

**Putting Creativity to Work:  
The Implementation of Creative Ideas in Organizations**

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## **ABSTRACT**

The production of creative ideas does not necessarily imply their implementation. This study examines the possibility that the relation between creativity and implementation is regulated by individuals' motivation to put their ideas into practice and their ability to network or, alternatively, the number of strong relationships they maintain. Using data from 216 employees and their supervisors, results indicated that individuals were able to improve the otherwise negative odds of their creative ideas being realized when they expected positive outcomes to be associated with their implementation efforts and when they were skilled networkers or had developed a set of strong "buy-in" relationships.

“Ideas are useless unless used” (Levitt, 1963: 79). Although few would dispute the validity of this statement, studies that directly examine the conditions that determine when creative ideas are converted into actual innovations, that is, implemented or used, are relatively rare. This lack of systematic attention is especially surprising given that innovation, particularly in dynamic contexts, is widely recognized as being critical to the growth and competitiveness of organizations (e.g., Roth & Sneader, 2006; Tellis, Prabhu, & Chandy, 2009) and, as a consequence, has been of longstanding interest to scholars and practitioners alike (e.g., Damanpour, 1991; Kanter, 1983; Peters & Waterman, 1982; Rogers, 2003; Schumpeter, 1942).

Individual innovation refers to the “development and implementation of new ideas by people who over time engage with others within an institutional context” (Van de Ven, 1986: 591). Creativity can be viewed as the first stage of the innovation process. Creativity refers to the development of ideas that are both novel and useful, either in the short- or long-term (e.g., Amabile, 1996; Oldham & Cummings, 1996), whereas idea implementation describes the process of converting these ideas into new and improved products, services, or ways of doing things (e.g., Kanter, 1988; West, 2002; Woodman, Sawyer, & Griffin, 1993). Thus, innovation can be conceptualized as encompassing two different activities—the development of novel, useful ideas and their implementation.

Presumably reflecting the importance of the initial development of new ideas for innovation to unfold, work on creativity has proliferated over the past decades (see George, 2007 & Shalley, Zhou, & Oldham, 2004 for recent reviews). This body of work has provided valuable insights into the factors that shape the production of novel, useful ideas in organizations. However, because idea implementation, in contrast to creativity, is primarily a social-political process (e.g., Frost & Egri, 1991; Van de Ven, 1986), the implications of this work for our understanding of when creative ideas are ultimately implemented are limited.

Although there is a growing body of work that has examined innovation more directly (see Anderson, De Dreu, & Nijstad, 2004 & Hülshager, Anderson, & Salgado, 2009 for recent reviews), this research also suffers from a number of limitations. First, despite acknowledging that innovation encompasses both creativity and idea implementation and that each activity may be shaped by different personal and contextual forces, numerous studies have not made this distinction, neither in their conceptual arguments nor in their empirical analyses (e.g., Scott & Bruce, 1994; Yuan & Woodman, 2010). Second, those efforts that have distinguished between idea generation and implementation typically focused not so much on the creativity of employees' ideas but rather on their quantity (e.g., Axtell, Holman, Unsworth, Wall, Waterson, & Harrington, 2000; Frese, Teng, & Wijnen, 1999). However, the nature of the relation between the mere production of ideas and implementation may be qualitatively different than the link between creativity and implementation. Finally, research on the emergence of change agents (e.g., Howell & Higgins, 1990; Kanter, 1983) and the ways in which they attract the attention of important decision makers (e.g., Dutton & Ashford, 1993) has provided important insights into the tactics that surround the implementation process in organizations. However, this work typically has ignored the outcome side of this process—that is the extent to which the various actions of change agents actually result in implementation of new initiatives. Thus, our understanding of the factors determining the extent to which individuals are able to improve the odds of successfully realizing their ideas still remains incomplete. Given the overall state of the research on individual innovation, it appears then that the observation by Van de Ven (1983) that the conversion of ideas into actual innovations is one of the central problems in the study of innovation appears to be as true today as it was more than a quarter century ago. The goal of the present study was to tackle this issue by addressing the limitations of this previous research.

Acknowledging that idea generation and implementation are two distinguishable elements of the innovation process, the current study examines the relation between these two activities. In contrast to some earlier work, however, the focus here is not on the extent to which individuals develop ideas, irrespective of their novelty and usefulness, but rather on the overall creativity of these contributions. Given this focus, it is argued that ideas that are useful yet novel are likely to produce uncertainty and, as a result, are likely to be met with skepticism and hesitation (e.g., Janssen, Van de Vliert, & West, 2004; Levitt, 1963; Wolfe, 1995). Thus, although there may be forces in the organization that promote the implementation of creative ideas (e.g., organizational mandate to be innovative), the very nature of these ideas is likely to generate reluctance to their implementation. As a result, it is suggested that the generation of creative ideas by no means guarantees their implementation (Sohn & Jung, 2010).

Idea implementation, however, is largely a social-political process (e.g., Van de Ven, 1986; Yuan & Woodman, 2010). Consequently, people—provided they are motivated to engage the risky endeavor of pursuing their ideas and provided they possess the ability or social relationships that allow them to involve and draw upon the resources of important supporters in the organization—should be able to influence this social-political process thereby improving the otherwise negative odds that their creative contributions are eventually realized (e.g., Dutton & Ashford, 1993; Kanter, 1983). Reflecting this logic, the present examination considers both people's motivation to engage idea implementation (implementation instrumentality) as well as their ability to cultivate and use their social networks (networking ability) or, alternatively, the strength of their actual relationships (number of strong buy-in ties) as joint moderators of the link between creativity and implementation. This logic is consistent with the notion that performance can be thought of as a multiplicative function of both motivation and ability, [ $p = f(M \times A)$ ] (Vroom, 1964).

The contributions of this study are twofold. First, in examining *creativity* vis-à-vis implementation, rather than the mere production of ideas irrespective of their novelty and usefulness, the present study provides important insights into the link between the nature of people's ideas and the extent to which these ideas are ultimately realized. Second, this study is the first to theorize and test the effects of creativity, individuals' instrumentality beliefs regarding implementation, and the ability to cultivate and use one's social networks (consisting of strong buy-in ties) in jointly shaping idea implementation. Thus, the current research provides an important first step toward identifying the conditions that determine whether creative ideas are ultimately converted into innovations. In doing so, this study assumes a person-centric perspective on innovation thereby offering a valuable complement to previous work which has often dismissed the importance of personal factors for implementation in favor of more macro-level drivers (e.g. Axtell et al., 2000; Axtell et al., 2006). Although there is evidence supporting the importance for innovation of a range of different personal factors, such as risk taking and achievement (Howell & Higgins, 1990), the contribution of the present study lies in identifying the most critical factors and then hypothesizing and testing how they *jointly* shape implementation.

## **LITERATURE OVERVIEW AND THEORETICAL DEVELOPMENT**

### **Previous Research on Individual Innovation**

Research on innovation has flourished in recent decades. Despite the widespread agreement that creativity and implementation are two distinguishable activities of the innovation process with potentially different antecedents (e.g., Axtell et al., 2000), this growing body of work has not always made this distinction. Indeed, earlier research as well as more recent efforts have treated creativity and implementation as indicative of the same underlying concept—innovation. A variety of factors have been identified as important antecedents to this umbrella

concept, including climate and culture (e.g., Miron, Erez, & Naveh, 2004; Scott & Bruce, 1994), leadership (e.g., Janssen, 2005; Janssen & Van Yperen, 2004; Yuan & Woodman, 2010), group characteristics (e.g., Hülshager et al., 2009), job requirements (e.g., Bunce & West, 1994; Janssen, 2000, 2001), and personal attributes (e.g., Bunce & West, 1995; Ng, Feldman, & Lam, 2010). While having made important strides toward providing a comprehensive understanding of the contextual and individual factors that shape innovation in organizations, in treating innovation as a unitary concept this research tells us little about the link between creativity and implementation and the conditions affecting it.

