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Angela M. Farabee
University of Missouri-St. Louis, angelafarabee@gmail.com

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by

Angela M. Farabee

M. A., Psychology, University of Missouri – Saint Louis, 2009
B. S., Psychology, Truman State University, 2006

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Advisory Committee

James Breaugh, Ph.D.
Chairperson

Deborah Balser, Ph.D.

John Meriac, Ph.D.

Stephanie Merritt, Ph.D.

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Abstract

The relationship between person-organization fit (PO fit) and creativity was investigated in this study. Based on the attraction-selection-attrition framework (Schneider, 1987), over time organizational members become more homogeneous (e.g., on cultural values) which may be less conducive for individual employee creativity. Person-organization fit, defined as congruence on the non-creativity values from the competing values model (Quinn, 1988), was hypothesized to negatively relate to creativity. This had partial support for internal processes value fit when considering individuals in a low creative culture, otherwise it was unsupported. It was also hypothesized and moderately supported that fit on creativity/innovation value would be positively related to creativity. Individual conformity preference and willingness to take risks were included as moderators. Risk-taking was the only significant moderator and was only significant for the relationship between creativity/innovation value fit and creativity. Based on an exploratory analysis, anticipated reward for creativity was the largest positive predictor of creativity compared to fit and other predictors of creativity. A sample of currently working or previously employed undergraduate and graduate students served as participants and the outcome variable (i.e., creativity) was collected from supervisors and coworkers. Differences in the results between self and other ratings are discussed.

Keywords: Person-organization fit, creativity, competing values model

Person-Organization Fit as a Barrier to Employee Creativity

Organizational leaders are beginning to recognize the value of promoting the creativity and innovation of their employees. In a recent survey of company executives, 83% mentioned innovation as part of their organization's economic recovery strategy (Andrew, 2010). In order to be innovative, employees must initially be creative. The implication for organizations seeking to be innovative is that they must first focus on cultivating creativity within the organization. While creativity and innovation are related, they are distinct. Creativity is the production of ideas around products, processes, or procedures that are novel or original and potentially useful to the employing organization (Amabile, 1983) and innovation is the implementation of those creative ideas (West & Atlink, 1996). In this economy, organizations and their members need to be able to create and innovate to remain competitive in their market (Andrew, 2010). While researchers have identified many barriers and promoters of the first stage of innovation, creativity (e.g., Shalley, Zhou, & Oldham, 2004), minimal attention has been given to a potential barrier of creativity, person-organization fit.

Person-organization fit (PO fit) can be defined as the congruence between individuals and organizations for which they work on a host of different dimensions (e.g., values, goals, personality; Kristof, 1996). Typically, PO fit is related to important work outcomes for both the employee and the organization, regardless of which dimension is used (Arthur, Bell, Villado, & Doverspike, 2006; Hoffman & Woehr, 2006; Kristof-Brown, Zimmerman, & Johnson, 2005; Verquer, Beehr, & Wagner, 2003). The better the fit, the more committed employees are to their organizations, the more satisfied they are with their organization and job, and the less likely they are to leave their organizations.

The previous examples are representative of the PO fit literature in that the outcomes typically investigated are positive (Harrison, 2007). That is, the more a person fits with the organization, the more positive the outcomes. However, based on theoretical models (i.e., attraction-selection-attrition framework, Schneider, 1987; strength of weak ties, Granovetter, 1973) and related research, individuals with a strong fit with an organization may be less likely to be creative. Although the proposed negative link between PO fit and creativity has not yet been investigated in the literature, a parallel example can be drawn from research on teams. Some research suggests that the more similar team members are, particularly on demographic variables, the less creativity they exhibit (Milliken, Bartel, & Kurtzberg, 2003; West, 2001). Likewise, the more diverse a team, the more creative ideas result (cf., Shin & Zhou, 2007; Zhou & Shalley, 2011). Potentially, based on this example, employees with a high PO fit may not be as creative as those who have less of a fit with the organization. Given the importance of fostering employee creativity, the purpose of this study was to fill the gap in the literature concerning the relationship between PO fit and individual employee creativity. In addition to PO fit, a selection of already established predictors of creativity was included in this study in order to expand the nomological network surrounding these constructs. Lastly, individuals' preference for conformity and willingness to take risks were investigated as potential moderators between the relationship of PO fit and individual employee creativity (see Figure 1).

Theoretical Foundation

Attraction-Selection-Attrition. Schneider's (1987) attraction-selection-attrition (ASA) framework for organizations provides the foundation for the hypothesis that individuals' creativity at work may be negatively impacted by a high fit between the

employee and the organization. The main premise of ASA is that individuals are attracted to and selected by organizations that are similar to them. Moreover, individuals who do not believe they fit with the organization tend to turnover. As the ASA cycle continues, the resulting workforce is suggested to become more homogeneous in terms of its values, attitudes, and personality (Schneider, Goldstein, & Smith, 1995). Jordan, Herriot, and Chalmers (1991) and Schneider, Smith, Taylor, and Fleenor (1998) found similar results confirming that homogeneity in organizations exists. In their studies, they established that organizations could be differentiated based on personality measures of their top management. Specifically, top management within an organization displayed similar personality profiles to one another, whereas top management between organizations displayed different personality profiles. This homogeneity may result in less creativity and innovation (e.g., due to shared mental models; Schneider et al., 1995).

Additional demonstrations that organizations become homogeneous over time have been studied indirectly using PO fit. For example, the higher the anticipated PO fit, the more attracted applicants are to the organization and the more likely they are to pursue a job with the company (Chapman, Uggerslev, Carroll, Piasentin, & Jones, 2005). Once selected by an organization, those with high PO fit tend to stay and those who do not fit will likely leave (Chatman, 1989; Kristof-Brown et al., 2005). Overall, the ASA model has continued to receive support and suggests that, over time, organizations will become more homogeneous (Giberson, Resick, & Dickson, 2005; Schneider, 2008).

Individuals interacting with similar others in an organization can create an environment of shared values and norms, that is, a strong homogeneous organizational culture. Organizational culture can be defined as “the pattern of shared beliefs and values

that gives members of an institution meaning, and provides them with the rules for behavior in their organization" (Davis, 1984, p. 1). In a strong organizational culture, most employees will abide by the same rules. Any behavior that is outside of that routine will likely not be engaged in. In addition, individuals are more likely to have similar mental models, that is, similar ways of thinking (Schneider et al., 1995). Those with similar mental models are less likely to think divergently (e.g., identifying multiple solutions to a problem) and creativity has been found to improve with divergent thinking (e.g., Basadur, Wakabayashi, & Graen, 1990; Mumford & Gustafson, 1988).

Strength of weak ties. Beyond the ASA framework, little theory and research exists to support why there should be a negative link between PO fit and creativity. However, although not directly tested in the current study, additional support can be garnered from Granovetter's (1973) strength of weak ties theory. Specifically, the strength of weak ties theory helps explain why individuals maintain the status quo by following the norms and culture of their organization as opposed to being creative.

The premise of weak ties is that there are social networks of individuals consisting of those who are close to us (strong ties) and others who are not as close and are more like acquaintances (weak ties). Granovetter (1973) suggested that individuals have both weak and strong ties to others (e.g., perceived closeness, frequency of interaction, emotional intensity). Employees who belong to a dense collection of strong ties (i.e., a group of mutually connecting strong ties) often share similar information and perspectives (Burt, 2004; Zhou, Shin, Brass, Choi, & Zhang, 2009). This similarity stems from the concept of homophily (Byrne, 1971). That is, individuals naturally prefer to interact with others who are similar to them; not unlike how the ASA framework suggests that employees will

turnover when they are not similar to others in the organization (e.g., lack of PO fit). In turn, by interacting with similar others, the perceptions and attitudes of every individual tend to be reinforced. The potential result is the creation of social pressures to conform to the current norms of the organization or group. Beyond conformity, individuals may have perceptual blinders to other opportunities due to their shared mental models (Das & Teng, 1999). That is to say an individual might not have enough differing information to offer any new and useful ideas.

On the other hand, connections with weak ties are thought to provide accessibility to diverse perspectives and experience, to spread ideas, and to challenge existing assumptions (Brass, 1995; Granovetter, 1973; cf., Burt, 1992) which are valuable for creativity (e.g., Amabile 1983; Perry-Smith, 2006). Both Perry-Smith (2006) and Zhou et al. (2009) found support for the positive relationship between the number of weak ties individuals had and creativity; supporting the idea that there is strength in weak ties (e.g., more creativity). In addition, Zhou et al. (2009) found that the number of weak ties promotes creativity up to a point and then their usefulness is diminished (i.e., a curvilinear relationship). The explanation behind this finding was that an abundance of weak ties may actually be detrimental to creativity because it would be more challenging to (a) have meaningful discussions with many weak ties and (b) to synthesize all the diverse information. Mechanisms suggested by the strength of weak ties theory for why PO fit should be related to creativity (e.g., differing information and perspectives) were not considered currently as social network methodology was beyond the purposes of this study.

Before leaving the strength of weak ties theory, a few more insights can be garnered from the two studies previously cited (i.e., Perry-Smith, 2006 and Zhou et al., 2009). In both Perry-Smith (2006) and Zhou et al. (2009), the number of strong ties an individual had was not related to creativity. Zhou et al. (2009) hypothesized that this relationship would be negative for the reasons that strong ties may make individuals conform or expose them only to the similar information. Zhou et al. suggested the explanation for the non-significant relationship found between the two could be that the number of strong ties has both a positive and negative effect on creativity; therefore, cancelling out the relationship. There is a potential positive effect as strong ties provide support to the employee, and support from both supervisors and coworkers have been found to positively influence creativity (e.g., Amabile, Conti, Coon, Lazenby, & Herron, 1996). The possible negative effect is as the strength of weak ties theory would suggest; the lack of differing perspectives may impede creativity. Although I hypothesized that there will be a negative relationship between PO fit and creativity, as opposed to a non-significant relationship, other correlates of creativity (e.g., supervisor support) were included, not only to expand the nomological network, but also to help explain some of the findings.

Interactionist perspective on behavior. An overarching connector between PO fit and creativity is that they both stem from the interactionist perspective (Lewin, 1936; Pervin, 1989). The crux of the interactionist perspective is that behavior is not solely a function of individual characteristics (Allport, 1937) or solely a function of situational characteristics (Mischel, 1968); instead, it is the joint effects of the individual and the environmental characteristics that determine behavior. Person-organization fit influences

behavior because of the interacting effect of the characteristics of the individual and the environment (Edwards, 2008) and creativity (i.e., behavior) is thought to be influenced by both individual and environmental characteristics (Amabile, 1983; Woodman & Schoenfeldt, 1990; Woodman, Sawyer, & Griffin, 1993). In order to provide context for the present study, an examination of the conceptualizations of both PO fit and creativity will be presented.

Conceptualization of PO Fit

As previously mentioned, PO fit has often been defined as the congruence between an individual's characteristics and the organization's characteristics (Kristof, 1996). The two words in the definition of PO fit that need further explanation are "congruence" and "characteristics." Congruence has been conceptualized in two main ways, supplementary fit and complementary fit (Muchinsky & Monahan, 1987). Supplementary fit focuses on the similarity between the person and the organization (e.g., they share similar values) and complementary fit is a mutually fulfilling relationship between the person and the organization, where one provides what the other requires. Complementary fit is further delineated into needs-supplies and demands-abilities fit. Needs-supplies fit is strong when the organization provides something an individual needs or values (e.g., job security). The second type of complementary fit is demands-abilities fit in which the person has the abilities to cope with organizational demands (e.g., ability to be cooperative because teamwork demands cooperation).

Given that the ASA framework purports that organizational members tend to be similar to each other, this study assessed supplementary fit as it measures employees' similarity between themselves and the organization. Also, needs-supplies fit was included

in the present study to understand how the congruence between what employees want in an organization and what they actually receive affects creativity. Organizations have some control over what they offer to employees so it is important to understand its influence for the practical purpose of fostering creativity. Demands-abilities fit has been studied in the small extant literature of PO fit and creativity together (e.g., Choi, 2004); however, it is the other two types of fit that are necessary to test for a negative relationship between PO fit and creativity. This is based on how "characteristics" has been defined, which is described next.

The second word in the definition of PO fit that needs to be further addressed is what is meant by "characteristics" of the organization and of the individual. Although other operational definitions exist (e.g., needs, goals, personality), most often fit is defined as being between a person's values and the organization's values (Chatman, 1989; Kristof-Brown, et al., 2005). Values can be defined as beliefs that transcend situations and that guide behavior (Schwartz, 1992). Organizational cultural values and individuals' preferred organizational cultural values were the characteristics used in the current study (i.e., needs-supplies values fit). Demands-abilities fit is not applicable when "characteristics" are defined as values. Values define the culture of the organization, which in turn, partially determines employees' behavior (Schein, 1992). Based on certain values employees may act (or not act) in certain ways. For instance, if an organization is very rule-oriented, employees may not offer creative suggestions that would challenge any established rules. Organizational values can be condensed into a few components as demonstrated with the competing values model (Quinn, 1988).

The values chosen for this study were derived from Quinn and Rohrbaugh's (1981, 1983) competing values model, a model recommended for use in PO fit research by Ostroff, Shin, and Kinicki (2005) and Meyer, Hecht, Gill, and Toplonytsky (2010). The competing values model consists of two dimensions that make up four quadrants (see Figure 2). However, these quadrants are not mutually exclusive but rather organizations can have differing degrees of each quadrant (Cameron & Quinn, 1999). The first dimension reflects organizational structure and ranges from *control* (e.g., valuing stability, planning, and continuity) to *flexibility* (e.g., valuing decentralization, differentiation, and experimentation). The second dimension ranges from *internal*, where the focus is on the interests and growth of individuals in the organization to *external*, where the focus is on the interests and growth of the organization itself (Quinn & Rohrbaugh, 1981). These two dimensions create four quadrants that are representative of organizational culture (e.g., Howard, 1998). The four quadrants on which organizations can vary are human relations (flexibility, internal), rational goal (control, external), internal processes (control, internal), and particularly relevant to creativity, open systems (flexibility, external; Quinn 1988). Again, following Meyer et al. (2010) and Cameron and Quinn (1999), instead of categorizing organizations into one quadrant, organizations instead should be characterized as having differing degrees of each quadrant. That is, each of the four values becomes a component of an organization's culture (Meyer et al., 2010).

Organizations that value *human relations* have an internal focus on employee development with flexibility in how employees will interact. A focus on teamwork, employee morale, and cohesion are characteristic of the human relations value. *Rational goal value* describes organizations with a competitive, achievement-oriented culture where

organizational productivity is the goal. The *internal processes value* is characterized by organizations that support rules for employees, timeliness, and efficiency. A bureaucratic organization would be described as having a strong internal processes value. The last value, hereafter referred to as *creativity/innovation value*, characterizes organizations as supportive of innovation, growth, and adaptability.

Before leaving the discussion on the conceptualization of PO fit, another aspect that needs attention is how to measure these conceptualizations. There are three main ways: perceived, subjective, and objective (Kristof-Brown & Guay, 2011). Both conceptualizations (i.e., supplementary and complementary fit) can be measured any of these ways. Perceived measures ask individuals to assess the degree of fit with an organization they feel they have (e.g., I feel my values are similar to the organizations—for supplementary fit; I believe the organization provides the values I need in an organization—complementary fit). Perceived measures do not assess fit as the person and the organization separately as the interactionist perspective would support; however, subjective and objective measures do.

A subjective PO fit measure consists of individuals assessing their characteristics and then separately assessing their organization's characteristics. Objective PO fit is similar to subjective PO fit with the exception that organizational members separate from the main individual make an assessment of the characteristics of the organization. There has been confusion over these labels in the literature (Kristof-Brown & Guay, 2011). For example, the labels of perceived and subjective measures have been switched in the past (e.g., Hoffman & Woehr, 1996; Kristof, 1996; Verquer et al., 2003). Kristof-Brown and Guay (2011) have suggested that researchers use definitions that have been described

currently in keeping with the early foundations of PO fit research (i.e., French, Rogers, & Cobb, 1974). The supplementary conceptualization in this study was assessed with a perceived measure which asks individuals to determine how similar they believe they are to the organization's values. The needs-supplies fit conceptualization was assessed with a subjective measure which asks individuals to determine the values they want in an organization and then separately determine the values that describe their organization.

Conceptualization of Creativity

Creativity is the production of novel and potentially useful ideas about products, processes, and procedures (Zhou & Shalley, 2011). A further conceptualization is that creativity can be either incremental or radical (Amabile, 1988). For example, not all creativity must introduce a radical new product, even introducing a helpful procedure like how to track vacation hours can be considered creative. Likewise, creativity is not exclusive to research and development or marketing jobs. Creativity can be expressed from all levels and job areas in an organization (Amabile, 1988).

PO Fit and Creativity

Relatively few studies have specifically focused on PO fit and creativity (except Choi, 2004; Choi & Price, 2005; Lipkin, 1999; Livingstone, Nelson, & Barr, 1997). Livingstone et al. (1997) looked at PO fit conceptualized as creativity congruence and how that fit affects outcomes such as strain, job satisfaction, organizational commitment, and overall job performance. The more specific conceptualizations of PO fit used were creativity needs-supplies fit and creativity demands-abilities fit assessed via a subjective measure. For needs-supplies fit, when both the individual and the organization value creativity there is creativity congruence. For demands-abilities fit, when the organizational

demands require creativity and the employee has the ability to meet those demands, there is also creativity congruence. Although many outcomes were included in this study, actual individual creative behavior was not addressed. Results showed that creativity demands-abilities fit did positively relate to strain and job performance. Also, the environment (both organizational demand for creativity and organizational supply of creativity value) had a stronger influence on the outcomes than did the individual creativity value or ability.

Choi (2004) extended Livingstone et al.'s (1997) research by also looking at both creativity needs-supplies fit and creativity demands-abilities fit except on actual creative behavior (using subjective fit measures). In a classroom setting, students' creativity value and ability predicted professors' creativity ratings at the end of the semester. The environment did not predict professors' ratings nor did the fit between the person and environment. The author suggested that there was little variance in the classes as they were all structured similarly; thereby, the variance of the environment was limited (i.e., range restriction) which is a potential reason neither the environment nor the person-environment fit were significant predictors.

Choi and Price (2005) also researched creativity needs-supplies fit and creativity demands-abilities fit as did Choi (2004) but investigated the outcomes of implementation intention (affect) and implementation behavior regarding a company's switch to a paperless cyber culture. Their findings demonstrated that having an organization that supported creativity (i.e., environmental supply of creativity) influenced implementation intentions and both individuals' value level for creativity and creative ability predicted actual implementation behavior. The results from Choi and Price (2005), Livingstone et al. (1997) and Choi (2004) suggest that while creativity congruence is an important predictor

of work outcomes, individual characteristics and the creative work culture may also contribute to work outcomes beyond the congruence between the individual and the environment (e.g., organizational culture).

Another common thread in these studies is that they used fit, be it needs-supplies fit or demands abilities-fit, defined as creativity congruence and found it to be *positively* related to creativity and other outcomes. Moreover, these studies all only tested one dimension of values congruence, creativity. It is intuitive that the more creativity value congruence on needs-supplies fit, the more creative behaviors result. However, there are cultural values beyond creativity (Schwartz, 1992). Given that individuals and organizations have multiple values which partially guide behavior, investigating a larger set of values (e.g., competing values model) is pertinent to theory development. It is pertinent because including additional values on which organizations and individuals may fit will expand our understanding of how PO fit relates to creativity. Further understanding may also guide organizations in establishing a culture that supports creativity and innovation.

Lipkin (1999) also studied the relationship between PO fit and a variation of creativity. The variation of creativity included was creative ideation (i.e., self-rated ability to think creatively). The Organization Culture Profile (OCP; O'Reilly, Chatman, & Caldwell, 1991) was used to rate PO fit using a sample of 49 employees at an insurance company. The OCP required participants to rank 54 values by what they want in an organization and then rank the same values in the order that described the organization. The profiles were then compared via difference scores. Contrary to the current investigation, Lipkin hypothesized a positive relationship between fit and creative ideation.

The rationale was that the OCP contains some items that may support creative ideation (e.g., risk-taking) and that the fit literature suggests that fit has a positive influence on outcomes. No significant relationship was found between PO fit and creative ideation; however, Lipkin mentioned her main limitation was low statistical power hindering the ability to find a significant relationship. An additional concern not addressed within her study was that difference scores were used to compare individuals' values to the organization's values. Many issues are associated with the use of difference scores (Edwards, 2002; 1993). Edwards (1993) explains that using difference scores to calculate the similarity between profiles obscures the sources of differences. Also, the profile is ambiguous because it combines conceptually distinct measures into one entity (e.g., heterogeneous values). The fact that this was the method employed could have influenced the results. For example, while some values may have promoted creative ideation, other values may not have and this distinction was lost by using difference scores.

The Current Study

In summary, the ASA model suggests that as time passes, organizations become more homogeneous. The implication is that employees are similar in terms of their values (Schneider, 1987). In turn, the more similar employees are to one another, the less creative they will likely be due to shared mental models and maintenance of the status quo (e.g., Granovetter, 1973). Since creativity is defined, in part, by suggesting *new* ways of proceeding, employee creativity does challenge the status quo of an organization, something from which an individual with a strong PO fit may refrain. The goals of this study were to investigate the relationship between PO fit and creativity compared to the

already established predictors of creativity as well as to investigate two potential boundary conditions around PO fit and creativity (see Figure 1).

Person-organization fit should not be solely defined in terms of creativity value congruence (e.g., Livingstone et al., 1997). Given that individuals and organizations have multiple values (Schwartz, 1992), taking into account a wider set of values should allow for a more comprehensive understanding of the relationship between PO fit and creativity. For example, according to the competing values model, the internal processes value is characterized by rigidness and predictability (Meyer et al., 2010). Congruence on this value is less likely to promote creativity. The four value components (i.e., human relations, internal processes, rational goal, creativity/innovation) from the competing values model are representative of organizations (Ostroff et al., 2005) and are recommended for use in congruence research (e.g., PO fit). Using this model, employees determined what specific values they want in an organization and what values they believe are characteristic of their organization (i.e., subjective needs-supplies PO fit). In addition to the four specific value components, a general supplementary PO values fit measure was also be incorporated. The general PO values fit measure asked employees to judge how well they fit with the organization (i.e., a perceived fit measure). The defining feature of a general PO values fit measure is that it taps the individual's overall similarity to the organization's values (Kristof, 1996). Considering there are moderate to strong relationships between outcomes and supplementary PO fit measures (e.g., Hoffman & Woehr, 2006; Verquer et al., 2003), coupled with the idea that the ASA model is based on organizational homogeneity (i.e., member similarity), inclusion of this measure is warranted.

The two conceptualizations of PO fit that were included are meant to complement each other in that both are hypothesized to relate negatively to creativity. The advantage of using the subjective needs-supplies PO fit conceptualization over the perceived general measure is that the interactive effects of the person and the environment can be examined with the subjective measure as the interactionist perspective would support. It is hypothesized that individuals who have a strong PO fit, defined here in terms of non-creativity values congruence (i.e., human relations value, internal processes value, rational goal value, general PO values fit), will be less likely to be creative on the job. Formally stated,

Hypothesis 1: Person-organization fit, defined as non-creativity values congruence (i.e., human relations, internal processes, rational goal, general PO values fit), will be negatively related to individual employee creativity.

A caveat to the first hypothesis should be offered. Those who have a strong fit with the organization are still likely to be creative if the culture is one that values, or supports, creativity (Amabile et al., 1996). Specifically, if one of the organization's core values is creativity and the individual also values creativity, then in this case, it is more likely that PO fit will be *positively* related to creativity. Personal creativity value was found to positively relate to students' class creativity (Choi, 2004). However, further research is needed to determine if *congruence* on the value of creativity relates to actual employee creativity. For example, Choi (2004) did not find that the congruence between the person and the environment predicted creativity because there was little variance in the environment. The current study included a heterogeneous sample of organizations to

increase the likelihood of capturing more environmental variance. Thus, it was hypothesized that,

Hypothesis 2: Person-organization fit, defined as creativity/innovation value congruence, will be positively related to individual employee creativity.

Moderators. The relationship between PO fit and creativity may not be adequately explained without the inclusion of potential moderators. Although there is limited research on PO fit and creativity, the rationale for including moderators and an idea of what those moderators might be can be drawn from relationships in the literature that are similar to PO fit and creativity. Zhou et al. (2009) applied the strength of weak ties theory to their hypothesis that the number of strong ties an individual had would negatively relate to creativity. Strong ties can be characterized as perceived closeness and frequent interaction with similar others (e.g., Granovetter, 1973; Zhou et al., 2009) much like how those with a strong PO fit are likely similar to others who fit. Zhou et al. found no significant relationship between the number of strong ties and creativity. They included individuals' preference for conformity as a moderator between the number of *weak* ties and creativity and found that individuals' conformity preference moderated the link between weak ties and creativity such that the relationship between weak ties and creativity was stronger when individuals' conformity preference was low. However, they did not test this moderator for the relationship between the number of strong ties and creativity. Although they did not, it may be that individual conformity preference may interact with strong ties in predicting creativity just as it did with weak ties. Likewise, the parallel can be drawn to the relationship between PO fit and creativity. Two moderators will be examined in the current study, individuals' conformity preference and individuals' willingness to take risks;

both of which relate to whether or not employees will challenge norms. These variables are hypothesized to moderate the relationship between all definitions of PO fit (i.e., non-creativity values, creativity/innovation value, and general PO values fit) and creativity.

Individual conformity preference. An outcome of interacting with similar others governed by the same norms is that individuals are less likely to behave in ways that are contrary to those norms. Those who prefer conformity tend to follow group trends and social expectations and often rely on others' suggestions (Mehrabian & Stefl, 1995; Schwartz, 1992). Furthermore, those who have a strong conformity preference are less likely to suggest new ways of proceeding as conformity has been found to be negatively related to creativity (Rice, 2006). On the other hand, those who have a low conformity preference may offer their creative ideas regardless of if it violates prior assumptions or norms. Employees can still have high PO fit on non-creativity values, but have a low preference to conform. Those who have PO fit on creativity/innovation value are more likely to be creative; however, if they fit on creativity/innovation value *and* have a low preference to conform; their creativity might be enhanced over those with a high conformity preference. It was hypothesized that,

Hypothesis 3a: Individual preference for conformity will moderate the negative relationship between PO fit (defined as non-creativity values) and individual employee creativity such that the negative relationship between PO fit and creativity will be stronger for those with high conformity preference.

Hypothesis 3b: Individual preference for conformity will moderate the positive relationship between PO fit (defined as creativity/innovation value) and individual

employee creativity such that the positive relationship between PO fit and creativity will be stronger for those with a low conformity preference.

