is more strongly positively associated with the cognitively oriented dimensions of innovative performance (e.g., problem identification, idea generation, idea evaluation, experimentation, and innovation adoption) than with the interpersonally oriented dimensions of innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, and resource acquisition).

The Moderating Role of Task Domain Expertise

Although task domain expertise is hypothesized to relate positively to problem identification, idea generation, idea evaluation, experimentation, and innovation adoption, a high quality social exchange relationship likely increases performance in these dimensions for individuals with higher levels of task domain expertise. As described earlier, rewards help sustain a high quality social exchange relationship between the organization and the employee (Shore et al. 2006). Although findings regarding the effects of rewards on creativity and innovation have been mixed (see Hammond et al.), the quality of the social exchange relationship might clarify when and for whom rewards increase performance. Specifically, a higher quality social exchange relationship might motivate employees to diagnose problems, generate solutions, critique proposed ideas, experiment with concepts and ideas, and adopt innovations. However, given that performance is a function of both ability and motivation (Vroom, 1964), the gap between expert and non-expert performance likely increases as experts benefit from both the motivational effects of a high quality social exchange relationship and from their greater ability, i.e., task domain expertise. Thus, the expected positive associations between the quality of the social exchange relationship and various dimensions of innovative performance are likely strengthened for individuals with task domain expertise.

H3: Task domain expertise moderates the relation between the quality of the social exchange relationship and problem identification, idea generation, idea evaluation, experimentation, and innovation adoption.

Openness to Experience

Similar to task domain expertise, openness to experience is likely related predominantly to the creativity stage of innovation and less so to the implementation stage, with the exception of innovation adoption. Openness to experience is the personality trait most strongly associated with creativity (McCrae, 1987). Open individuals tend to be intellectually curious, to enjoy thinking about abstract concepts, to appreciate the arts, to enjoy complex problem-solving, and to seek new perspectives and

experiences (McCrae, 1987). Openness is especially well-suited to creativity in the workplace, which requires generating novel yet practical ideas, solving challenging problems, and figuring out how to do things better. Furthermore, open individuals tend to be less conformist (Feist, 1998) and are therefore more likely to suggest ideas that challenge the status quo. Madjar et al. (2002) found a positive correlation between creative personality and creative performance, operationalized as supervisor ratings of the employee's ability to generate and develop creative ideas.

A robust personality predictor of creativity (Hammond et al.), openness to experience is likely related most strongly to the dimensions of innovative performance that pertain to the creativity stage. Diagnosing the problem at hand, generating ideas to solve the problem, critiquing ideas that have been suggested, and experimenting with new concepts, ideas, and technologies are congruent with the characteristics of an open individual, i.e., intellectual curiosity, affinity for complex problem-solving, and receptiveness to new ideas and paradigms (McCrae, 1987).

Openness to Experience and Problem Identification

Amabile (1988) asserted that the start of any creative task is the identification of a problem that requires a creative solution. Although problem identification has been implicated as the critical first step in the innovative process (Farr et al., 2003), innovation research has tended to group problem identification with idea generation and implementation as a composite outcome (Bains & Tran, 2006). Therefore, little is known about the antecedents to problem identification. To the author's knowledge, the relation between openness to experience and problem identification has not been tested; however, given the propensity of open individuals to be intellectually curious and to enjoy complex problem-solving (McCrae, 1987), open individuals are likely disposed to diagnosing the problem currently facing the organization or work group.

Openness to Experience and Idea Generation

Openness to experience is positively related to idea generation (Feist, 1998; Zhang & Huang, 2001) and has been associated with higher levels of knowledge sharing (Cabrera, Collins, & Salgado, 2006), which is important during the idea generation stage. Because open individuals are intellectually curious, they likely enjoy sharing knowledge with others (Wang & Yang, 2007). Open individuals identify themselves as inventive and unconventional (McCrae, 1987), and are therefore more likely to suggest new ideas that challenge the status quo (McCrae & Costa, 1997). The current study seeks to replicate findings from previous research (e.g., Zhang & Huang, 2001) that openness to experience is positively related to idea generation.

Openness to Experience and Idea Evaluation

During the idea evaluation phase, an individual determines the feasibility and appropriateness of the idea (Amabile, 1983). This phase of the innovative process involves critiquing the idea and considering alternatives. Zhou and George (2003) asserted that the idea evaluation stage is perhaps the point at which the most creative idea arises, and is therefore crucial to the creative process. To the author's knowledge, the relation between openness to experience and idea evaluation has not been investigated; however, open individuals likely consider ideas from different vantage points and are intellectually curious enough to pursue different avenues or permutations of the idea.

Openness to Experience and Experimentation

Innovation typically requires a series of trial-and-error attempts and an innovator likely experiences multiple failures in order to achieve ultimate success (Shalley & Gilson, 2004). Individuals high on openness to experience are learning-oriented (McCrae, 1987) and demonstrate a higher level of interest in things (Silvia & Sanders, 2010). Experimentation provides individuals with the opportunity to test concepts and ideas, and to learn from their successes and failures. Arguing that open individuals are motivated to learn, Barrick and Mount (1991) found that openness predicted success in training. Openness to experience has been associated with a learning goal orientation (Klein & Lee, 2006) in which individuals seek mastery of a given task or topic in order to improve their skills and abilities (Elliott & Dweck, 1988). To the author's knowledge, the relation between openness to experience and experimentation has not been tested; however, open individuals likely engage in higher levels of experimentation given their motivation to learn.

Openness to Experience and Innovation Adoption

Though related primarily to the creativity stage, openness likely relates to the innovation implementation stage of innovative performance. Innovation adoption refers to the extent to which an individual utilizes new technologies or work methods in order to improve his or her productivity, efficiency or work quality. An open individual likely welcomes new ways to perform his or her work provided that the new method or technology offers a promising likelihood of improving one's performance (George & Zhou, 2001). Frequently, a new technology or work method requires employees to acquire new skills or to attempt to adopt untried and potentially ambiguous processes (Klein & Knight, 2005). To the author's knowledge, the relation between openness to experience and innovation adoption has not been investigated empirically; however, an open individual likely welcomes the opportunity to take advantage of new technologies or work methods.

Open individuals are likely less effective in the other performance dimensions of the implementation stage. Openness is a cognitively oriented personality factor (DeYoung et al., 2005), which is concerned with ideas and perceptions, but not with interpersonal interactions (McCrae, 1987). As previously discussed, implementation places strong interpersonal performance demands on individuals. As a cognitively oriented trait, openness does not equip individuals with a social disposition that is helpful for building coalitions, persuading others to adopt an innovation or persuading decision-makers to provide resources for innovation.

