Creativity in the workplace is increasingly recognized as a valuable organizational commodity (Amabile, 1996; Chen & Kaufmann, 2008; Ford & Gioia, 1995; Rosa, Qualls, & Fuentes, 2008; Shalley & Gilson, 2004). The value of a creative workforce will only increase as organizations face an ever-expanding global nature of business, continued and rapid changes in technology, increased competition for products and/or services, and regular changes to organizational structures, strategies, and environments (Egan, 2005). Indeed, creativity has been identified as the 21st century’s most important economic resource (Florida, 2002). Though the value of creativity grows increasingly clear, the factors that contribute to a creative and innovative workforce are more elusive. Although much attention in the creativity literature has been paid to individual characteristics related to creative potential (Ivcevic, 2009), the business world necessarily requires an understanding of creativity that is both more considerate of organizational context and which focuses more directly on domain specific behavioral outcomes. The purpose of our chapter is to highlight the role of organizational context in the development of individual creativity, to discuss the impact of leader
and organizational-level factors, and to identify key steps in advancing our understanding of context so that organizations may benefit more directly from the research on individual creativity and context.

A big challenge to understanding contextual influences on individual creativity in organizations is the inconsistency with which creativity has been defined. In a review of over 90 different articles appearing in either the top two creativity journals, or from peer-reviewed journals in business, psychology, and education, which used the word “creativity” in the title, Plucker, Beghetto, and Dow (2004) found that 62% of the articles failed to explicitly define creativity in their work. While some have defined creativity as requiring something to be both novel and useful (Sternberg, 2006) others have argued that the “useful” aspect of a creative idea or product is a reference to innovation, and that the development or generation process (i.e., creativity) is separate (Amabile, 1996).

In an organizational context, the value of separating creativity and innovation is questionable. As we have noted elsewhere (Agars, Kaufman, & Locke, 2008) creativity and innovation should be considered as distinct constructs because of differences in how each may be predicted (Rank, Pace, & Frese, 2004; West, 2002). From a business perspective, however, creativity for its own sake has minimal value. If not for the useful implementation of a creative idea, product, or process, why would an organization value creativity? Fittingly, in the organizational world, creativity is most often defined as the production of novel and useful ideas (Hemlin, Allwood, & Martin, 2009; Mumford & Gustafson, 1988). Still, this definition is not without limitations when one is considering creativity in a business context. For example, what is considered “creative” in one organization may be problematic for another. Similarly, individual acts of creativity may not be supported (nor valued) in an organization where performance is largely team based. Plucker et al. (2004) addressed these concerns when they defined creativity as:

“...the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context” (p. 90).

This definition is valuable both because it illustrates the complexity of causal factors underlying creativity, but also because it underscores the role of the general work domain (and the individual business domains that may exist therein). Indeed, others have argued the importance of defining creativity within a particular domain (Baer & Kaufman, 2005; Ford, 1996), and when thinking about the creativity product (i.e., instead of the creative person) the domain-specificity argument has received substantial support (Baer, 1991, 1994, 1998; Han, 2003; Runco, 1989). As one example, in a study of creative problem solving, Reiter-Palmon, Illies, Cross, Buboltz, and Nimps (2009) found that creativity was differentially influenced by problem type. Even though these problems were all broad examples of real life creativity, they represented separate domains at the micro level. Most relevant to the manager, Baer (1996, 1997, 1998) has argued that although person-factors are relevant, the smart manager should be primarily interested in domain-specific guidance.

We strongly endorse the domain-specific approach to creativity. One challenge to informing organizational leaders through a domain-specific pursuit, however, is in determining which lessons from the general creativity literature are appropriate for the domains of business. In their Four-C model of creativity, Kaufman and Beghetto (2009) take a lifespan view of creativity. Early in life, a typical creator might be beginning to play with her creativity and exploring personal insights (mini-c) as she discovers new things. Most people will first
experience mini-c early in life. After repeated attempts and encouragements, the creator might then reach the realm of everyday creativity (little-c). As part of this process of enjoying creativity in everyday life, the creator may stumble upon the domain that she feels an initial pull of passion. With years of acquired expertise and advanced schooling, the creator may move onto the stage of professional creativity (Pro-c). Although she will still have mini-c insights, the creator has now achieved professional-level status and is capable of working on problems, projects, and ideas that affect the field as a whole. The creator may continue to create at the Pro-c level throughout her entire life, with specific peaks occurring at different ages based on the domain (e.g., Simonton, 1997). After many years have come and gone, the creator may achieve a lasting, legendary creativity (Big-C) contribution to a field (e.g., the Nobel Prize) or the creator may have passed away, and history will make the final judgment as to whether she has entered the pantheon of Big-C or has been long-forgotten.