Individuals' willingness to take risks. A second relevant moderator would be individuals' willingness to take risks (Dewett, 2006). Willingness to take risks is defined as individuals' propensity to take risks on their job. That is, employees are willing to behave in ways where the outcome of the behavior is unknown and could potentially be positive or negative. Engaging in creativity carries with it a degree of uncertainty regarding what the outcome of that behavior might be (Sethia, 1989). Creativity is characterized by voicing ideas and offering suggestions that are new and, therefore, outside the scope of regular organizational routine. Given creativity may not be looked upon favorably, those who prefer not to take risks on the job are less likely to be creative. The link between individual risk-taking and creativity has been demonstrated (Dewett, 2006; Kirton, 1976) and research shows that when organizations encourage employees to take risks, employees are more likely to be creative (Edmondson, 1999). Even if the organization does not encourage risk-taking, those who are risk-takers themselves have a higher likelihood of being creative than those with a lower willingness to take risks. A risk-taker can have a strong fit with an organization, but may still take risks that do not align with the organization. In addition, similar to conformity preference, individuals who have PO fit on creativity/innovation value are likely to be creative but those with a high willingness to take risks may be more creative than those with a low willingness to take risks. Thus, formally stated,

Hypothesis 4a: Individuals' willingness to take risks on the job will moderate the negative relationship between PO fit (defined as non-creativity values) and individual

employee creativity such that the negative relationship between PO fit and creativity will be stronger when individuals have a low willingness to take risks.

Hypothesis 4b: Individuals' willingness to take risks on the job will moderate the positive relationship between PO fit (defined as creativity/innovation value) and individual employee creativity such that the positive relationship between PO fit and creativity will be stronger when individuals have a high willingness to take risks.

Correlates of creativity. It is informative to expand the nomological network surrounding fit and creativity by also including variables already suggested to be in that network. The variables included in the current study are a representative, although not exhaustive, sample of predictors of creativity, many of which organizations have some degree of control over. For the purposes of this study, these predictors of creativity will be grouped into two categories: the componential model-related predictors (Amabile, 1983) and employee perceptions about the job itself predictors (see Figure 1).

Componential model-related predictors. Amabile's (1983, 1988) componential model of creativity has been an oft-cited model for creativity research. The model consists of three parts: domain-relevant skills, creativity-relevant skills, and task motivation. Not all components were directly tested in this study, although many of the correlates included were based off of the componential model. Domain-relevant skills, which were included, are influential because without mastery in the domain one is working in, it is difficult to be creative (Woodman et al., 1993). Instead of using energy toward being creative, energy is dispensed toward learning or adequately performing the job. Domain-relevant skills include both knowledge, such as facts, procedures, and principles, and the technical skills related to performing the job (Amabile, 1983). Although the componential model and

others (e.g., Woodman et al., 1993; Zhou & Shalley, 2011) mention that domain-relevant skills are a precursor to creativity, minimal research exists empirically testing this link as the relationship is typically implied. Therefore, domain-relevant skills were measured in the current study. Based on Amabile's (1983) componential model, it was hypothesized that:

Hypothesis 5: Domain-relevant skills will be positively related to individual employee creativity.

The second component in the model, creativity-relevant skills, includes types of cognitive style (e.g., divergent thinking, postponing decision-making, combining diverse information). Instead of testing creativity-relevant skills directly as is typically done via lab studies (Zhou & Shalley, 2011) or well-researched cognitive style surveys (e.g., Kirton, 1976), the perception of the presence of creative role models was included as only two studies have investigated its relationship with creativity. The presence of creative role models may help individuals strengthen their creativity-relevant skills (Amabile, 1988) and has also been shown to positively relate to creativity (Zhou, 2003).

Based on Bandura's (1986) social learning theory, when individuals observe others acting in a certain way, they are sometimes able to model others' behavior (e.g. others' creativity-relevant skills). Creative role models can be coworkers or leaders in an organization who demonstrate creativity. Shalley and Perry-Smith (2001) found that when provided with an example of a creative solution to a business problem, participants were more likely to be creative over those who were provided with an example of a non-creative solution. It was hypothesized that,

Hypothesis 6: The presence of creative role models will be positively related to individual employee creativity.

The last factor in the componential model is task motivation. Task motivation includes intrinsic motivation to be creative, which is supported by social aspects of one's environment (Conti, Coon, & Amabile, 1996). Task motivation has been the component in Amabile's (1983) model that has received the most research attention (Zhou & Shalley, 2011), especially on the social environment surrounding creative behavior. Since there was no particular task incorporated into this study, task motivation was not directly tested, but instead, a social aspect supporting intrinsic motivation was included.

A social aspect related to intrinsic motivation is supervisor support. Supportive supervisors demonstrate concern for their direct reports' feelings, encourage open communication, and provide feedback that is non-threatening (Deci, Connell, & Ryan, 1989). Supervisor support can influence intrinsic motivation based on cognitive evaluation theory (Deci & Ryan, 1985). Cognitive evaluation theory suggests that external factors to individuals have both informational and controlling aspects. In terms of the informational aspect, when supervisors are supportive, individuals receive helpful informational feedback about their work; thereby, increasing intrinsic motivation and creativity (Amabile, 1983). Frese, Teng, and Wijnen (1999) found that supervisor support positively related to the number of suggestions submitted to an employee suggestion program which was how creativity was operationalized in the study. Since supervisors can have substantial influence over employees' perceptions and behaviors (e.g., Shin & Zhou, 2007), when supervisors are supportive they can increase employees' intrinsic motivation

to perform (Deci & Ryan, 1985). The more support supervisors provide to employees, the more likely employees are to be creative. Therefore,

Hypothesis 7: Supervisor support will be positively related to individual employee creativity.

Perceptions about the job itself predictors. While supervisor support provides an informational aspect to employees (Deci & Ryan, 1985), the way the job is structured can provide a controlling aspect. According to cognitive evaluation theory, when the environment is controlling, intrinsic motivation decreases (Deci & Ryan). Job autonomy is where employees have the freedom to decide the way in which their work is carried out (Hackman & Oldham, 1980). Specifically, employees have job autonomy when they have control over the method(s) to use when performing their job (Breaugh, 1999).Without this freedom, employees have little opportunity to be creative (i.e., the environment is controlling). In past research (Amabile & Gitomer, 1984; Shalley et al., 2004), job autonomy has been shown to be a significant positive predictor of creativity. Thus, it was hypothesized,

Hypothesis 8: Job autonomy, in terms of method autonomy, will be positively related to individual employee creativity.

One of the barriers to creativity that can be described as being part of job itself is excessive time pressure (Amabile et al., 1996). Excessive time pressure results when individuals perceive that there is not enough time to complete their workload or meet their deadlines. When there is an excessive amount of work to complete in a constricted time limit, creativity is less likely to occur (Amabile et al., 1996). When employees work under excessive time pressure, they are more likely to remain performing comfortable procedures

than they are to explore other, more creative, options. For example, ideas that were produced under a ten minute interval were less creative than those produced under a twenty minute interval (Kelly & McGrath, 1985). Other researchers have also found a negative relationship between time pressure and creativity (Andrews & Smith, 1996) and creativity time pressure (i.e., time pressure specifically hindering creativity) and creativity (Baer & Oldham, 2006).

Despite this support, the research has still been mixed (Shalley et al., 2004). The key that makes time pressure a barrier to creativity is that the workload is unmanageable as opposed challenging (i.e., motivating). When time pressure to perform a task is challenging to an individual, but not excessive, intrinsic motivation and creativity are likely to increase (Amabile et al., 1996). Time pressure, at moderate levels, has been shown to positively relate to creativity (Andrews & Farris, 1972; Noefer, Stegmaier, Molter, & Sonntag, 2009). Furthermore, other researchers have suggested the relationship between time pressure and creativity is inverted U-shaped (e.g., Baer & Oldham, 2006, Ohly, Sonnentag, & Pluntke, 2006). Ohly et al. (2006) found support for an inverted U-shaped relationship. Baer and Oldham found an inverted U-shape, but only at high levels of supervisor support; otherwise the relationship was negative.

In sum, the relationship between time pressure and creativity is mixed. Research has found that time pressure can have a positive, negative or curvilinear relationship with creativity. Minimal time pressure is likely negatively related to creativity, as is excessive time pressure. Intermediate levels of time pressure are likely positively related to creativity. The studies cited all used different scales of time pressure which may also contribute to the conflicting results. For example, participants can interpret items such as “I

often experience time pressure at work" (Noefer et al., 2009; p. 388) to mean the pressure is challenging *or* excessive. Since time pressure was not a central focus of this study, the measure of time pressure used only focused on excessive time pressure on the job in line with Amabile et al., (1996). As such, it was hypothesized that,

Hypothesis 9: Excessive time pressure will be negatively related to individual employee creativity.

The last two correlates of creativity relevant to this study are creative job requirement and anticipated reward for being creative. Although all jobs afford the opportunity to be creative based on the conceptualization of creativity (Amabile, 1988), a promoter of creativity is employees' *perceptions* of whether or not their job requires them to be creative (Yuan & Woodman, 2010). Yuan and Woodman tested this proposition on the basis that (a) employees will be more motivated to be creative since doing so is likely tied to performance ratings and (b) employees may think that others will more readily accept their ideas since their job requires creativity (e.g., a research and development scientist). When employees feel their ideas will be accepted they will feel more psychologically safe to risk breaking the norms of the organization (Edmondson, 1999). Regardless of if employees feel their job requires them to be creative, they may still believe that if they are creative they can expect positive performance outcomes such as rewards (Yuan & Woodman, 2010).

Anticipated reward for being creative is the extent to which employees feel that if they are creative, their performance will be recognized and rewarded. According to Vroom's (1964) expectancy theory, individuals are motivated to behave in ways that will result in certain desired outcomes (e.g., a positive reward). If employees believe that being

creative will help with their job performance, in terms of being rewarded for good performance, they are more likely to be creative. As hypothesized, anticipated positive performance outcomes (i.e., rewards) significantly and positively correlated with innovative behavior (i.e., creativity and innovation combined; Yuan & Woodman, 2010). A second reason for including these two variables is to replicate the findings in Yuan and Woodman's (2010) recent study as these variables answer the "why" employees are creative (e.g., task motivation; Amabile, 1983; 1988). Formally stated,

Hypothesis 10: Creative job requirement will be positively related to individual employee creativity.

Hypothesis 11: Anticipated reward for being creative will be positively related to individual employee creativity.

Expanding the nomological networks. Failing to include correlates of creativity in PO fit-creativity research may impede further establishment of the nomological network surrounding these variables; therefore, a representative sample of correlates was chosen for this study although other correlates exist. For example, research on the impact of moods on creativity also appears in the literature (see Zhou & Shalley, 2011 for a review). As moods are temporary, generalized, affective states (Brief & Weiss, 2002), capturing their influence on creativity was beyond the central question of the current study. Person-organization fit, defined as values, is more stable than moods.

An additional creativity correlate example is that the more open to experience individuals are, the more broad-minded, inquisitive, and unconventional they tend to be (Costa & McCrae, 1992) which enhances their creativity-relevant skills (Amabile, 1983; Barron & Harrington, 1981). Research has found that creative individuals (e.g., scientists

and artists) are more open to experience than those not in typically creative positions (e.g., non-scientists and non-artists; Feist, 1998). Likewise, research has shown that using a sample that excluded artists and scientists resulted in no significant relationship between openness to experience and creativity (George & Zhou, 2001). Since research on the relationship between openness to experience and creativity is inconsistent and a non-artist and non-scientist sample was used in the current study (i.e., business students), the inclusion of the correlate openness to experience was beyond the purpose of the present investigation.

As almost all of the correlates of creativity included in this study have previously been shown to have significant relationships with creativity, there is the possibility that some may also moderate the relationship between PO fit and creativity. For example, job autonomy may moderate the relationship between PO fit and creativity. However, following the logic of ASA, those with high levels of job autonomy may still not conduct their work in ways that are contrary to the norms of the organization if they have a high fit with the organization. Both moderators included in this study, conformity preference and willingness to take risks, do directly address if individuals have the propensity to behave contrary to the norms. Inclusion of additional moderators beyond the two discussed were beyond the scope of the current study.

Additional analyses. Creativity, as it has been presented currently, is described as a desirable outcome, although as Shalley et al. (2004) pointed out, little research has examined this assertion. Three individual outcome variables of creativity were investigated in order to help understand the positive impact of creativity—innovation, job performance, and turnover intention. As creativity is the precursor to innovation (i.e., the implementation

of creativity); a measure was included in order to capture employee innovation. An employee might voice a creative suggestion, but unless they actually carry out that creativity, innovation may not occur (Amabile, 1996). A question in the current study was if employees are creative, do they actually implement that creativity (i.e., are they innovative)?

Job performance is arguably one of the most important outcomes researched in industrial-organizational psychology; therefore, job performance was measured in this study. Some evidence exists to suggest that the more creative employees are, the better their job performance as rated by supervisors (Oldham & Cummings, 1996; Zhang & Bartol, 2010). There are however, examples that may suggest that creativity is not always positively related to job performance. For instance, a supervisor may not approve of the creative ideas from a direct report and as such, this may reflect poorly on the employee's performance review. Therefore an additional analysis investigated how creativity relates to job performance.

Presumably, organizations want most employees to have low turnover intention. The relationship between creativity and turnover intention was explored in the present study, although the causal relationship between the two was not implied. Almost no research exists to answer the question, are employees who are creative less likely to have turnover intention (i.e., turnover intent as an outcome)? Or on the other hand, if employees are planning to turnover, are they less creative (i.e., turnover intent as a predictor)?

Lastly, there is no literature suggesting how PO fit relates to creativity vis-à-vis the inclusion of other predictors. For example, does PO fit account for more or less variance than the rest of the predictors? PO fit was compared to the other predictors of creativity in

this study. The research question that was posed is as follows: How does PO fit relate to creativity compared to other predictors of creativity?

Method

Procedure and Participants

There were two data collection waves in which individuals participated. All study variables were filled out by participants at Time 1 which was typically during class time. For Time 2, an online survey with creativity and innovation measured again was administered for test-retest purposes and as a way to reduce common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In addition, employee creativity, employee innovation, and the cultural values of the organization were assessed by supervisors and coworkers of participants in order to provide more than one perspective on the hypothesized relationships.

A total of 401 participants from a mid-sized Midwestern university completed the measures at Time 1; however, two were eliminated due to missing needs-supplies fit scales. Another five were eliminated because they did not complete the creativity measure, nor did a supervisor or a coworker. This left 394 participants. Of these participants, 84% were undergraduate business students and 16% were graduate MBA students. The average age of participants was 25.02 (SD = 5.99), with a similar rate of males (54.3%; n = 214) and females. Seventy-three percent of the participants in the sample were Caucasian, 11% were Black or African-American, 9.4% were Asian, 3.3% were more than one race, and 1.5% were Hispanic. Out of the participants, 70% were describing a job in which they were paid hourly and 80% were currently working. The average time participants were in their current job or previous job was 2.61 years (SD = 3.02). For those who were not currently

working, the average time since they held the job they responded over was 1.13 years (*SD* = 1.10).

Participants were offered a chance to win 1 of 5 $100 prizes for completing the Time 2 measures. An average of 23.74 days (*SD* = 13.52, *n* = 193) lapsed between Time 1 data and Time 2 data with a 53% response rate. The response rate was based only on those who provided their email addresses. Participants were emailed two reminders to take the Time 2 measures and participants' professors also reminded them in class in order to increase the response rate. The Time 2 data had similar demographics as Time 1 with the following exceptions: females and graduate students were more likely to respond to the Time 2 measure (χ^2 (1) = 9.31; 12.94, respectively; *ps* < .01).

Participants were also asked to supply email addresses of a direct supervisor and a coworker so that a short survey could be sent to them on the participant's creativity and innovation and the organization's culture. Out of the emails received, 65% of the direct supervisors replied (*n* = 80) and 64% of the coworkers replied (*n* = 67). No demographic information was collected from them. On average, supervisors worked with their direct reports for 2.12 years (*SD* = 2.64) and coworkers worked with participants an average of 1.93 years (*SD* = 2.31).

Measures

All measures are available in Appendix A in the order in which they were given to participants. In addition, all measures were rated on a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) unless otherwise indicated.

Participant measures. The measures that follow were filled out by the participants in the study.

General PO values fit. The first measure of PO fit was a general perceived measure which asked participants how they believed they fit with their organization's values. This three-item measure combined items from both Saks and Ashforth's (2002) scale and items suggested by Kristof-Brown and Guay (2011) in their description of general PO fit measures. The three items represent fit in terms of general values congruence. An example item includes, "The values of my company are similar to the values I want in a company." Alpha equals .93.

Needs-supplies PO fit (competing values model measures). The needs-supplies PO fit measures were based on the competing values model (Quinn, 1988). Three items adapted from Meyer et al.'s (2010) competing values model scales were used for each dimension (i.e., human relations, internal processes, rational goal, and creativity/innovation). Participants rated their agreement with each item twice as this was a subjective fit measure. First, they assessed if the statement described the organization for which they were currently working (or the last organization for which they worked). Second, they assessed if the statement described what they want in an organization. An example item from each scale is as follows: human relations (My organization is employee-focused; supply $\alpha = .78$; need $\alpha = .81$), internal processes (My organization is stable and rule-oriented; supply $\alpha = .75$; need $\alpha = .85$), rational goal (My organization promotes a competitive and achievement-oriented image; supply $\alpha = .83$; need $\alpha = .87$), and creativity/innovation (My organization promotes an image of innovation, adaptability, and entrepreneurship; supply $\alpha = .89$; need $\alpha = .94$).

Conformity preference. Individuals assessed their preference for conformity with three items from Mehrabian and Stefl's (1995) scale. An example item from this scale is

"Generally, I'd rather give in and go along for the sake of peace than struggle to have my way." Alpha was .83.

Willingness to take risks. Participants' willingness to take risks on the job was assessed with three items adapted from Dewett's (2006) eight-item scale. Many items were redundant therefore five items were deleted. This measure captures individuals' willingness to take risks which encompasses their knowledge of the potential negative outcome of taking risks. An example item is "I will take a risk and try something new if I have an idea that might improve my work, regardless of how I might be evaluated." Alpha was .83.

***Presence of creative role models*.** As research evidence on the presence of creative role models is limited (see Zhou and Shalley, 2011), a three-item scale was created for the purpose of this study. Zhou (2003) used a scale that focused on coworkers; however, the current scale was defined more broadly than that (i.e., any employee in the organization can be a creative role model). An example item is, "There are employees in my organization who I consider to be creative role models." Alpha was .86.

Supervisor support. Four items were adapted from Oldham and Cumming's (1996) supervisor support scale. The items assessed the degree to which direct reports believe their supervisor encourages and helps them. "My supervisor encourages me to develop new skills," is an example item ($\alpha = .85$).

***Job autonomy*.** The methods scale from Breaugh (1999) was used to measure job autonomy. Individuals have autonomy in the method of their work when they are able to determine how they go about completing their job. "I am free to choose the method(s) to

use in carrying out my work" is an example item. The scale had three items and an alpha of .94.

Creative job requirement. The perception of whether or not individuals' jobs require them to be creative was assessed by three items from Yuan and Woodman's (2010) five-item scale. An example item is "I don't have to be creative to fulfill my job requirement (reverse-coded)." Alpha for this study was .81.

Anticipated reward for being creative. Three items adapted from Yuan and Woodman (2010; adapted from House and Dessler, 1974) were used to assess the degree to which employees believe if they are creative, they will be rewarded. An example item includes, "I will be rewarded if I am creative on my job." Alpha equaled .86.

Excessive time pressure. The time pressure scale assessed if individuals felt they have too much work to complete in too little time. An adapted version of Durham, Locke, Poon, and McLeod's (2000) three-item scale was used in the current study. A sample item includes, "I feel I work under excessive time pressure" (previous $\alpha = .83$). The key to this scale is that the items are meant to tap time pressure that is excessive; not challenging or minimal. Alpha for this study was .86.

***Turnover intention*.** Intent to turnover is the extent to which an employee plans to leave the organization within the next year. Turnover intention was measured with two-items from Colarelli's (1984) three-item measure. An example item is "I am planning on searching for a new job during the next 12 months." Previous alpha levels have been .75 (e.g., Colarelli, 1984; Oldham & Cummings, 1996). Alpha was .92 in this study. This scale was only relevant for those who were currently working.

Measures for participant, participant's direct supervisor, and participant's coworker. Individual employee creativity, innovation, and domain-relevant skills were measured by all three sources.

***Individual creativity*.** The most useful judges to assess the creativity of others are those considered subject matter experts in their profession. For example, supervisors and coworkers have a visceral understanding of jobs in the organization and are able to determine if an idea is new and practical. Other research has also focused on self ratings of creativity because individuals are aware of their behaviors that are directed toward being creative (e.g., Shalley, Gilson, & Blum, 2009). Even though self report measures may be susceptible to personal biases (e.g., leniency), Axtell, Holman, Unsworth, Wall, Waterson, and Harrington (2000) found that self and supervisor ratings of creativity correlated .62. In the current study, creativity was operationalized as ratings from supervisors, coworkers, and self in order to get multiple perspectives on individual employee creativity.

A combination of six items from two oft-cited creativity scales was used in this study (George & Zhou, 2001; Tierney, Farmer, & Graen, 1999; self Time 1 $\alpha = .92$; self Time 2 $\alpha = .91$; supervisor $\alpha = .95$; coworker $\alpha = .94$). The items were chosen to represent the items closest to the definition of creativity used in the current study. That is, creativity is the production of ideas around procedures, products, or processes that are both useful and novel. An example item is, "I have suggested new uses for existing methods or equipment." Words were changed for supervisors and coworkers (e.g., My coworker has suggested new uses for existing methods or equipment).

Innovation. Part of the additional analyses was whether or not individuals' creativity (generation of ideas) transfers to actual innovation (implementation of ideas).

Three items were created for the current study that addressed if individuals implement their creativity; however, the item that was reversed coded was not internally consistent with the other two items and was removed. For consistency, the reverse coded item was removed from all other innovation scales (self Time 1 $\alpha = .72$; self Time 2 $\alpha = .58$; supervisor $\alpha = .83$; coworker $\alpha = .81$). An example item includes, "I implement my creative ideas on the job." Words were changed for supervisor and coworker (e.g., My direct report implements his/her creative ideas on the job).

Domain-relevant skills. Three items were created to assess individuals' perceptions of their domain-relevant skills. To my knowledge, no domain-relevant skills measure exists as typically, the relationship between domain-relevant skills and creativity has been inferred only, not empirically linked. An example item is, "I have the skills necessary to perform my job." Alpha was .85.

The scale that participants completed was assessed by the direct supervisors and coworkers with the wording slightly changed. The three items were, "My direct report/coworker has the skills necessary to perform his/her job", "My direct report/coworker is very experienced when it comes to his/her job" and "Performing his/her job comes easily to my direct report/coworker." Alpha for the supervisor scale was .76 and alpha for the coworker scale was .75.

Organizational values supply (competing values model measures). In order to demonstrate that participants' perceptions of their organizations' cultural values were accurate, direct supervisors and coworkers completed the same measures about the organization's values as the participant did. That is, they rated the extent to which the organization's values can be characterized as human relations, internal processes, rational

goal, and creativity/innovation (supervisor alphas were .81, .76, .83, .88, respectively; coworker alphas were .78, .82, .84, .90, respectively).

Additional measure for participant's direct supervisor. One additional measure was completed by the supervisor.

***Job performance*.** Supervisors rated their direct report's overall job performance using three items from Hackman and Oldham's (1976) scale. These three items asked supervisors to rate the level of performance of their direct report on work quality, work quantity, and effort on the job. The rating scale for this measure ranged from 1 (very unsatisfactory) to 7 (very satisfactory). This job performance rating scale has been used in other creativity research (e.g., Oldham & Cummings, 1996) and a previous alpha was found to be .85 in Oldham and Cummings. Alpha for this study was also .85.

Job complexity rating based on the Dictionary of Occupational Titles. In order to complement the many measures to which participants, supervisors, and coworkers responded, I coded job complexity based on individuals' job titles and brief descriptions of their job. The characteristics of complex jobs are that they afford individuals a high level of autonomy, meaningfulness, skill variety, task identity and feedback from the job itself (Hackman & Oldham, 1980). Job complexity has been positively related to creativity in the past (Amabile & Gryskiewicz, 1989; Oldham & Cummings, 1996; Shalley et al., 2009). A similar methodology to Shalley et al. (2009) was followed in order to code job complexity based on job titles and brief job descriptions. Shalley et al. coded complexity by using Roos and Treiman's (1980) substantive complexity score. This complexity score was based on a factor analysis of 44 occupational characteristics documented in the *Dictionary of Occupational Titles.* This factor included characteristics such as training needed to

perform the job, the level of interaction with data, people, and things, and cognitive ability. While these characteristics do not mirror Hackman and Oldham's (1980) job complexity definition, they do allow for a level of objectivity in measuring how the type of work relates to creativity. Roos and Treiman coded 591 occupations for their substantive complexity. Job titles in this study were compared to these ratings.

Job complexity was coded for 378 participants out of 394. Those missing the complexity coding were missing due to lack of information provided. The substantive complexity score ranged from 0 (not complex) to 10 (most complex). The majority of the job titles in this study were identical to those in Roos and Treiman. That is, a few participants were bartenders and there was a code explicitly for bartenders. A few examples of coding include bartender equaling 1.9, food server equaling 2.1, sales associate equaling 3.9 and engineer equaling 8.2. An independent coder determined the complexity ratings for those job titles that did not have a similar match (n = 33). The independent coder and I were able to agree on all but two of the job titles. For these two, a third coder determined which rating should be given.

Results

Descriptive statistics and intercorrelations for study variables can be found in Table 1. As can be seen in the table, most measures have adequate internal consistency (i.e., greater than .70; Nunnally, 1978) with the exception of Time 2 innovation (α = .58). All variables were checked for univariate outliers and very few existed (i.e., less than 2% for each variable). Those that did exist were negative outliers (e.g., on domain-relevant skills). No cases were excluded from the data set given all responses were plausible such as not wanting to work for an organization high on human relations value (e.g., characterized by

substantial teamwork). The spread of the data were adequate for most variables. Seven variables had standard deviations that were less than 1.00 (i.e., domain-relevant skills rated by self, supervisor, and coworker, human relations value need-self rated, creativity and innovation rated by coworkers, and supervisor rated job performance). Relationships with these variables may have been truncated due to restriction in range.