> *H4: Openness to experience is more strongly positively associated with the cognitively oriented dimensions of innovative performance (e.g., problem identification, idea generation, idea evaluation, experimentation, and innovation adoption) than with the interpersonally oriented dimensions of innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, and resource acquisition).*

The Moderating Role of Openness to Experience

As illustrated in Figure 1, the current research posits that the quality of the social exchange relationship is positively associated with innovative performance, and that

openness to experience moderates the relation between the quality of the social exchange relationship and innovative performance. Previous research has supported an "interactionist" perspective in which individual and contextual factors interact to facilitate creative and innovative behavior in organizations (Woodman, Sawyer, & Griffin, 1993). George and Zhou (2001) found that openness to experience, feedback, and task characteristics interacted such that individuals who were high in openness to experience exhibited the greatest creativity when they received positive feedback when performing heuristic tasks. Heuristic tasks were described as complex tasks having unclear ends and unclear means, i.e., there was uncertainty about what should be accomplished and how it should be accomplished. Oldham and Cummings (1996) found that creative personality and supervisory style interacted such that employees with creativity-relevant personal characteristics exhibited increased creative performance when their supervisors were supportive and noncontrolling. Although these researchers did not identify openness or creative personality as a moderator, subsequent creativity and innovation researchers have conceptualized personality as a moderator (e.g., Shalley et al., 2004). For example, Baer and Oldham (2006) found that openness to experience moderated the creative time pressure – creative performance relation for individuals who reported receiving support for creativity from supervisors and coworkers.

The current study acknowledges that rewards are an integral part of a social exchange relationship, which increases the employee's motivation to perform innovatively. Positive feedback, or praise, can be considered a type of reward in an organizational setting, and have been found to facilitate innovative behaviors at work (George & Zhou, 2001). Oldham and Cummings (1996) included in their measure of supportive supervision this reward-related item: "My supervisor rewards me for good performance." To the author's knowledge, previous research has not tested openness to experience as a moderator of the association between the quality of the social exchange relationship and certain dimensions of innovative performance.

H5: Openness to experience moderates the relation between the quality of the social exchange relationship and problem identification, idea generation, idea evaluation, experimentation, and innovation adoption.

Political Skill

Political skill has received increasing attention as an important predictor of various types of performance at work (e.g., Ferris et al., 2005, 2007; Jawahar, Meurs, Ferris, & Hochwarter, 2008). Political skill is "the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives" (Ferris et al., 2005, p. 127). Building on the early work of Mintzberg (1983), Ferris et al. (2005) developed a measure of political skill that includes four dimensions: social astuteness, interpersonal influence, networking ability, and apparent sincerity. Political skill is especially effective for performance in socially-based contexts (Ferris et al., 2005) and is therefore likely relevant to the dimensions of innovative performance that have interpersonally based performance demands. Creative idea implementation requires social acumen and the ability to understand the perspectives of those being asked to adopt the innovation (King, 1995).

For many jobs, innovative performance is at least partially, if not completely,

volitional (Van Dyne et al., 1994). Jawahar et al. (2008) found that political skill is a better predictor of contextual rather than task performance, which suggests that political skill might predict volitional aspects of innovative performance. Schnake and Dumler (1997) argued that individuals engage in citizenship behaviors at least partially with the expectation that they will be indirectly rewarded for them at some point in the future. Despite the risk of failure, innovation represents great potential for personal and financial gain. Politically skilled individuals are likely to persist with various citizenship performance behaviors, including innovative performance, because they are convinced that they will eventually be rewarded for them (Andrews, Kacmar, & Harris, 2009).
A study based on Holland's (1973, 1997) theory of vocational personalities and work environments found that political skill predicted job performance most robustly in enterprising work environments (Blickle et al., 2009). Holland described enterprising work environments as ambiguous, and as requiring extensive talking, listening and persuading. Politically skilled individuals flourish in such environments. Examples of enterprising occupations include entrepreneur, executive, salesperson, and lobbyist (Holland, 1973). Given their exceptional performance in enterprising work environments and their tendency to occupy central locations in social networks (Blickle et al.), politically skilled individuals likely excel at the interpersonally oriented aspects of innovative performance: idea solicitation, idea promotion, innovation promotion, and resource acquisition.

Political Skill and Idea Promotion

In contrast to expertise and openness to experience, political skill likely relates more strongly to the implementation stage of innovation than to the creativity stage. Implementation entails interpersonal performance demands, which include persuading others to support and to adopt a creative idea. Creative ideas are new, unproven and have a high likelihood of failure (Anderson, De Dreu, & Nijstad, 2004). Persuading others to adopt the ideas, i.e., obtaining "buy-in," is critical to moving the innovative process forward (Baer, 2007). Researchers have also identified the critical importance of "idea champions" in promoting creative ideas (Howell & Boies, 2004; Kleysen & Street, 2001). "Coalition-building" is an extremely important aspect of innovative performance, as achieving a "critical mass" of support facilitates social approval for the idea. Bains and Tran (2006) identified coalition building and selling as a way for creative ideas to reach higher levels of the organization where decision-makers can provide organizational endorsement for the idea. Politically skilled individuals are especially good at persuading others due to their calm confidence and their focus on others rather than on themselves (Ferris et al., 2007). To the author's knowledge, the relation between political skill and idea promotion has not been investigated; however, politically skilled individuals are likely adept at promoting ideas.

Political Skill and Innovation Promotion

Once the organization has decided to implement the innovation, employees must adopt the innovation, i.e., effectively incorporate it into their work routines, in order for the innovation to yield its anticipated benefits (Klein & Knight, 2005). Implementing something new requires that individuals change their work routines, which can lead to resistance to change. Unless individuals are persuaded and committed to the idea, then

the innovation implementation will fail, even if the innovation itself is sound from a technical perspective (Klein & Sorra, 1996). Politically skilled individuals are better able to manage conflict, which helps lower resistance to change (Janssen, de Vliert, & West, 2004), and are effective at motivating others to adopt innovations (Kleysen & Street, 2001). Ferris et al. (2005) identified networking ability as a key dimension of political skill, which has been associated with networking behaviors (Treadway, Breland, Adams, Duke, & Williams, 2010). Ibarra (1993) found that social network centrality predicted the successful implementation of administrative innovations such as introducing a new performance appraisal system, an employee information database, and conflict management training, which suggests that politically skilled individuals are likely effective innovation implementers given their networking ability.

Resistance to an innovation implementation can also arise from legitimate concerns about the innovation's suitability and effectiveness in accomplishing its espoused aims (Ford, Ford, & D'Amelio, 2008). Politically skilled individuals are also good listeners (Ferris et al., 2005). Therefore, they are receptive to employee concerns and, depending on the circumstances, can incorporate employee feedback into the implementation process, or communicate employee feedback to relevant organizational members. To the author's knowledge, the relation between political skill and innovation promotion has not been tested; however, politically skilled individuals are likely adept at promoting innovations.

Political Skill and Resource Acquisition

A requisite amount of resources is needed for innovation (Nohria & Gulati, 1996). The extent to which an individual must persuade others to provide resources for innovation depends on the individual's decision-making authority and on the innovation's magnitude. Similar to persuading others of a creative idea's merits, innovative employees must persuade organizational decision-makers to provide the financial, material, and labor resources to develop and implement the innovation (Kleysen & Street, 2001). Innovations vary greatly in terms of scope and magnitude (Anderson & West, 1998), with risk increasing as the innovation's magnitude increases. Micro or incremental innovations, such as changing a work routine within a work group, incur fewer resources than macro or radical innovations, such as developing a new product.