Pro-c represents the developmental and effortful progression beyond little-c (but that has not yet attained Big-C status). Anyone who attains professional-level expertise in any creative area is likely to have attained Pro-c status. Not all working professionals in creative fields will necessarily reach Pro-c (a professional actor, for example, may make a good living on soap operas but may not necessarily be Pro-c level creative in his or her craft). Similarly, some people may reach Pro-c level without being able to necessarily quit day jobs; some areas of creative expression may not provide enough monetary sustenance to allow financial freedom from other responsibilities; many “amateur” artists are creative at the Pro-c level, even if it is not their primary means of support (Kaufman & Beghetto, 2009).

The challenge for organizational leaders is that most theories of creativity are aimed at either little-c or Big-C. People’s creativity in their professional lives is often overlooked by other branches of psychological research. Consistent with Kaufman and Beghetto (2009), Styhre (2006) suggested that creativity and innovation need not be thought of as extraordinary events, but should be thought of as regularly occurring possibilities in organizations. How much this has occurred is debatable. In the remaining sections of this chapter, we provide a brief overview of the consideration of context in organizational creativity and innovation theory, followed by a discussion of insights gained from the research specific to work organizations, with a particular emphasis on leadership and organizational-level contexts. We conclude with a discussion of challenges and recommendations for fostering creativity in organizations.

CONTEXTUAL FACTORS AND INDIVIDUAL CREATIVITY

Early work on creativity focused largely on the importance of the individual to the creativity process and the production of creative products (Barron & Harrington, 1981; Ford & Gioia, 1995; Galton, 1869; Reuter, Panksepp, Schnabel, Kellerhoff, & Hennig, 2005). Increasingly, however, contextual factors have become integrated into theories and approaches to creativity in organizations. Amabile’s Componential Theory of Creativity (1983a, 1983b) represents one of the earliest considerations of contextual factors in a theoretical sense. Her later Model of Creativity and Innovation in Organizations (Amabile 1997, 1998) specifically incorporated organizational resources, management practices, and an organization’s orientation towards innovation as contextual predictors of creativity. Others have discussed the importance of social context. The Theory of Organizational Creativity
B. INDIVIDUAL LEVEL INFLUENCES

(Woodman, Sawyer, & Griffin, 1993), one of the first true multi-level models of creativity, included group norms, group cohesiveness, and social roles as key social predictors of creativity. The model also indentifies organizational-level factors such as culture, resources, rewards, strategy, structure, and technology as having both direct and indirect influences on individual creative behaviors. Today, major theories within organizational creativity field are consistent in their recognition of the importance of both person and contextual factors (Shalley, Zhou & Oldham, 2004). These include the Theory of Creative Action in Multiple Social Domains (Ford 1996), a Sensemaking Theory of Creativity in Organizations (Drazin, Glynn, & Kazanjian, 1999), a Propulsion Model of Creativity (Sternberg, Kaufman, & Pretz, 2002, 2003) and West’s (2002) Integrative Model of Creativity and Innovation Implementation in Work Groups. An in-depth discussion of these is beyond our current scope (see Agars et al., 2008 for a more detailed review of these theories), though their existence is worth noting as it underscores the increased recognition that understanding creativity in the workplace requires a careful consideration of context. They further illustrate, as we will discuss, the complexities such context represents.

Of particular interest to the current chapter is the consideration of domains. In presenting the Theory of Creative Action in Multiple Social Domains, Ford (1996) noted that domains represent independent contexts within which unique norms for creative behavior may develop. As we noted earlier, however, much of our research on creativity is individual based or conducted in domains that may not be generalizable to the organization. As interesting as it may be to demonstrate improved creativity on Torrance tests of creativity (e.g. Torrance & Presbury, 1984; Torrance & Safter, 1989), such demonstrations are not the same as producing creative outcomes in an organizational domain (i.e. Pro-c; Kaufman & Beghetto, 2009). In the whimsically titled Amusement Park Theoretical (APT) Model of Creativity (Baer & Kaufman, 2004; Kaufman, Beghetto, Baer, & Ivcevic, 2010), the analogy of the amusement park, with multiple themed areas, is used to illustrate the importance of considering domains in understanding individual creativity. The APT model suggests that it is the intersection of individual characteristics with general thematic areas (which park we attend), domains (different themed areas within the park), and micro domains (individual rides within each themed area). In the organizational context, this may reflect different industries, specific organizations within an industry, and functional areas within a particular organization. For example, the general thematic area might be book publishing; domain might be this publisher, Cambridge; and the micro-domain could be the copyediting department. There are, of course, multiple examples in the world where domains are nested in this way (Agars, Baer, & Kaufman, 2005).