Reliability, Test-Retest Stability, and Agreement among Rating Sources

Creativity and innovation were rated twice by participants, at Time 1 and Time 2, and were rated once by supervisors and coworkers. Domain-relevant skills were measured by participants at Time 1 and by supervisors and coworkers. Supervisors and coworkers also rated their perceptions of the organization's culture via the competing values model measures. Table 2 displays the paired samples t-test between each pair of ratings and the mean differences associated with these analyses. Table 1 displays the correlations among these variables along with their means and standard deviations.

The overall pattern for creativity ratings was that the mean at Time 1 was moderately lower than Time 2, which was moderately lower than supervisor ratings, which was moderately lower than coworker ratings. Time 1 and Time 2 ratings of creativity correlated significantly at .65 ($p < .01$). Creativity ratings between supervisor and self were also significantly correlated ($r = .24$ for Time 1; $r = .25$ for Time 2; $ps < .05$). Self ratings did not significantly correlate with coworker ratings of creativity (Time 1 $r = .08$, $p = .55$; Time 2 $r = .14$, $p = .29$). Lastly, supervisor and coworker ratings of creativity were not significantly correlated ($r = .07$, $p = .67$). Since coworkers rated participants high on creativity ($M = 6.38$, $SD = .72$), the correlations with these ratings were likely truncated due to restriction of range. Based on this information, all of the analyses were run

separately on these outcomes (i.e., creativity rated at Time 1 and Time 2 and by supervisor and coworker). The same pattern as above emerged for innovation ratings (see Tables 1 and 2).

For domain-relevant skills, self and supervisor ratings were significantly correlated (r = .25, p < .05) and the means were not significantly different (see Table 2). Coworker and self ratings were not significantly related (r =.12, p =.33) and coworkers rated individuals significantly higher on domain-relevant skills than individuals rated themselves. Lastly, coworker and supervisor ratings of domain-relevant skills were not statistically different in terms of means, but they were not significantly correlated at the .05 level (i.e., r = .26, p < .10).

Agreement and reliability were also analyzed for the competing values model measures to determine if participants' perception of the organizations' culture could be verified by others working for that company. For human relations value, self ratings correlated significantly with supervisor and coworker ratings (r = .26, p < .05; r = .32, p < .01, respectively), although the means were significantly higher for both supervisors and coworkers (see Table 2). For internal processes value, supervisor and self ratings did not correlated significantly (r = .16, p = .16); however, the means were not significantly different. Coworker and self ratings of internal process values did correlate (r = .38, p < .01) but the mean was significantly higher for coworkers. For rational goal value, supervisor and self ratings were not significantly correlated (r = .10, p = .38) and supervisors' perception that rational goal value was present in the organization was significantly higher. Self and coworker ratings were not correlated at the .05 significance level (r = .23, p = .07) and the coworker mean was significantly higher. Lastly, for

creativity/innovation value, self and supervisor ratings did not correlate (r = .09, p = .42) but self and coworker ratings did (r = .28, p < .05). Means for creativity/innovation value were significantly higher for supervisor and coworker ratings versus self ratings. Lastly, while supervisor and coworker mean ratings of the organization's values were not significantly different from each other (see Table 2), supervisor ratings of values were not significantly correlated to coworker ratings of values (see Table 1).

In summary, supervisors and coworkers rated the majority of variables significantly more favorably than did participants in this study. In a little less than half of the interrater reliability comparisons, supervisors' and participants' and coworkers' and participants' ratings correlated, although not to a large degree (i.e., small effect sizes according to r^2 values). Even though the perceived supply of culture varied among self and other ratings, self perceptions of reality are important predictors of behavior versus what others believe to be reality (Caplan, 1987). All analyses were run using self ratings of the organization's cultural supply.

Potential Extraneous Variables

Table 3 lists the significant differences on main study variables (i.e., creativity and general PO values fit) based on the additional variables collected. Graduate students rated themselves as more creative than undergraduates, but only at Time 1. Those working 40 hours a week rated themselves higher on creativity at Time 1 and Time 2 than did those not working (those working part-time did not rate creativity significantly differently from either). Those working 40 hours a week were also statistically more likely to be graduate students ($\chi^2(2) = 34.92$, p < .01), and as seen above, graduate students rated themselves as more creative which may help to explain this finding. Those currently working had higher

ratings of general PO values fit than did those not currently working (see Table 3), but there was no difference on creativity. These concerns will be addressed later under the section "Exploratory Research Questions."

Data Analysis

Polynomial regression (Edwards, 1993; 2002) was used to calculate how PO fit related to creativity for the competing values model dimensions of human relations, rational goal, internal processes, and creativity/innovation. That is, a polynomial regression equation was computed to regress creativity rated by participants at Time 1, participants at Time 2, supervisors, and coworkers on each of the competing values model ratings. Polynomial regression is a method used to examine the joint effects of the person and the environment on an outcome. This method allows for both the investigation of how congruence between the person and environment affects an outcome as well as more complex questions concerning misfit (e.g., how the direction of the misfit affects an outcome).

The equation used was $Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2 + e$, where Z was creativity, X was what the employee values in an organization and Y was what the employee perceived the organization's values to be. There were three steps followed to test the relationships using polynomial regression. For step one, the value components were centered on the scale mid-point (i.e., 4) to reduce multicollinearity as recommended by Edwards (2002). In the second step, the scale centered X and Y predictors were entered into the equation along with the scale centered X^2, XY, and Y^2 predictors. When R^2 was significant, then step three was to use the unstandardized regression weights to produce a three-dimensional response surface graph depicting the relationship (Edwards & Rothbard,

1999; Edwards, 2002). Explicitly stated, the emphasis is not on the significance or direction of the regression weights themselves, but is on the shape of the response surface graph. Moreover, the interpretation of results was then based on a statistical analysis of the shape of the response surface graph (e.g., how creativity was rated when X = Y).

Four characteristics of the response surface graph were analyzed using t-tests. These characteristics are the slope of the line of fit when X = Y (a_1), the shape of the line of fit (concave or convex, represented by a_2), the slope of the line of misfit when X = -Y (a_3), and the shape of the line of misfit (concave or convex, represented by a_4). The formulas for these tests and a quick reference to the meaning of these characteristics are listed in Table 4 (Edwards, 2002; Shanock, Baran, Gentry, Pattison, & Heggestad, 2010). A_1 is particularly important to answering Hypotheses 1 and 2 as it represents what happens to creativity when an individual fits with an organization. A thorough explanation of interpreting a response surface accompanies the first graph discussed for Hypothesis 1.

The data were checked for outliers for each polynomial regression as different outliers appeared for different regressions. The decision to remove these outliers was based on the impact outliers have on the analysis when they are included in the squared and interaction terms (Edwards & Rothbard, 1999). No more than 1% of the cases were ever eliminated due to being outliers. The number of individuals represented in each regression is available under each relevant table. Outliers were removed when they had excessive leverage (i.e., $h < .24$), studentized residuals (i.e., +/- 3), and/or were clearly dispersed from most scores during a visual inspection of the standardized residuals plotted against the standardized predicted values.

Hypothesis 1 stated that fit on non-creativity values would be negatively related to creativity and Hypothesis 2 stated that fit on creativity/innovation value would be positively related to creativity. There were three approaches taken to answering these questions. First, all cases (minus outliers) were included in the polynomial regression analyses (or correlational analysis for general PO values fit). Second, the analyses were run again using only those individuals whose organizations had a low creative culture. That is, the relationship between non-creativity values congruence and creativity should also be tested when there is minimal supply of creativity/innovation value in the environment; otherwise, the negative relationship may be indiscernible as those with an organization with a creative culture may be influencing the results in a positive direction.

In order to facilitate the second approach, individuals' ratings of their organization's culture on creativity/innovation value were used. This variable was normally distributed with a median of 4.00 and a mean of 4.02 (*SD* = 1.61). All individuals who rated their organization's supply of culture four or below were considered to have a low creative culture and the analyses were conducted again only on this subset (Time 1 *n* = 199, Time 2 *n* = 99, supervisor *n* = 43, coworker *n* = 25). Although the sample sizes did decrease, there was still a decently full range of scores on creativity as the standard deviations were larger with this sample (with the exception of Time 2 creativity; i.e., Time 1 *M* = 4.42, *SD* = 1.40; Time 2 *M* = 5.06, *SD* = 1.11; Supervisor *M* = 5.90, *SD* = .92; Coworker *M* = 6.31, *SD* = .90) than in the full sample available in Table 1.

The third approach used to analyze the data was to compare only those who participated in both Time 1 and Time 2. Since almost half of the sample did not respond at Time 2 and the test-retest results for creativity were significantly different (i.e., the mean at

Time 2 was higher), there may have been a level of unaccounted for response bias. By analyzing the paired Time 1-Time 2 data, the results are more comparable. Univariate outliers on the Time 1-Time 2 change scores (i.e., +/- 2 standard deviations) were removed because some respondents on the second survey likely filled it out quickly by responding with all sevens on the scale when they had responded lower at Time 1. Nine cases were removed leaving a total of 179 individuals for the paired Time 1-Time 2 data. The correlation between self rated creativity at paired Time 1 and paired Time 2 was .75 ($p <$ .01); however, there was still a significant difference between paired Time 1 and paired Time 2 creativity ratings even after excluding outliers (paired Time 1 M = 5.02, SD = 1.21*;* paired Time 2 M = 5.32, SD =1.01*;* $t(178) = -4.79$, $p < .01$*, Cohen's d* = -.37). All three approaches (i.e., all data minus outliers, low creative culture only, and paired Time 1-Time 2 data) are presented for relevant analyses.

Hypothesis 1

Human relations value. Human relations value describes an organization that supports team work and cohesion. Table 5 displays the polynomial regression results for self ratings of creativity at Time 1, self ratings of creativity at Time 2, paired Times 1 and 2 creativity ratings, and supervisor ratings for all available data. The coworker regressions for human relations value as well as the other competing values model regressions revealed negative adjusted R^2s suggesting that there were not enough observations to regressors (Tabachnick & Fidell, 2007). Table 6 displays the results of the coworker regressions although they were not significant.

The linear (i.e., human relations supply, human relations need) and nonlinear effects (i.e., human relations supply squared, need times supply, need squared) as a set

were statistically significant predictors of creativity at Time 1 and paired ratings of creativity at Times 1 and 2. The variance in creativity explained by these effects was 7% in each case. Instead of interpreting the regression weights (or their associated significance level) as in ordinary least squares regression, the regression weights were used to depict the relationship using response surface methodology (Edwards, 2002). As a reminder, interpretations were made and surface graphs were plotted only for those regressions which were both significant overall (e.g., R^2) and which had at least one significant surface characteristic (e.g., the slope of the line of fit). When considering all data, the only regression that had both of these characteristics was creativity rated at Time 1. Figure 3a (p. 142) displays the response surface graph for human relations value fit and self rated Time 1 creativity. Figure 3a will be used as an introduction to interpreting the graphs.

The bottom left side of the graph ranges from +3 to -3 and represents the level of need an individual has for a certain cultural value. This range is based on the fact that the competing values model scales were centered on the mid-point such that the highest score of +3 translates to the highest point on the scale, 7 (or 7 minus mid-point 4). The bottom right side of the graph ranges from -3 to +3 and it represents the level, or supply, of the value that is present in the organization. The vertical axis represents creativity and ranges from 1 to 7, seven being the highest. The point on the graph where +3 for need and +3 for supply intersect is located at the back corner of the graph and represents perfect fit at a high level of the human relations value. Negative three for need and -3 for supply also represent perfect fit but at the lowest level of the value.

The line that runs between +3, +3 and -3, -3 is the line of fit. Perpendicular to the line of fit is the line of misfit which runs from the point where +3 need meets -3 supply and

-3 need meets +3 supply. The different colors on the graph are used to aid in interpreting how much the slope increases or decreases; however, the colors do not represent statistical significance. Figure 3a suggests that fit on human relations value was positively related to creativity as the graph slopes upward toward the point +3, +3. More important than a visual inspection of the graph, there are the four surface tests of significance (see Table 4 for reference). Specifically, these are a_1, a_2, a_3, and a_4. A_1 represents the slope of the line of fit. As can be seen in Table 5 for human relations Time 1, the value for a_1 was .32 ($p < .05$) indicating that when need equals supply, creativity increases (as the value is positive). A_2 represents the curvature of the line of fit. This value was .02 ($p < .05$), while although small, indicates the shape of the slope was convex, or sloping upward (Shanock et al., 2010). A_3 represents the slope of the line of misfit (-.04, *n.s.*). Although not significant, if negative, a_3 means that creativity is higher when need exceeds supply (this is opposite for positive values). Lastly, a_4 represents the curvature of the line of misfit. The a_4 value for human relations at Time 1 was -.02 (*n.s.*). A negative value for a_4 indicates that the shape of the line of misfit is concave or, downward sloping. A summary for the surface tests of human relations value Time 1 is as follows: the fit between human relations value need and supply was positively related to creativity with a slight upward sloping curve indicated by the three different colors (purple being the highest, followed by teal, followed by yellow at the lowest).

Table 7 contains the results for the significant relationships between human relations value fit and creativity in a low creative culture. The linear and nonlinear effects of human relations value were significant predictors as a set of Time 2 creativity ratings, with 11% of the variance in creativity explained and of supervisor ratings with 24% of the

variance explained. Figure 3b (p. 142) displays the relationship between human relations value fit and supervisor rated creativity as this was the one out of the two significant polynomial regression equations which also showed significant surface tests. Based on a positive a_1 (2.62, $p < .05$) the relationship between human relations value fit and creativity was positive. There was a slight downward, concave shape to the line of fit (-.73, $p < .05$ for supervisor) toward the point where +3 and +3 intersect, suggesting that toward higher values of fit, creativity may decrease. Lastly, creativity was higher when need exceeded supply ($a_3 = -2.70$, $p < .01$ for supervisor) and this line of misfit was slightly concave, or downward curving ($a_4 = -.70$, $p < .05$).

Taken together, the relationship between human relations value fit and creativity did not support Hypothesis 1. Instead, there was slight support that human relations value fit was positively related to creativity. There is only slight support as this was not a significant trend with all ratings. There was a small downward curve close to fit at a high level (+3, +3) for supervisor ratings in a low creative culture; however, the sample size at this point was low ($n = 3$) indicating that this part of the graph may not have been adequately predicted.

Internal processes value. An organization that values internal processes is very efficient and bureaucratic. When all cases were considered, Time 1 and Time 2 creativity ratings were significantly predicted by the linear and nonlinear effects of internal processes value fit as a set (see Table 5, Figure 4a-b, p. 143) with 3% and 7% of the variance in creativity explained, respectively. Both also had at least one significant surface test result. For those cases with a low creative culture, Time 2, paired Time 1 and Time 2, and supervisor creativity ratings were all significantly predicted by the internal processes value

linear and nonlinear effects as a set (see Table 7, Figure 4c-f, p. 143) with variance explained ranging from 7% to 23%. All four also had at least one significant surface test result.

For all cases, the only significant surface test was for a_2 at both Time 1 (.07, $p <$ .05) and Time 2 (.10, $p < .05$) indicating that the line of fit had a convex, upward sloping curve (see Table 5). This means that for Time 1 and Time 2, creativity was higher moving away from where 0 need met 0 supply toward -3, -3 and +3, +3. Given the remaining surface tests were non-significant and that paired ratings for Times 1 and 2 returned negative adjusted R^2s, internal processes value fit only had a minimal, if any, relationship with creativity when those with creative cultures were included in the analysis.

A different pattern emerged when only considering those in a low creative culture (see Table 7). For the self ratings of creativity, a_2s were significant and negative for Time 2 and paired Time 2 (-.23, $p < .05$, -.26, $p < .01$, respectively). This means that the line of fit was curved such that when moving toward extreme levels of fit (both high and low) creativity decreased. Paired Times 1 and 2 both had significant positive a_3s (.35, $p < .10$, albeit at the .10 level; .37, $p < .05$, respectively) and significant negative a_4s (-.30, $p < .05$; -.36, $p < .01$, respectively). This indicates that the line of misfit was curved downward such that creativity was lower toward extreme ends of misfit; however, creativity was slightly higher when the supply for internal processes value exceeded the need. For example, in Figure 4c (p. 143) there is a blue color at +3 need and -3 supply which denotes lower levels of creativity. Close to -3 need and +3 supply, the level of creativity is slightly higher (i.e., there is no blue).

Supervisor ratings of creativity in a low creative culture had an a_1 of -.44 ($p < .05$) which means that fit on internal processes value was negatively related to supervisor ratings of creativity (see Table 7). Overall, internal processes value fit had minimal or no significant impact on creativity when the sample included those with a creative culture. When the sample only included those in a low creative culture, fit on internal processes value was related to lower self rated creativity moving toward the extreme levels of fit. Based on supervisor ratings, fit on internal processes values was negatively related to creativity. The findings on the relationship between internal processes value fit and creativity in a low creative culture provide some support to Hypothesis 1.

Rational goal value. Rational goal value describes an organization that fosters high performance, achievements, and competition. For all cases, the linear and nonlinear effects of rational goal value as a set were significant predictors of creativity rated at Time 1, Time 2, paired Times 1 and 2, and rated by supervisors (see Table 5) with a range of 10% to 13% of the variance in creativity ratings explained. For those with a low creative culture, the linear and nonlinear effects of rational goal value as a set were significant predictors of creativity rated at Time 1, paired Time 1, and by supervisors (see Table 7) with variance explained for self ratings at 11% each and for supervisor ratings at 35%.

When all cases were included, the only significant regression that also had a significant surface test result was creativity rated at Time 1 (see Figure 5a, p. 144). Specifically, a significant positive a_1 indicated that fit on rational goal value was positively related to Time 1 creativity ($a_1 = .48$, $p < .01$; see Table 5). When only considering those with a low creative culture, again only Time 1 creativity ratings also had a significant surface test result (see Figure 5b, p. 144). The fit on rational goal value in a low creative

culture was also positively related to creativity at Time 1 (a_1 = .52, p < .01), all other tests were non-significant (see Table 7).

Taken together, the relationship between rational goal value fit and creativity did not support Hypothesis 1. Instead, there was slight support that rational goal value fit was positively related to creativity. There is only slight support as this was not a significant trend with all ratings. The finding with rational goal value fit was similar to the finding for human relations value fit.

General PO values fit. General PO values fit was also hypothesized to relate negatively to creativity. This hypothesis was tested by analyzing the correlations. When all cases were considered, fit was positively and significantly related to creativity at Time 1 (r = .33, p <. 01, n = 387) and Time 2 (r = .22; p < .01; n = 193), but was unrelated to supervisor or coworker ratings of creativity (r = -.06, p = .58, n = 80; r = -.06, p = .63, n = 67, respectively). Paired Time 1 and Time 2 for all data showed a similar pattern as with all data included. That is, general PO values fit correlated .30 (p < .01, n = 179*)* with paired Time 1 and .18 (p < .05, n = 179) with paired Time 2.

A slightly different pattern emerged when considering only those in a low creative culture. Fit positively related to Time 1 creativity (r = .18, p < .05; n = 199), but not to Time 2 (r = .10, p = .33, n = 99). To compare, paired Time 1 was not significantly correlated to creativity (r = .15, p = .16, n = 91*)* nor was paired Time 2 (r = .07, p = .53, n = 91). Although not significant at the .05 significance level, the direction of the relationship between fit and supervisor rated creativity was in line with Hypothesis 1 (r = -.27, p = .08; n = 43) in a low creative culture. Lastly, general PO values fit was not

significantly related to coworker rated creativity in a low creative culture (r = -.25, p =.22; n =25).

In summary, the relationship between non-creativity values fit and creativity was more complicated than suggested in Hypothesis 1. There was slight support that creativity was more likely to be *positively* related to fit on human relations value and rational goal value rather than negatively related. However, the relationships for these two values were not consistent among rating sources which suggests that they may only have a small relationship with creativity, if any. There was some support to the hypothesis when looking at internal processes value fit in a low creative culture. That is, for Time 2 and paired Time 2, creativity tended to decrease toward extreme levels of fit. In addition, internal processes value fit was negatively related to supervisor rated creativity when only low creative culture data were included in the analysis. Lastly, regardless of including all data or data from a low creative culture, the relationship between general PO values fit and creativity failed to support Hypothesis 1. One finding to note was that the direction of general PO values fit and supervisor rated creativity in a low creative culture was in line with Hypothesis 1 at the .10 significance level. Overall, Hypothesis 1 received mixed support.

Hypothesis 2

Creativity/innovation value. Hypothesis 2 stated that fit on creativity/innovation value would be positively related to creativity. Significant polynomial regressions resulted when including all data, with a range of 18% to 24% of the variance in self ratings of creativity explained (see Table 8). Supervisor and coworker ratings were not significantly predicted by creativity/innovation value fit. The non-significant polynomial regressions are presented for low creative culture in Table 9 for reference.

Out of the significant polynomial regressions, Time 1, Time 2 and paired Time 2 also had significant surface test results (see Table 8 and Figure 6a-c). Figure 6a (p. 145) and the surface tests for Time 1 ratings of creativity support Hypothesis 2, as the slope of the line of fit (a_1) was .65 ($p < .01$) meaning fit on creativity/innovation value was positively related to creativity. The result for Time 2 and paired Time 2 did not have significant a_1 values, but they did have significant a_2 values (.14, $p < .05$; .13, $p < .05$, respectively). This suggests that toward extreme levels of fit on creativity/innovation value, creativity increased (i.e., the shape of the line of fit was convex; see Figure 6b-c, p. 145).

Overall, Hypothesis 2 had some support. This is despite the visual differences in the shape of the response surface graphs at Time 1 compared to Time 2 and paired Time 2. At Time 1, creativity was lowest moving toward the point where -3 need met -3 supply, whereas at Time 2 and paired Time 2, creativity was high at any level of the creativity/innovation value the organization supplied. This finding may have been the result of almost half of the sample not responding at Time 2. For example, when paired Time 1 was plotted, despite the surface tests being non-significant, the *shape* of the graph resembled Time 2 and paired Time 2 such that creativity appeared higher along any value of the cultural supply. Simply stated, the individuals who responded which helped form the shape of the Time 1 surface plot, did not respond at Time 2.

Hypotheses 3 and 4

Hypotheses 3 and 4 suggested that all of the PO fit-creativity relationships proposed would be moderated by both individuals' conformity preference and their willingness to take risks at work. The relationships for the competing values model

variables were again tested using polynomial regression. The equation for moderation was $Z = b_0 + b_1X + b_2X + b_3X^2 + b_4XY + b_5Y^2 + b_6V + b_7XV + b_8YV + b_9X^2V + b_{10}XYV + b_{11}Y^2V + e$, where V was the moderator. The terms that include the moderator were entered into a separate regression step after the linear effects, nonlinear effects, and the mean centered moderator were included in the first step. A significant change in R^2 indicated that there was evidence for moderation (Edwards, 1994). After determining there was a moderating effect, the polynomial regressions were run again at high and low levels of the moderator to interpret the impact of the moderator on the fit-creativity relationship (see Anseel & Lievens, 2006; Edwards & Rothbard, 1999). For these analyses, those who were below a 4.00 on the moderators were considered low on the moderator whereas those above a 4.00 were considered high on the moderator. That is, the moderators were dichotomized so polynomial regressions could be conducted for both high and low levels of the moderators (Edwards & Rothbard, 1999). Both moderators were normally distributed with minimal skewness. Those individuals who rated conformity or willingness to take risks around the mid-point were not removed as this would have caused the sample size to drop substantially in some instances (e.g., when only considering low creative culture) and these regressions were needed for comparison purposes.

Hypotheses 3a and 4a stated that the negative relationship between non-creativity values and creativity would be stronger for those high on conformity preference (or low on willingness to take risks) compared to those low in conformity preference (or high on willingness to take risks). Support for these hypotheses would have been demonstrated through a significant negative a_1 for high conformity preference (or low willingness to take risks) and an a_1 for those with a low conformity preference (or high willingness to take

risks) that had a less negative value in comparison (even if still significant), a non-significant value, or a significant value in the positive direction. Hypotheses 3b and 4b stated that the positive relationship between creativity/innovation value fit and creativity would be stronger for those low on conformity preference (or high on willingness to take risks) over those high on conformity preference (or low on willingness to take risks). Support for these hypotheses would have been demonstrated through a significant positive a_1 for those low on conformity preference (or high willingness to take risks) and an a_1 for those with a high conformity preference (or low willingness to take risks) with a less positive value in comparison (even if still significant), a non-significant value, or a significant value in the negative direction. Lastly, the only interpretations made and graphs plotted were for those relationships with at least one statistically significant surface test result.

The general PO values fit was tested using traditional moderated regression where the interaction term was added in a separate step from the individual predictors (after being mean-centered) and if the regression weight for the interaction and change in R^2 were significant, then there was evidence for moderation.

Conformity preference. Results of the moderation analyses for the competing values model are presented via change in R^2 in Tables 5, 7, and 8. Conformity preference did not moderate the relationship between creativity/innovation value fit and creativity for any of the ratings (see Table 8); therefore, Hypothesis 3b was not supported. Conformity preference also did not moderate the relationship between general PO values fit and creativity when either all data were included or when only low creative culture data were included (see Tables 10 and 11, respectively). Out of the non-creativity values-creativity

relationships, conformity preference significantly moderated four out of the 19 possible relationships. The 19 possible relationships were the polynomial regressions that reached statistical significance in Tables 5 and 7. The significant moderation results were for Time 1 for internal processes value with all data included where including the moderator explained 5% more of the variance in creativity, paired Times 1 and 2 for rational goal value including all data where the addition of the moderator explained 7% more variance in creativity each, and Time 1 for rational goal value in a low creative culture, where including the moderator explained 7% more variance in the creativity ratings. The surface tests can be found in Table 12.

As can be seen with the surface test results, the a_1 values were not in the appropriate direction (i.e., a significantly negative a_1 for high conformity preference) indicating that Hypothesis 3a was not supported. Figure 7a-f (p. 146) displays the surface graphs for high and low levels of conformity preference for which there was at least one significant surface test result. The surface tests for rational goal value paired Time 2 ratings with all data were not significant for low conformity preference; hence it was not graphed. Likewise, none of the high conformity preference surface tests for Time 1 rational goal value with data from a low creative culture were significant (see Table 12).

Individuals' willingness to take risks. Individual's willingness to take risks at work did not moderate any of the relationships for the non-creativity competing values fit and creativity (see Tables 5 and 7), nor did it moderate the relationship for general PO values fit and creativity (see Tables 13 and 14). Therefore, Hypothesis 4a was not supported. Risk-taking was only a significant moderator for the creativity/innovation value fit-creativity relationship at Time 1, Time 2, and paired Times 1 and 2 when including all

data (see Table 8 and Figure 8a-d, p. 148). Adding risk-taking as a moderator for the creativity/innovation value fit-creativity relationship increased the variance explained in creativity by 3% to 9%.