Decision-making discretion typically increases as individuals climb the organizational hierarchy (Karasek, 1979; Zaccaro & Klimoski, 2001). If the resources required for the innovation fall within the individual's decision-making discretion, then the individual does not need to persuade others to provide financial resources for the innovation. Nonetheless, it is likely that an individual must persuade organizational members at some point during the innovative process to provide resources for innovation. Even so, individuals higher in the organizational hierarchy tend to have more advanced political skill (Mintzberg, 1983) and emotional intelligence (e.g., George, 2000; Harms & Credé, 2010; Wang & Huang, 2009). To the author's knowledge, the relation between political skill and resource acquisition has not been tested; however, politically skilled individuals are likely better able to acquire the resources needed for innovation.

Political Skill and Idea Solicitation

While related predominantly to the implementation stage of innovation, political

skill likely relates to the idea solicitation dimension of the creativity stage. A politically skilled individual might see the importance of getting contributions from all organizational members involved in the innovative process in order to obtain "buy-in," which increases the likelihood of the innovation's success (Baer, 2007). While political skill does not necessarily relate to the cognitive aspects of generating and developing creative ideas, a politically skilled individual might function well as a facilitator of ideas among the team members working on the creative task. Zhou and George (2003) proposed that leaders high on emotional intelligence, a construct related to political skill (Ferris et al., 2005), are instrumental in eliciting employee creativity. To the author's knowledge, the relation between political skill and idea solicitation has not been tested; however, politically skilled individuals likely excel at soliciting creative ideas.

> *H6: Political skill is more strongly positively associated with the interpersonally oriented dimensions of innovative performance (e.g., idea solicitation, idea promotion, innovation promotion, and resource acquisition) than with the cognitively oriented dimensions of innovative performance (e.g., problem identification, idea generation, idea evaluation, experimentation, and innovation adoption).*

The Moderating Role of Political Skill

As illustrated in Figure 1, the current research posits that political skill moderates the relation between the quality of the social exchange relationship and innovative performance. To the author's knowledge, this moderating role has not been tested; however, previous research supports political skill's moderating effects. For example, Brouer et al. (2009) found that political skill moderated the relation between supervisor-subordinate racial dissimilarity and the quality of leader-member exchange. Perrewé and colleagues found that political skill reduced the negative effects of role conflict on measures of strain, which included anxiety, somatic complaints, and blood pressure (Perrewé et al., 2004), and that political skill buffered the negative effects of role overload on strain, which included anxiety, job tension, and job (dis)satisfaction (Perrewé et al., 2005).

Given that innovative behaviors are volitional for many jobs and have been considered a type of extra-role or citizenship performance (Smith, Organ, & Near, 1983; Van Dyne et al., 1994), motivation likely plays an important role in whether individuals expend their political capital on innovation. Performance is considered to be a function of both ability and motivation (Vroom, 1964). Knowledge and skills have been assumed to relate more strongly to task and in-role performance whereas individual dispositions relate more strongly to extra-role and citizenship performance (Arvey & Murphy, 1998; Dudley & Cortina, 2008); however, recent research has shown that knowledge and skills are indeed relevant to citizenship performance (Dudley & Cortina). Thus, knowledge and skills relate to the "will do" aspects of performance, i.e., whether an individual chooses to engage in certain types of work-related behaviors. To the author's knowledge, previous research has not tested political skill as a moderator of the association between the quality of the social exchange relationship and innovative performance; however, the association between the quality of the social exchange relationship and certain dimensions of innovative performance is likely stronger for individuals possessing higher levels of

political skill.

H7: Political skill moderates the relation between the quality of the social exchange relationship and idea promotion, innovation promotion, resource acquisition, and idea solicitation.

This study's hypotheses have outlined the expected relations among the quality of the social exchange relationship, individual differences, and innovative performance. The quality of the social exchange relationship is expected to be positively associated with all dimensions of innovative performance, while individual differences are expected to have both direct and moderating relations with dimensions of innovative performance.

Appendix C: Interchangeability of Self and Supervisor Innovative Performance Ratings

During data collection for this study, participants were invited to recruit their supervisors to rate their innovative performance. Participants invited their supervisors by cutting and pasting text, generated by the online survey, into an email that each participant sent to his or her supervisor. The email contained a link to an online supervisor survey for the supervisor to rate his or her employee's innovative performance. The supervisor survey invitation email also contained a unique ID that the supervisor entered into the online survey in order to proceed with the innovative performance ratings. The supervisor innovative performance measure was identical to the employee self-report measure, except that the supervisor measure items began with "This employee…", while the employee measure items began with "I…".

In total, 86 supervisors rated the innovative performance of their employees. These ratings, along with the 86 self-ratings from the employees who recruited their supervisors, and a random sample of 86 self-ratings from employees who did not recruit their supervisors were examined to determine if ratings of innovative performance differed by source. A one-way MANOVA revealed mean differences among supervisor ratings, self-ratings from people who recruited their supervisors, and self-ratings from people who did not recruit their supervisors, F (18, 492) = 2.88, $p < .001$; Wilk's $\lambda = .82$, partial $\varepsilon^2 = .10$, and there were differences in the covariance matrices, Box's M = 169.64, F (90, 176704.64) = 1.79, $p < .001$. However, rating source had a statistically significant effect on only one dimension of innovative performance, problem identification (F (2, 254) = 7.19; $p < .001$; partial $\varepsilon^2 = .06$). Post-hoc Tukey's HSD tests showed that supervisors rated their employees significantly higher at the $p < .01$ level of significance than their employee's self-reports and than the self-reports of people who did not recruit their supervisors. None of the other comparisons were significant. Given that supervisors tended to rate their employees more highly on problem identification, relationships among the other constructs of interest and self-reported problem identification are likely more conservative estimates than those among the other constructs of interest and supervisor ratings of problem identification.

For the quality of the social exchange relationship, expertise, openness to experience, and political skill, a one-way MANOVA did not reveal mean differences between people who recruited their supervisors and people who did not recruit their supervisors, F (4, 167) = 1.19, $p = .32$; Wilk's $\lambda = .97$, partial $\varepsilon^2 = .03$, nor were there differences in the covariance matrices, Box's M = 10.96, F (10, 138167.33) = 1.07, $p = .38$.

As shown in Table 1, self (recruited supervisors) and supervisor ratings for each

innovative performance dimension were highly correlated. Tables 2, 3, and 4 demonstrate that self (recruited supervisors), self (did not recruit supervisors), and supervisor ratings exhibited consistent relations with the quality of the social exchange relationship, openness to experience, political skill, and required innovativeness. Expertise was the exception in that expertise generally did not relate significantly to supervisor ratings or self ratings (recruited supervisors) of innovative performance, whereas expertise did generally relate positively to innovative performance dimensions for self ratings (did not recruit supervisors).