Not all empirical research on innovation has followed this path, however. A few investigations have considered creativity and implementation as separate activities and examined their unique antecedents (e.g., Axtell, Holman, & Wall, 2006; Clegg, Unsworth, Epitropaki, & Parker, 2002; Frese et al., 1999). This research generally concludes that personal and job variables promote the suggestion of ideas, whereas organizational variables contribute to their implementation. For example, Axtell et al. (2000) showed that while autonomy and self-efficacy were most strongly related to idea generation, participation in decision making and support for innovation emerged as the most powerful predictors of implementation.

Although this work has significantly advanced our understanding of the factors that differentially promote idea generation and implementation, the factors that shape the relation between *creativity* and idea implementation still remain largely unknown. This is because research in this vein has typically focused not on the nature of employees' ideas—that is, the creativity of their ideas—but rather on their quantity. For example, Frese et al. (1999) conceptualized and measured creativity as referring to the number of ideas employees generated and suggested, irrespective of whether these ideas were novel and useful. Consistent with the notion that without generating creative ideas, implementation cannot occur, this work generally

observes positive associations between suggestions and implementation—relations that are often quite substantial. However, creativity implies not only the generation of ideas but also that these ideas satisfy the criteria of novelty and usefulness (e.g., Baer, 2010; Oldham & Cummings, 1996). Thus, although informative, research that has separated innovation into suggestions and implementation provides only limited insights into the conditions that shape the relation between creativity, rather than idea quantity and implementation.

Research on how people affect change in organizations also has made important advances in illuminating the dynamics that surround idea implementation in organizations (e.g., Howell & Shea, 2001; Kanter, 1988). For example, work on issue selling—a perspective that highlights the importance of change agents and their actions in bringing certain issues to the attention of top management (Dutton & Ashford, 1993)—has examined, both theoretically as well as empirically, the actions that constitute the issue selling process (Dutton, Ashford, O’Neill, & Lawrence, 2001) and the contextual forces that affect a person’s willingness to engage issue selling in the first place (Ashford, Rothbard, Piederit, & Dutton, 1998; Dutton, Ashford, O’Neill, Hayes, & Wierba, 1997). While this research has developed a rich portrait of the issue selling process and the conditions that shape it, it has paid relatively scant attention to the outcomes of this process—that is, whether a person’s attempts to affect change (i.e., to get a new idea heard and implemented) are successful or not. The sparse knowledge that does exist about whether certain behaviors enhance the probability of successfully selling an issue comes from qualitative work (e.g., Dutton et al., 2001).

From previous research, then, it is not at all clear how (1) creativity relates to idea implementation, (2) what factors are most likely to improve the otherwise probably negative odds of creative ideas actually being implemented, and (3) how these factors combine to jointly shape idea implementation. The remainder of the Introduction addresses these three points.



## **Creativity and Idea Implementation**

Previous research has consistently documented that the production of ideas is a positive predictor of idea implementation (Axtell et al., 2000; Axtell et al., 2006; Frese et al., 1999). For example, in their study of design engineers in two large aerospace companies, Clegg et al. (2002) found a positive association of .57 between the number of ideas employees had suggested and the extent to which these ideas were eventually implemented. However, the link between *creativity* and implementation may not be as positive and straightforward as implied in this earlier work. Indeed, a number of commentators have cautioned that creativity and idea implementation may be only loosely coupled. According to these voices, the production of creative ideas is far more prevalent than their conversion into actual innovations (e.g., Levitt, 1963; West, 2002). The reason for this rather loose connection between creativity and implementation may be found largely in the novelty dimension of the concept of creativity. Although usefulness is a necessary requirement for ideas to be considered creative, the skepticism and resistance with which new ideas are often met is likely to be attributable more to variations in novelty rather than differences in usefulness. Thus, as long as the usefulness criterion is satisfied, the novelty aspect is likely to be the reason why the production of creative ideas does not invariably result in their ultimate implementation.

As they imply departures from or extensions of existing products, services, or ways of doing things, uncertainty is a signature feature of most creative ideas (e.g., Kanter, 1988; Pelz, 1985; Wolfe, 1995). Unfortunately, uncertainty often provokes disputes caused by differences in viewpoints among those who are affected by the ideas and such conflicts, in turn, may result in unnecessary delays in the implementation process or its ultimate failure altogether (Frost & Egri, 1991; Green, Welsh, & Dehler, 2003). Moreover, pressing for the implementation of new ideas typically implies that established power structures within the organization are challenged,

thereby causing resistance (Janssen et al., 2004; Kanter, 1988). In contrast to ideas of limited novelty, which typically can be accommodated within existing structures, creative ideas tend to be associated with more substantive changes—changes in roles, power, and status—and, as a consequence, have a greater likelihood of being rejected (Damanpour, 1988; Green, Gavin, & Aiman-Smith, 1995). Regardless of how promising an idea may be, its implementation will likely conflict with some interests and jeopardize some alliances (Kimberly, 1981). Thus, the opposition that creative ideas may encounter may have less to do with the merit of the idea but rather stem from the organizational and personal consequences they imply (Wolfe, 1995).

Due to their potential to elicit controversy and to alter the dynamics within the organization, creative ideas, compared to ideas that are more mundane, are naturally disadvantaged in harvesting the resources (funds, materials, etc.) necessary for their implementation (Damanpour, 1988; Norman, 1971). However, because the decision to allocate or redirect resources often involves multiple constituents who are likely to disagree about an idea's value, especially when ideas are novel and inherently ambiguous, this process is open to social-political maneuvers, and sponsorship and advocacy are natural mechanisms for influencing decisions in such circumstances (Green et al., 2003). As Kanter (1988: 186) noted, “The features of successful ideas have more to do with the likelihood of gathering political support than with the likelihood of the idea to produce results.” Thus, individuals who are able to mobilize the support of key allies should be in a position to sway important resource allocation decisions in their favor, thereby improving the odds that even their more creative ideas may be realized (Van de Ven, 1985; Howell & Higgins, 1990).

Taken together, the above discussion suggests that although the generation of ideas is a prerequisite for their ultimate implementation, creativity may exhibit a qualitatively different relation with implementation. Specifically, rather than facilitating idea implementation,

producing ideas that are creative, in the absence of certain mitigating factors, should make it less likely that these ideas find their way into practice. However, in circumstances in which people are driven to pursue their ideas and possess the necessary abilities or social relationships that allow them to involve and draw upon the resources of important supporters in the organization, the odds of creativity resulting in idea implementation should be enhanced. This line of argumentation suggests that the effects of creativity on implementation depend on the presence (or absence) of certain moderating factors. In addition, it suggests that to comprehensively describe the effects of creativity on implementation, it is necessary to consider all of these factors in concert. It is to this discussion that I now turn.