The results of the response surface tests can be found in Table 15. The R^2s for the polynomial regressions testing the moderator at high and low levels of willingness to take risk were all above .16 with an average of 26% of the variance in self creativity ratings explained. At Time 1, low risk-takers were creative when they had fit at high levels of creativity/innovation value as indicated by a positive a_1 (.55, $p < .01$) and a close to zero a_2 (-.02, *n.s.*, see Figure 8a, p. 148). For high risk-takers, this relationship increased to .77 ($p < .01$) which provides preliminary support to Hypothesis 4b that the positive relationship between creativity/innovation values fit and creativity would be stronger for those high in willingness to take risks than for those low in willingness to take risks.

A difference concerning the result at Time 1 compared to Time 2 and paired Times 1 and 2 was that at Time 1 there was an increase in a_1 between low and high levels of risk-taking but this was not the case for Time 2 or paired Times 1 and 2 (see Table 15). However, the *shape* of the fit line for Time 2 and paired Time 2 indicated that the line of fit was curved upward for those high in willingness to take risks (Time 2 $a_2 = .21$, $p < .10$, albeit at the .10 significance level, paired Time 2 $a_2 = .20$, $p < .05$) but not for those low in willingness to take risks. This suggests that toward more extreme levels of fit (particularly toward +3, +3) creativity was higher for those high in willingness to take risks. In sum, Hypothesis 4b was partially supported for self ratings but not for supervisor or coworker creativity ratings.

Correlates of Creativity

Hypotheses 5 thru 11 addressed the proposed relationships between the previously researched correlates of creativity and creativity. In order to simplify the results, all data were included for these analyses (see Table 1); however, the data from individuals in a low creative culture were considered when including these correlates in a multiple regression analysis under the section "Exploratory Research Questions".

Hypothesis 5 predicted that domain-relevant skills would be positively related to creativity. This hypothesis was supported at Time 1 and Time 2 ($r = .12$, $p < .05$; $r = .22$, $p < .01$, respectively); albeit, at Time 1 the relationship was smaller. Self ratings of domain-relevant skills did not correlate with supervisor or coworker ratings of creativity; however, supervisor ratings of domain-relevant skills correlated to supervisor ratings of creativity ($r = .49$, $p < .01$) and coworker ratings of domain-relevant skills correlated to coworker ratings of creativity ($r = .50$, $p < .01$). Overall, Hypothesis 5 had support for self ratings to self ratings and other ratings to other ratings (e.g., supervisor rated domain-relevant skills to supervisor rated creativity). The hypothesis was not supported for self rated domain-relevant skills to other rated creativity.

Hypothesis 6 was that the presence of creative role models would be positively related to creativity. This was supported at Time 1 and Time 2 ($r = .43$, $p < .01$; $r = .27$, $p < .01$, respectively); however, the presence of creative role models was not significantly related to supervisor or coworker ratings of creativity. Hypothesis 6 was supported for self ratings only.

Hypothesis 7 was that the more supportive supervisors are the more likely direct reports are to be creative. The correlations were significant at Time 1 and Time 2 ($r = .40$, $p < .01$; $r = .32$, $p < .01$, respectively). As with creative role models, supervisor support was

not significantly related to supervisor or coworker ratings of creativity. The same pattern emerged with Hypothesis 8 which stated that job autonomy would be positively related to creativity. Time 1 and Time 2 correlations of job autonomy and creativity were significant ($r = .37$, $p < .01$; $r = .25$, $p < .01$, respectively), but supervisor and coworker ratings of creativity were not significantly related.

Hypothesis 9 suggested that time pressure, when seen as excessive and not challenging, would be negatively related to creativity. The items were designed to capture excessive time pressure; however, excessive time pressure was positively correlated with Time 1 creativity ($r = .16$, $p < .05$). Excessive time pressure was not correlated with Time 2 creativity or with supervisor or coworker ratings of creativity. As noted in the introduction, time pressure has a complex relationship with creativity and may be best represented as curvilinear. The curvilinear relationship between excessive time pressure and creativity was essential the same as the linear relationship. Both correlation coefficients for Time 1 were .15 ($ps < .01$). Time 2, supervisor, and coworker creativity ratings did not significantly correlate with either linear or curvilinear excessive time pressure. Hypothesis 9 was not supported.

Hypothesis 10 stated that creative job requirement would be positively related to creativity. Creative job requirement positively correlated to Time 1 and Time 2 creativity ($r = .55$, $p < .01$; $r = .39$, $p < .01$, respectively), but not to supervisor or coworker rated creativity. Hypothesis 11 suggested that even if creativity was not required on the job, the anticipation that being creative would be rewarded would likely positively relate to creativity. This hypothesis was supported for both Time 1 and Time 2 ratings ($r = .64$, $p <$

.01; $r = .50$, $p < .01$, respectively), although it was not supported based on supervisor or coworker creativity ratings.

A comprehensive summary of the level of support for all hypotheses can be found in Table 16.

Exploratory Research Questions

The first set of exploratory research questions concerned the relationships between creativity and other outcomes including innovation (i.e., idea implementation), supervisor rated job performance ratings, and turnover intention. Self ratings of creativity at Time 1 positively and significantly correlated to self ratings of innovation at Time 1 ($r = .78$, $p < .01$) as did Time 2 creativity to Time 2 innovation ($r = .72$, $p < .01$). This suggests that when individuals consider themselves creative they tend to believe they are also innovative; that is, they believe they implement their ideas. The correlation between creativity Time 1 and innovation Time 2 was lower, yet still significant ($r = .59$, $p < .01$). However, any correlations with Time 2 innovation may not be accurately represented as alpha was low for innovation at Time 2 ($\alpha = .58$). Time 1 creativity ratings did not significantly correlate to supervisor or coworker ratings of innovation. Time 2 creativity also did not significantly correlate to coworker ratings, but did significantly correlate to supervisor ratings of innovation ($r = .29$, $p < .05$). Interestingly, supervisor ratings of creativity positively and significantly correlated to self ratings of innovation at Time 1 and Time 2 ($r = .25$, $p < .05$; $r = .26$, $p < .05$, respectively). Supervisor ratings of creativity correlated highly to supervisor ratings of innovation ($r = .89$, $p < .01$). Lastly, coworker ratings of creativity did not significantly correlate to self ratings of innovation but did significantly correlate to coworkers' ratings of innovation ($r = .77$, $p < .01$).

Supervisors were asked to rate their direct reports' performance on the job. Supervisor ratings of creativity were significantly and positively related to supervisors' ratings of individuals' performance ($r = .56$, $p < .01$) suggesting that to some extent, supervisors' perception of employees' creativity on the job had an impact on performance ratings. Self ratings of creativity did not significantly relate to supervisor performance ratings suggesting that individuals may believe they are creative but this does not necessarily translate to supervisor rated job performance. Lastly, coworker ratings also did not significantly correlate to supervisor rated job performance.

Self ratings of creativity at Time 1 were negatively correlated to turnover intention of those currently working ($r = -.15$, $p < .01$), although not to a large degree. Creativity ratings at Time 2 were not significantly related to turnover intention. Supervisor and coworker creativity ratings did not significantly correlate to individuals' turnover intention as well. This suggests that the relationship between creativity and turnover intention may only be minimal.

The other exploratory research question concerned how PO fit relates to creativity compared to the already established predictors of creativity. In order to answer this question, general PO values fit was entered into the first step of a hierarchical regression equation predicting creativity. This was followed by entering the correlates of creativity as well as individuals' conformity preference and willingness to take risks. Results for all data can be seen in Table 17, results for those in a low creative culture can be seen in Table 18, results of those currently working (refer to Table 3 as there was a difference on general PO values fit) can be seen in Table 19 for all data, and in Table 20 for low creative culture. In addition, Tables 21 and 22 display the multiple hierarchical regression results

considering all data for graduate and undergraduate students, respectively (refer to Table 3 as there was a difference on creativity between these two groups). The comparison between graduate and undergraduates in a low creative culture was not included as the sample size for graduate students was extremely low (n = 26 for self ratings and n = 9 for coworker ratings of creativity). Since graduate students' responses influenced the different results on creativity between full-time workers and those not currently working (see Table 3), the results were only analyzed by graduate versus undergraduate students.

For all data, general PO values fit was a significant positive predictor for Time 1, Time 2, and paired Times 1 and 2 self ratings of creativity, but not for supervisor or coworker rated creativity. Change in R^2 was significant at the .01 level when the other predictors were added for all self ratings and significant at the .10 level for supervisor ratings (see Table 17). With the inclusion of all predictors, adjusted R^2s ranged from .29 to .53 for self ratings and was .09 for supervisor ratings. The results were fairly consistent (i.e., similar for all self ratings) such that fit was not a significant predictor when the other variables were entered. Self rated domain-relevant skills and anticipated reward for being creative were significant predictors for all ratings except supervisors. The only significant predictors for supervisor rated creativity were excessive time pressure (b = -.14, p < .05) and conformity preference (b = -.19, p < .05).

In a low creative culture, domain-relevant skills and anticipated reward for being creative were again significant positive predictors for all self rated creativity while fit was not (see Table 18). The changes in R^2 for self ratings when adding in the other predictors were all significant at the .01 level and the adjusted R^2s ranged from .23 to .53. As for supervisor ratings, fit was a negative predictor for creativity (b = -.23, p <.05) as was

conformity preference *(b* = -.27, *p* <.05); however, the regression model itself was not significant and adjusted R^2 equaled .06.

For those currently working, the most consistent significant positive predictor of self rated creativity was anticipated reward for being creative when both all data were included and when low creative culture data were included (see Tables 19 and 20). General PO values fit was not a significant predictor in either case. The adjusted R^2s for self ratings for all data of those currently working ranged from .22 to .54, and all changes in R^2 were significant at the .01 level. The adjusted R^2s for self ratings of those in a low creative culture ranged from .29 to .54 and all changes in R^2 were significant at the .01 level. For supervisor ratings, with both all data and low creative culture data, the regression weights for conformity preference were significant and negative. The overall regression equation was only significant at the .10 level with all data and not significant with low creative culture data included.

All changes in R^2s were significant at the .01 level for self ratings for both graduate students and undergraduate students when entering all correlates of creativity. Anticipated reward for being creative was a consistent significant positive predictor for both graduate students and for undergraduate students while fit was not (see Tables 21 and 22). Domain-relevant skills was also a consistent predictor of creativity for undergraduates but not for graduate students. The adjusted R^2s for graduate student self ratings ranged from .48 to .62 and they ranged from .22 to .53 for undergraduate self ratings. Neither supervisor ratings nor coworker ratings for graduate students or undergraduate students had significant regression equations.

Overall, general PO values fit was not a significant predictor of creativity when other variables were also considered. Anticipated reward for being creative was the biggest consistent positive predictor of participants' self rated creativity followed by domain-relevant skills. Conformity preference was the most consistent negative predictor of supervisor ratings. The competing values model of fit was not compared to the other predictors of creativity as the beta weights are not interpreted the same as they would be in ordinal least squares regression (e.g., instead of interpreting the beta weights, they are plotted using response surface methodology).

The last exploratory analysis was over job complexity. Job complexity was coded on a scale of 0 to 10 with 10 being most complex. The mean complexity score for this sample was 4.08 (*SD* = 1.75) ranging from .20 to 8.30. Job complexity was normally distributed and Table 1 displays all study variables correlation with job complexity. Job complexity was significantly correlated with creativity at Time 1 ($r = .29$, $p < .01$) and Time 2 ($r = .30$, $p < .01$), and innovation at Time 1 ($r = .21$, $p < .01$) and Time 2 ($r = .29$, $p < .01$). Job complexity was not significantly correlated with creativity or innovation ratings of supervisors ($r = .15$, $p = .18$; $r = .15$, $p = .19$, respectively) or coworkers ($r = .18$, $p = .15$; $r = .23$, $p = .06$, respectively). Given complex jobs can be described by the amount of autonomy individuals have, the relationship between job complexity and job autonomy was examined. The correlation was .10 ($p < .05$) indicating that, to a small but significant extent, job complexity ratings covaried with job autonomy.

Discussion

As mentioned in the recent review by Kristof-Brown and Guay (2011), there has been a call to conduct more research on the relationship between PO fit and creativity. One

of the overarching goals of this study was to begin to answer the question of whether or not there is a dark side to PO fit. Schneider's (1987) attraction-selection-attrition framework was the impetus for the idea that PO fit may be negatively related to creativity. If individuals do not feel they fit with an organization they are likely to turnover. Over time this cycle leaves an organization with employees who are more homogeneous on certain characteristics, such as their values. Schneider posits that this homogeneity may reduce organizations' flexibility and ability to be creative and innovative. From a practical standpoint, more and more companies are focusing their efforts on developing innovative capabilities at their organizations (Andrew, 2010) and in order to be innovative (idea implementation) employees must first be creative (idea generation). Therefore beyond theory development, there are practical implications from this study as well as limitations that may be addressed with future PO fit-creativity research.

The first hypothesis that PO fit would be negatively related to creativity was tested using general PO values fit and the three non-creativity values of the competing values model (Quinn, 1988; Quinn & Rohrbaugh, 1983). The second hypothesis that PO fit would be positively related to creativity was tested using the creativity/innovation value of the competing values model. The competing values model was chosen because (a) the four values have been shown to comprehensively represent organizations' culture (Howard, 1998), (b) it has been recommended for use in congruence research (Ostroff et al., 2005), (c) using the competing values model expands other PO fit-creativity research which only looked at fit on a creativity value (e.g., Choi, 2004), and (d) organizations have some control over whether or not they have these four values. The measures for the competing values model were operationalized as subjective needs-supplies fit which allowed the joint

effects of the person and the environment on creativity to be tested. This operational definition of fit supported the interactionist perspective (e.g., Lewin, 1936) as well as allowed for the use of polynomial regression (i.e., the recommended statistical technique for congruence research; Edwards, 2002; Meyer et al., 2010). In addition to the competing values model, a general PO values fit measure was used to capitalize on the fact that it was a supplementary perceived measure. That is, the measure had individuals assess if they thought they were *similar* to their organization as the ASA model would support.

A revisit to Figure 2 is necessary in order to interpret the results for Hypotheses 1 and 2. The four competing values are characterized by two dimensions; control (valuing stability and planning) versus flexibility (valuing differentiation and experimentation) and external (a focus outside the organization) versus internal (a focus inside the organization). The creativity/innovation value is defined as being external and flexible. Opposite of this is the internal processes value which is defined as being internal and controlled. Human relations and rational goal values each share a characteristic in common with the creativity/innovation value. Human relations value shares the flexible characteristic and rational goal value shares the external characteristic. Understanding these similarities helps to explain the results. For a few of the relationships (i.e., for self ratings at Time 1 with either all data or low creative culture data considered), fit on human relations value and rational goal value was *positively* related to creativity, failing to support Hypothesis 1. Likewise, fit on creativity/innovation value *positively* related to creativity (rated by self) in support of Hypothesis 2. These findings can be explained by the fact that human relations value and rational goal value share characteristics in common with creativity/innovation value. However, under certain conditions (i.e., in a low creative culture), individuals' fit on

the internal processes value, which is opposite of creativity/innovation value, was more in line with Hypothesis 1.

When all data were considered, the relationship between internal processes value fit and self rated creativity was sometimes positive (i.e., based on a_2) and other times there was no relationship. As mentioned previously, the analyses were run by using all data and by using data of those in a low creative culture in order to understand how fit on non-creativity values related to creativity when the organization does not value creativity. When considering those individuals whose organizations were low on creative culture, fit on internal processes value was generally significantly related to lower levels of creativity for both self and supervisor ratings. This was not the case for those in a low creative culture for human relations and rational goal values fit, but as discussed above, they share characteristics in common with the creativity/innovation value.

The relationship between general PO values fit and creativity was positively related to self ratings when all data were considered, but it was unrelated to supervisor or coworker ratings of creativity. When only taking into account those in a low creative culture, fit was positively or not significantly related to self ratings of creativity and negatively related to supervisor ratings at the .10 level. Overall, Hypothesis 1 received some support in a low creative culture for internal processes value fit on self and supervisor creativity ratings. Moreover, general PO values fit was negatively related to supervisor ratings in a low creative culture which also demonstrated some support. However, Hypothesis 1 was unsupported (i.e., fit was somewhat positively related to creativity) when considering human relations and rational goal values fit when all data were included *and* when only data at low levels of creative culture supply were included.

The fact that Hypothesis 1 was unsupported for human relations and rational goal value may be explained by these values sharing characteristics in common with creativity/innovation value which fit, for the most part, on this value positively related to creativity in support of Hypothesis 2.

In this study, Hypotheses 3a and 3b were not supported for either the competing values model or general PO values fit as individuals' conformity preference was not a significant moderator of the relationship between fit and creativity in the hypothesized direction. Hypothesis 4a was not supported as willingness to take risks did not moderate the relationship between the non-creativity values (i.e., human relations, internal processes, rational goal, and general PO values fit) and creativity. With creativity/innovation values fit; however, willingness to take risks did moderate the relationship between this fit and creativity in the hypothesized direction for most self ratings, but did not for supervisor or coworker ratings. That is, the relationship between fit and self rated creativity was stronger (either due to a positive line of fit or a positive convex shape) for those with a high willingness to take risks over those with a low willingness to take risks. Overall, there was partial support for Hypothesis 4b.

Instead of individuals' conformity preference and willingness to take risks serving as moderators for the fit-creativity relationship as suggested in Hypotheses 3 and 4, they may only be predictors of creativity. This was demonstrated by the significant negative relationships between conformity preference and self ratings at Times 1 and 2 and conformity and supervisor ratings. The more likely individuals were to conform to the group, the less likely they were to be creative, despite their PO fit. Also, willingness to take risks had significant positive relationships with self ratings as was to be expected

based on prior research on risk-taking (e.g., Dewett, 2006). Another possible reason that conformity preference and willingness to take risks were not significant moderators for most of the relationships is related to the fact that when added to the fit-creativity relationship, they did not explain much additional variance in creativity ratings. This may have made it hard to even find a relationship, if one does exist, without a large enough sample of individuals.

There were two overarching findings about the zero-order correlations between the correlates of creativity and creativity. First, the hypotheses, 5 to 11, were supported for self ratings of creativity with the exception of the relationship between excessive time pressure and creativity (i.e., Hypothesis 9 was not supported). Second, the predictors tended to correlate with self ratings of creativity but not to other ratings of creativity. These two general findings and the more specific findings are discussed next.

The relationship between domain-relevant skills and creativity was based on the componential model of creativity (Amabile, 1983; 1988) and had, to my knowledge, not been empirically tested previously. The measure created in this study was assessed by all raters and there were similarities between the way supervisors and participants rated (both in agreement and reliability). However, as noted previously, self ratings of domain-relevant skills positively related to self ratings of creativity and other ratings of domain-relevant skills positively related to other ratings of creativity. Future researchers may want to refine and use this measure in creativity studies because, based on the exploratory analyses, it was the second most consistent positive predictor of self rated creativity.

The presence of creative role models, supervisor support, and job autonomy all correlated with self rated creativity in the expected positive direction. These three

correlates tended to be non-significant predictors of self rated creativity when considering other predictors (e.g., domain-relevant skills) in a multiple regression analysis. Also, they did not significantly correlate with supervisor or coworker ratings. In terms of the supervisor support measure, it may have had a stronger relationship with creativity had the focus of the scale been different. The supervisor support measure asked about participants' perception that their supervisor was supportive *in general*. Potentially, if the measure had asked if their supervisor supported employee creativity in the organization, the relationship between it and creativity might have been stronger due to their similar focus (Madjar, Oldham, & Pratt, 2002).

As mentioned previously, Hypothesis 9, which stated that excessive time pressure would be negatively related to creativity, was not supported. Time pressure and creativity have a complex relationship such that at minimal and excessive levels of time pressure, creativity is more likely to be lower than when it is at moderate levels (Baer & Oldham, 2006). The measure of time pressure in this study was meant to represent excessive time pressure, but it is possible that the participants did not interpret the items in this way as excessive time pressure was *positively* related to self ratings of creativity. Future researchers may look into crafting a measure that only represents excessive time pressure; otherwise, the relationships may be best represented as curvilinear. In the present study, the curvilinear relationship between time pressure and creativity was tested and found to be essentially the same as the linear relationship (e.g., correlation coefficients were both .15). This is not surprising given that Baer and Oldham (2006) only found an inverted U-shaped relationship for those high in the level of a moderator (e.g., openness to experience). Lastly, like the general focus of the supervisor support measure, if excessive time pressure

was not just general, but about excessive time pressure specifically hindering creativity, the relationship between this and creativity may have been significant and negative (Baer & Oldham, 2006).

The last two hypothesized correlates were creative job requirement and anticipated reward for being creative. These variables were included to replicate Yuan and Woodman's (2010) study which linked these variables to supervisor ratings of innovative behavior (defined as creativity and innovation combined). Both variables were positively related to self rated creativity but were unrelated to supervisor or coworker ratings. This is not surprising given that many of the correlates did not relate to other ratings. Additionally, a main finding that resulted from the exploratory analysis was that anticipated reward for being creative was the most consistent and largest predictor of self rated creativity compared to the other correlates of creativity, including general PO values fit.

One of the most consistent findings throughout this entire study was that the results of relationships to self and other ratings of creativity were mostly dissimilar. This happened for the relationships concerning the competing values model, general PO values fit, and the correlates of creativity. There are a few possible explanations for this finding. First, interrater reliability for creativity was low. Recall that self ratings of creativity were significantly correlated to supervisor ratings but the effect size was not large (i.e., $r^2 = .06$). Also, coworker ratings of creativity were not significantly correlated to self ratings, and, had a small standard deviation. This lack of interrater reliability overall and potential range restriction for coworker ratings may have contributed to the inconsistent relationships with creativity and other study variables.

In order to reduce the common method bias that may have resulted from having individuals assess the predictor variables and creativity at the same time with the same method (i.e., responding to a survey), creativity was measured at Time 2 as well. Although there was a time lapse, common method bias could have been a second contributor to the inconsistent findings. For example, the strongest relationships between the predictors and creativity were observed with Time 1 ratings. Some of the relationships at Time 1 could have been inflated due to common method bias. Common method bias could be another reason why self and other ratings differed beyond lack of interrater reliability. That is, even at Time 2 the self rated predictors were still being correlated with self rated creativity.

A third explanation for the self-other rating inconsistencies is that supervisor and coworker creativity ratings might have been less accurate than self ratings. For example, independent from both self and other ratings, job complexity was coded as past research demonstrates that job complexity has been positively related to creativity (e.g., Amabile & Gryskiewicz, 1989; Shalley et al., 2009). This variable also showed the pattern of significantly correlating to self ratings but not to other ratings. Since this measure was independent from all raters in this study, it is possible that supervisor and coworker ratings were less accurate. Rater errors such as leniency may help explain this inaccuracy. However, another plausible alternative explanation to supervisors and coworkers rating inaccurately is that there may have been some accuracy as these raters could have just observed different behaviors than individuals perceived of themselves. Lastly, researchers have argued that creativity can be considered an internal process where supervisors and coworkers are better judges of innovation, which is more visible, over creativity (Drazin, Glynn, & Kazanjian, 1999). Given that for the current study the innovation ratings also

mirrored the creativity ratings in that there were inconsistencies in relationships and low interrater reliability, this may not be the case currently.

A fourth explanation for the inconsistent results is non-response bias. Participants decided if they would provide the emails of their supervisors and coworkers for the study as well as whom those individuals would be. Given that the means were significantly higher for supervisor and coworker ratings, the individuals whose coworkers and supervisor were not included may have given lower ratings than those who were; hence participants may have been reluctant to provide contact information on them. Moreover, inconsistencies in the Time 1 and Time 2 relationships could have been due to non-response bias (e.g., the relationship between creativity/innovation value fit on creativity at Time 1 to Time 2 was inconsistent, see Figure 6). It is likely that all three explanations (i.e., lack of interrater reliability, inaccuracy in ratings, and non-response bias) had some effect on the inconsistencies between relationships with self and other creativity ratings and study variables. Overall, reviews on creativity (e.g., Shalley et al., 2004; Zhou & Shalley, 2011) have suggested that field studies should begin to incorporate multiple raters (e.g., self, supervisor, and coworker) to fully understand the creative relationship. Consequently, in the creativity literature, these relationships are not yet clear.

Some insight regarding self and other ratings that may be useful for future creativity research can be drawn from the literature on 360 degree feedback and assessment centers. In the 360 degree feedback literature, some researchers are using the lack of raters' consistency to build theories (Atwater & Yammarino, 1992). That is, the lack of consistency may be related to outcomes as different raters may see different aspects of behavior; all of which may be valid. Atwater, Ostroff, Yammarino, and Fleenor (1998)

found that self and other ratings were not in perfect agreement (or reliability), yet both were significant predictors of managerial effectiveness. Moreover, the interaction of self and other ratings mattered (e.g., effectiveness was highest when others rated higher than managers did or if there was perfect agreement). Future creativity researchers may want to consider how the degree of mismatch (i.e., agreement and reliability) between self and other ratings relate to other study variables such as general PO values fit (e.g., via polynomial regression).

Even if the mismatch between self and other ratings matters, it may also be possible to increase reliability and agreement of self-other creativity ratings as has been demonstrated with assessment center research. During assessment centers, raters make evaluations of participants' behavior. Likewise for this study, self and other raters were asked to rate their perceptions of employee (or self) behavior. The raters may have had a different conceptualization of creativity when answering the questions. In assessment center research, ratings tend to be more consistent when the raters have had frame of reference training (e.g., Goodstone & Lopez, 2001). Frame of reference training gives raters a common definition of the concept and defines specific behavioral indicators of the concept. Both of these are then reinforced though making practice ratings and receiving feedback on the accuracy of the ratings. Applied here, if raters were trained briefly on what constitutes creativity, they may have had more consistent ratings. The research on assessment centers shows that after frame of reference training, raters were more consistent in their assessments (e.g., better reliability), and this consistency increased the observed statistical relationships between variables (Schleicher, Day, Mayes, & Riggio, 2002). Overall, the relationships to self and other rated creativity may be greater and more

consistent if raters are given frame of reference training, or at the least, if the rating scale is behaviorally anchored.