In order to determine the relative influence of each construct and interaction on each innovative performance dimension, all variables, including the interaction terms, were entered into separate regression equations that predicted each dimension of innovative performance. Results from these regression analyses are presented in Table 5 With some exceptions, the results were fairly consistent. First, required innovativeness exhibited a robust, positive influence on all dimensions of innovative performance across the three rating sources. Second, the quality of the social exchange relationship generally interacted with the individual difference factors in predicting supervisor ratings of innovative performance, whereas the quality of the social exchange relationship generally did not interact with the individual difference factors in predicting either source of self ratings of innovative performance. Third, in multiple instances, a partial regression coefficient for a given rating source was significantly related to an innovative performance dimension, while the partial regression coefficient associated with one or two of the other rating sources was not significantly related to the innovative performance dimension. Most frequently, the partial regression coefficients' effects for each rating source were in the same direction; however, only one or two of the partial regression coefficients obtained statistical significance. Regression results, however, must be interpreted with caution. The relatively small sample size of 86 limits statistical power and raises multicollinearity concerns given the presence of seven main effects and three interaction terms included in each regression equation.

Given the comparability of self and supervisor innovative performance ratings in terms of mean ratings, correlations among self and supervisor ratings of the same innovative performance dimensions, consistent correlations among innovative performance ratings and the study variables of interest, and the fairly consistent regression analysis results, the self ratings of innovative performance included in the full dataset are adequate for testing this study's hypotheses.

Table 1

Self Report and Supervisor Report Innovative Performance Correlations and Reliabilities

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	Prob (self)	(.80)																	
2.	Prob (sup)	.56**	(.81)																
3.	Gen (self)	.59**	.54**	(.62)															
4.	Gen (sup)	.31**	.65**	.50**	(.87)														
5.	Sol (self)	.51**	.53**	.68**	.60**	(.80)													
6.	Sol (sup)	.32**	.61**	.42**	.78**	.60**	(.77)												
7.	Eval (self)	.58**	.51**	.65**	.61**	.80**	.54**	(.79)											
8.	Eval (sup)	.31**	.51**	.45**	.77**	.57**	.74**	.55**	(.81)										
9.	Ex (self)	.36**	.52**	.55**	.65**	.67**	.55**	.59**	.58**	(.72)									
10.	Ex (sup)	.24*	.57**	.45**	.59**	.49**	.68**	.35**	.71**	.58**	(.80)								
11.	Idea (self)	.45**	.34**	.53**	.56**	.71**	.49**	.65**	.53**	.62**	.30**	(.62)							
12.	Idea (sup)	.48**	.66**	.52**	.77**	.64**	.79**	.61**	.72**	.57**	.60**	.63**	(.80)						
13.	Inno (self)	.55**	.47**	.67**	.60**	.69**	.46**	.75**	.54**	.62**	.43**	.66**	.62**	(.82)					
14.	Inno (sup)	.47**	.71**	.52**	.67**	.54**	.54**	.53**	.66**	.56**	.63**	.44**	.72**	.60**	(.84)				
15.	Adopt (self)	.41**	.51**	.67**	.61**	.73**	.53**	.69**	.60**	.70**	.51**	.68**	.62**	.73**	.52**	(.74)			
16.	Adop (sup)	.35**	.65**	.50**	.72**	.58**	.76**	.53**	.69**	.58**	.76**	.45**	.79**	.56**	.76**	.59**	(.85)		
17.	Acq (self)	.67**	.65**	.53**	.36**	.41**	.27*	.46**	.32**	.41**	.30**	.33**	.44**	.52**	.59**	.40**	.38**	(.83)	
18.	Acq (sup)	.43**	.60**	.35**	.31**	.26*	.27*	.31**	.33**	.29**	.34**	.19	.43**	.29**	.59**	.28**	.38**	.72**	(.92)

Notes. N's range from 85-86. Coefficient alphas shown on the diagonal. Prob = Problem Identification. Gen = Idea Generation. Sol= Idea Solicitation. Eval = Idea Evaluation. Ex = Experimentation. Idea = Idea Promotion. Inno = Innovation Promotion. Adopt = Innovation Adoption. Acq = Resource Acquisition.

Correlations in bold indicate correlations between self and supervisor ratings for the same innovative performance dimension.

*p < .05. **p < .01.

Table 2

Supervisor Report Innovative Performance Correlations and Reliabilities

	M	*SD*	SE	Open	Expert	PS	Req	Prof	MUSA
SE	5.15	.88	(.81)						
Open	4.82	.81	.10	(.82)					
Expert	5.03	1.32	-.02	-.18	--				
PS	5.59	.71	.52**	.31**	.11	(.92)			
Req	5.52	.70	.57**	.23*	.12	.53**	(.84)		
Prof	0.10	.31	-.09	.36**	-.07	.17	-.08	--	
MUSA	0.06	.24	-.06	.08	-.01	-.03	-.04	-.09	--
Prob	5.56	.80	.41**	.19	.07	.41**	.65**	-.11	.05
Gen	5.68	.88	.26*	.31**	.12	.53**	.57**	.05	.05
Sol	5.73	.89	.32**	.41**	.02	.53**	.49**	.19	.08
Eval	5.53	.81	.32**	.27*	.02	.51**	.50**	.00	.07
Ex	5.75	.82	.21	.28**	.07	.37**	.42**	.03	.05
Idea	5.66	.90	.40**	.31**	.11	.56**	.58**	.05	.07
Inno	5.66	.78	.48**	.20	.09	.46**	.68**	-.08	-.08
Adopt	5.76	.90	.32**	.30**	.02	.44**	.54**	.01	.07
Acq	5.49	1.15	.35**	.07	.15	.23*	.60**	-.16	-.09

Notes. N's range from 85-86. Coefficient alphas shown on the diagonal. SE = Social Exchange. Open = Openness to Experience. Expert = Expertise. PS = Political Skill. Req = Required Innovativeness. Prof = Professional Contacts. MUSA = MTurk USA. Prob = Problem Identification. Gen = Idea Generation. Sol= Idea Solicitation. Eval = Idea Evaluation. Ex = Experimentation. Idea = Idea Promotion. Inno = Innovation Promotion. Adopt =

Innovation Adoption. Acq = Resource Acquisition.

*p < .05. **p < .01.