### **Implementation Instrumentality and Networking Ability as Moderators of the Creativity-Implementation Relation**

Innovation is a risky endeavor. For example, Janssen (2003) showed that innovative behavior, especially among those employees who were deeply involved in their jobs, often created conflict with coworkers which, in turn, resulted in less satisfactory relationships with those individuals. In addition, ideas may fail to produce anticipated returns, as a consequence of which, people may suffer losses in reputation as well as a withdrawal of trust from friends and sponsors (Yuan & Woodman, 2010). Given these prospects, people are unlikely to mobilize sponsorship and obtain advocacy in an effort to sway important resource allocation decisions unless they believe that the outcomes of such efforts offer significant returns (Dutton & Ashford, 1993). Indeed, people have long been known to act upon the expected consequences of their actions (Vroom, 1964). Thus, the extent to which individuals expect positive outcomes to be associated with their implementation efforts—a concept referred to as *implementation instrumentality*—is likely to serve as an important moderator of the relation between creativity and idea implementation.

Some evidence for implementation instrumentality serving as a potential moderator of the association between creativity and innovation was provided by Miron et al. (2004). These authors showed that creative individuals were rated as more innovative when they were also highly determined to realize their ideas. Additional support for the logic that outcome expectations are powerful motivating forces shaping innovative behavior was obtained by Yuan and Woodman (2010). These authors argued and showed that innovation is determined, at least partially, by both performance and image outcome expectations, defined as employees' beliefs that their innovative efforts will bring about performance improvements as well as result in certain image gains (or risks). Similar to the notion of outcome expectations as conceptualized by Yuan and Woodman (2010), implementation instrumentality captures the extent to which employees' believe that their innovative efforts will result in certain (desirable) outcomes. In contrast to this work, however, implementation instrumentality focuses on the outcomes expected to be associated with idea implementation specifically rather than with innovation more generally and not only captures the more extrinsic outcomes (e.g., image gains) of individuals' implementation efforts but also the intrinsic benefits flowing from such efforts.

Although the expectation of positive outcomes being associated with one's implementation efforts may provide the motivational impetus for people to seek the support and obtain the advocacy necessary to improve the odds of putting their creative ideas into practice, the ability to network is equally important to successfully navigate the social-political process of innovation (e.g., Kanter, 1983). Mobilizing sponsorship and advocacy requires that individuals have cultivated the types of social relationships—close connections to trusted friends and allies—that provide access to such assets (Obstfeld, 2005). Thus, without the ability to develop close connections and forge beneficial alliances, the motivation to implement may not allow people to improve the odds of realizing their creative ideas after all. *Networking ability*—defined

as the extent to which people are skilled in developing and using social networks to affect change at work (Ferris, Treadway, Kolodinsky, Hochwater, Kacmar, Douglas, & Frink, 2005; Ferris, Treadway, Perrewé, Brouer, Douglas, & Lux, 2007)—may therefore be expected to regulate the extent to which implementation instrumentality allows employees who develop creative ideas to improve the odds of these ideas ultimately being realized.

Previous theoretical and qualitative research has provided some support for the importance of the ability to involve others and build coalitions in selling issues and ideas to decision makers in the organization. For example, Dutton and Ashford (1993) theorized that assembling an alliance of potential supporters should allow issue sellers to better attract the attention of top management. Similarly, based on her qualitative work, Kanter (1983) concluded that the ability to build effective coalitions is critical for successful innovation. Although these previous efforts have not explicitly considered the role of networking ability in regulating, alongside motivation, the relation between creativity and actual idea implementation, they nevertheless highlight the importance of individuals' abilities to craft and utilize effective social networks in an effort to affect change in organizations.

Although it is expected that both implementation instrumentality and networking ability will be integral in overcoming the unfavorable odds that truly creative ideas are likely to face when being considered for implementation, the realization of ideas that are of limited creativity should depend to a lesser extent on the presence of these moderating factors. Given that ideas of limited creativity—ideas that are more mundane—tend to preserve the status quo rather than challenge it (Subramaniam & Youndt, 2005), they tend to be naturally favored and, as a result, more likely to harvest the resources needed for their implementation. In other words, motivation and networking ability are expected to offer fewer advantages when creativity is relatively low

and the fate of ideas is less likely to be depended upon the mobilization of trusted allies and the obtainment of important resources such as sponsorship and advocacy.

Overall, then, these arguments suggest that creativity should combine with both implementation instrumentality and networking ability to jointly affect idea implementation. In the absence of both motivation and ability, idea implementation should become less likely as creativity increases. Thus, when implementation instrumentality and networking ability are both low, the relation between creativity and implementation is expected to be negative. Relative to people who lack the motivation to implement their ideas and the ability to cultivate and use their social networks, those who are motivated or possess the requisite networking abilities should be more likely to realize their creative ideas, with the best odds belonging to those employees who are both driven to implement their ideas and gifted networkers. However, even under these most optimal of circumstances, it may not be possible to achieve implementation rates for highly creative ideas that are higher than those that can be expected when ideas are relatively less creative and, as a result, likely to get implemented without much opposition anyway. Thus, although high levels of both moderating factors should significantly improve the odds of highly creative ideas finding their way into practice relative to circumstances when both factors are at low levels, this does not necessarily imply that the relation will be positive. Thus,

**Hypothesis 1a.** Implementation instrumentality and networking ability will jointly moderate the relation between creativity and implementation; relative to individuals who lack implementation instrumentality and the ability to network, the relation should be less negative for those who possess either high levels of instrumentality or the ability to network, and least negative for those who possess both high levels of instrumentality and networking ability.

## **Strong Social Ties as Alternative Moderator to Networking Ability**

Given that part of individuals' success at implementing their creative ideas is rooted in their ability to forge the type of social relationships that provide access to resources such as sponsorship and advocacy, these social ties may also be considered as a potential moderator (along with implementation instrumentality) of the link between creativity and idea implementation.

Networking ability is likely to allow people to cultivate different types of social relationships and network constellations depending upon the needs of the circumstances in which they operate (Ferris et al., 2005, 2007). In other words, in circumstances in which people are primarily concerned with being able to access a wide range of different information, networking ability may translate into very different types of relationships than in circumstances in which employees are primarily concerned with getting new initiatives implemented. Thus, examining the nature of the relationships through which networking ability exerts its moderating effect (alongside instrumentality) on the link between creativity and implementation provides some clarification as to the social-structural mechanism involved during idea implementation.

The social ties that are the focus of the present examination are individuals' "buy-in" relationships—ties to others whose backing may allow people to successfully pursue initiatives within the organization (Podolny & Baron, 1997). Resources such as sponsorship and advocacy typically flow from buy-in networks primarily consisting of strong ties (i.e., ties to close colleagues or friends) (Coleman, 1988; Granovetter, 1973; Perry-Smith & Shalley, 2003). Hence, the number of strong buy-in ties is considered as a potential moderator regulating the joint effects of creativity and implementation instrumentality on idea implementation.

To mobilize sponsorship and advocacy, individuals may approach a wide range of contacts—subordinates, peers, managers of related functions, etc. Although individuals may be

occasionally in a position to offer their network contacts something tangible in exchange for their buy-in, more often than not, such exchanges involve less tangible assets—my support in the future in exchange for your sponsorship now (Kanter, 1983). Such implicit agreements, however, require the existence of mutual trust and norms of reciprocity—assets that are more likely to be developed when the ties connecting individuals to their buy-in contacts are strong rather than weak (Coleman, 1988; Obstfeld, 2005; Podolny & Baron, 1997). Thus, the number of strong buy-in ties may be expected to improve the odds that motivated individuals are able to implement their creative ideas.