Before discussing the practical implications of this study, there are a few exploratory findings worth mentioning. For example, supervisors' perception of their direct reports' creativity was positively related to job performance ratings, indicating for this sample, creativity was seen as a positive behavior. Only a few studies have investigated the relationship between creativity and performance (e.g., Zhang & Bartol, 2010) as creativity is usually the outcome in this type of research. Creativity did not have a strong relationship with turnover intention for self ratings, indicating that higher creativity may not relate to lower turnover intention. This relationship may be further explained if future studies include continuance commitment (i.e., staying at an organization because there are no other options) as a moderator. For example, Zhou and George (2001) found that employees were creative (i.e., voiced concerns about change) when they were both dissatisfied and had a high level of continuance commitment. Potentially, creativity and turnover intention may be more strongly related in situations where there is also continuance commitment.

Practical Implications

Organizations can use the information from this research to take steps toward increasing employee creativity in their organizations. The first recommendation is that organizations should move toward understanding how employees perceive the organization's cultural values as there could be potential differences between espoused (values the organization says they have) and enacted values (values they actually have). By understanding how employees perceive the environment, organizations can learn if they

are high on the values that, coupled with employee fit on that value, may positively (or negatively) relate to creativity. Of particular importance would be to determine if there are high levels of creativity/innovation value or internal processes value. That is, if there are high levels of creativity/innovation value, employees are more likely to be creative, especially if they fit with this value. An organization could even ask employees if creativity/innovation is something they value in this first step in order to form a more holistic understanding of if individuals fit with the culture (instead of assuming they do since they have not left the organization). Likewise, if organizations are high on internal processes value and employees fit on this value, the organization may find that creativity is not happening at high levels, especially if the organization is also low on creativity/innovation value. Given that creativity/innovation value and internal processes value do not share the same characteristics (i.e., external and flexible versus internal and controlled), this may be the case that an organization high on internal processes value is also low on creativity/innovation value. More research needs to be conducted to fully understand the impact of human relations and rational goal values fit on creativity, but it seems possible, based on this research, that fit on these values may at least somewhat predict higher levels of creativity.

If organizations find they are not high on creativity/innovation value, they can initiate a culture change to work toward instating this value. At the same time, they may need to reduce the focus on internal processes value. As culture change is a slow process (Zell, 1997), an organization would need to build in systems to support creativity (e.g., gaining supervisor understanding so they can be supportive, identifying creative role models to set the example, implementing rewards for creativity, and tolerating risk-taking).

Given that behavioral norms govern, to some degree, how employees behave in an organization, organizations might be able to identify the specific norms in the organization that might hinder creativity (e.g., conforming to the group to ensure cohesion). These norms could be identified through focus groups or an employee survey. The norms that employees find most intense are likely to be the ones that direct behavior (O'Reilly, 1989) and it would be useful to create salient norms that support creativity (e.g., risk-taking).

Based on this research, the largest consistent significant predictor of creativity was anticipated reward for being creative. If creativity is tied to rewards, employees are more likely to see themselves as creative and in turn, are more likely to implement that creativity. Therefore, if rewards are used to spur creativity, it would behoove organizations to ensure their employees value rewards for being creative as well as to form an understanding of what rewards are important to them (e.g., monetary vs. public recognition; Vroom, 1964).

Organizations may also benefit from attracting those who prefer creativity in organizations by means of employee recruiting. For example, organizations could send the message on company web sites or through other recruitment material that they are seeking applicants who value creativity. By implementing structures that support creativity and attracting individuals who are creative, employees are more likely to be creative and innovative.

The last recommendation for organizations based on the inconsistent self and other ratings in this study is that they should develop a common definition of what creativity and innovation mean. In terms of creating a common definition, Unsworth (2001) suggests that there are four types of creativity and organizations might find one more important than the

other. For example, one of the creativity types is responsive creativity which is creativity in response to an organizational problem, whereas proactive creativity is where there is no current problem; instead this type of creativity is unprompted. Concept definition and frame of reference training may be a beneficial addition to any culture change toward creativity/innovation value.

Limitations and Future Research

There are a few limitations of this study that should be mentioned. First, although creativity was measured by two sources independent from the participant and at Times 1 and 2, the data were correlational; therefore, the assumption cannot be made that PO fit causes less or more creativity. Laboratory studies where group value composition is manipulated, or quasi-experiments where those high in the same value are asked to work together on a creative project, may be used in order to allow for more causal statements. In addition, this study was cross-sectional where self and other ratings were made at essentially the same time. Longitudinal data would add more evidence to support the PO fit-creativity link (Zhou & Shalley, 2011).

Another potential limitation was how PO fit was measured. A subjective needs-supplies PO fit measure was used to capture the competing values model dimensions. This measure had participants rate both the values they wanted in an organization and what they believed the organization's values are (Kristof, 1996). While individuals' fit perceptions relate to important attitudinal outcomes (e.g., turnover intention; Hoffman & Woehr, 2006; Kristof-Brown, et al., 2005), objective measures tend to have higher relationships with actual behaviors (Hoffman & Woehr). An objective PO fit measure still requires individuals to rate what they value in an organization, but then a separate group of

employees rate the organization's values. Although there were two other sources used for measuring the organization's culture, there were some issues with reliability and agreement among them. In order to use objective fit measures, multiple raters need to agree on the culture of the organization. In addition, this would also likely mean that one organization would have to be studied versus including a random sample of employees from a variety of industries. Future researchers may be able to use a research method that lends itself to studying PO fit with an objective measure (e.g., by surveying members of a single organization).

The sample in this study may have influenced the results. A wide variety of individuals with different backgrounds were included to represent differences in the environmental levels of the different values. This is a strength as fit has been shown to be unrelated to creativity when the environment to which individuals were assessing their fit was similar (i.e., low variance truncates relationships; Choi 2004). However, there were some differences between graduate students and undergraduates and those currently working versus those not working. These differences were assessed by looking at the groups separately in some instances (e.g., in the multiple regression analyses), but future research would benefit from using different kinds of samples, including more homogeneous samples. For instance, an ideal way to test the hypotheses in this study would be to have the sample consist of multiple organizations instead of individuals (Schneider, 2008). That is, these relationships could be tested at the organizational level; although obtaining enough power would be difficult. Overall, the results of this study need to be replicated so that the generalizability of these findings can be assessed. While the sample size was acceptable for self ratings, supervisors and coworkers had lower

participation. There were still significant results with some supervisor and coworker ratings; however, additional researchers can include more non-self ratings than in the present study.

There are many avenues in which to take the PO fit and creativity literature. Given that fit only accounted for some of the variance in creativity in the current study, it is possible that fit is a distal predictor to more proximal predictors of creativity. For example, if individuals fit with an organization, then they are likely similar to other members and share common mental models and information. In other words, fit may be related to creativity because of these other factors. Future researchers could incorporate these other factors by using social network theories such as the strength of weak ties theory (Granovetter, 1973) with PO fit when predicting creativity. Social network characteristics (e.g., density of strong ties) might be the proximal mechanism through which PO fit relates to creativity. In addition, there has been a call to extend the research on creativity to include social networks (e.g., Zhou & Shalley, 2011). One step further would be to incorporate *both* PO fit and social networks.

There are more types of fit than just PO fit, and considering these other types of fit would be an informative direction in which to take fit- creativity research. For example, person- group fit may be especially relevant for creativity research as many times, organizations have a culture that requires teamwork. Moreover, this may mean that teams have to be creative together, not just at the individual level. Multilevel research on fit and creativity may help organizations understand how person-group fit relates to team or individual creativity. This may also help address the inconsistent research on the impact

that team composition has on team creativity (e.g., understanding the role that diversity plays; Milliken et al., 2003; Shin & Zhou, 2007).

In the introduction I mentioned that there were other correlates of creativity that were not included in the present study that could be included in future fit-creativity research. These include more individual factors such as moods, creativity-relevant skills, and openness to experience. A recent review by Zhou and Shalley (2011) describes many variables that could be relevant in creativity (and PO fit) research. For example, creativity researchers have recently included the variable creative self-efficacy (Tierney & Farmer, 2004) which is individuals' belief in their ability to be creative. Another variable, psychological safety (Edmondson, 1999), allows individuals to feel safe with taking risks or speaking against norms which may relate to higher levels of creativity. These variables may be potential moderators of the relationship between PO fit and creativity or person-group fit and creativity. Mentioned in Shalley et al.'s (2004) review is that there is some research on the impact that the physical space one is working in has on creativity. A few examples of physical space that may be investigated include how an open floor plan versus a closed plan (tall cubicle walls and many offices) effect creativity or even, understanding which furniture, colors, and decorations are most conducive for creativity. This is something that could lend itself to laboratory studies. Fit may interact with the physical space in predicting creativity.

Although there are many different avenues in which to take fit-creativity research, two final areas addressed currently concern understanding self-other creativity rating differences and the implication of time in fit-creativity studies. First, as there was a lack of consistency between self and other ratings, future researchers should look at the degree of

correlation between supervisor ratings of employee creativity and employee ratings of how they *believe* their supervisor would rate them on creativity. Likewise, self ratings of creativity should be correlated to supervisor ratings of how supervisors *think* their direct reports would rate their own creativity. For example, employees may think that they are creative, but know that their supervisor has not seen this behavior; therefore, while the employee would rate themselves high on creativity, they may respond that the supervisor would rate their creativity low. It is more likely that supervisor creativity ratings and what employees believe would be their supervisors' ratings would show a stronger relationship than would self rated creativity with supervisor rated creativity. Assessing creativity in this way could help researchers understand why self and other ratings may differ.

Lastly, as the ASA framework suggests that organizations become more homogeneous over time, future fit-creativity research could place more emphasis on time. For example, in this study the length of time employees worked with their supervisor and coworker and the time they were on their job and in the organization were captured (although since time on the job and in the organization were highly correlated, only time on the job was presented for simplicity). While the current results with these time variables did not relate to creativity, they may still have an impact in other scenarios. For instance, if researchers collect data at just one organization, there may be a difference in creativity based on tenure with the organization or tenure with the supervisor. As ASA would suggest, the longer employees are with an organization, the more likely they are similar to other members of the organization. Potentially, a long tenure could be associated with less creativity. Time under the same supervisor may also be related to creativity. With shorter tenure with a supervisor, employees may feel less psychologically safe to be

creative. Finally, to understand how fit and time spent working with the supervisor relates to creativity, researchers may also include leader-member exchange theory (Graen & Uhl-Bien, 1995). That is, fit and time with the supervisor may matter, but also the *quality* of the relationship between the leader and the member could impact employee creativity. The preceding scenarios are just a few examples of how time may be an informative variable in future fit-creativity studies.

To conclude, while the findings of this research did not produce a definitive answer to the question of whether or not PO fit is negatively related to creativity, my hope is that this study will generate additional discussion and research attention to the subject of whether or not there is a "dark side" to PO fit. Creativity and innovation are important outcomes for many organizations and will likely continue to be part of their organizational strategies. With additional research over the relationship between PO fit and creativity, organizations can begin to create the most conducive environment to foster creativity and innovation. Research in this area may also be a useful way to bring researchers and practitioners together in order to help bridge the perceived scientist-practitioner gap in the field of Industrial-Organizational Psychology.

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Table 1

Means, standard deviations, and intercorrelations for all variables

Scale	*N*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
Demographics														
1. Gender	394	--	--	--										
2. Age	392	25.02	5.99	-.03										
Correlates of Creativity														
3. General PO Values Fit	394	4.85	1.64	.01	.00	(.93)								
4. Conformity	394	3.72	1.39	.12*	-.08	.06	(.83)							
5. Risk-taking	394	4.86	1.32	-.16**	.11*	.25**	-.22**	(.83)						
6. D.R. Skills-self	387	6.32	.93	.01	.08	.07	-.15**	.05	(.85)					
7. D.R. Skills-supervisor	80	6.35	.80	-.07	-.04	-.13	-.11	-.09	.25*	(.76)				
8. D.R. Skills-coworker	67	6.68	.50	-.02	.22	-.02	-.07	-.11	.12	0.26	(.75)			
9. Creative Role Model	394	4.46	1.56	.05	-.03	.58**	.01	.28**	-.02	.03	-.03	(.86)		
10. Supervisor Support	391	4.98	1.40	.07	.06	.61**	-.01	.29**	.01	.03	-.08	.68**	(.85)	
11. Job Autonomy	394	4.92	1.66	-.02	.18**	.28**	-.03	.28**	-.01	-.15	.12	.30**	.29**	(.94)
12. Job Complexity	378	4.08	1.75	.09	.34**	.13*	-.15**	.12*	-.10*	-.16	-.02	.20**	.31**	.10*
13. Time Pressure	394	3.72	1.71	-.04	.16**	-.14**	.01	.07	-.09	-.06	-.04	-.08	-.04	.09
14. Creative Job Requirement	394	3.69	1.69	.00	.17**	.39**	-.08	.31**	-.13**	-.11	-.13	.48**	.47**	.41**
15. Anticipated Reward	394	4.25	1.55	.00	.08	.35**	-.05	.36**	-.04	-.11	-.12	.48**	.46**	.36**
Competing Values Model														
16. Human Relations Need	394	6.12	.92	.07	.02	.16**	.04	.02	.17**	-.08	.04	.15**	.21**	.01
17. Internal Processes Need	394	4.67	1.29	.09	-.02	.25**	.18**	0.04	.03	-.11	.00	.15**	.10*	-.01
18. Rational Goal Need	394	5.65	1.05	-.13*	.02	.16**	-.11*	.24**	.15**	-.05	-.09	.19**	.14**	.10
19. Creativity/Innovation Need	394	5.68	1.16	.04	.05	.12*	-.14**	.21**	.06	.00	-.15	.26**	.27**	.07
20. HR Supply-Self	394	4.99	1.33	.06	-.03	.69**	.09	.17**	.02	-.01	-.05	.55**	.58**	.21**
21. IP Supply-Self	394	4.68	1.20	.05	.07	.35**	.12*	.13**	.09	-.17	-.02	.27**	.26**	-.09
22. RG Supply-Self	394	5.00	1.32	.03	.10*	.38**	.00	.23**	.01	-.12	.00	.44**	.38**	.13*
23. CI Supply-Self	394	4.02	1.61	.09	.08	.55**	.05	.22**	-.10	-.04	.10	.69**	.59**	.32**
24. HR Supply-Supervisor	78	5.87	1.13	-.14	-.22*	.18	.27 *	-.11	.21	.16	-.02	.07	.06	-.07
25. IP Supply-Supervisor	78	4.93	1.32	.04	-.21	-.12	.12	-.14	.13	-.17	.05	-.34**	-.23*	-.30**
26. RG Supply-Supervisor	77	5.52	1.34	-.21	-.12	.02	-.08	.01	.15	.04	.04	-.03	-.22	.11

Scale	*N*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
27. CI Supply-Supervisor	76	5.22	1.34	-.07	-.09	.15	.03	-.11	.17	.05	-.15	.01	-.06	.11
28. HR Supply-Coworker	67	5.67	1.24	.18	-.11	.26*	.31*	-.11	-.05	-.12	.06	.12	.16	.04
29. IP Supply-Coworker	66	5.25	1.44	.12	-.10	.10	.23	-.22	.06	-.10	.07	.01	.12	-.20
30. RG Supply-Coworker	67	5.53	1.28	.12	-.06	.32**	.29*	.02	-.05	-.19	.09	.16	.15	.13
31. CI Supply Coworker	67	5.00	1.53	.23	.05	.24	.28*	-.05	-.18	-.34*	.19	.24	.25*	.06
Outcomes														
32. Creativity-Self Time 1	387	4.85	1.30	-.01	.14**	.33**	-.16**	.46**	.12*	-.01	.01	.43**	.40**	.37**
33. Creativity-Self Time 2	193	5.31	1.04	.01	.19**	.22**	-.17*	.30**	.22**	-.03	.03	.27**	.32**	.25**
34. Creativity-Supervisor	80	5.83	1.02	-.12	-.10	-.06	-.25*	-.05	.14	.49**	.17	.00	.03	.00
35. Creativity-Coworker	67	6.38	0.72	.07	.36**	-.06	.20	.01	-.01	.18	.50**	-.18	-.08	.07
36. Innovation-Self Time 1	387	4.66	1.31	-.07	.09	.31**	-.20**	.43**	.10*	-.01	-.11	.36**	.32**	.35**
37. Innovation-Self Time 2	193	5.06	1.12	-.06	.08	.17*	-.14*	.24**	.16*	.01	-.04	.18*	.26**	.19**
38. Innovation-Supervisor	80	5.55	1.15	-.14	-.02	-.06	-.20	-.02	.13	.44**	.33*	-.04	.01	.08
39. Innovation-Coworker	67	6.04	0.95	.05	.23	-.08	.19	-.07	-.08	.05	.39**	-.08	.00	.02
40. Job Performance	80	6.53	0.70	-.04	-.19	-.08	.01	-.14	.06	.60**	.11	.03	.13	-.02
41. Turnover	302	4.61	2.16	.00	-.13*	-.51**	-.04	-.06	.11	.04	-.01	-.35**	-.40**	-.19**
Time Variables														
42. Years on Job	376	2.61	3.02	-.06	.48**	-.06	-.01	.05	.17**	.11	.26**	-.12*	-.08	.11*
43. Years with Supervisor	74	2.12	2.64	-.13	.21	-.07	-.18	.03	.14	.17**	.20	-.14	-.26*	-.01
44. Years with Coworker	62	1.93	2.31	-.21	.24	-.36**	-.19	-.12	.06	.21	.24	-.19	-.30*	-.11
45. Years since Last Job	72	1.13	1.10	.02	.45**	-.14	.16	-.13	-.20	--	--	.03	-.08	.07

Note. *$p < .05$; **$p < .01$. PO= Person-Organization. D.R. = Domain-relevant; T1 = Time 1; T2 = Time 2; HR = Human Relations; IP = Internal

Processes; RG = Rational Goal; CI = Creativity/Innovation. Internal consistency alpha values are listed in parentheses on the diagonal.

Table 1 (cont'd)

Means, standard deviations, and intercorrelations for all variables

Scale	*N*	*M*	*SD*	12	13	14	15	16	17	18	19	20	21	22
Demographics														
1. Gender	394	--	--											
2. Age	392	25.02	5.99											
Correlates of Creativity														
3. General PO Values Fit	394	4.85	1.64											
4. Conformity	394	3.72	1.39											
5. Risk-taking	394	4.86	1.32											
6. D.R. Skills-self	387	6.32	0.93											
7. D.R. Skills-supervisor	80	6.35	0.80											
8. D.R. Skills-coworker	67	6.68	0.50											
9. Creative Role Model	394	4.46	1.56											
10. Supervisor Support	391	4.98	1.40											
11. Job Autonomy	394	4.92	1.66											
12. Job Complexity	378	4.08	1.75	--										
13. Time Pressure	394	3.72	1.71	.08	(.86)									
14. Creative Job Requirement	394	3.69	1.69	.39**	.10	(.81)								
15. Anticipated Reward	394	4.25	1.55	.22**	.06	.66**	(.86)							
Competing Values Model														
16. Human Relations Need	394	6.12	0.92	.13*	.04	.09	.12*	(.81)						
17. Internal Processes Need	394	4.67	1.29	-.02	-.01	.10	.11*	.25**	(.85)					
18. Rational Goal Need	394	5.65	1.05	.07	-.03	.20**	.26**	.31**	.29**	(.87)				
19. Creativity/Innovation Need	394	5.68	1.16	.19**	.04	.26**	.35**	.36**	.16**	.55**	(.94)			
20. HR Supply-Self	394	4.99	1.33	.11*	-.18**	.37**	.31**	.27**	.24**	.20**	.22**	(.78)		
21. IP Supply-Self	394	4.68	1.20	.08	-.04	.15**	.16**	.20**	.44**	.14**	.14**	.34**	(.75)	
22. RG Supply-Self	394	5.00	1.32	.16**	.09	.30**	.28**	.21**	.24**	.35**	.30**	.39**	.33**	(.83)
23. CI Supply-Self	394	4.02	1.61	.23**	.02	.53**	.49**	.17**	.25**	.22**	.39**	.55**	.28**	.51**
24. HR Supply-Supervisor	78	5.87	1.13	-.15	-.12	-.08	-.13	-.03	.25*	-.09	-.07	.26*	.20	-.05
25. IP Supply-Supervisor	78	4.93	1.32	-.11	-.09	-.28*	-.32**	.09	.11	.01	-.02	-.16	.16	-.12
26. RG Supply-Supervisor	77	5.52	1.34	-.15	.07	-.09	-.17	.12	.05	-.08	.00	-.06	-.03	.10

Scale	*N*	*M*	*SD*	12	13	14	15	16	17	18	19	20	21	22
27. CI Supply-Supervisor	76	5.22	1.34	-.08	-.04	-.02	-.09	.11	.12	-.06	-.02	.16	.12	.01
28. HR Supply-Coworker	67	5.67	1.24	-.05	-.24*	.00	.08	.09	.06	.01	-.07	.32**	.14	.11
29. IP Supply-Coworker	66	5.25	1.44	-.18	-.42**	-.26*	-.07	.16	.24	.04	-.04	.22	.38**	.13
30. RG Supply-Coworker	67	5.53	1.28	-.05	-.28*	-.03	.00	.14	.15	.09	-.13	.31**	.26*	.23
31. CI Supply Coworker	67	5.00	1.53	.13	-.12	.06	.07	.19	.16	.10	.05	.33**	.21	.23
Outcomes														
32. Creativity-Self Time 1	387	4.85	1.30	.29**	.16**	.55**	.64**	.20**	.07	.32**	.38**	.23**	.14**	.27**
33. Creativity-Self Time 2	193	5.31	1.04	.30**	.13	.39**	.50**	.11	.00	.24**	.25**	.10	.03	.18*
34. Creativity-Supervisor	80	5.83	1.02	.15	-.19	.11	.20	.09	-.16	.17	.13	-.01	-.26*	-.18
35. Creativity-Coworker	67	6.38	0.72	.18	.00	-.03	.01	.11	.10	.03	.01	-.01	.15	.05
36. Innovation-Self Time 1	387	4.66	1.31	.21**	.13**	.53**	.66**	.21**	.08	.29**	.41**	.24**	.16**	.19**
37. Innovation-Self Time 2	193	5.06	1.12	.29**	.11	.34**	.47**	.17*	-.01	.35**	.38**	.10	-.10	.15*
38. Innovation-Supervisor	80	5.55	1.15	.15	-.23*	.04	.15	.09	-.13	.17	.12	-.03	-.19	-.24*
39. Innovation-Coworker	67	6.04	0.95	.23	-.03	-.06	.01	.18	.09	-.01	.06	.05	.17	.13
40. Job Performance	80	6.53	0.70	.03	-.15	.00	.00	-.11	-.20	-.05	.04	-.03	-.21	-.09
41. Turnover	302	4.61	2.16	-.21**	.08	-.30**	-.19**	-.06	-.10	.02	-.03	-.42**	-.19**	-.20**
Time Variables														
42. Years on Job	376	2.61	3.02	.00	.17**	.03	-.03	-.09	.02	.01	-.05	-.08	-.03	-.00
43. Years with Supervisor	74	2.12	2.64	.03	.16	.09	-.01	-.27*	.08	-.03	-.03	-.12	-.07	-.22
44. Years with Coworker	62	1.93	2.31	-.08	.19	-.23	-.13	-.02	.13	.02	.04	-.44**	.10	-.01
45. Years since Last Job	72	1.13	1.10	.09	-.07	.04	-.01	-.08	.00	-.04	-.02	-.18	-.21	-.14

Note. *$p < .05$; **$p < .01$. PO= Person-Organization. D.R. = Domain-relevant; T1 = Time 1; T2 = Time 2; HR = Human Relations; IP = Internal Processes; RG = Rational Goal; CI = Creativity/Innovation. Internal consistency alpha values are listed in parentheses on the diagonal.

Table 1 (cont'd)

Means, standard deviations, and intercorrelations for all variables

Scale	*N*	*M*	*SD*	23	24	25	26	27	28	29	30	31	32	33
Demographics														
1. Gender	394	--	--											
2. Age	392	25.02	5.99											
Correlates of Creativity														
3. General PO Values Fit	394	4.85	1.64											
4. Conformity	394	3.72	1.39											
5. Risk-taking	394	4.86	1.32											
6. D.R. Skills-self	387	6.32	0.93											
7. D.R. Skills-supervisor	80	6.35	0.80											
8. D.R. Skills-coworker	67	6.68	0.50											
9. Creative Role Model	394	4.46	1.56											
10. Supervisor Support	391	4.98	1.40											
11. Job Autonomy	394	4.92	1.66											
12. Job Complexity	378	4.08	1.75											
13. Time Pressure	394	3.72	1.71											
14. Creative Job Requirement	394	3.69	1.69											
15. Anticipated Reward	394	4.25	1.55											
Competing Values Model														
16. Human Relations Need	394	6.12	0.92											
17. Internal Processes Need	394	4.67	1.29											
18. Rational Goal Need	394	5.65	1.05											
19. Creativity/Innovation Need	394	5.68	1.16											
20. HR Supply-Self	394	4.99	1.33											
21. IP Supply-Self	394	4.68	1.20											
22. RG Supply-Self	394	5.00	1.32											
23. CI Supply-Self	394	4.02	1.61	(.89)										
24. HR Supply-Supervisor	78	5.87	1.13	.07	(.81)									
25. IP Supply-Supervisor	78	4.93	1.32	-.26*	.29*	(.76)								
26. RG Supply-Supervisor	77	5.52	1.34	.01	.38**	.37**	(.83)							

Scale	*N*	*M*	*SD*	23	24	25	26	27	28	29	30	31	32	33
27. CI Supply-Supervisor	76	5.22	1.34	.09	.64**	.27*	.66**	(.88)						
28. HR Supply-Coworker	67	5.67	1.24	.14	-.07	.00	.02	-.14	(.78)					
29. IP Supply-Coworker	66	5.25	1.44	.09	.10	.01	-.06	-.05	.63**	(.82)				
30. RG Supply-Coworker	67	5.53	1.28	.11	.11	.07	.22	.00	.67**	.56**	(.84)			
31. CI Supply Coworker	67	5.00	1.53	.28*	-.10	-.03	.11	-.05	.71**	.43**	.62**	(.90)		
Outcomes														
32. Creativity-Self Time 1	387	4.85	1.30	.40**	-.13	-.17	-.05	-.13	.02	-.08	-.05	.11	(.92)	
33. Creativity-Self Time 2	193	5.31	1.04	.30**	-.14	-.12	-.04	-.13	-.02	-.17	-.03	.15	.65**	(.91)
34. Creativity-Supervisor	80	5.83	1.02	-.02	.09	-.03	-.01	.05	-.09	-.16	-.08	-.32*	.24*	.25*
35. Creativity-Coworker	67	6.38	0.72	.03	-.01	-.09	.00	-.07	.23	.09	.17	.41**	.08	.14
36. Innovation-Self Time 1	387	4.66	1.31	.38**	-.10	-.25*	.06	-.01	.15	-.08	.03	.11	.78**	.55**
37. Innovation-Self Time 2	193	5.06	1.12	.24**	-.15	-.19	.00	-.06	.07	-.14	.02	.21	.59**	.72**
38. Innovation-Supervisor	80	5.55	1.15	-.05	.08	.09	-.03	.06	-.06	-.10	-.07	-.32*	.20	.29*
39. Innovation-Coworker	67	6.04	0.95	.06	.14	.11	.09	.10	.28*	.21	.19	.46**	.04	.16
40. Job Performance	80	6.53	0.70	.04	.14	-.02	-.07	.05	.07	-.03	-.04	-.20	.03	-.03
41. Turnover	302	4.61	2.16	-.28**	-.01	.19	.09	-.06	-.33*	-.06	-.22	-.23	-.15**	.02
Time Variables														
42. Years on Job	376	2.61	3.02	-.05	.10	-.05	.05	.04	-.04	.05	-.07	-.13	.10	-.05
43. Years with Supervisor	74	2.12	2.64	-.03	.16	-.03	.10	.16	-.21	-.07	-.38*	-.36*	.14	.06
44. Years with Coworker	62	1.93	2.31	-.09	-.05	-.04	.08	.05	-.20	.07	-.27*	-.16	-.16	-.20
45. Years since Last Job	72	1.13	1.10	.05	--	--	--	--	--	--	--	--	-.11	-.42*

Note. *$p < .05$; **$p < .01$. PO= Person-Organization. D.R. = Domain-relevant; T1 = Time 1; T2 = Time 2; HR = Human Relations; IP = Internal Processes; RG = Rational Goal; CI = Creativity/Innovation. Internal consistency alpha values are listed in parentheses on the diagonal.