Table 3

Self Report (Recruited Supervisors) Innovative Performance Correlations and Reliabilities

	M	*SD*	SE	Open	Expert	PS	Req	Prof	MUSA
SE	5.15	0.84	(.81)						
Open	4.82	0.81	.10	(.82)					
Expert	5.03	1.32	-.02	-.18	--				
PS	5.59	0.71	.52**	.31**	.11	(.92)			
Req	5.52	0.74	.57**	.23*	.12	.53**	(.84)		
Prof	0.10	0.31	-.09	.36**	-.07	.17	-.08	--	
MUSA	0.06	0.24	-.06	.08	-.01	-.03	-.04	-.09	--
Prob	5.07	1.01	.48**	-.04	.12	.43**	.53**	.00	-.06
Gen	5.59	0.67	.40**	.14	.04	.47**	.61**	-.06	-.03
Sol	5.70	0.90	.56**	.34**	-.03	.58**	.67**	.01	.04
Eval	5.60	0.85	.55**	.28**	.01	.62**	.73**	-.02	-.01
Ex	5.64	0.79	.35**	.47**	.13	.48**	.59**	-.04	-.01
Idea	5.74	0.71	.40**	.31**	.07	.56**	.53**	.11	.01
Inno	5.68	0.80	.46**	.24*	.02	.60**	.62**	-.03	-.02
Adopt	5.85	0.78	.40**	.41**	-.06	.58**	.62**	-.02	.08
Acq	5.42	1.02	.40**	-.05	.35**	.34**	.62**	-.28**	-.01

Notes. N's range from 85-86. Coefficient alphas shown on the diagonal. SE = Social Exchange. Open = Openness to Experience. Expert = Expertise. PS = Political Skill. Req = Required Innovativeness. Prof = Professional Contacts. MUSA = MTurk USA. Prob = Problem Identification. Gen = Idea

Generation. Sol= Idea Solicitation. Eval = Idea Evaluation. Ex = Experimentation. Idea = Idea Promotion. Inno = Innovation Promotion. Adopt = Innovation Adoption. Acq = Resource Acquisition.

*p < .05. **p < .01.

Table 4

Self Report (Did not Recruit Supervisors) Innovative Performance Correlations and Reliabilities

		M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.	SE	5.20	0.82	(.81)															
2.	Open	5.06	0.89	.26*	(.86)														
3.	Expert	4.99	1.48	.30**	-.06	--													
4.	PS	5.57	0.73	.67**	.42**	.35**	(.92)												
5.	Req	5.38	0.90	.65**	.40**	.28**	.77**	(.90)											
6.	Prof	0.01	0.11	.17	.14	-.22*	.08	-.02	--										
7.	MUSA	0.21	0.41	-.19	.22*	-.25*	-.21	-.29**	-.06	--									
8.	Prob	5.02	0.92	.51**	.32**	.32**	.61**	.66**	-.00	-.15	(.72)								
9.	Gen	5.47	0.86	.50**	.28**	.37**	.62**	.70**	-.09	-.21*	.77**	(.77)							
10.	Sol	5.73	0.85	.49**	.47**	.25*	.70**	.69**	.00	-.13	.61**	.68**	(.80)						
11.	Eval	5.60	0.82	.46**	.48**	.16	.65**	.68**	.19	-.10	.60**	.68**	.82**	(.82)					
12.	Ex	5.69	0.79	.48**	.41**	.31**	.68**	.74**	-.13	-.22*	.53**	.64**	.79**	.75**	(.76)				
13.	Idea	5.68	0.80	.42**	.35**	.28**	.57**	.65**	-.20	-.05	.65**	.65**	.70**	.66**	.67**	(.76)			
14.	Inno	5.65	0.86	.63**	.36**	.34**	.69**	.73**	.05	-.14	.70**	.68**	.66**	.66**	.66**	.69**	(.87)		
15.	Adopt	5.94	0.76	.59**	.47**	.33**	.68**	.70**	-.03	.00	.62**	.62**	.80**	.73**	.76**	.66**	.72**	(.83)	
16.	Acq	5.18	1.11	.48**	.28**	.22*	.51**	.78**	-.12	-.37**	.49**	.59**	.52**	.48**	.60**	.46**	.51**	.49**	(.86)

Notes. N = 86. Coefficient alphas shown on the diagonal. SE = Social Exchange. Open = Openness to Experience. Expert = Expertise. PS = Political Skill. Req = Required Innovativeness. Prof = Professional Contacts. MUSA = MTurk USA. Prob = Problem Identification. Gen = Idea Generation. Sol= Idea Solicitation. Eval = Idea Evaluation. Ex = Experimentation. Idea = Idea Promotion. Inno = Innovation Promotion. Adopt = Innovation Adoption. Acq = Resource Acquisition.

*p < .05. **p < .01.

Table 5

Summary of Regression Analysis for Predicting Dimensions of Innovative Performance for Supervisor Ratings, Self Ratings (Recruited Supervisors), and Self Ratings (Did not Recruit Supervisors) (N = 86)

IV → DV	β Supervisor Ratings	β Self Ratings (Recruited Supervisors)	β Self Ratings (Did not Recruit Supervisors)
Social Exchange → Problem Identification	.20	.16	.05
Social Exchange → Idea Generation	.06	.14	.07
Social Exchange → Idea Solicitation	.33**	.15	.07
Social Exchange → Idea Evaluation	.19	.20	.00
Social Exchange → Experimentation	.16	.02	.02
Social Exchange → Idea Promotion	.26*	.07	.05
Social Exchange → Innovation Promotion	.24	.06	.19
Social Exchange → Innovation Adoption	.21	.00	.23*
Social Exchange → Resource Acquisition	.09	.07	.05
Openness → Problem Identification	-.02	-.25*	.03
Openness → Idea Generation	.10	-.09	.05
Openness → Idea Solicitation	.13	.20*	.26**
Openness → Idea Evaluation	.03	.09	.23*
Openness → Experimentation	.06	.40**	.21*
Openness → Idea Promotion	.10	.14	.12
Openness → Innovation Promotion	.03	.04	.03
Openness → Innovation Adoption	.09	.22*	.22*
Openness → Resource Acquisition	.05	-.06	.08
Social Exchange x Openness → Problem Identification	-.23*	.17	.05
Social Exchange x Openness → Idea Generation	-.40**	-.17	-.01
Social Exchange x Openness → Idea Solicitation	-.47**	.06	-.16
Social Exchange x Openness → Idea Evaluation	-.32**	.11	.04
Social Exchange x Openness → Experimentation	-.30*	-.04	-.08
Social Exchange x Openness → Idea Promotion	-.33**	-.01	-.08
Social Exchange x Openness → Innovation Promotion	-.18	-.04	.00
Social Exchange x Openness → Innovation Adoption	-.36**	-.03	-.19*
Social Exchange x Openness → Resource Acquisition	-.08	.02	.05
Expertise → Problem Identification	-.04	-.02	.13