Taken together, these arguments suggest that creativity should combine with both implementation instrumentality and the number of strong buy-in ties to jointly affect idea implementation. In the absence of both the motivation to pursue their ideas and multiple strong relationships, idea implementation should become less likely as creativity increases. Thus, when implementation instrumentality and the number of strong buy-in ties are both low, the relation between creativity and implementation is expected to be negative. Relative to people who lack implementation instrumentality and possess only a limited number of strong buy-in ties, those who are motivated or possess many strong ties should be more likely to realize their creative ideas, with the best odds belonging to those employees who are both motivated to implement their ideas and who have cultivated a large number of strong buy-in relationships. Thus,

**Hypothesis 1b.** Implementation instrumentality and strong buy-in ties will jointly moderate the relation between creativity and implementation; relative to individuals who lack implementation instrumentality and possess a limited number of strong buy-in ties, the relation should be less negative for those who possess either high levels of instrumentality or many strong ties, and least negative for those who possess both high levels of instrumentality and many strong ties.



## METHODS

### Research Setting and Participants

Hypotheses were tested in a sample of employees from a large, global agricultural processing firm. Employees from different divisions, including accounting, finance, processing, R&D, etc. and from different hierarchical levels, such as nonsupervisory employees, supervisors, etc. were approached for participation. Information on individuals' creativity, implementation instrumentality, networking ability, and buy-in networks was assessed via web-based surveys from participating employees. To avoid problems of common source variance, information on implementation was obtained via supervisor ratings. Finally, background information was obtained from archival records. A Human Resource Management liaison person identified all potential participants and their supervisors and provided a list of their names along with basic demographic information. In total, 531 employees and 111 supervisors were identified.

Out of the 531 employees invited to participate in the study, a total of 238 completed all sections of the survey for a response rate of 45 percent. Of the sample, 151 were men, 87 were women, and 94 percent were white. The mean age was 40.58 years (s.d. = 11.52) and average company tenure was 8.16 years (s.d. = 7.95). The median number of years of post-high school education was four years (i.e., bachelor's degree). Out of the 111 supervisors invited to participate in the study, a total of 98 provided employee ratings for a response rate of 88 percent. Of the sample, 86 were male, 25 were female, and 92 percent were white. The mean age was 46.55 years (s.d. = 8.57) and average company tenure was 14.39 years (s.d. = 9.10).

Characteristics of employee respondents and nonrespondents were generally similar. Specifically, there were no significant differences in terms of age ( $t[488] = .02, p > .05$ ), gender ( $\chi^2[1] = .89, p > .05$ ), or race ( $\chi^2[1] = .28, p > .05$ ). However, there were significant differences

in terms of company tenure ( $t[523] = 2.81, p < .01$ )—the average tenure of respondents (mean = 8.16 years) was significantly lower than the average tenure of nonrespondents (mean = 10.17 years) suggesting that shorter-tenured individuals may have been overrepresented in my sample. Because a number of supervisors of nonparticipating employees had provided ratings of implementation, it was possible to establish whether respondents and nonrespondents differed in terms of their engagement in this activity. No significant differences emerged for this variable ( $t[405] = -.22, p > .05$ ).

The final sample size dropped from 238 to 216 because for 22 participating employees it was not possible to obtain the necessary ratings. The ratings for this final sample were provided by 87 supervisors. The median number of employees rated by each supervisor was 2.

## **Measures**

***Creativity.*** This was measured with three items derived from those developed by Subramaniam and Youndt (2005): “Developed ideas that imply substantial departures from existing product and service lines;” “Developed ideas that make existing knowledge about current products/services obsolete;” “Developed breakthrough ideas—not minor changes to existing products/services.” Consistent with research using self-reports of creativity (e.g., Axtell et al., 2000; Shalley, Gilson, & Blum, 2009), employees indicated the extent to which each of the three statements was characteristic of the work they had produced over the past year using a scale ranging from 1 (“not at all characteristic”) to 7 (“extremely characteristic”). The three items were averaged to create a scale ( $\alpha = .87$ ).

***Implementation instrumentality.*** According to Vroom (1964), perceived instrumentality refers to the degree to which a person sees the outcome in question (e.g., the implementation of an idea) as leading to the attainment of other, second-level outcomes (e.g., praise, monetary rewards, etc.). Although expectancy theory requires that the instrumentality scores be weighted

by the valence (i.e., desirability) of each of the secondary outcomes and then be multiplied by the probability that a certain action (typically referring to a person's level of effort) would indeed be followed by the outcome in question, research has found that weighting instrumentality perceptions by valence adds little to the predictive power of the theory (Mitchell, 1974; Nadler & Lawler, 1983) and thus unweighted instrumentality scores will be used in the present study.

Typically, the second-level outcomes that follow the outcome in question are selected by the researcher and then presented to the employee for rating. Naturally, this carries the risk that some outcomes may be irrelevant to the employee, whereas other, relevant outcomes may be omitted (Van Eerde & Thierry, 1996). To ensure that all outcomes were indeed relevant to the sample under investigation, after selecting items based on the extant literature (e.g., Kanter, 1983), the list of outcomes was discussed with representatives from each of the participating divisions and adjustments were made based on their comments. Nine outcomes were selected and representatives indicated that these outcomes constituted a comprehensive list of relevant consequences of idea implementation at the organization.

To derive the instrumentality scores, participants were asked to report the extent to which they perceived each of the nine outcomes to be associated with the pursuit of idea implementation. Specifically, after reading the item stem, "Here are some things that could happen to people if they tried to turn their ideas into a new product, process, or procedure that is actually brought to market or implemented at [organization]. How likely is it that each of these things would happen if YOU tried to implement one of your ideas?", participants responded to the following items using a scale that ranged from 1 ("not at all likely") to 7 ("extremely likely"): My supervisor will praise me and my work; I will enhance my reputation as someone who can get things done; I will get a bonus or pay increase; I will get a promotion or a better job; I will get the feeling that I have accomplished something worthwhile; I will be given chances to

learn new things; I will have more freedom in my job; I will encounter resistance or active opposition (reversed scored); I will get the resources necessary to tackle other, even bigger projects. Values were averaged across the nine items ( $\alpha = .85$ ).

**Networking ability.** This was measured via the six-item networking ability scale of the Political Skill Inventory (PSI; Ferris et al., 2005). Sample items include: I am good at using my connections and networks to make things happen at work; I have developed a large network of colleagues and associates at work who I can call on for support when I really need to get things done. Items were rated on a scale that ranged from 1 (“strongly disagree”) to 7 (“strongly agree”) and then averaged ( $\alpha = .89$ ).

**Strong ties.** To capture individuals’ buy-in networks, employees first responded to a name generator question, “Most people turn to others for support when they try to get something done in their organization, such as implementing a new idea or changing a work procedure. Please write down the names, nicknames, or initials of all people whose support you can count on to move your ideas forward” (e.g., Rodan & Galunic, 2004). Based on discussions with representatives from the participating divisions, the number of contacts participants could list was limited to 15. However, participants could add additional contacts if they felt necessary and two participants did so. The number of buy-in contacts reported ranged from 1 to 17 with an average of 4.79 (s.d. = 3.78).

After listing their buy-in contacts, participants responded to a set of name interpreter questions for each contact. In accordance with the theoretical arguments, tie strength was operationalized via (emotional) closeness (Granovetter, 1973): “How close are you with each person?” (1 = acquaintance, 2 = distant colleague, 3 = friendly colleague, 4 = close colleague, 5 = very close colleague). To construct a measure of strong ties, ties were categorized into strong (i.e., close colleague and very close colleague) and weak (i.e., acquaintance, distant colleague,

and friendly colleague) ties and then the number of strong ties was counted (Marsden & Campbell, 1984; Perry-Smith, 2006).