Table 1 (cont'd)

Means, standard deviations, and intercorrelations for all variables

Scale	*N*	*M*	*SD*	34	35	36	37	38	39	40	41	42	43	44
Demographics														
1. Gender	394	--	--											
2. Age	392	25.02	5.99											
Correlates of Creativity														
3. General PO Values Fit	394	4.85	1.64											
4. Conformity	394	3.72	1.39											
5. Risk-taking	394	4.86	1.32											
6. D.R. Skills-self	387	6.32	0.93											
7. D.R. Skills-supervisor	80	6.35	0.80											
8. D.R. Skills-coworker	67	6.68	0.50											
9. Creative Role Model	394	4.46	1.56											
10. Supervisor Support	391	4.98	1.40											
11. Job Autonomy	394	4.92	1.66											
12. Job Complexity	378	4.08	1.75											
13. Time Pressure	394	3.72	1.71											
14. Creative Job Requirement	394	3.69	1.69											
15. Anticipated Reward	394	4.25	1.55											
Competing Values Model														
16. Human Relations Need	394	6.12	0.92											
17. Internal Processes Need	394	4.67	1.29											
18. Rational Goal Need	394	5.65	1.05											
19. Creativity/Innovation Need	394	5.68	1.16											
20. HR Supply-Self	394	4.99	1.33											
21. IP Supply-Self	394	4.68	1.20											
22. RG Supply-Self	394	5.00	1.32											
23. CI Supply-Self	394	4.02	1.61											
24. HR Supply-Supervisor	78	5.87	1.13											
25. IP Supply-Supervisor	78	4.93	1.32											
26. RG Supply-Supervisor	77	5.52	1.34											

Scale	*N*	*M*	*SD*	34	35	36	37	38	39	40	41	42	43	44
27. CI Supply-Supervisor	76	5.22	1.34											
28. HR Supply-Coworker	67	5.67	1.24											
29. IP Supply-Coworker	66	5.25	1.44											
30. RG Supply-Coworker	67	5.53	1.28											
31. CI Supply Coworker	67	5.00	1.53											
Outcomes														
32. Creativity-Self Time 1	387	4.85	1.30											
33. Creativity-Self Time 2	193	5.31	1.04											
34. Creativity-Supervisor	80	5.83	1.02	(.95)										
35. Creativity-Coworker	67	6.38	0.72	.07	(.94)									
36. Innovation-Self Time 1	387	4.66	1.31	.25*	.07	(.72)								
37. Innovation-Self Time 2	193	5.06	1.12	.26*	.20	.62**	(.58)							
38. Innovation-Supervisor	80	5.55	1.15	.89**	.22	.23*	.26*	(.83)						
39. Innovation-Coworker	67	6.04	0.95	-.05	.77**	.00	.20	.17	(.81)					
40. Job Performance	80	6.53	0.70	.56**	.06	.02	.03	.56**	.07	(.85)				
41. Turnover	302	4.61	2.16	-.01	-.12	-.15**	-.10	-.05	-.17	.04	(.92)			
Time Variables														
42. Years on Job	376	2.61	3.02	-.20	.22	.03	-.03	-.14	.13	-.12	.03	--		
43. Years with Supervisor	74	2.12	2.64	.14	.16	.12	.09	.17	.09	.06	.25*	.56**	--	
44. Years with Coworker	62	1.93	2.31	-.09	.22	-.15	-.16	.01	.23	-.09	.24	.56**	.78**	--
45. Years since Last Job	72	1.13	1.10	--	--	-.10	-.02	--	--	--	--	.36**	--	--

Note. *$p < .05$; **$p < .01$. PO= Person-Organization. D.R. = Domain-relevant; T1 = Time 1; T2 = Time 2; HR = Human Relations; IP = Internal Processes; RG = Rational Goal; CI = Creativity/Innovation. Internal consistency alpha values are listed in parentheses on the diagonal.

Table 2

Test-retest results and agreement among rating sources

Rating Pair	*Mdiff*	*SD*	*df*	*t*	*Cohen's d*
Self T1-Self T2 Creativity	-.37	1.00	187	-5.12**	-0.37
Self T1-Supervisor Creativity	-.82	1.51	79	-4.84**	-0.54
Self T1-Coworker Creativity	-1.17	1.39	63	-6.75**	-0.84
Supervisor-Coworker Creativity	-.50	1.10	44	-3.05**	-0.45
Self T2-Supervisor Creativity	-0.42	1.20	67	2.88**	-0.35
Self T2-Coworker Creativity	-0.85	1.15	58	5.71**	-0.74
Self T1-Supervisor Innovation	-0.92	1.58	79	-5.20**	-0.58
Self T1-Coworker Innovation	-1.30	1.59	63	-6.55**	-0.82
Supervisor-Coworker Innovation	-0.39	1.31	44	-1.99	-0.30
Self HR-Supervisor HR	-0.90	1.53	77	-5.18**	-0.59
Self IP-Supervisor IP	-0.28	1.70	77	-1.44	-0.16
Self RG-Supervisor RG	-0.55	1.76	76	-2.74**	-0.31
Self CI-Supervisor CI	-1.14	2.03	75	-4.88**	-0.56
Self HR-Coworker HR	-0.55	1.54	66	-2.90**	-0.35
Self IP-Coworker IP	-0.59	1.56	65	-3.08**	-0.38
Self RG-Coworker RG	-0.44	1.66	66	-2.15*	-0.26
Self CI-Coworker CI	-0.71	1.95	66	-2.99**	-0.36
Supervisor HR-Coworker HR	0.42	1.79	42	1.54	0.23
Supervisor IP-Coworker IP	-0.15	2.04	41	-0.48	-0.07
Supervisor RG-Coworker RG	0.29	1.70	42	1.11	0.17

Supervisor CI-Coworker CI	0.56	2.08	41	1.73	0.27
Self-Supervisor D.R. Skills	-0.05	1.04	79	-0.47	-0.05
Self-Coworker D.R. Skills	-0.39	1.04	63	-3.00**	-0.38
Supervisor-Coworker D.R. Skills	-0.13	0.69	44	-1.22	-0.18

Note. * p <.05; ** p <.01. Mdiff = Mean difference, D.R. = Domain-relevant; T1= Time 1; T2 = Time 2; HR = Human Relations; IP = Internal Processes; RG = Rational Goal; CI = Creativity/Innovation.

Table 3

Differences among study variables

Results	Comparison 1		Comparison 2			Comparison 3	
	Grad.	Undergrad.	Full-time	Part-time	Not working	Currently working	Not Working
Creativity							
M	5.28	4.76					
SD	1.29	5.27					
N	60	326					
t(384)	2.82**						
M-Time 1			5.16	4.75	4.67		
SD			1.10	1.37	1.31		
N			106	203	78		
F(2,384)				4.28*			
M-Time 2			5.62	5.25	4.94		
SD			.93	.94	1.25		
N			63	90	40		
F(2,190)				5.84**			
General Fit							
M						4.96	4.45
SD						1.58	1.81
N						312	79
t(389)						2.51*	

Note. * $p < .05$; ** $p < .01$. Grad. = graduate student, undergrad. = undergraduate student.

For comparison 2, Tukey's HSD revealed that full-time workers had greater creativity ratings than those not working. No other significant differences existed for comparison 2.

Table 4

Equations and interpretation for response surface graph tests

Surface point	Equation for significance test	Result interpretation
a_1= (b1+b2)	$t = \frac{a_1}{\sqrt{(SE^2 b1 + SE^2 b2) + 2covb1b2}}$	a_1 is the slope of the line of perfect fit (i.e., where need=supply). If positive, when need=supply, creativity increases, if negative when need=supply, creativity decreases
a_2= (b3+b4+b5)	$t = \frac{a_2}{\sqrt{(SE^2 b3 + SE^2 b4 + SE^2 b5) + 2covb3b4 + 2\ covb4b5 + 2covb3b5}}$	a_2 is the curvature of the line of perfect fit. If positive the curve is upward (convex) and if negative it is downward (concave)
a_3= (b1-b2)	$t = \frac{a_3}{\sqrt{(SE^2 b1 + SE^2 b2) - 2covb1b2}}$	a_3 is the slope of the line of misfit (i.e., where need is opposite supply). If negative, creativity is higher when need surpasses supply; if positive, creativity is higher when supply surpasses need
a_4= (b3-b4+b5)	$t = \frac{a_4}{\sqrt{(SE^2 b3 + SE^2 b4 + SE^2 b5) - 2covb3b4 + 2\ covb4b5 - 2covb3b5}}$	a_4 is the curvature of the line of misfit. If negative, a downward curve (concave) along the line of misfit, if positive an upward curve (convex) along the line of misfit

Note. Adapted from Shanock et al. (2010, pp. 548-552) and Edwards (2002). B1 is the beta weight for need, b2 is the beta weight for supply, b3 is the beta weight for need squared, b4 is the cross product of need and supply, and b5 is supply squared from the polynomial regression output. SE stands for standard error of the beta weight and cov is the covariance between beta weights.

Table 5

Results of polynomial regression predicting creativity for Hypothesis 1 and moderation results including all data

	Self Time 1			Self Time 2			Paired Time 1			Paired Time 2			Supervisor		
	HR	IP	RG	HR	IP	RG	HR	IP	RG	HR	IP	RG	HR	IP	RG
Linear Regression															
Constant	4.32	4.75	4.16	5.01	5.42	4.92	4.42	5.00	4.52	4.97	5.33	4.92	5.49	5.99	5.71
Culture-Supply	.20**	.11^	.19**	.03	-.01	.12*	.16*	.01	.12^	.09	-.04	.12*	.01	-.14	-.15^
Culture-Need	.16*	.04	.30**	.12	.11^	.19*	.20	.01	.24**	.12	.04	.18*	.17	-.02	.21*
R^2	.07**	.02*	.13**	.01	.02	.08**	.05**	.00	.08**	.03^	.00	.07**	.02	.05	.09*
Adj. R^2	.06	.01	.12	.00	.01	.07	.04	Neg.	.07	.02	Neg.	.06	Neg.	.02	.07
Polynomial Regression															
Constant	4.31	4.74	4.19	5.37	5.32	5.09	4.18	4.93	4.71	4.52	5.25	5.06	4.44	5.90	5.77
Culture-Supply (b1)	.14	.06	.19^	-.03	-.13^	.01	.19	-.02	.07	.34^	-.04	.04	.16	-.22^	-.05
Culture-Supply (b2)	.18	.01	.29*	-.39	.05	.02	.30	-.05	.14	.23	-.01	.08	1.25	-.04	.16
Supply sq. (b3)	.01	.01	-.02	.09*	.01	-.07	.07	-.01	-.09*	.09*	-.02	-.06	.05	.02	-.07
Supply X Need (b4)	.02	.08^	.02	-.03	.06	.11^	-.06	.06	.10	-.16^	.02	.09	-.08	.07	-.01
Need sq. (b5)	-.01	-.03	.00	.12	.04	.04	-.02	.03	.02	.01	.06	.02	-.26	.01	.04
ΔR^2	.00	.01	.00	.03	.05*	.04*	.01	.02	.03	.04^	.02	.03	.05	.05	.03
R^2	.07**	.03^	.13**	.04	.07*	.13**	.07*	.02	.11**	.07*	.03	.10**	.07	.10	.12^
Adj. R^2	.05	.02	.11	.02	.04	.10	.04	Neg.	.08	.04	Neg.	.07	.00	.04	.06
Surface Tests															
a_1	.32*	.07	.48**		-.08	.03	.49		.21	.57		.12			.11
a_2	.02*	.07*	.00		.10*	.09	.00		.03	-.06		.05			-.05
a_3	-.04	.05	-.10		-.18	-.01	-.11		-.08	.10		-.04			-.21
a_4	-.02	-.09	-.03		-.01	-.14	.11		-.17	.26		-.13			-.02
Moderation-conformity															
ΔR^2	.04	.05**	.02		.02	.03	.02		.07*	.01		.07**			.03
Moderation-risk-taking															
ΔR^2	.01	.01	.01		.05	.03	.03		.02	.02		.04			.09

Note. ^$p < .10$; *$p < .05$; **$p < .01$. HR = Human Relations; IP = Internal Processes; RG = Rational Goal. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. HR Time 1 n = 386, Time 2 n = 190, Paired Time 1-Time 2 n = 179, Supervisor n = 79. IP Time 1 n = 386, Time 2 n = 186, Paired Time 1-Time 2 n = 178, Supervisor n = 79. RG Time 1 n = 384, Time 2 n = 191, Paired Time 1-Time 2 n = 178, Supervisor n = 79. Sample sizes differ due to the removal of outliers for different regressions. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 6

Results of polynomial regression analysis for coworker ratings of creativity with all data included and data for low creative culture supply

	Coworker All Data			Coworker Low Creative Culture		
	HR	IP	RG	HR	IP	RG
Linear Regression						
Constant	6.12	6.47	6.49	6.44	6.34	6.49
Culture-Supply	-.02	.08	-.01	-.16	-.01	-.13
Culture-Need	.12	-.07	-.02	-.03	-.10	-.10
R^2	.01	.02	.02	.06	.01	.06
Adj. R^2	Neg.	Neg.	Neg.	Neg.	Neg.	Neg.
Polynomial Regression						
Constant	6.67	6.56	6.39	7.65	6.32	7.16
Culture-Supply (b1)	-.08	.09	-.08	-.46	-.02	.27
Culture-Supply (b2)	-.56	-.05	.19	-1.47	-.06	-1.45
Supply sq. (b3)	.06	-.02	.03	.07	.01	-.09
Supply X Need (b4)	-.01	.07	.12	.11	-.05	-.14
Need sq. (b5)	.16	-.08	-.07	.35	.02	.44
ΔR^2	.05	.03	.02	.11	.00	.19
R^2	.07	.05	.02	.17	.02	.25
Adj. R^2	Neg.	Neg.	Neg.	Neg.	Neg.	.05

Note. HR = Human Relations; IP = Internal Processes; RG = Rational Goal. For all data HR n = 67, IP n = 64, RG n = 65. For low creative culture HR n = 25, IP n = 25, RG n =25. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 7

Results of polynomial regression predicting creativity for Hypothesis 1 for low creative culture supply and moderation results

	Self Time 1			Self Time 2			Paired Time 1			Paired Time 2			Supervisor		
	HR	IP	RG	HR	IP	RG	HR	IP	RG	HR	IP	RG	HR	IP	RG
Linear Regression															
Constant	4.41	4.36	3.85	5.04	5.18	4.89	4.60	4.67	4.30	5.39	5.14	4.95	5.53	6.10	5.46
Culture-Supply	.06	.15	.17*	-.06	-.10	.09	.01	.15	.09	-.04	.09	.13	-.14	-.29*	-.22*
Culture-Need	.02	-.01	.35**	.02	-.07	.10	.08	-.18	.21^	-.06	-.22*	.04	.20	-.13	.40**
R^2	.00	.01	.11**	.01	.02	.02	.00	.03	.05	.01	.05^	.03	.07	.18*	.26**
Adj. R^2	.00	.00	.10	.00	.00	.00	Neg.	.01	.03	Neg.	.03	.01	.02	.13	.22
Polynomial Regression															
Constant	4.29	4.55	3.90	3.93	5.33	5.03	5.37	4.91	4.54	6.02	5.43	5.09	3.62	5.93	5.67
Culture-Supply (b1)	.07	.15	.17	.64*	.08	.29^	-.01	.23	.04	.11	.22^	.07	-.04	-.39*	-.20
Culture-Supply (b2)	.20	.03	.36^	1.06	-.04	.09	-.89	-.12	.26	-.94	-.15	.13	2.66**	-.05	.31^
Supply sq. (b3)	-.02	-.04	-.03	.06	-.22*	-.08	.06	-.22*	-.13*	.07	-.30**	-.09	-.05	.18	-.16*
Supply X Need (b4)	-.00	.11	.02	-.33*	-.04	-.10	-.02	.06	.08	-.10	.05	.07	-.04	-.19	.01
Need sq. (b5)	-.05	-.01	-.01	-.24	.03	.01	.24	-.02	-.03	.23	-.00	-.05	-.64**	.06	.04
ΔR^2	.00	.01	.00	.09*	.09*	.04	.02	.07^	.06	.03	.16**	.03	.17*	.06	.10
R^2	.00	.03	.11**	.09^	.07^	.06	.02	.11^	.11^	.04	.21**	.06	.24^	.23^	.35**
Adj. R^2	.00	.00	.09	.05	.04	.01	Neg.	.06	.05	Neg.	.16	.00	.14	.13	.27
Surface Tests															
a_1			.52**	1.69	.04			.11	.30		.06		2.62*	-.44*	.11
a_2			-.02	-.50	-.23*			-.19	-.09		-.26**		-.73*	.04	-.10
a_3			-.19	-.42	.11			.35^	-.22		.37*		-2.70**	-.34	-.51
a_4			-.05	.26	-.15			-.30*	-.25		-.36**		-.70*	.43^	-.12
Moderation-conformity															
ΔR^2			.07**	.05^	.04			.06	.06		.05		.04	.08	.03
Moderation-risk-taking															
ΔR^2			.03	.07	.07			.03	.04		.08		.11	.07	.07

Note: ^$p < .10$; *$p < .05$; **$p < .01$. HR = Human Relations; IP = Internal Processes; RG = Rational Goal. HR Time 1 $n = 195$, Time 2 $n = 99$, Paired Time 1-Time 2 $n = 84$, Supervisor $n = 43$. IP Time 1 $n = 199$, Time 2 $n = 98$, Paired T1-T2 $n = 91$, Supervisor $n = 43$; RG Time 1 $n = 198$; Time 2 $n = 99$, Paired Time 1-Time 2 $n = 91$, Supervisor $n = 43$. Sample sizes differ due to the removal of outliers in certain regressions. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Response surface graphs not plotted for Time 2 HR as adjusted R^2 were negative. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 8
Results of polynomial regression predicting creativity for Hypothesis 2 and moderation results including all data

	Self Time 1 CI	Self Time 2 CI	Paired Time 1 CI	Paired Time 2 CI	Supervisor CI	Coworker CI
Linear Regression						
Constant	4.28	5.01	4.54	5.01	5.64	6.39
Culture-Supply	.25**	.13**	.17**	.13**	-.05	.02
Culture-Need	.33**	.18**	.28**	.19**	.15	-.01
R^2	.24**	.12**	.17**	.13**	.03	.00
Adj. R^2	.24	.11	.16	.12	.01	Neg.
Polynomial Regression						
Constant	4.32	5.05	4.57	5.06	5.73	6.27
Culture-Supply (b1)	.31**	.10	.19	.12	-.04	-.13
Culture-Supply (b2)	.34**	-.19	-.05	-.18	.15	.03
Supply sq. (b3)	.01	-.02	-.01	-.02	-.03	-.03
Supply X Need (b4)	-.03	.01	-.01	.00	-.01	.07
Need sq. (b5)	-.02	.15**	.13*	.15**	-.00	.02
ΔR^2	.00	.06**	.03^	.06**	.01	.05
R^2	.24**	.18**	.20**	.19**	.04	.05
Adj. R^2	.23	.16	.18	.16	Neg.	Neg.
Surface Tests						
a_1	.65**	-.09	.14	-.06		
a_2	-.04	.14*	.12	.13*		
a_3	-.04	.28	.23	.30		
a_4	.02	.12	.13	.13		
Moderation-conformity						
ΔR^2	.01	.03	.03	.06		
Moderation-risk-taking						
ΔR^2	.03*	.04**	.04^	.09**		

Note. ^$p < .10$; *$p < .05$; **$p < .01$. CI = Creativity/Innovation. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. CI Time 1 $n = 386$, Time 2 $n = 192$, Paired Time 1-Time 2 $n = 178$, Supervisor $n = 79$, Coworker $n = 67$. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 9

Results of polynomial regression predicting creativity for Hypothesis 2 for low creative culture supply

	Self Time 1 CI	Self Time 2 CI	Paired Time 1 CI	Paired Time 2 CI	Supervisor CI	Coworker CI
Linear Regression						
Constant	4.30	5.08	4.46	5.06	5.68	6.25
Culture-Supply	.26**	.08	.01	.05	.01	-.09
Culture-Need	.32**	.08	.20*	.11	.19^	-.08
R^2	.12**	.02	.06^	.02	.09	.05
Adj. R^2	.11	Neg.	.03	.00	.04	Neg.
Polynomial Regression						
Constant	4.52	5.04	4.60	5.17	5.34	5.66
Culture-Supply (b1)	.34	.13	.19	.38	-.77	-.92
Culture-Supply (b2)	.21	-.20	-.14	-.19	.23	-.07
Supply sq. (b3)	-.02	-.00	.01	.08	-.25	-.26
Supply X Need (b4)	-.10	.02	-.06	-.02	.05	.06
Need sq. (b5)	-.03	.16	.13^	.14*	.02	.06
ΔR^2	.01	.07	.04	.08	.06	.09
R^2	.13**	.09	.10	.10	.14	.14
Adj. R^2	.11	.04	.04	.04	.03	Neg.

Note: ^$p < .10$; *$p < .05$; **$p < .01$. CI = Creativity/Innovation. CI Time 1 $n = 198$, Time 2 n = 98, Time 1-2 $n = 89$, Supervisor $n = 43$, Coworker $n = 25$. Sample sizes differ due to the removal of outliers in certain regressions. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 10

The relationship between general PO values fit and creativity moderated by conformity preference with all data included

	Self T1	Self T2	P. T1	P. T2	Supervisor	Coworker
Constant	4.85	5.34	5.03	5.33	5.84	6.40
General PO Fit	.27**	.12**	.25**	.13**	-.03	-.01
Conformity Preference	-.17**	-.12*	-.22**	-.12*	-.18*	.11
R^2	.14**	.06**	.18**	.06**	.06^	.05
Adj. R^2	.14	.05	.17	.05	.04	.01
Constant	4.85	5.35	5.03	5.33	5.84	6.40
General PO Fit	.27**	.12*	.25**	.13**	-.03	-.01
Conformity Preference	-.17 **	-.12*	-.22**	-.12*	-.18*	.11
Fit X Conformity	.02	-.02	.00	-.01	.001	.01
ΔR^2	.00	.00	.00	.00	.00	.00
R^2	.14**	.07**	.16**	.06*	.06	.05
Adj. R^2	.13	.05	.14	.05	.03	Neg.

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person Organization, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 387$, Time 2 $n = 192$, Paired Time 1-Time 2 $n = 179$, Supervisor $n = 43$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 11

The relationship between general PO values fit and creativity moderated by conformity preference in low creative culture supply

	Self T1	Self T2	P. T1	P. T2	Supervisor	Coworker
Constant	4.52	5.13	4.76	5.16	5.77	6.16
General PO Fit	.17**	.10	.15*	.07	-.16^	-.17
Conformity Preference	-.23**	-.21*	-.24*	-.16*	-.24*	.20
R^2	.08**	.08*	.09*	.05	.21*	.15
Adj. R^2	.07	.06	.07	.03	.17	.07
Constant	4.52	5.14	4.76	5.18	5.77	6.06
General PO Fit	.17**	.10	.15*	.06	-.17^	-.22^
Conformity Preference	-.23**	-.22*	-.26*	-.21*	-.29**	.32^
Fit X Conformity	.01	-.01	-.02	-.05	-.07	.13
ΔR^2	.00	.00	.00	.01	.03	.09
R^2	.08**	.08^	.10*	.06	.24*	.23
Adj. R^2	.07	.05	.06	.03	.18	.13

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person-Organization, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 199$, Time 2 $n = 99$, Paired Time 1-Time 2 $n = 91$, Supervisor $n = 43$, Coworker $n = 25$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2.

Table 12

Surface tests for high and low levels of conformity preference moderation analysis

	All Data						Low Creative Culture	
Surface Tests	Time 1-IP		Paired TI-RG		Paired T2-RG		Time 1 RG	
	Low	High	Low	High	Low	High	Low	High
a_1	-0.05	-0.01	-0.57	0.23	0.03	-0.04	1.28**	0.04
a_2	0.08	0.09*	0.27^	0.07	0.06	0.11	-0.27	0.07
a_3	0.01	0.24*	0.39	-0.42*	0.44	-0.19*	-0.43	-0.20
a_4	0.27*	0.17**	-0.12	-0.16	0.16	-0.16	-0.12	-0.11
R^2	.07*	.15**	.17**	.16*	.10	.13*	.29**	.02
Adj. R^2	.05	.12	.12	.11	.05	.07	.26	.00

Note: *$p < .05$; **$p < .01$. IP = Internal Processes, RG = Rational Goal, T1 = Time 1, T2 = Time 2. Time 1-IP *n* low = 201, *n* high = 182; Paired Time I-RG *n* low = 91, *n* high = 88; Paired Time 2-RG *n* low = 91, *n* high = 88; Time 1-RG *n* low = 113, *n* high = 86. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. The moderation was significant at the .10 level for Time 2 for HR in a low creative culture; however, the surface results are not presented due to negative adjusted R^2.