IV → DV	β Supervisor Ratings	β Self Ratings (Recruited Supervisors)	β Self Ratings (Did not Recruit Supervisors)
Expertise → Idea Generation	.03	-.11	.15
Expertise → Idea Solicitation	-.07	-.08	.04
Expertise → Idea Evaluation	-.11	-.07	.04
Expertise → Experimentation	-.03	.10	.08
Expertise → Idea Promotion	-.01	-.02	.08
Expertise → Innovation Promotion	-.02	-.08	.11
Expertise → Innovation Adoption	-.08	-.17*	.14
Expertise → Resource Acquisition	.09	.22*	-.02
Social Exchange x Expertise → Problem Identification	.01	.13	.01
Social Exchange x Expertise → Idea Generation	.00	.14	.09
Social Exchange x Expertise → Idea Solicitation	.12	.08	.14
Social Exchange x Expertise → Idea Evaluation	.14	.00	.21
Social Exchange x Expertise → Experimentation	.09	.05	.12
Social Exchange x Expertise → Idea Promotion	.18*	.17	.08
Social Exchange x Expertise → Innovation Promotion	.09	.04	-.01
Social Exchange x Expertise → Innovation Adoption	.12	.16	-.02
Social Exchange x Expertise → Resource Acquisition	.05	.12	.00
Political Skill → Problem Identification	.10	.21	.16
Political Skill → Idea Generation	.28*	.22	.14
Political Skill → Idea Solicitation	.23*	.20	.30*
Political Skill → Idea Evaluation	.31*	.31**	.20
Political Skill → Experimentation	.20	.18	.21
Political Skill → Idea Promotion	.23*	.28*	.13
Political Skill → Innovation Promotion	.08	.38**	.16
Political Skill → Innovation Adoption	.15	.34**	.14
Political Skill → Resource Acquisition	-.18	.03	-.21
Social Exchange x Political Skill → Problem Identification	.13	.12	-.08
Social Exchange x Political Skill → Idea Generation	-.02	.09	-.03
Social Exchange x Political Skill → Idea Solicitation	.09	-.09	-.19
Social Exchange x Political Skill → Idea Evaluation	.11	-.02	-.09
Social Exchange x Political Skill → Experimentation	.20	.05	-.07
Social Exchange x Political Skill → Idea Promotion	.02	-.03	-.08
Social Exchange x Political Skill → Innovation Promotion	.06	.02	-.16
Social Exchange x Political Skill → Innovation Adoption	.05	.06	-.07
Social Exchange x Political Skill → Resource Acquisition	-.10	-.01	.02

IV → DV	β Supervisor Ratings	β Self Ratings (Recruited Supervisors)	β Self Ratings (Did not Recruit Supervisors)
Required Innovativeness → Problem Identification	.60**	.36**	.45**
Required Innovativeness → Idea Generation	.51**	.53**	.48*
Required Innovativeness → Idea Solicitation	.37**	.41**	.29*
Required Innovativeness → Idea Evaluation	.38**	.50*	.46**
Required Innovativeness → Experimentation	.36**	.40**	.44**
Required Innovativeness → Idea Promotion	.44**	.31**	.47**
Required Innovativeness → Innovation Promotion	.57**	.40**	.43**
Required Innovativeness → Innovation Adoption	.48**	.44**	.35**
Required Innovativeness → Resource Acquisition	.63**	.53**	.83**
MUSA → Problem Identification	.08	-.04	.05
MUSA → Idea Generation	.10	.05	-.02
MUSA → Idea Solicitation	.12	.00	-.03
MUSA → Idea Evaluation	.08	-.05	.02
MUSA → Experimentation	.05	.01	-.09
MUSA → Idea Promotion	.09	-.01	.11
MUSA → Innovation Promotion	-.06	.05	.11
MUSA → Innovation Adoption	.09	-.01	.19*
MUSA → Resource Acquisition	-.06	-.02	-.20*
Prof → Problem Identification	-.09	.09	.01
Prof → Idea Generation	-.02	-.06	-.05
Prof → Idea Solicitation	.10	-.04	.03
Prof → Idea Evaluation	-.08	-.05	.25**
Prof → Experimentation	-.05	-.19*	-.10
Prof → Idea Promotion	.00	.05	-.15
Prof → Innovation Promotion	-.08	-.09	.04
Prof → Innovation Adoption	-.05	-.15	-.02
Prof → Resource Acquisition	-.08	-.21*	-.13

*p < .05. **p < .01.

References

References

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, *45*(2), 357–376.

Amabile, T. M. (1988). A model of creativity and innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 10, pp. 123–167). Elsevier Science & Technology Books.

Anderson, N., De Dreu, C. K. W., & Nijstad, B. A. (2004). The routinization of innovation research: A constructively critical review of the state-of-the-science. *Journal of Organizational Behavior*, *25*(2), 147–173.

Anderson, N. R., & West, M. A. (1998). Measuring climate for work group innovation: development and validation of the team climate inventory. *Journal of Organizational Behavior*, *19*(3), 235–258.

Andrews, K. M., & Delahaye, B. L. (2000). Influences On Knowledge processes In Organizational Learning: The Psychosocial Filter. *Journal of Management Studies*, *37*(6), 797–810.

Andrews, M. C., Kacmar, K. M., & Harris, K. J. (2009). Got political skill? The impact of justice on the importance of political skill for job performance. *Journal of Applied Psychology*, *94*(6), 1427–1437.

Baer, M. (2007). *Innovation in organizations: The generation and implementation of radical ideas.* ProQuest Information & Learning, US.

Baer, M., & Oldham, G. R. (2006). The curvilinear relation between experienced creative time pressure and creativity: Moderating effects of openness to experience and support for creativity. *Journal of Applied Psychology*, *91*(4), 963–970.

Bains, P., & Tran, V. (2006). Creativity and innovation: Taking it to the next level. Presented at the 21st Annual Society for Industrial and Organizational Psychology (SIOP) Conference, Dallas, TX.

Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, *44*(1), 1–26.

Basadur, M., Graen, G. B., & Green, S. G. (1982). Training in creative problem solving: Effects on ideation and problem finding and solving in an industrial research organization. *Organizational Behavior & Human Performance*, *30*(1), 41–70.

Binnewies, C., Ohly, S., & Sonnentag, S. (2007). Taking personal initiative and communicating about ideas: What is important for the creative process and for idea creativity? *European Journal of Work and Organizational Psychology*, *16*(4), 432–455.

Blickle, G., Kramer, J., Zettler, I., Momm, T., Summers, J. K., Munyon, T. P., & Ferris, G. R. (2009). Job demands as a moderator of the political skill-job performance relationship. *The Career Development International*, *14*(4), 333–350.

Brooks-Shesler, L., & Tetrick, L. E. (2010). Development of a dimensionalized measure of innovative performance. Presented at the 25th Annual Society for Industrial and Organizational Psychology (SIOP) Conference, Atlanta, GA.

Brouer, R. L., Duke, A., Treadway, D. C., & Ferris, G. R. (2009). The moderating effect of political skill on the demographic dissimilarity—Leader-member exchange quality relationship. *The Leadership Quarterly*, *20*(2), 61–69.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*(1), 3–5.

Cabrera, Á., Collins, W. C., & Salgado, J. F. (2006). Determinants of individual engagement in knowledge sharing. *The International Journal of Human Resource Management*, *17*(2), 245–264.

Choi, J. N. (2004). Individual and contextual predictors of creative performance: The mediating role of psychological processes. *Creativity Research Journal*, *16*(2-3), 187–199.