**Implementation.** This was measured via three items developed for this study. On a scale that ranged from 1 (“never”) to 7 (“always”), supervisors rated the frequency with which employee’s ideas had reached certain stages of the implementation process, “Please rate the frequency with which, in the past, employee’s ideas (1) have been approved for further development; (2) have been transformed into usable products, processes, or procedures; (3) have been successfully brought to market or have been successfully implemented at (organization).” Responses were averaged to create an indicator of idea implementation ( $\alpha = .95$ ).<sup>1</sup>

To establish convergent validity for this measure, participants were asked to describe a few ideas they had been working on in the past and to estimate the extent to which each idea had been successfully implemented: “Think about the last 2-3 ideas that you have developed (alone or in collaboration with others but with major input from you) and that you tried to get implemented at (organization). How successful were these implementation efforts in each case?” The item was rated on a scale ranging from 1 (“not at all successful—idea was never considered for implementation”) to 7 (“extremely successful—idea was brought to market or implemented”). About 60 percent of participants provided information on this measure. To derive an indicator of implementation from the employee’s perspective, scores were averaged across all ideas reported by each participant ( $\alpha = .88$ ). Providing evidence of convergent validity,

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<sup>1</sup> Most supervisors rated only two employees in terms of their idea implementation. However, problems associated with nonindependence of observations may still arise. Although the parameter estimates in Table 2 are accurate, Bliese and Hanges (2004) noted that in models including only individual-level variables (such as is the case here), any potential nonindependence may result in too many Type II errors—a loss of power. Given the significance of the present findings, however, any loss of power is unlikely to have affected the results. Nevertheless, I repeated all analyses adjusting standard errors for correlations of error terms due to clustering within supervisors. Results of these analyses were virtually identical to those presented in Table 2, supporting the conclusion that the present findings were not significantly affected by nonindependence and are likely to be conservative estimates of the true effect.

this indicator of implementation significantly and positively correlated with the measure of implementation provided by supervisors ( $r = .26, p < .01$ ), with the size of the correlation being comparable to previous research (e.g., Janssen, 2000, 2001; Scott & Bruce, 1994).

**Control variables.** According to Ibarra (1993), the process of bringing new ideas into use is affected by both personal sources of power, such as education and experience (e.g., tenure) as well as structural sources, such as subunit membership and formal rank. Following this model and accounting for the possibility that any observed effects may be partially attributable to these variables (e.g., Cross & Cummings, 2004; Mumford & Gustafson, 1988; Obstfeld, 2005; Unsworth, Wall, & Carter, 2005), the following were included as control variables: education (years of post high school education), tenure (years in organization), divisional membership (series of dummy variables with audit as the default group), and position (1 = nonsupervisory/individual contributor, 2 = supervisor/ coordinator and/or technical expert, 3 = manager/director, 4 = senior management). In addition, to control for the possibility that any potential effects may be due not to the creativity of employees' ideas but rather to the number of ideas generated, frequency of idea generation was also included as a control variable. Using a response scale ranging from 1 ("once a year or less") to 5 ("every week"), employees indicated how often, on average, they came up with a new idea.

## RESULTS

Table 1 summarizes means, standard deviations, and correlations among the study variables. The relation between creativity and implementation was statistically nonsignificant ( $r = .13, p > .05$ ), providing some support for the notion that the production of creative ideas does not invariably result in their implementation.

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Insert Table 1 about here

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Hypothesis 1a stated that implementation instrumentality and networking ability would jointly moderate the relation between creativity and implementation such that relative to individuals who lacked both implementation instrumentality as well as the requisite networking skills, the relation would be less negative for those who were either motivated or skilled networkers, and least negative for those who were both motivated and skilled at crafting effective social relationships. Consistent with this hypothesis, the creativity  $\times$  implementation instrumentality  $\times$  networking ability three-way interaction entered in the last step of Model 1 was negative and statistically significant ( $\beta = -.18, p < .05$ ) (see Table 2).

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Insert Table 2 about here

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Providing initial support for Hypothesis 1a, simple slope analyses indicated that the relation between creativity and implementation was only negative and statistically significantly different from zero when employees lacked both the motivation to implement their ideas and the ability to network ( $\beta = -.90, t[190] = -1.85, p < .05$ ). In all other cases, the slopes between creativity and implementation did not differ statistically significantly from zero ( $\beta$ s =  $-.22, -.08, \& .04$   $t$ s[190] =  $-1.01, -.36, \& .38, p$ s  $> .05$ , for low instrumentality/high ability, high instrumentality/low ability, & high instrumentality/high ability, respectively). These slopes are displayed in Figure 1.

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Insert Figure 1 about here

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Hypothesis 1a postulated that the slopes for the relation between creativity and implementation when either instrumentality or networking ability were low would be significantly different (i.e., less negative) from the slope when both instrumentality and ability were low. In addition, Hypothesis 1a suggested that the slope when both instrumentality and ability were high would be significantly different (i.e., less negative) from the slopes when either

or both of these factors were low. To accurately test Hypothesis 1a, the slope difference test proposed by Dawson and Richter (2006) was used. In support of the hypothesis, results of this test showed that the slopes for the relation between creativity and implementation when either instrumentality or ability were low were indeed statistically significantly less negative (i.e., the difference was positive) compared to the slope when both factors were low ( $ts[190] = 2.41$  &  $1.84$ ,  $ps < .01$  &  $.05$  for high instrumentality/low ability & low instrumentality/high ability, respectively) (see Table 3). Also supportive of the proposed pattern of relations, results revealed that the slope when both instrumentality and ability were high was statistically significantly less negative compared to the slope when both factors were low ( $t[190] = 2.10$ ,  $p < .05$ ) and compared to the slope when instrumentality was low and ability was high ( $t[190] = 1.63$ ,  $p < .05$ ). However, failing to support Hypothesis 1a, no statistically significant difference emerged between the slope when both instrumentality and ability were high and the slope when instrumentality was high and ability was low ( $t[190] = .67$ ,  $p > .05$ ). Thus, there was only partial support for Hypothesis 1a.

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Insert Table 3 about here

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Hypothesis 1b stated that implementation instrumentality and strong buy-in ties would jointly moderate the relation between creativity and implementation such that relative to individuals who lacked both instrumentality as well as a number of strong buy-in ties, the relation would be less negative for those who were either motivated or possessed many strong ties, and least negative for those who were both motivated and had cultivated a number of strong buy-in relationships. Consistent with this hypothesis, the creativity  $\times$  implementation



instrumentality  $\times$  strong tie three-way interaction entered in the last step of Model 2 was negative and statistically significant ( $\beta = -.25, p < .01$ ) (see Table 2).<sup>2</sup>

Providing initial support for Hypothesis 1b, simple slope analyses indicated that the relation between creativity and implementation was only negative and statistically significantly different from zero when employees lacked both the instrumentality to implement their ideas and a number strong buy-in ties ( $\beta = -.55, t[190] = -2.02, p < .05$ ). In all other cases, the slopes between creativity and implementation did not differ statistically significantly from zero ( $\beta$ s =  $-.10, -.12, \& .01$   $t$ s[190] =  $-.50, -.91, \& .10, p$ s  $> .05$ , for low instrumentality/high strong ties, high instrumentality/low strong ties, & high instrumentality/high strong ties, respectively). These slopes are displayed in Figure 2.