Table 13

The relationship between general PO values fit and creativity moderated by willingness to take risks with all data included

	Self T1	Self T2	Paired T1	Paired T2	Supervisor	Coworker
Constant	4.86	5.32	5.01	5.32	5.89	6.38
General PO Fit	.18**	.10*	.19**	.09*	-.02	-.03
Risk-taking	.40**	.21**	.30**	.20**	.00	.02
R^2	.26**	.12**	.19**	.10**	.00	.00
Adj. R^2	.26	.11	.18	.09	Neg.	Neg.
Constant	4.85	5.31	5.00	5.31	5.88	6.34
General PO Fit	.18**	.10*	.18**	.09*	-.02	-.03
Risk-taking	.40**	.22**	.30**	.21**	.01	.02
Fit X Risk	.01	.02	.03	.03	.02	.06
ΔR^2	.00	.00	.00	.00	.00	.04
R^2	.26**	.12**	.19**	.10**	.00	.05
Adj. R^2	.26	.10	.18	.09	Neg.	.00

Note. *$p < .05$; **$p < .01$. PO = Person-Organization. Time 1 n = 387, Time 2 n = 193, Paired Time 1-Time 2 n = 179, Supervisor n = 79, Coworker n = 67. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 14

The relationship between general PO values fit and creativity moderated by willingness to take risks in low creative culture supply

	Self T1	Self T2	Paired T1	Paired T2	Supervisor	Coworker
Constant	4.60	5.18	4.80	5.20	5.78	6.21
General PO Fit	.10^	.06	.12^	.05	-.17^	-.14
Risk-taking	.46**	.32**	.36**	.32**	.02	-.10
R^2	.23**	.15**	.16**	.15**	.08	.09
Adj. R^2	.22	.13	.14	.13	.03	.00
Constant	4.635	5.17	4.80	5.19	5.79	6.20
General PO Fit	.09^	.06	.11^	.05	-.17^	-.14
Risk-taking	.43**	.32**	.34**	.30**	.05	-.11
Fit X Risk	-.02	-.02	-.03	-.03	.04	.02
ΔR^2	.00	.00	.00	.00	.01	.00
R^2	.23**	.15**	.16**	.15**	.08	.09
Adj. R^2	.22	.12	.13	.12	.01	Neg.

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person-Organization. Time 1 $n = 199$, Time 2 $n = 99$, Paired Time 1-Time 2 $n = 91$, Supervisor $n = 43$, Coworker $n = 25$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 15

Surface tests for high and low levels of individual willingness to take risks moderation analysis

All Data								
Surface Tests	Time 1-CI		Time 2-CI		Paired Time 1		Paired Time 2	
	Low	High	Low	High	Low	High	Low	High
a_1	0.55**	0.71**	0.01	-0.43	0.34	-0.09	0.03	-0.39
a_2	-0.02	-0.06	0.11	0.21^	0.02	0.21	0.11	0.20*
a_3	0.06	-0.17	0.15	0.80	0.32	0.24	0.10	0.79
a_4	-0.11	0.08	-0.14	0.36*	-0.03	0.24	-0.14	.37**
R^2	.26**	.27**	.36**	.16**	.25**	.28**	.34**	.19**
Adj. R^2	.24	.25	.32	.12	.20	.24	.30	.15

Note: *$p < .05$; **$p < .01$. CI = Creativity/Innovation. Time 1 *n* low = 167, high *n* = 219; Time 2 *n* low = 87, high *n* = 105; Paired Time 1 *n* low =81, high *n* = 98; Paired Time 2 *n* low = 81, high *n* = 98. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2.

Table 16

Summary of results for hypotheses

Hypothesis	Self Rating	Supervisor Rating	Coworker Rating
1. PO fit on non-creativity values will negatively relate to creativity			
Human Relations Value	Not Supported	Not Supported	Not Supported
Internal Processes Value	Mixed Support	Mixed Support	Not Supported
Rational Goal Value	Not Supported	Not Supported	Not Supported
General PO Values Fit	Not Supported	Some Support	Not Supported
2. PO fit on creativity/innovation value will positively relate to creativity	Mixed Support	Not Supported	Not Supported
3a. Conformity preference will moderate the relationship between non-creativity values fit and creativity	Not Supported	Not Supported	Not Supported
3b. Conformity preference will moderate the relationship between creativity/innovation value fit and creativity	Not Supported	Not Supported	Not Supported
4a. Willingness to take risks will moderate the relationship between non-creativity values fit and creativity	Not Supported	Not Supported	Not Supported
4b. Willingness to take risks will moderate the relationship between creativity/innovation value fit and creativity	Some Support	Not Supported	Not Supported
5. Domain-relevant skills will positively relate to creativity	Supported	Mixed Support	Mixed Support
6. Presence of creative role models will positively relate to creativity	Supported	Not Supported	Not Supported
7. Supervisor support will positively relate to creativity	Supported	Not Supported	Not Supported
8. Job autonomy will positively relate to creativity	Supported	Not Supported	Not Supported
9. Excessive time pressure will	Not Supported	Not Supported	Not Supported

negatively relate to creativity			
10. Creative job requirement will positively relate to creativity	Supported	Not Supported	Not Supported
11. Anticipated reward for being creative will positively relate to creativity	Supported	Not Supported	Not Supported

Table 17

Multiple regression analysis predicting creativity including all data

	Self T1	Self T2	P. T1	P.T2	Supervisor	Coworker
Constant	3.58	4.69	3.94	4.70	6.03	6.48
General PO Fit	.26**	.12**	.22**	.12**	-.04	-.02
R^2	.11**	.04**	.09**	.05**	.004	.00
Adj. R^2	.11	.04	.09	.04	.001	Neg.
Constant	.01	1.94	-.67	1.25	6.36	5.72
General PO Fit	.01	-.01	.05	-.02	-.13	-.01
Domain-Relevant Skills	.20**	.23**	.34**	.26**	.09	.02
Creative Role Models	.08^	.02	-.00	.01	-.04	-.09
Supportive Supervisor	.01	.08	.14*	.11^	.13	.01
Job Autonomy	.06^	.03	-.01	-.02	-.02	.05
Excessive Time Pressure	.09**	.04	.05	.00	-.14*	.01
Creative Job Requirement	.12**	.02	.09^	.06	.06	.01
Creative Reward	.32**	.24**	.36**	.26**	.14	.01
Risk-Taking	.19**	.07	.17**	.14**	-.11	.03
Conformity Preference	-.07*	-.07	-.07	-.01	-.19*	.12
ΔR^2	.44**	.29**	.47**	.36**	.20^	.06
R^2	.55**	.33**	.56**	.40**	.20^	.06
Adj. R^2	.53	.29	.53	.37	.09	Neg.

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person-Organization, T1 = Time 1, T2 = Time 2, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 384$, Time 2 $n = 186$, Paired Time 1-Time 2 $n = 175$, Supervisor $n = 80$, Coworker $n = 63$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 18

Multiple regression analysis predicting creativity in low creative culture supply

	Self T1	Self T2	P. T1	P.T2	Supervisor	Coworker
Constant	3.81	4.97	4.24	4.94	6.60	6.89
General PO Fit	.15*	.03	.10	.04	-.17^	-.15
R^2	.03*	.00	.02	.00	.07^	.08
Adj. R^2	.03	.00	.01	.00	.05	.04
Constant	-.79	1.52	-1.49	.76	8.77	11.24
General PO Fit	-.00	-.00	.06	-.00	-.23*	-.17
Domain-Relevant Skills	.28**	.23^	.46**	.27*	-.14	-.12
Creative Role Models	.05	-.05	-.03	-.05	.09	-.34^
Supportive Supervisor	.03	.14	.22*	.18*	.06	-.19
Job Autonomy	.07	-.01	-.00	-.03	.01	.14
Excessive Time Pressure	.11**	.05	.07	.04	-.08	-.22^
Creative Job Requirement	.12^	.08	.05	.06	-.13	.07
Creative Reward	.37**	.22*	.35**	.25**	.09	.16
Risk-Taking	.21**	.13	.18^	.20*	-.08	-.38^
Conformity Preference	-.07	-.05	-.12	-.04	-.27*	-.06
ΔR^2	.52**	.31**	.52**	.40**	.21	.48
R^2	.56**	.31**	.54**	.41**	.29	.56
Adj. R^2	.53	.23	.48	.33	.06	.22

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person Organization, T1 = Time 1, T2 = Time 2, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 198$, Time 2 $n = 96$, Paired Time 1-Time 2 $n = 91$, Supervisor $n = 43$, Coworker $n = 24$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. As coworker data has a very low sample, results should be interpreted with caution.

Table 19

Multiple regression analysis predicting creativity including all data of those currently working

	Self T1	Self T2	P.T1	P.T2	Supervisor	Coworker
Constant	3.84	5.02	4.12	4.93	5.92	6.51
General PO Fit	.21**	.07	.18**	.08	-.00	-.03
R^2	.07**	.01	.07**	.02^	.00	.00
Adj. R^2	.06	.01	.06	.01	Neg.	Neg.
Constant	.55	3.90	.29	2.66	6.03	5.69
General PO Fit	-.04	-.03	.01	-.05	-.09	-.01
Domain-Relevant Skills	.16*	.04	.27**	.12	.12	.02
Creative Role Models	.11*	.03	.01	.00	-.03	-.10
Supportive Supervisor	-.02	.01	.14^	.10	.14	.01
Job Autonomy	.03	.04	-.05	-.02	.01	.04
Excessive Time Pressure	.08*	-.01	.02	-.02	-.13*	.02
Creative Job Requirement	.16**	.05	.14^	.07	.05	.00
Creative Reward	.34**	.24**	.33**	.26**	.07	.01
Risk-Taking	.20**	.04	.16**	.12*	-.09	.03
Conformity Preference	-.06	-.09^	-.09^	-.05	-.19*	.13
ΔR^2	.47**	.26**	.51**	.34**	.22^	.06
R^2	.54**	.27**	.58**	.36**	.22^	.07
Adj. R^2	.52	.22	.54	.31	.10	Neg.

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person Organization, T1 = Time 1, T2 = Time 2, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 306$, Time 2 $n = 148$, Paired Time 1-Time 2 $n = 138$, Supervisor $n = 77$, Coworker $n = 61$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 20

Multiple regression analysis predicting creativity in low creative culture supply of those currently working

	Self T1	Self T2	P.T1	P.T2	Supervisor	Coworker
Constant	4.22	5.18	4.69	5.26	6.61	6.91
General PO Fit	.07	-.01	.02	-.01	-.17	-.15
R^2	.01	.00	.00	.00	.07^	.08
Adj. R^2	.00	Neg.	Neg.	Neg.	.05	.04
Constant	-.15	5.36	.41	4.01	8.78	11.43
General PO Fit	-.05	-.03	.00	-.02	-.22^	-.18
Domain-Relevant Skills	.21^	-.18	.28	-.09	-.14	-.14
Creative Role Models	.08	-.08	-.04	-.10	.09	-.37*
Supportive Supervisor	-.02	.02	.14	.07	.06	-.23
Job Autonomy	.04	.00	-.02	.01	.01	.19
Excessive Time Pressure	.10*	-.02	.02	-.03	-.07	-.28*
Creative Job Requirement	.17*	.17^	.14	.12	-.13	.10
Creative Reward	.40**	.24*	.36**	.28**	.08	.22
Risk-Taking	.22**	.05	.13	.16^	-.08	-.41^
Conformity Preference	-.06	-.10	-.11	-.07	-.27*	-.03
ΔR^2	.57**	.39**	.53**	.52**	.21	.53
R^2	.57**	.39**	.53**	.52**	.29	.61
Adj. R^2	.54	.29	.45	.43	.06	.29

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person Organization, T1 = Time 1, T2 = Time 2, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 158$, Time 2 $n = 75$, Paired Time 1-Time 2 $n = 69$, Supervisor $n = 42$, Coworker $n = 23$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative.

Table 21

Multiple regression analysis predicting creativity for graduate students with all data

	Self T1	Self T2	P.T1	P.T2	Supervisor	Coworker
Constant	4.45	4.23	3.81	4.11	6.32	6.60
General PO Fit	.16	.23	.29*	.25*	-.07	-.04
R^2	.03	.14*	.14	.15*	.02	.02
Adj. R^2	.02	.12	.12*	.13	Neg.	Neg.
Constant	2.58	4.71	-1.05	3.13	7.25	6.96
General PO Fit	-.17^	.00	-.13	-.01	-.06	.04
Domain-Relevant Skills	.05	-.12	.37*	.04	.11	-.13
Creative Role Models	.12	.05	-.10	.04	-.36	.07
Supportive Supervisor	-.06	-.08	.45^	.14	.58	-.26
Job Autonomy	.05	-.09	.02	-.14	-.09	.05
Excessive Time Pressure	-.01	-.01	.06	.01	-.17	.02
Creative Job Requirement	.17	.03	.22	.09	.21	-.12
Creative Reward	.32**	.37**	.25^	.34*	-.15	.10
Risk-Taking	.11	.00	.10	.05	-.24	.09
Conformity Preference	-.06	-.18^	-.10	-.15	-.31^	.12
ΔR^2	.59**	.48**	.58**	.50**	.48	.32
R^2	.63**	.61**	.72**	.65**	.50	.33
Adj. R^2	.55	.48	.62	.53	.11	Neg.

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person Organization, T1 = Time 1, T2 = Time 2, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 60$, Time 2 $n = 40$, Paired T1 $n = 40$, Supervisor $n = 24$, Coworker $n = 23$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative. Low creative culture results not shown as *n* for graduate students was low so a comparison could not be made to undergraduates.

Table 22

Multiple regression analysis predicting creativity for undergraduate students with all data

	Self T1	Self T2	P.T1	P.T2	Supervisor	Coworker
Constant	3.46	4.79	3.99	4.94	5.80	6.39
General PO Fit	.27**	.10*	.20	.07	.01	-.01
R^2	.12**	.03*	.09**	.01	.00	.00
Adj. R^2	.12	.02	.08	.01	Neg.	Neg.
Constant	-.37	1.12	-.30	1.26	5.59	4.34
General PO Fit	.06	-.01	.12	-.02	-.04	-.04
Domain-Relevant Skills	.25**	.37**	.34**	.33**	.09	.20
Creative Role Models	.09^	.01	.04	.00	.08	-.05
Supportive Supervisor	-.04	.05	.04	.08	.00	.01
Job Autonomy	.05	.05	.02	.05	.04	.02
Excessive Time Pressure	.11**	.03	.10*	.03	-.10	.01
Creative Job Requirement	.11*	.03	.04	.03	.02	.02
Creative Reward	.31**	.20**	.33**	.20**	.17	.03
Risk-Taking	.20**	.09	.13	.10	-.05	.03
Conformity Preference	-.08*	-.04	-.12*	-.03	-.22*	.14
ΔR^2	.42**	.30**	.40**	.27**	.26	.08
R^2	.54**	.33**	.49**	.29**	.26	.08
Adj. R^2	.53	.22	.44	.23	.10	Neg.

Note. ^$p < .10$; *$p < .05$; **$p < .01$. PO = Person Organization, T1 = Time 1, T2 = Time 2, P. T1 = Paired Time 1, P. T2 = Paired Time 2. Time 1 $n = 323$, Time 2 $n = 145$, Paired Time 1-Time 2 $n = 136$, Supervisor $n = 55$, Coworker $n = 40$. Paired Time 1-Time 2 refers to the analysis conducted with only those who responded both at Time 1 and Time 2. Neg. equals negative and refers to when the adjusted R^2 was negative. Low creative culture results not shown as *n* for graduate students was low so a comparison could not be made to undergraduates.

Appendix A

This appendix includes the proposed measures for the study and the order in which they would be presented to participants. Page breaks indicate how much participants will see on the screen at one time.

To be given at time of recruitment in classes:

IRB language first: purpose of survey. That it is voluntary, confidential, time commitment, etc.

- Your first and last name
- Your email address
- Your direct supervisor's first name
- Your direct supervisor's email address
- A coworker's first name
- A coworker's email address

Feel free to mention to your supervisor/coworker that he/she will be receiving this short survey. If you do not currently have your supervisor/coworker's email address you can do 1 of 2 things. 1) send me their work email when I email you the survey link, or 2) in the case that they do not have a work email, please provide your organization's name and location and I will mail the survey or, a personal email of your coworker or immediate supervisor will also work.

Time 1 Measures:

All items are measured on a Likert-type scale of 1 (strongly disagree) to 7 (strongly agree) unless indicated.

PO fit-organizational supplies

Human Relations Value

1. The glue that holds my organization together consists of loyalty and commitment.
2. My organization is employee-focused.
3. My organization brings in employees who are courteous, friendly, supportive, and team players.

Internal Processes Value

1. The glue that holds my organization together is its formal procedures, rules, and policies
2. My organization is stable and rule-oriented.
3. My organization brings in employees who are conservative and predictable.

Rational Goal Value

1. The glue that holds my organization together is an emphasis on productivity and goal accomplishment.

2. My organization promotes a competitive and achievement-oriented image.
3. My organization brings in employees who are competitive and achievement-oriented.

Creativity/Innovation Value

1. The glue that holds my organization together is a focus on innovation.
2. My organization promotes an image of innovation, adaptability, and entrepreneurship.
3. My organization brings in employees who are creative and innovative.

Supervisor Support

1. My supervisor encourages me to develop new skills.
2. My supervisor encourages employees to participate in important decisions.
3. My supervisor encourages employees to speak up when they disagree with a decision.
4. My supervisor praises good work.

General PO Values Fit

1. The values of my company are similar to the values I want in a company.
2. I believe I fit well with my organization's values.
3. I am well matched to my organization's culture.

Presence of Creative Role Models

1. In my organization, I often see employees display creative behaviors at work.
2. In my organization, I have a role model who offers new and useful ideas.
3. There are employees in my organization who I consider to be creative role models.

Willingness to Take Risks at Work

1. When I think of a good way to improve the way I accomplish my work, I will risk potential failure to try it out.
2. I will take a risk and try something new if I have an idea that might improve my work, regardless of how I might be evaluated.
3. I am willing to go out on a limb at work and risk failure when I have a good idea that could help me become more successful.

Conformity Preference

1. I tend to go along with what the group wants.
2. Generally, I'd rather give in and go along for the sake of peace than struggle to have my way.
3. I give into others easily.

<u>Needs-Supplies Fit-Needs</u>

Human Relations Value

1. I want the glue that holds my organization together to consist of loyalty and commitment.
2. I want my organization to be employee-focused.

3. I want my organization to bring in employees who are courteous, friendly, supportive, and team players.

Internal Processes Value
1. I want the glue that holds my organization together to be its formal procedures, rules, and policies.
2. I want my organization to be stable and rule-oriented.
3. I want my organization to bring in employees who are conservative and predictable.

Rational Goal Value
1. I want the glue that holds my organization together to be an emphasis on productivity and goal accomplishment.
2. I want my organization to promote a competitive and achievement-oriented image.
3. I want my organization to bring in employees who are competitive and achievement-oriented.

Creativity/Innovation Value
1. I want the glue that holds my organization together to be a focus on innovation.
2. I want my organization to promote an image of innovation, adaptability, and entrepreneurship.
3. I want my organization to bring in employees who are creative and innovative.

Anticipated Reward for Being Creative
1. The more creative I am, the better my job performance.
2. Coming up with creative ideas helps me do well on my job.
3. I will be rewarded if I am creative on my job.

Job Autonomy
1. I am allowed to decide how to go about getting my job done (the methods to use).
2. I am able to choose the way to go about my job (the procedures to utilize).
3. I am free to choose the method(s) to use in carrying out my work.

Excessive Time Pressure
1. I feel I work under excessive time pressure.
2. My workload is sometimes too much to handle.
3. I do not have sufficient time to complete my work tasks.

Creative Job Requirement
1. Introducing new ideas to my organization is part of my job.
2. I don't have to be creative to fulfill my job requirements. (R)
3. Suggesting new ideas is part of my job duties.

Demographics
Age:
Gender: male female

How would you describe yourself: (i.e., American Indian/Alaska Native, Asian, Hispanic, Native Hawaiian or other Pacific Islander, Black or African-American, Caucasian, more than one race, other-please specify)
Student status: MBA/undergrad
Job status: full-time/part-time/not currently working
Job title and brief description of your job activities:
Job Level: director or above, manager, individual contributor-salaried, individual contributor-hourly
Approximate number of months on current job
Approximate number of months at organization
Organization's name:

Creativity
1. I demonstrate originality in my work.
2. I have suggested new uses for existing methods or equipments.
3. I identify opportunities for new products/processes.
4. I generate novel, but operable work-related ideas.
5. I exhibit creativity on the job when given the opportunity.
6. I come up with new and practical ideas to improve performance.

Innovation
1. I implement my creative ideas on the job.
2. I suggest creative ideas, but do not act on them. (R)
3. I consider myself an innovator.

Turnover intention
1. If I have my way, I will be working for another organization one year from today.
2. I am planning on searching for a new job during the next 12 months**.**

Domain-relevant skills
1. I have the skills necessary to perform my job.
2. I am very experienced when it comes to my job.
3. Performing my job comes easily to me.

<u>Time 2 Measures</u>

Creativity
1. I demonstrate originality in my work.
2. I have suggested new uses for existing methods or equipments.
3. I identify opportunities for new products/processes.
4. I generate novel, but operable work-related ideas.
5. I exhibit creativity on the job when given the opportunity.
6. I come up with new and practical ideas to improve performance.

Innovation
1. I implement my creative ideas on the job.

2. I suggest creative ideas, but do not act on them. (R)
3. I consider myself an innovator.

Coworker survey
Will need IRB language
Please respond to the following items about the coworker named in the email. This information will not be shared with anyone other than the research team.

Creativity
1. My coworker demonstrates originality in his/her work.
2. My coworker has suggested new uses for existing methods or equipments.
3. My coworker identifies opportunities for new products/processes.
4. My coworker generates novel, but operable work-related ideas.
5. My coworker exhibits creativity on the job when given the opportunity.
6. My coworker comes up with new and practical ideas to improve performance.

Innovation
1. My coworker implements his/or her creative ideas on the job.
2. My coworker suggests creative ideas, but does not act on them. (R)
3. I consider my coworker an innovator.

Domain-relevant skills
1. My coworker has the skills necessary to perform his/her job.
2. My coworker is very experienced when it comes to his/her job.
3. Performing his/her job comes easily to my coworker.

How many months/years have you worked with this coworker (please specify)?

Human Relations Value
1. The glue that holds my organization together consists of loyalty and commitment.
2. My organization is employee-focused.
3. My organization brings in employees who are courteous, friendly, supportive, and team players.

Internal Processes Value
1. The glue that holds my organization together is its formal procedures, rules, and policies
2. My organization is stable and rule-oriented.
3. My organization brings in employees who are conservative and predictable.

Rational Goal Value
1. The glue that holds my organization together is an emphasis on productivity and goal accomplishment.
2. My organization promotes a competitive and achievement-oriented image.

3. My organization brings in employees who are competitive and achievement-oriented.

Creativity/Innovation Value

1. The glue that holds my organization together is a focus on innovation.
2. My organization promotes an image of innovation, adaptability, and entrepreneurship.
3. My organization brings in employees who are creative and innovative.

Direct Supervisor Survey
Will need IRB language

Please respond to the following items about your direct report named in the email. This information will not be shared with anyone other than the research team.

Creativity

1. My direct report demonstrates originality in his/her work.
2. My direct report has suggested new uses for existing methods or equipments.
3. My direct report identifies opportunities for new products/processes.
4. My direct report generates novel, but operable work-related ideas.
5. My direct report exhibits creativity on the job when given the opportunity.
6. My direct report comes up with new and practical ideas to improve performance.

Innovation

1. My direct report implements his/or her creative ideas on the job.
2. My direct report suggests creative ideas, but does not act on them. (R)
3. I consider my direct report an innovator.

Domain-relevant skills

1. My direct report has the skills necessary to perform his/her job.
2. My direct report is very experienced when it comes to his/her job.
3. Performing his/her job comes easily to my direct report.

Overall Job Performance

Please rate your direct report's job performance using the following questions:

1. My direct report's work quality is
2. My direct report's work quantity is
3. My direct report's effort on his/her job is

(1-7 ranging from very unsatisfactory to very satisfactory)

How many months/years have you supervised this direct report (please specify)?

Human Relations Value

1. The glue that holds my organization together consists of loyalty and commitment.
2. My organization is employee-focused.
3. My organization brings in employees who are courteous, friendly, supportive, and team players.

Internal Processes Value

1. The glue that holds my organization together is its formal procedures, rules, and policies
2. My organization is stable and rule-oriented.
3. My organization brings in employees who are conservative and predictable.