Choi, J. N. (2007). Change-oriented organizational citizenship behavior: Effects of work environment characteristics and intervening psychological processes. *Journal of Organizational Behavior*, *28*(4), 467–484.

Choi, J. N., & Price, R. H. (2005). The effects of person-innovation fit on individual

responses to innovation. *Journal of Occupational and Organizational Psychology*, *78*(1), 83–96.

Clayton, P. (1997). *Implementation of organizational innovation*. San Diego: Academic Press.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, *35*(1), 128–152.

Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, *19*(2), 109–134.

Dempster, A. P., Laird, N. M., & Rubin, D. B. (1977). Maximum Likelihood from Incomplete Data via the EM Algorithm. *Journal of the Royal Statistical Society. Series B (Methodological)*, *39*(1), 1–38.

Dewar, R. D., & Dutton, J. E. (1986). The Adoption of Radical and Incremental Innovations: An Empirical Analysis. *Management Science*, *32*(11), 1422–1433.

Elliott, E., & Dweck, D. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, *39*(5), 940–952.

Ericsson, K. A., & Charness, N. (1994). Expert performance: Its structure and acquisition. *American Psychologist*, *49*(8), 725–747.

Farr, J. L., Sin, H.-P., & Tesluk, P. E. (2003). Knowledge Management Processes and Work Group Innovation. In L. V. Shavinina (Ed.), *The international handbook on innovation.* (pp. 574–586). New York, NY US: Elsevier Science.

Feist, G. J. (1998). A meta-analysis of personality in scientific and artistic creativity. *Personality and Social Psychology Review*, *2*(4), 290–309.

Ferris, G. R., Treadway, D. C., Kolodinsky, R. W., Hochwarter, W. A., Kacmar, C. J., Douglas, C., & Frink, D. D. (2005). Development and Validation of the Political Skill Inventory. *Journal of Management*, *31*(1), 126–152.

Ferris, G. R., Treadway, D. C., Perrewé, P. L., Brouer, R. L., Douglas, C., & Lux, S. (2007). Political skill in organizations. *Journal of Management*, *33*(3), 290–320.

Fiske, S. T., & Dyer, L. M. (1985). Structure and development of social schemata:

Evidence from positive and negative transfer effects. *Journal of Personality and Social Psychology*, *48*(4), 839–852.

Ford, J. D., Ford, L. W., & D'Amelio, A. (2008). Resistance to change: The rest of the story. *The Academy of Management Review*, *33*(2), 362–377.

French, J. P. R., & Raven, B. (1960). The bases of social power. In D. Cartwright & A. Zander (Eds.), *Group Dynamics* (pp. 607–623). New York: Harper and Row.

George, J. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, *53*(8), 1027–1055.

George, J. M., & Jones, G. R. (1997). Organizational spontaneity in context. *Human Performance*, *10*(2), 153–170.

George, J. M., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology*, *86*(3), 513–524.

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality*, *40*(1), 84–96.

Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, *5*(1), 90–105.

Harms, P. D., & Credé, M. (2010). Emotional intelligence and transformational and transactional leadership: A meta-analysis. *Journal of Leadership & Organizational Studies*, *17*(1), 5–17.

Howell, J. M., & Boies, K. (2004). Champions of technological innovation: The influence of contextual knowledge, role orientation, idea generation, and idea promotion on champion emergence. *The Leadership Quarterly*, Leading for Innovation, *15*(1), 123–143.

Hunter, S. T., Bedell-Avers, K. E., Hunsicker, C. M., Mumford, M. D., & Ligon, G. S. (2008). Applying multiple knowledge structures in creative thought: Effects on idea generation and problem-solving. *Creativity Research Journal*, *20*(2), 137–154.

Hunthausen, J. M., Truxillo, D. M., Bauer, T. N., & Hammer, L. B. (2003). A field study of frame-of-reference effects on personality test validity. *Journal of Applied Psychology*, *88*(3), 545–551.

Ibarra, H. (1993). Network centrality, power, and innovation involvement: Determinants of technical and administrative roles. *Academy of Management Journal*, *36*(3), 471–501.

Janssen, O. (2003). Innovative behaviour and job involvement at the price of conflict and less satisfactory relations with co-workers. *Journal of Occupational and Organizational Psychology*, *76*(3), 347–364.

Janssen, O. (2004). How fairness perceptions make innovative behavior more or less stressful. *Journal of Organizational Behavior*, *25*(2), 201–215.

Janssen, O., van de Vliert, E., & West, M. (2004). The bright and dark sides of individual and group innovation: a Special Issue introduction. *Journal of Organizational Behavior*, *25*(2), 129.

Kanter, R. M. (1988). When a thousand flowers bloom: Structural, collective, and social conditions for innovation in organizations. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 10, pp. 169–211).

Kapelner, A., & Chandler, D. (2010). Preventing satisficing in online surveys: A "kapcha" to ensure higher quality data. *In CrowdConf ACM Proceedings*.

Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24*, 285–308.

Kelava, A., Werner, C. S., Schermelleh-Engel, K., Moosbrugger, H., Zapf, D., Ma, Y., Cham, H., et al. (2011). Advanced nonlinear latent variable modeling: Distribution analytic LMS and QML estimators of interaction and quadratic effects. *Structural Equation Modeling*, *18*(3), 465–491.

Kenny, D. A., & Judd, C. M. (1984). Estimating the nonlinear and interactive effects of latent variables. *Psychological Bulletin*, *96*(1), 201–210.

King, N. (1995). Individual Creativity and Organizational Innovation: An Uncertain Link. In C. M. Ford & D. A. Gioia (Eds.), *Creative Action in Organizations: Ivory Tower Voices and Real World Voices* (pp. 82–87). Thousand Oaks, CA:

Sage Publications, Inc.

Klein, A., & Moosbrugger, H. (2000). Maximum likelihood estimation of latent interaction effects with the LMS method. *Psychometrika, 65*(4), 457–474.

Klein, H., & Lee, S. (2006). The effects of personality on learning: The mediating role of goal setting. *Human Performance*, *19*(1), 43–66.

Klein, K. J., & Knight, A. P. (2005). Innovation implementation: Overcoming the challenge. *Current Directions in Psychological Science*, *14*(5), 243–246.

Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *The Academy of Management Review*, *21*(4), 1055–1080.

Kleysen, R. F., & Street, C. T. (2001). Toward a multi-dimensional measure of individual innovative behavior. *Journal of Intellectual Capital*, *2*(3), 284–296.

Krosnick, J. A., Narayan, S., & Smith, W. R. (1996). Satisficing in surveys: Initial evidence. *New Directions for Evaluation*, *1996*(70), 29–44.

Kuvaas, B., & Dysvik, A. (2009). Perceived investment in permanent employee development and social and economic exchange perceptions among temporary employees. *Journal of Applied Social Psychology*, *39*(10), 2499–2524.

Larkin, J. H., McDermott, J., Simon, D. P., & Simon, H. A. (1980). Models of competence in solving physics problems. *Cognitive Science: A Multidisciplinary Journal*, *4*(4), 317–345.