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Insert Figure 2 about here

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Hypothesis 1b postulated that the slopes for the relation between creativity and implementation when either instrumentality or strong ties were low would be significantly different (i.e., less negative) from the slope when both instrumentality and strong ties were low. In addition, Hypothesis 1b suggested that the slope when both instrumentality and strong ties were high would be significantly different (i.e., less negative) from the slopes when either or both of these factors were low. In support of the hypothesis, results of Dawson and Richter's (2006) test showed that the slopes for the relation between creativity and implementation when either instrumentality or strong ties were low were indeed statistically significantly less negative compared to the slope when both factors were low ( $t$ s[190] =  $2.32 \& 2.78, p$ s  $< .05 \& < .01$  for high instrumentality/low strong ties & low instrumentality/high strong ties, respectively) (see

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<sup>2</sup> Providing additional support for Hypothesis 1b, repeating this analysis using a measure of the number of weak ties (i.e., acquaintances, distant colleagues, and friendly colleagues) did not produce a statistically significant three-way interaction ( $p > .05$ ).

Table 3). Also supportive of the proposed pattern of relations, results revealed that the slope when both instrumentality and strong ties were high was statistically significantly less negative compared to the slope when both factors were low ( $t[190] = 2.48, p < .01$ ) and compared to the slope when instrumentality was high and strong ties was low ( $t[190] = 1.65, p < .05$ ). However, failing to support Hypothesis 1b, no statistically significant difference emerged between the slope when both instrumentality and strong ties were high and the slope when instrumentality was low and strong ties was high ( $t[190] = .79, p > .05$ ). Thus, Hypothesis 1b was only partially supported.<sup>3 4</sup>

## DISCUSSION

The findings of this study provide general support for the proposed framework. Consistent with Hypothesis 1a, results indicated that although creativity may often be negatively received squelching the chances for successful implementation, the odds of implementing creative ideas can be significantly improved when individuals are highly motivated to move their ideas forward to realization and/or when they are skilled networkers. In support of the arguments presented earlier, a lack of implementation instrumentality and networking ability indeed significantly hampered the implementation of creative ideas as compared to conditions when

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<sup>3</sup> Repeating all analyses substituting number of ideas for creativity did not produce any significant three-way interactions ( $ps > .05$ ).

<sup>4</sup> Given that networking ability should partially determine the extent to which individuals are able to cultivate networks of strong buy-in ties, I also examined the possibility that the moderating effect of networking ability on the joint association between creativity and instrumentality, and implementation was mediated by the number of strong buy-in ties (see Grant & Berry, 2011 for another example in which one moderating variable mediates the effect of another). Providing initial support for this logic, there was a positive relation between networking ability and strong ties ( $r = .18, p < .01$ ). In addition, simultaneously entering the three-way interaction involving networking ability and the three-way interaction involving strong ties into an equation predicting implementation (controlling for all relevant two-way interactions) revealed that the mediating interaction involving strong ties remained statistically significant ( $\beta = -.20, p < .05$ ), while the previously significant interaction involving networking ability became nonsignificant ( $\beta = -.14, p > .05$ ). The indirect effect was statistically significant according to Sobel's (1982) test ( $z = 2.04, p < .05$ ), supporting the notion that networking ability (in concert with creativity and implementation instrumentality) only impacted implementation to the extent that it allowed actors to develop and maintain strong buy-in relationships.

individuals possessed the motivation to implement their ideas, the ability to network, or both. However, the lack of difference between the slope when both implementation instrumentality and networking ability were high and the slope when instrumentality was high but networking ability was low, indicates that once employees were motivated to push their ideas toward implementation, networking ability was of limited importance. These results suggest that although a lack of both implementation instrumentality and networking ability significantly reduces the likelihood that creative ideas are implemented, once individuals perceive that idea implementation results in certain desirable outcomes, networking ability has limited marginal benefits.

Further solidifying the general framework proposed here, results for Hypothesis 1b indicated that, similar to networking ability, the number of strong buy-in ties combined with implementation instrumentality to jointly affect the relation between creativity and implementation. Consistent with earlier arguments, individuals who reported low levels of implementation instrumentality and who had cultivated only few strong buy-in relationships were significantly less likely to see their creative ideas come to fruition compared to individuals who were highly motivated to engage the implementation process, who had cultivated a larger net of strong buy-in relationships, or both. However, the lack of difference between the slope when both implementation instrumentality and strong ties were high and the slope when strong ties was high but instrumentality was low indicates that once the number of strong ties reached a certain number, implementation instrumentality was of limited additional benefits. These results suggest that although a lack of both implementation instrumentality and a sufficient number of strong buy-in ties significantly reduces the likelihood that creative ideas are realized, once individuals have established a critical mass of close buy-in relationships, motivation has only limited marginal benefits.

This conclusion is contrary to the earlier findings suggesting that networking ability may be relatively less important than the motivation to implement one's ideas. This discrepancy may be explained by the difference between networking ability and the number of strong ties. Although both concepts are functionally equivalent in capturing the potential of employees to mobilize support and obtain advocacy, the number of strong ties is a more direct indicator of access to such resources than the more distal measure of networking ability. This conclusion is supported by the finding that the moderating effect of networking ability was mediated by the moderating effect of strong ties (see footnote 5). Thus, while both concepts are functionally equivalent and are empirically related, the fact that the number of strong buy-in ties is a more proximal indicator of access to sponsorship and advocacy than networking ability may have resulted in stronger findings for this measure and the conclusion that motivation may have only limited marginal benefits as compared to the number of close buy-in relationship.

### **Theoretical Contributions**

The findings presented here contribute to the innovation literature in a number of ways. First, they contribute to the emerging stream of research recognizing that creativity and idea implementation are two different activities of the innovation process. Although some previous work has treated creativity and implementation as reflective of the same underlying concept or focused on idea generation, not creativity as a predictor of implementation (e.g., Axtell et al., 2000; Clegg et al., 2002; Frese et al., 1999; Janssen, 2001; Scott & Bruce, 1994), the results of the present study suggest that to the extent that the focus is on the nature of people's ideas, not quantity, creativity and implementation are neither synonymous nor necessarily positively related. In fact, results of the regression analyses revealed that while the number of ideas and implementation were positively related as expected, creativity and implementation were significantly negatively related when both instrumentality and networking ability/strong ties

were low. Thus, in contrast to previous research, the findings of this study suggest that the mere production of creative ideas does not ensure that these ideas are eventually implemented.

In addition to highlighting that creativity and implementation are only loosely connected, the present study also advances our knowledge of the nature of this connection by suggesting that the link between creativity and implementation cannot be properly understood without considering the simultaneous influence of both personal and relational contingencies. Consistent with this general framework, the findings of this study suggest that the motivation to implement one's ideas and the ability to network or, alternatively, the strength of people's actual network relationships, serve as moderating factors that jointly determine the extent to which creative ideas are eventually realized. Providing insights into the functional pattern of this interplay, the current findings indicate that a lack of both implementation instrumentality and ability/strong ties significantly hampers the implementation of creative ideas as compared to conditions when individuals possess the instrumentality to implement their ideas, the ability to network/strong ties, or both. In addition, results suggest that when individuals are primarily involved in the development of ideas of relatively limited creativity, idea implementation is largely independent of individuals' motivation and networking ability/strong ties. Although previous work on the social-political perspective on innovation has acknowledged the importance of involving others during the innovation process and discussed some of the factors examined here (e.g., Dutton & Ashford, 1993; Frost & Egri, 1991; Kanter, 1983), the present study extends this work by identifying the factors that are most critical to ensuring others' involvement and by considering how these factors, along with creativity, jointly shape actual idea implementation.