Reflected in these nested domains is the fact that there are both general factors (i.e., factors that relate to creativity in each micro-domain within a domain, or each domain within a thematic area) and unique or specific factors (i.e., factors that relate to creativity only within a particular domain or micro-domain) that determine what is or is not a creative outcome. Ultimately, the implication of this nested approach to creativity is that if we are to understand what will lead to creative outcomes among employees, we must identify and understand the general and specific factors that pertain to a particular context. Examining creativity at the micro-domain level, for example, can help in an organization with many different types of positions. For some micro-domains, such as a marketing department, personality factors such as agreeableness and extraversion might be important. For others, such as accounting, the conscientiousness personality factor might be the most essential.
As we noted earlier, much of what we have learned about creativity from the general creativity literature has limited and somewhat unknown application to creativity in organizations. What is clear is that the domains of interest in organizations require a more direct and precise examination of context than what has occurred outside of the organizational literature. Exacerbating this problem is that within the organizational literature, much of the research focus has been on group creativity/innovation, leaving the study of individual creativity to the creativity researchers themselves. But how much of what we know about creatively in general is applicable to our understanding of Pro-c? We are not saying there is nothing to be learned, but the question should be asked, particularly in light of the growing importance of domain specificity (Ford, 1996; Kaufman & Baer, 2002, 2005).

One of the key components of advancing from mini-c to little-c to Pro-c is the presence of a mentor. Sometimes this mentor can be found in a formal apprenticeship, such as a professor advising a student. An alternate path is the transitional period of tinkering—playing with one’s creativity in a domain and improving through such experimentation, even without a structured mentorship. In these cases, the mentorship can be in the form of audience comments and feedback. In the organizational realm, the role of the mentor is essential, and is often found in supervisors. Good organizational leaders are good mentors, and they can enhance individual and group creativity.

**Leadership and Creativity**

Kaufman and Beghetto (2009) proposed the concept of Pro-c to distinguish creativity in the workplace from other types of creativity. In the following section, we will discuss leadership as a mechanism through which Pro-c can be encouraged and sustained in organizations. Mumford, Scott, Gaddis and Strange (2002) described a leader’s role in fostering creativity as:

> “the exercise of influence to increase the likelihood of idea generation by followers and the subsequent development of these ideas into useful products” (p. 706).

We will discuss the characteristics and behaviors of leaders as well as the types of relationships they have with followers, which enable them to fulfill this role and thus cultivate an innovative organizational culture.

Creative expression at work involves a considerable investment of time and energy on the part of both the employee and the organization. Employees must be motivated to allocate a large amount of their temporal and cognitive resources to a creative project, and organizations must be willing to provide employees with the necessary support and freedom which enables them to invest said resources (Carmeli & Schaubroeck, 2007). To complicate the matter further, participation in the creative process often involves the need for both expertise and collaboration, which entails that an organization must support the continued attainment of expertise for those involved in creative projects (Mumford et al., 2002). The need for collaboration highlights the importance for leaders to have the interpersonal skills needed to facilitate group interactions in order to guide idea generation and evaluation effectively (Mumford et al., 2002). A recent theme in the leadership and creativity literature describes how transformational leadership may be an exceptionally successful mechanism by which to increase creativity and innovation in organizations (e.g., Elenkov & Manev, 2009; Jansen, Vera, & Crossan, 2009; Reuvers, Van Engen, Vinkenburg, & Wilson-Evered, 2008).
Transformational leadership, introduced by Burns (1978), influences both individual level creativity and organizational level innovation (Gumusluoglu & Islev, 2009). These leadership behaviors serve to motivate, inspire and support employees during times of uncertainty, such as when an organization is trying to increase participation in creative behaviors (Jung, Chow, & Wu, 2008; Reuvers et al., 2003). Transformational leadership tactics can also be used to direct culture change in an organization, such as when adopting a climate for supporting innovation. Kouzes and Pozner (1987) described the following five behaviors as characteristic of transformational leaders: modeling the way, inspiring a shared vision, challenging the process, enabling others to act and encouraging the heart. In an alternative description by Podsakoff, MacKenzie, Moorman, and Fetter (1990), the authors described six characteristics of transformational leadership: articulating a vision for the future, providing an appropriate role model, fostering the acceptance of goals, setting high performance expectations, providing individual support, and providing intellectual stimulation. Through these behaviors, leaders are able to enhance the psychological meaning that employees place on their work tasks and goals (Gumusluoglu & Islev, 2009). Transformational leadership inspires employees to put the needs of the organization (e.g., increased competitive advantage through innovation) before their personal needs (e.g., the desire not to risk failure or to experience discomfort associated with attempting a novel, time-consuming task) (Bass, 1996).