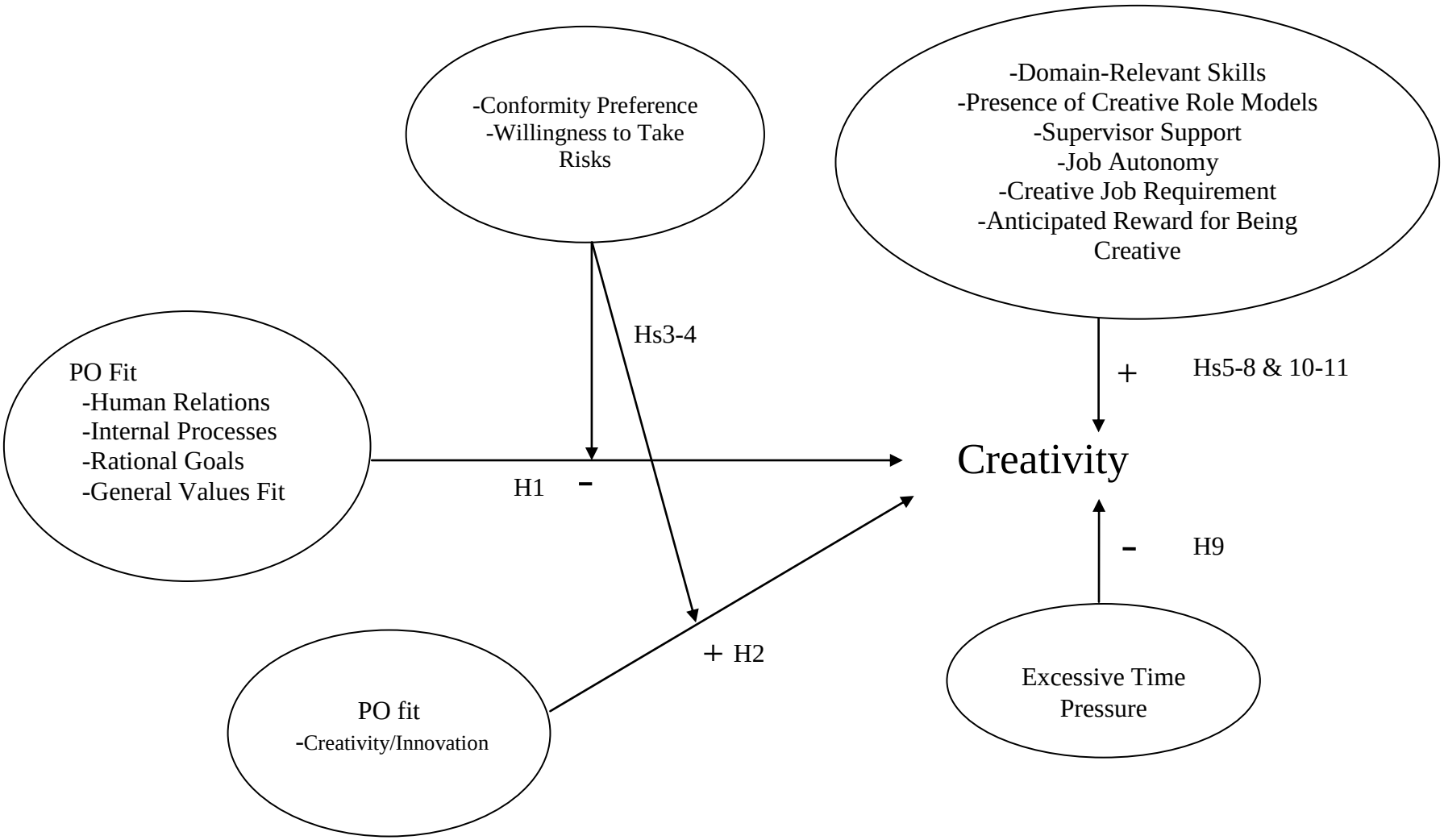
Rational Goal Value

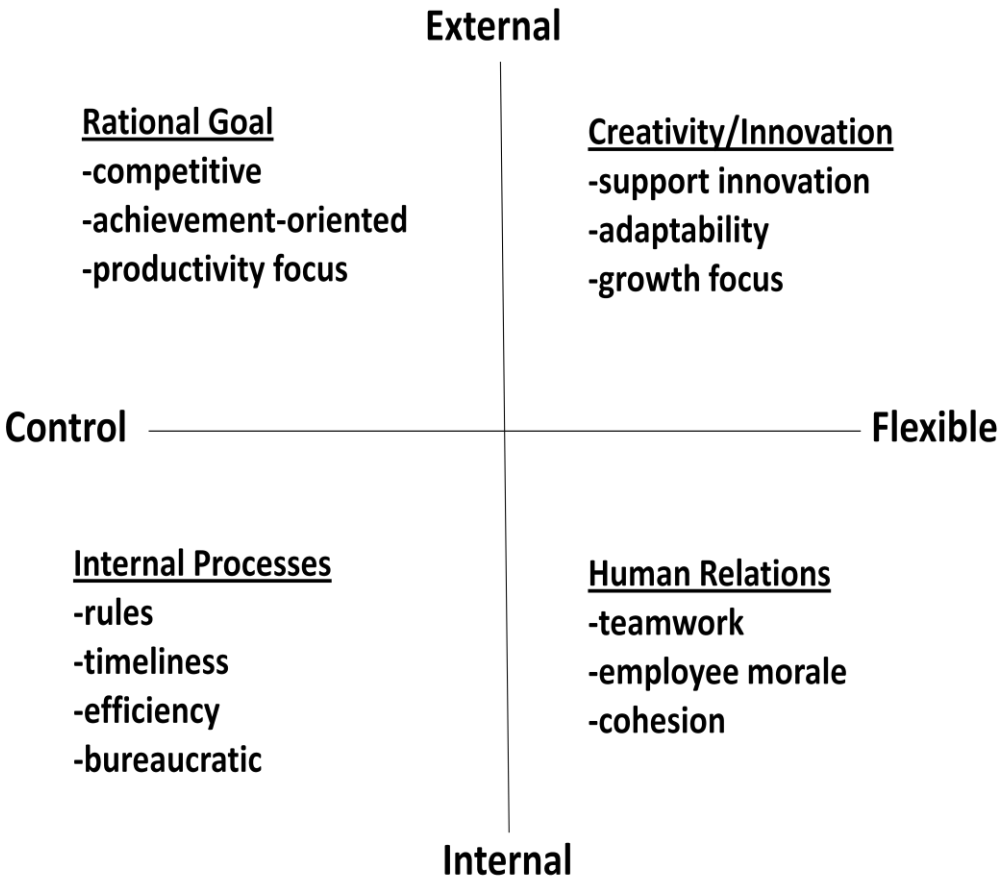
1. The glue that holds my organization together is an emphasis on productivity and goal accomplishment.
2. My organization promotes a competitive and achievement-oriented image.
3. My organization brings in employees who are competitive and achievement-oriented.

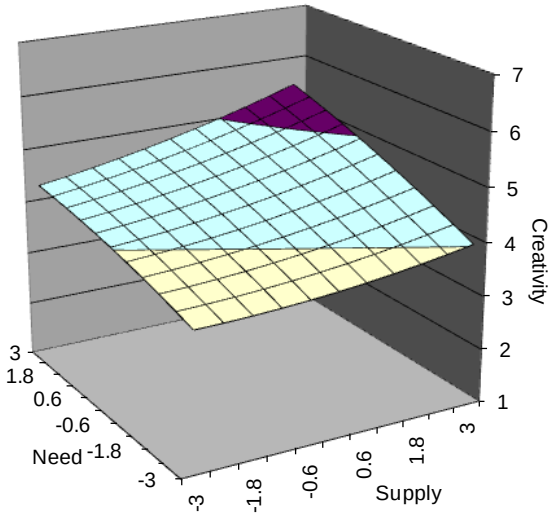
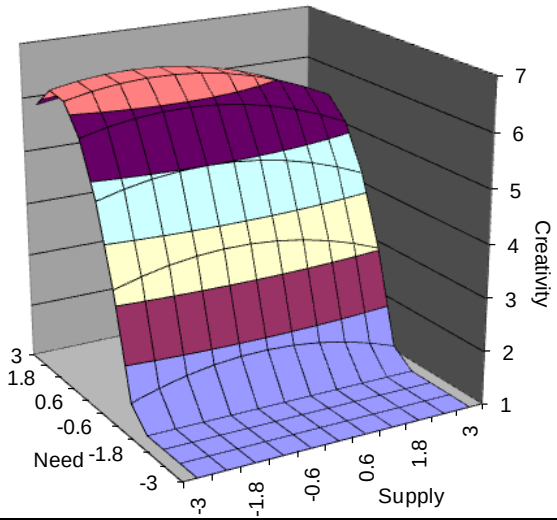
Creativity/Innovation Value

1. The glue that holds my organization together is a focus on innovation.
2. My organization promotes an image of innovation, adaptability, and entrepreneurship.
3. My organization brings in employees who are creative and innovative.

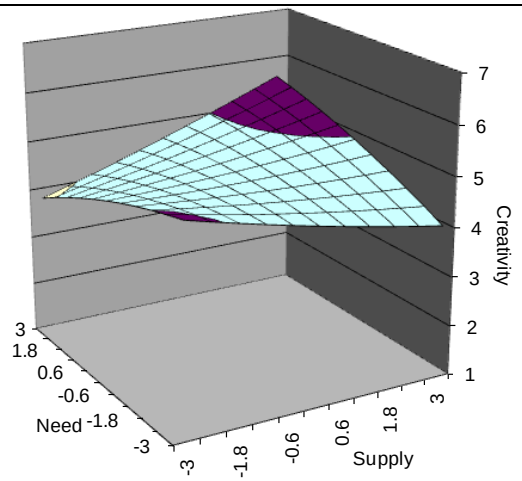
Figure Caption


-Conformity Preference
-Willingness to Take Risks
-Domain-Relevant Skills
-Presence of Creative Role Models
-Supervisor Support
-Job Autonomy
-Creative Job Requirement
-Anticipated Reward for Being Creative
Hs3-4
PO Fit
-Human Relations
-Internal Processes
-Rational Goals
-General Values Fit
+
Hs5-8 & 10-11
Creativity
H1
-
-
H9
+ H2
PO fit
-Creativity/Innovation
Excessive Time Pressure

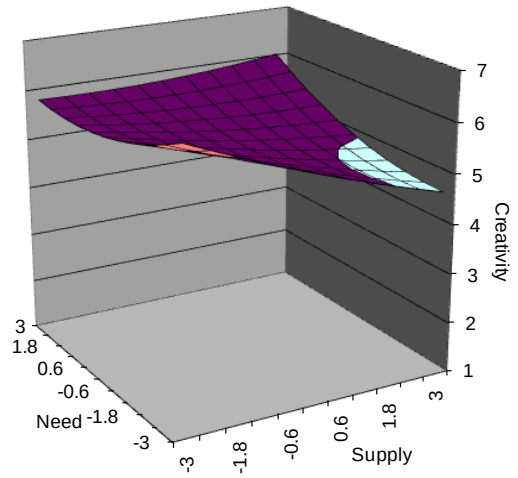

External
Rational Goal
-competitive
-achievement-oriented
-productivity focus
Creativity/Innovation
-support innovation
-adaptability
-growth focus
Control
Flexible
Internal Processes
-rules
-timeliness
-efficiency
-bureaucratic
Human Relations
-teamwork
-employee morale
-cohesion
Internal

a) Human Relations Time 1- all data	b) HR Supervisor- Low creative culture
	

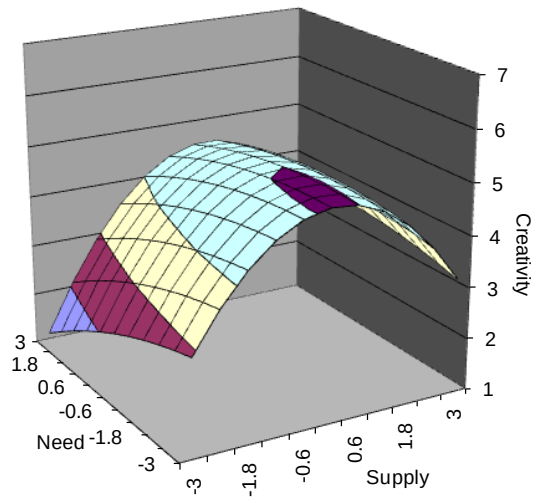
a) Internal Processes Time 1-all data



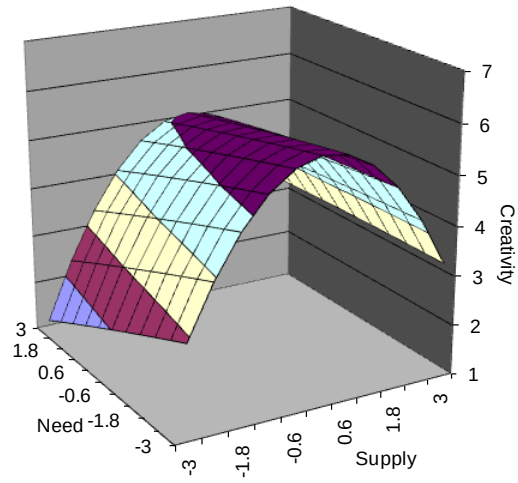
b) Internal Processes Time 2- all data



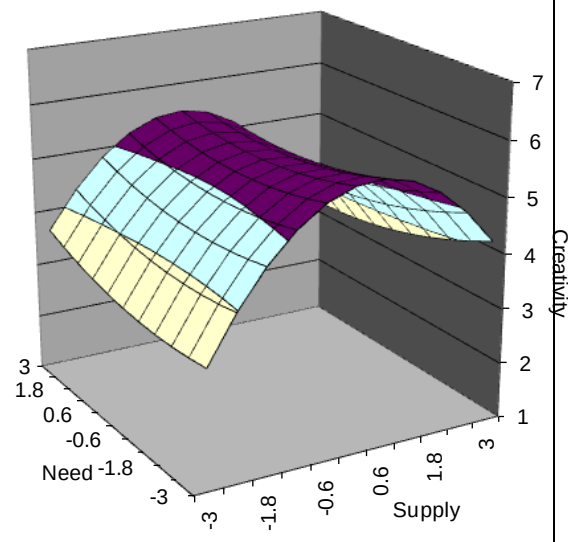
c) IP Paired Time 1- Low creative culture



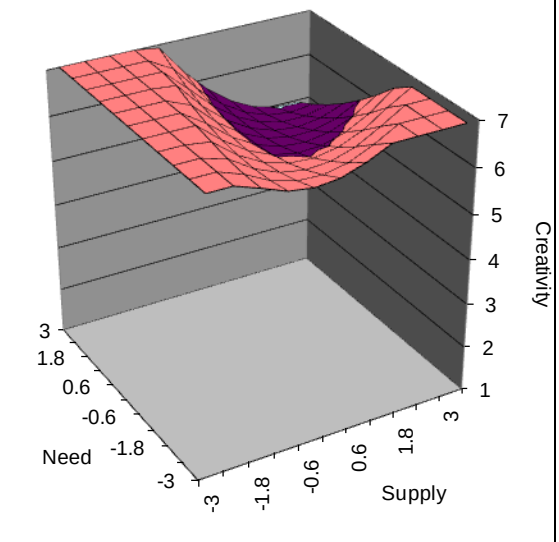
d) IP Paired Time 2-Low creative culture

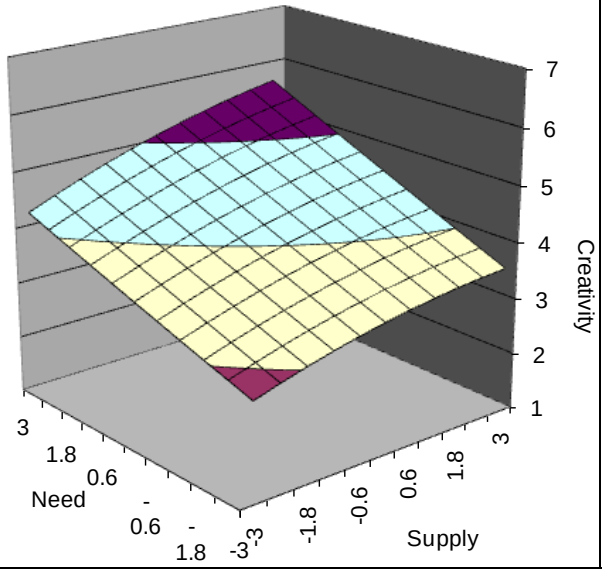
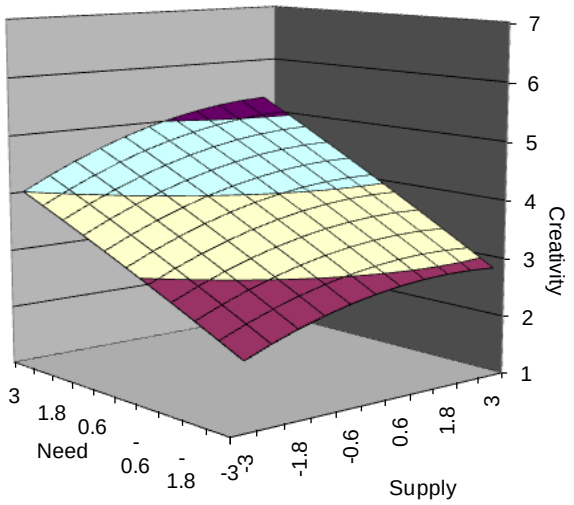


e) Internal Processes Time 2- Low creative culture

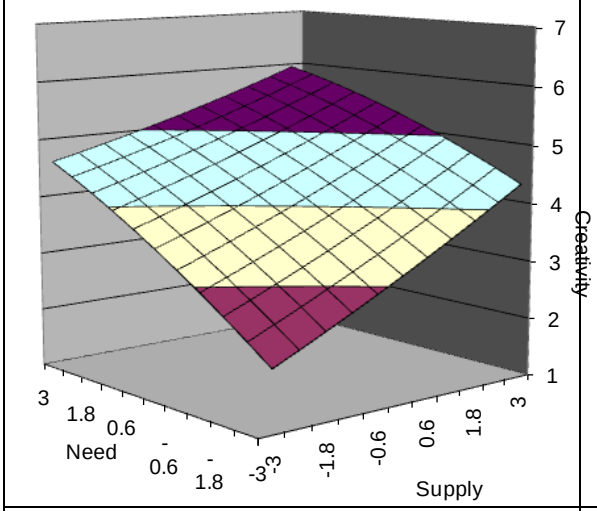


f) IP Supervisor- Low creative culture



a) Rational Goal Time 1- all data	b) Rational Goal Time 1- Low creative culture
	

a) Creativity/Innovation Time 1- all data



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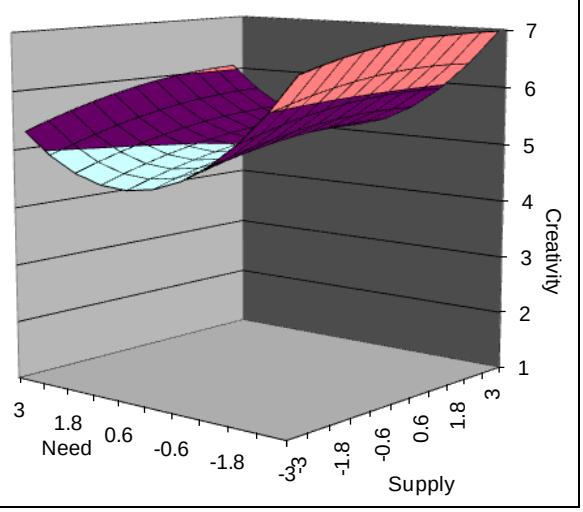
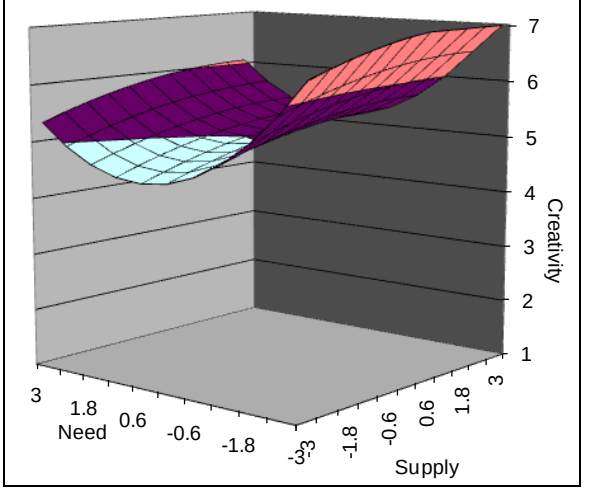
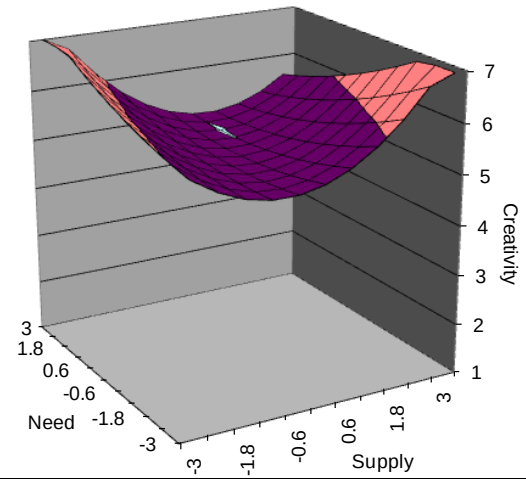


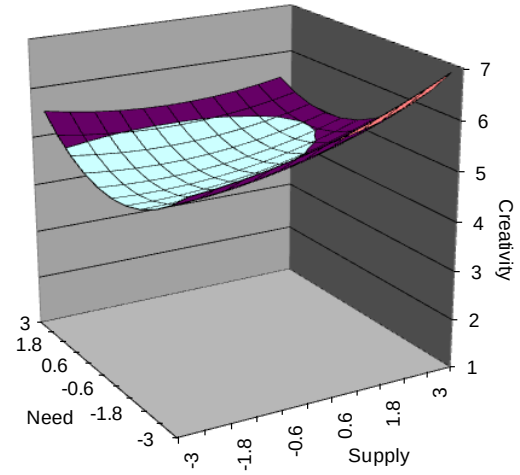
c) Creativity/Innovation Paired Time 2- all data



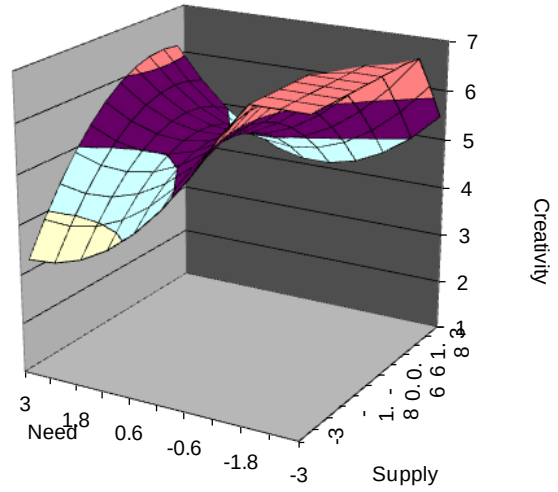
a) Low Conformity Preference-Internal Processes- Time 1-all data



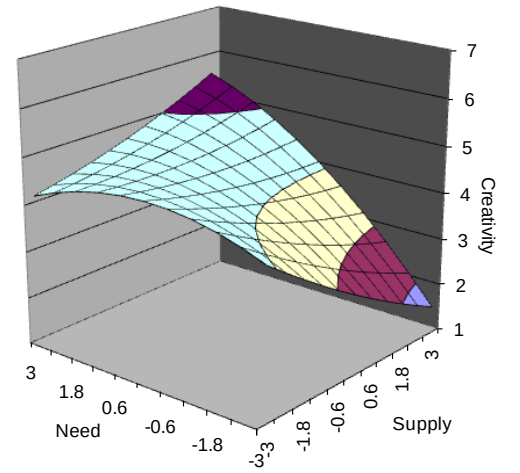
b) High Conformity Preference-Internal Processes- Time 1 all data



c) Low Conformity Preference-Rational Goal Paired Time 1- all data



d) High Conformity Preference-Rational Goal- Paired Time 1- all data



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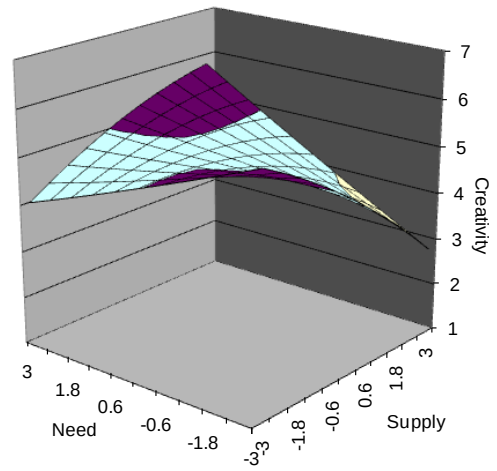
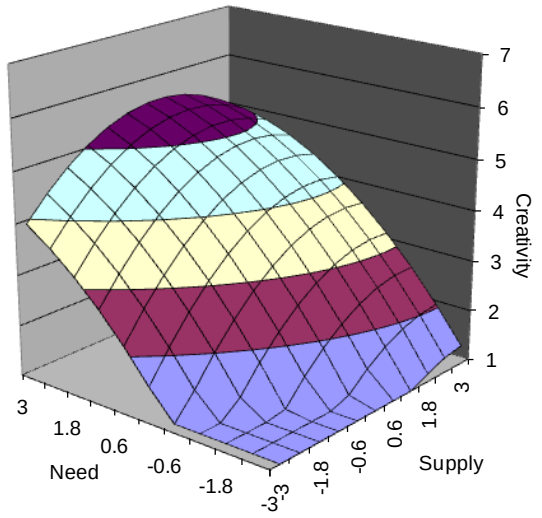
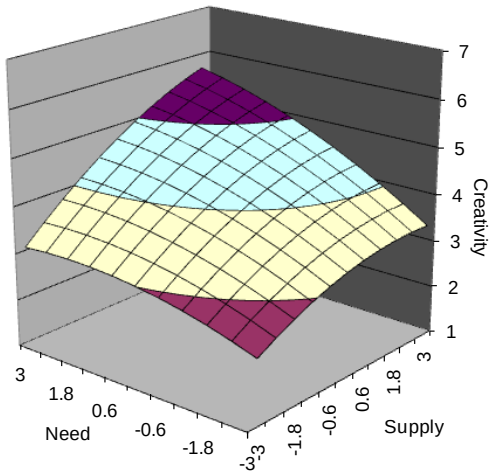


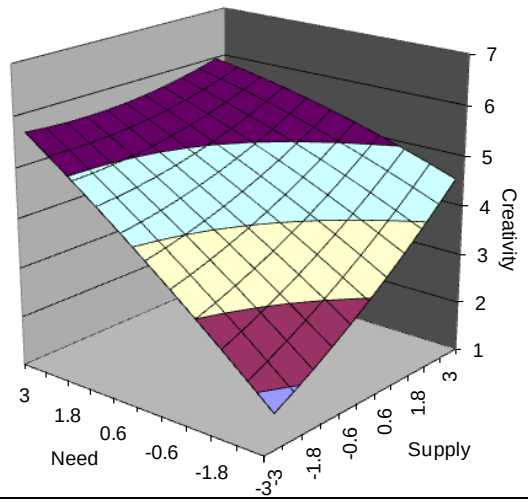
f) Low Conformity Preference-Rational Goal
Time 1-Low creative culture



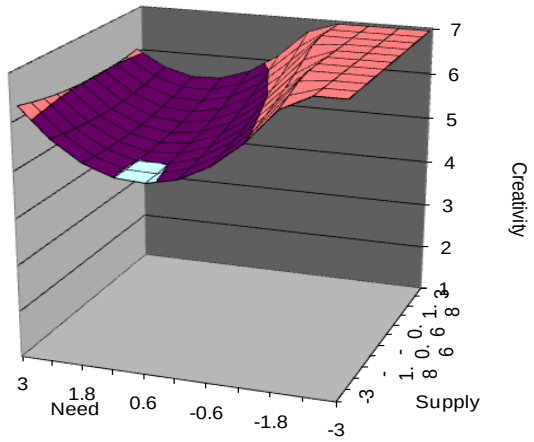
a) Low risk-taking-Creativity/Innovation Time 1-all data



b) High risk-taking-Creativity/Innovation Time 1-all data



c) High risk-taking-Creativity/Innovation Time 2-all data



d) High risk-taking-Creativity/Innovation Paired Time 2-all data