Finally, consistent with accounts highlighting the importance of outcome expectations in affecting employee innovation (Farr & Ford, 1990; Frese et al., 1999; Yuan & Woodman, 2010),

the results of the present study suggest that the implementation of creative ideas is not only influenced by intrinsic motivational considerations (e.g., sense of accomplishment, increased autonomy), which have been the focus of previous research in the area of creativity (e.g., Amabile, 1996; Oldham & Cummings, 1996), but also by extrinsic motivational considerations, such as monetary, career, and reputational benefits.<sup>5</sup> As hypothesized, however, these motivational forces did not directly shape idea implementation but only in conjunction with the creativity of people's ideas as well as certain abilities or relational features. Thus, in addition to highlighting the benefits of both intrinsic and extrinsic interests for innovation in the workplace, the findings of this study extend earlier work by advocating and demonstrating the validity of a more nuanced perspective separating creativity from implementation and considering motivation as a moderator of the link between creativity and idea implementation.

### **Limitations and Suggestions for Future Research**

Despite these contributions, the study is not without its limitations. First, the results have been interpreted in accordance with the hypothesized causal order, such that creativity along with instrumentality and networking ability or strong/high status buy-in ties result in different levels of idea implementation. The cross-sectional nature of the study, however, limits the ability to determine causality. For example, it is possible that the implementation of creative ideas influences a person's instrumentality to pursue the realization of ideas in the future, which is likely to affect not only subsequent levels of implementation but also the subsequent production of creative ideas. In addition, it is conceivable that engaging the idea implementation process also shapes a person's future networking ability and access to sponsorship via strong buy-in ties.

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<sup>5</sup> Additional analyses separating implementation motivation into its extrinsic and intrinsic components revealed that both motivational orientations produced similar patterns of results.

Thus, future studies employing longitudinal designs are now needed to not only examine the relations posited in the present study but to also explore potential reciprocal relations.

In addition, examining only one organization may limit the generalizability of the results presented here. Naturally, it is possible that different results may have been obtained if organizations from a wide range of industries had been included. Although locations from all major divisions (even those that are traditionally not considered hotbeds of innovation) of a large, global organization were sampled, it is nevertheless possible that the results, because of potentially idiosyncratic features of the focal organization, are not generalizable to organizations in other industries or organizations in general. Future research sampling a wide range of organizations across different industries is needed to address this issue.

Next, I focused on individuals' ability to cultivate network relationships as a means to mobilize the support and advocacy needed to bring creative ideas to fruition. Although innovation in organizations has often been characterized as a social-political process (e.g., Van de Ven, 1986; Yuan & Woodman, 2010), thereby justifying this focus on skills that are social in nature, idea implementation may not only be impacted by individuals' ability to network but also by their ability to design or structure ideas in such a way that they are particularly likely to be implemented. Domain relevant skills have been suggested to be integral to the development of creative ideas (Amabile, 1996), and such skills may also be relevant when actors attempt to implement their contributions. Future research therefore may want to capture expertise, technical skills, and other relevant talents in addition to networking skills when examining the factors that enhance the conversion of new ideas into innovations.

Finally, the current examination assumed a person-centric perspective on innovation in organizations. In contrast to previous work, which has highlighted the importance of organizational variables as antecedents to idea implementation (e.g. Axtell et al., 2000; Axtell et

al., 2006), the focus of this study was on personal (motivation, ability) and relational (strength of buy-in ties) factors. Although the results support the importance of these more micro-level influences, it may nevertheless be possible that more macro-level factors, such as organizational and team support for innovation may serve to additionally regulate the link between creativity and implementation. Although the present findings are encouraging in suggesting that when employees are savvy networkers and driven to implement their ideas, even their most creative ideas—ideas with the greatest potential to disrupt the status quo—are as likely to be implemented as their less controversial contributions, it may be possible that certain contextual factors further enhance the chances of creative ideas ultimately making it into practice. Considering both personal/relational *and* organizational factors may therefore prove to be a fruitful avenue for future research.

### **Practical Implications**

These limitations notwithstanding, the results of this study have some interesting practical implications. Because the odds of implementing creative ideas can be rather small, one of the implications of this work is that organizations and managers need to be aware that some of their potentially most productive ideas may never be realized and that this may be due to social-political dynamics rather than issues related to the idea itself (Levitt, 1963; Mintzberg, 1983). Although there may be good reasons for organizations to focus their efforts on contributions of lower creativity due to the potential for more highly creative ideas to cause conflict and create disruptions, the results of this study suggest that the implementation of creative ideas is a fragile endeavor that requires systematic attention to a number of conditions if to be successfully executed.

To promote the development of instrumentality perceptions associated with implementation activities, managers need to establish a systematic approach to acknowledging



and rewarding their employees' implementation efforts. Although the benefits of providing both intrinsic and extrinsic rewards in stimulating creativity are well-documented (e.g., Amabile, 1996; Eisenberger & Armeli, 1997; Eisenberger, Armeli, & Pretz, 1998), creating outcome expectations with respect to implementation activities that satisfy both intrinsic and extrinsic motives appears to be equally as important. Thus, managers need to develop an intimate understanding of their employees to discern, among the wide range of potentially relevant intrinsic and extrinsic factors, those that are likely to motivate each individual's implementation efforts. Once identified, managers need to establish a systematic approach to rewarding such efforts in a balanced manner.

To promote networking ability and the cultivation of strong ties to players willing to support others' implementation efforts—the second necessary condition improving the odds of creative ideas being eventually realized—managers may want to focus their efforts not only on selecting individuals who fit a certain personality profile (e.g., extraverted, agreeable, etc.) or who are skilled networkers but also on providing individuals with opportunities allowing them to develop their networking skills (Ferris et al., 2007). For example, providing individuals with role models promoting the emulation of certain behaviors, such as networking, may be one way. Assigning talented and socially savvy mentors who observe employees' behaviors and, in regular time intervals, provide developmental feedback may be another way for an organization to cultivate networking skills among its workforce. Together with initiatives aimed at enhancing individuals' implementation instrumentality, such efforts are then likely to improve the odds that even creative ideas are eventually realized.

## **Conclusion**

Throughout this paper, I have argued that the relation between the creativity of ideas and their implementation may be less straightforward than the relation between idea quantity and

implementation. The findings of this study support this argumentation and suggest that unless actors are motivated to push for the realization of their ideas and skilled at developing strong “buy-in” relationships, creativity is likely to be squelched.

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**TABLE 1**

**Means, Standard Deviations, and Intercorrelations among All Variables<sup>a</sup>**

Variables	Mean	s.d.	1	2	3	4	5	6	7	8
1. Education	4.49	2.44	—							
2. Position	0.79	0.72	-.01	—						
3. Tenure	8.24	8.01	-.31**	.19**	—					
4. Number of ideas	2.43	1.07	.19**	.23**	-.08	—				
5. Creativity	2.47	1.30	.22**	.24**	-.05	.41**	—			
6. Implementation instrumentality	4.25	1.07	.00	.01	-.08	-.06	.01	—		
7. Networking ability	4.07	1.12	-.13	.19**	.15*	.07	.17*	.23**	—	
8. Strong ties	2.20	2.25	-.16*	.10	.13	.12	.26**	.00	.18**	—
9. Implementation	3.62	1.43	.03	.10	.05	.11	.13	.05	.02	.07

<sup>a</sup>  $n = 207$  (listwise deletion).

\*  $p < .05$ .

\*\*  $p < .01$ .