Lievens, F., De Corte, W., & Schollaert, E. (2008). A closer look at the frame-of-reference effect in personality scale scores and validity. *Journal of Applied Psychology*, *93*(2), 268–279.

Malhotra, N. (2008). Completion Time and Response Order Effects in Web Surveys. *Public Opinion Quarterly*, *72*(5), 914–934.

McCrae, R. R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, *52*(6), 1258–1265.

McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *American Psychologist*, *52*(5), 509–516.

Meurs, J. A., Gallagher, V. C., & Perrewé, P. L. (2010). The role of political skill in the stressor–outcome relationship: Differential predictions for self- and other-reports of political skill. *Journal of Vocational Behavior, 76*(3), 520–533.

Mintzberg, H. (1983). *Power in and around organizations*. Englewood Cliffs, N.J.: Prentice-Hall.

Mumford, M. D., & Hunter, S. T. (2005). Innovation in organizations: A multi-level perspective on creativity. In F. Dansereau & F. J. Yammarino (Eds.), *Research in Multi Level Issues* (Vol. 4, pp. 11– 74). Oxford, England: Elsevier.

Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological Bulletin*, *103*(1), 27–43.

Muñoz-Doyague, M. F., González-Álvarez, N., & Nieto, M. (2008). An examination of individual factors and employees' creativity: The case of Spain. *Creativity Research Journal, 20*(1), 21–33.

Nohria, N., & Gulati, R. (1996). Is slack good or bad for innovation? *Academy of Management Journal*, *39*(5), 1245–1264.

Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, *39*(3), 607–634.

Perrewé, P. L., Zellars, K. L., Rossi, A. M., Ferris, G. R., Kacmar, C. J., Liu, Y., Zinko, R., et al. (2005). Political Skill: An Antidote in the Role Overload-Strain Relationship. *Journal of Occupational Health Psychology*, *10*(3), 239–250.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theroetical and empirical literature and suggestions for future research. *Journal of Management, 26*(3), 513–563.

Rietzschel, E. F., De Dreu, C. K. W., & Nijstad, B. A. (2007). Personal need for structure and creative performance: The moderating influence of fear of invalidity. *Personality and Social Psychology Bulletin*, *33*(6), 855–866.

Rietzschel, E. F., Nijstad, B. A., & Stroebe, W. (2007). Relative accessibility of domain knowledge and creativity: The effects of knowledge activation on the quantity and originality of generated ideas. *Journal of Experimental Social Psychology, 43*(6),

933–946.

Robie, C., Schmit, M. J., Ryan, A. M., & Zickar, M. J. (2000). Effects of item context specificity on the measurement equivalence of a personality inventory. *Organizational Research Methods*, *3*(4), 348–365.

Schmit, M. J., Ryan, A. M., Stierwalt, S. L., & Powell, A. B. (1995). Frame-of-reference effects on personality scale scores and criterion-related validity. *Journal of Applied Psychology*, *80*(5), 607–620.

Schnake, M., & Dumler, M. P. (1997). Organizational citizenship behavior: The impact of rewards and reward practices. *Journal of Managerial Issues*, *9*(2), 216–229.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal, 37*(3), 580–607.

Scratchley, L. S., & Hakstian, A. R. (2001). The measurement and prediction of managerial creativity. *Creativity Research Journal*, *13*(3-4), 367–384.

Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The Leadership Quarterly*, *15*(1), 33–53.

Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of Management*, *30*(6), 933–958.

Shore, L. M., Tetrick, L. E., Lynch, P., & Barksdale, K. (2006). Social and Economic Exchange: Construct Development and Validation. *Journal of Applied Social Psychology*, *36*(4), 837–867.

Silvia, P. J., & Sanders, C. E. (2010). Why are smart people curious? Fluid intelligence, openness to experience, and interest. *Learning and Individual Differences*, *20*, 242–245.

Simonton, D. K. (2000a). Creative development as acquired expertise: Theoretical issues and an empirical test. *Developmental Review*, *20*(2), 283–318.

Simonton, D. K. (2000b). Creativity: Cognitive, personal, developmental, and social aspects. *American Psychologist*, *55*(1), 151–158.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology*, *68*(4), 653–663.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics (5th ed.).* Boston: Allyn and Bacon.

Takeuchi, R., Lepak, D. P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied Psychology*, *92*(4), 1069–1083.

Thompson, M., & Heron, P. (2006). Relational quality and innovative performance in R&D based science and technology firms. *Human Resource Management Journal*, *16*(1), 28–47.

Tierney, P., & Farmer, S. M. (2004). The Pygmalion Process and Employee Creativity. *Journal of Management*, *30*(3), 413–432.

Treadway, D. C., Breland, J. W., Adams, G. L., Duke, A. B., & Williams, L. A. (2010). The interactive effects of political skill and future time perspective on career and community networking behavior. *Social Networks*, *32*(2), 138–147.

Unsworth, K. (2001). Unpacking creativity. *Academy of Management. The Academy of Management Review*, *26*(2), 289.

Van Dyne, L., Graham, J. W., & Dienesch, R. M. (1994). Organizational citizenship behavior: Construct redefinition, measurement, and validation. *Academy of Management Journal*, *37*(4), 765–802.

Wakefield, J. F. (1991). The outlook for creativity tests. *Journal of Creative Behavior*, *25*(3), 184–193.

Wang, C.-C., & Yang, Y.-J. (2007). Personality and intention to share knowledge: An empirical study of scientists in an R&D laboratory. *Social Behavior and Personality*, *35*(10), 1427–1436.

Wang, Y.-S., & Huang, T.-C. (2009). The relationship of transformational leadership with group cohesiveness and emotional intelligence. *Social Behavior and Personality*, *37*(3), 379–392.

West, M. A. (2002). Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. *Applied Psychology: An International Review*, *51*(3), 355–387.

West, M. A., & Farr, J. L. (1990). *Innovation and creativity at work: Psychological and organizational strategies.* Oxford England: John Wiley & Sons.

West, M. A., Hirst, G., Richter, A., & Shipton, H. (2004). Twelve steps to heaven: Successfully managing change through developing innovative teams. *European Journal of Work and Organizational Psychology*, *13*(2), 269–299.

Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of Management Review*, *18*(2), 293–321.

Zaccaro, S. J. & Klimoski. (2001). *The nature of organizational leadership: Understanding the performance imperatives confronting today's leaders.* The Jossey-Bass business & management series. San Francisco, CA US: Jossey-Bass.

Zhang, L.-F., & Huang, J. (2001). Thinking styles and the five-factor model of personality. *European Journal of Personality*, *15*(6), 465–476.

Zhang, X., & Bartol, K. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, *53*(1), 107–128.

Zhou, J., & George, J. M. (2003). Awakening employee creativity: The role of leader emotional intelligence. *The Leadership Quarterly*, *14*(4-5), 545–568.

Curriculum Vitae

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