**TABLE 2**

**Results of Regression Analyses for Implementation<sup>a</sup>**

Variables	Model 1		Model 2	
	entry $\beta$	final $\beta$	entry $\beta$	final $\beta$
<b>Control Variables</b>				
Accounting	0.14	0.14	0.14	0.13
Finance	0.29**	0.29**	0.29**	0.30**
Processing	0.04	0.04	0.04	0.05
R&D	0.30**	0.27*	0.30**	0.28*
Sales	0.07	0.08	0.07	0.08
Education	0.01	0.03	0.01	0.01
Position	0.10	0.06	0.10	0.07
Tenure	0.08	0.09	0.08	0.07
Number of ideas	0.15*	0.12	0.15*	0.15*
$\Delta R^2$	0.11		0.11	
$\Delta F$	2.73**		2.73**	
<b>Main Effects</b>				
Creativity	0.05	0.11	0.04	0.05
Implementation instrumentality	0.05	0.09	0.05	0.08
Networking ability	0.01	0.00	—	—
Strong ties	—	—	0.04	0.09
$\Delta R^2$	0.01		0.01	
$\Delta F$	0.40		0.52	
<b>Two-way Interactions</b>				
Creativity $\times$ Implementation instrumentality	0.05	0.08	0.03	0.06
Creativity $\times$ Networking ability	-0.06	-0.04	—	—
Creativity $\times$ Strong ties	—	—	-0.02	0.01
Implementation instrumentality $\times$ Networking ability	-0.01	0.01	—	—
Implementation instrumentality $\times$ Strong ties	—	—	0.02	0.12
$\Delta R^2$	0.00		0.00	
$\Delta F$	0.29		0.07	

Three-way Interactions				
Creativity × Implementation instrumentality × Networking ability	-0.18*	-0.18*	—	—
Creativity × Implementation instrumentality × Strong ties	—	—	-0.25**	-0.25**
$\Delta R^2$	0.03		0.04	
$\Delta F$	5.58*		9.65**	
$R^2$		0.15		0.16
$F$		2.02*		2.29**

<sup>a</sup>  $n = 207$  (listwise deletion). Divisional membership coded as a series of dummy variables with audit as the default group.

\*  $p < .05$ .

\*\*  $p < .01$ .

**TABLE 3**  
**T-Tests of Slope Differences**

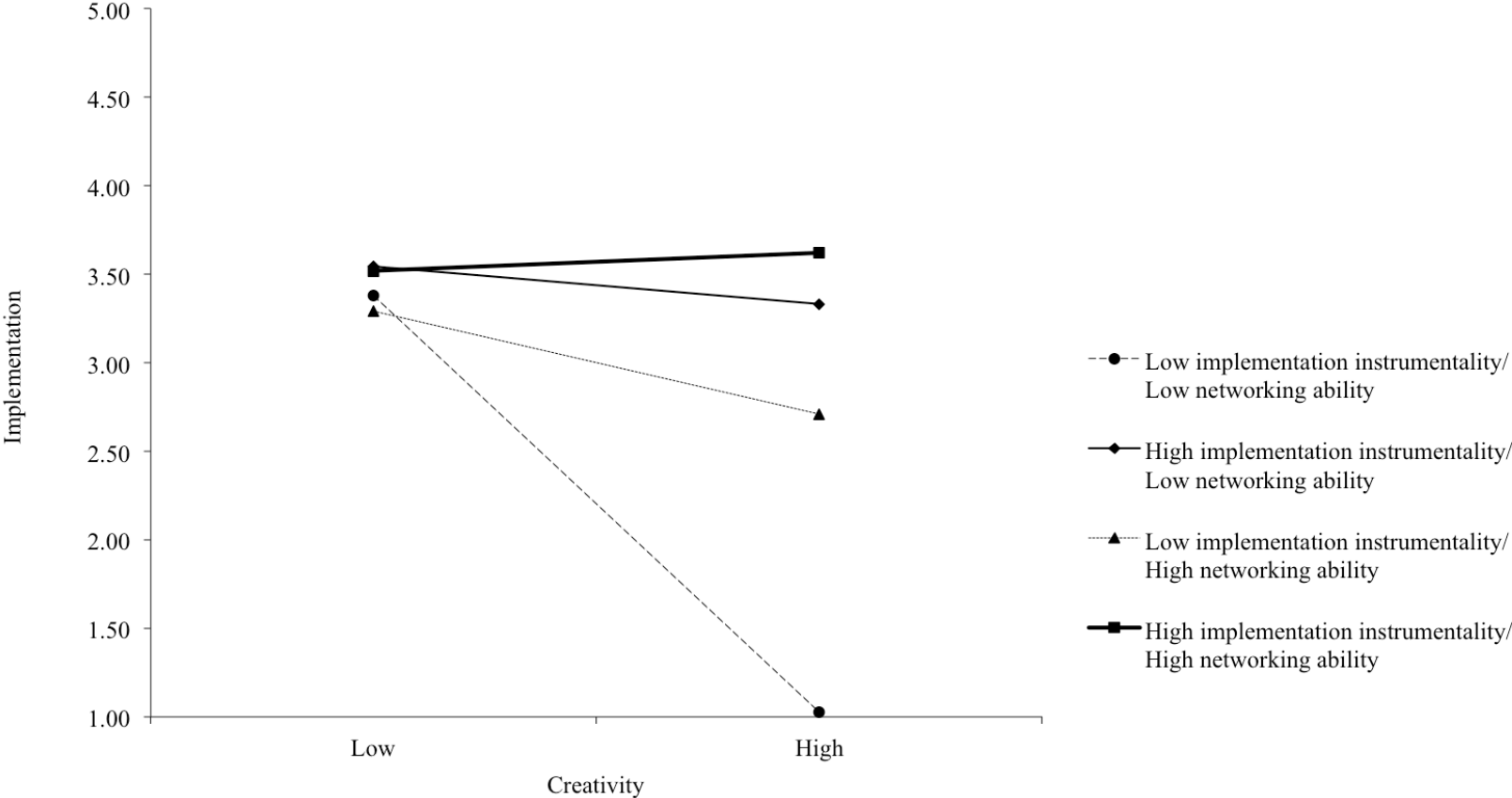
Slope Pairs	Networking Ability	Strong Ties
Implementation instrumentality <sub>high</sub> and Networking ability/strong ties <sub>high</sub> vs. Implementation instrumentality <sub>high</sub> and Networking ability/strong ties <sub>low</sub>	0.67	1.65*
Implementation instrumentality <sub>high</sub> and Networking ability/strong ties <sub>high</sub> vs. Implementation instrumentality <sub>low</sub> and Networking ability/strong ties <sub>high</sub>	1.63*	0.79
Implementation instrumentality <sub>high</sub> and Networking ability/strong ties <sub>high</sub> vs. Implementation instrumentality <sub>low</sub> and Networking ability/strong ties <sub>low</sub>	2.10*	2.48**
Implementation instrumentality <sub>high</sub> and Networking ability/strong ties <sub>low</sub> vs. Implementation instrumentality <sub>low</sub> and Networking ability/strong ties <sub>high</sub>	0.61	-0.11
Implementation instrumentality <sub>high</sub> and Networking ability/strong ties <sub>low</sub> vs. Implementation instrumentality <sub>low</sub> and Networking ability/strong ties <sub>low</sub>	2.41**	2.32*
Implementation instrumentality <sub>low</sub> and Networking ability/strong ties <sub>high</sub> vs. Implementation instrumentality <sub>low</sub> and Networking ability/strong ties <sub>low</sub>	1.84*	2.78**

\*  $p < .05$ .

\*\*  $p < .01$ .

**FIGURE 1**

**Interaction of Creativity, Implementation Instrumentality, and Networking Ability on Implementation**



**FIGURE 2**

**Interaction of Creativity, Implementation Instrumentality, and Strong Ties on Implementation**