It is interesting to note that Jaussi and Dionne (2003) found that unconventional behavior on the part of the leader (e.g., standing on chairs) explained variability in employee creative behavior over and above that of transformational leadership. These findings imply that the “role model” aspect of transformational leadership might be especially important when attempting to inspire creativity in followers. Similarly, in an empirical study investigating the relationship between transformational leadership behaviors (as defined by Podsakoff et al., 1990), organizational culture and climate for innovation, only the Articulates Vision and Provides Individualized Support factors of transformational leadership were significantly related to climate for innovation (Sarros, 2008). These results imply that the most important characteristics of transformational leaders are their ability to simultaneously set inspiring group goals while guiding individuals through the actual creative process.

Elenkov and Manev (2009) found that expatriate managers’ visionary transformational leadership behaviors were related to the rate of innovation adoption in their organizations. This study was unique, in that the effect of transformational leadership on creativity was being assessed in diverse, multinational organizations, and thus cultural intelligence was considered to be an important moderating characteristic of transformational leadership. In a multi-cultural context it is not possible to facilitate creative expression, and expertly evaluate creative products without being able to adapt one’s behavior in order to interact effectively within a cultural context. This study concentrates on cultural intelligence. It highlights, however, the general need to understand the context of the organization in which a leader works and adapt strategies accordingly.

The influence of a transformational leader will inspire heightened commitment to group goals; however, it is the climate and culture for innovation that will help to support the individual throughout the creative process. The functionalist perspective of organizational culture (Schein, 1985, 1992; Trice & Beyer, 1993) suggests that leaders have a significant role (if not the most significant role) in molding an organization’s culture (Sarros, 2008). An innovative climate or culture represents an environment that encourages collaboration and
experimentation (Elenkov & Manev, 2008) which may mean rewarding failure. When an organization has a climate for innovation, the positive effects of transformational leadership on innovation are stronger (Jung, Chow, & Wu, 2003). This means that not only do transformational leaders empower their employees, but they are able to fashion an organizational climate which continues to foster that creativity (Damanpour & Schneider, 2006).

Although the research cited above paints an optimistic picture of the effects of transformational leadership on employee innovative behaviors, not all studies investigating this relationship are as encouraging. Some studies have found no relationship between these constructs (e.g., Jaussi & Dionne, 2003; Moss & Ritossa, 2007) while others have even found a negative effect of transformational leadership on both innovation (Basu & Green, 1997) and creativity (Kahai, Sosik, & Avolio, 2003). Addressing the apparent inconsistencies in the extant literature, Nederveen Pieterse, Van Knippenberg, Schippers, and Stam (2010) found that transformational leadership has a positive effect on employee innovation only when employee psychological empowerment is high.

The proposition that moderator variables are responsible for the mixed results reported in the leadership and creativity literature supports our argument that context must be considered when trying to understand and augment creativity in the work place. Leadership behaviors are but one of many contextual variables discussed in this chapter. It is important to consider other components of context, in addition to dispositional characteristics of individual employees when attempting to influence organizational innovation in both research and practice. Without concomitantly considering characteristics of the individual, environment, and the task itself, researchers and practitioners alike will lack all the necessary information to effect results.

Nederveen Pieterse et al. (2010) argued that transformational leadership may render employees willing to be innovative but unless they consider themselves able to be innovative (i.e., psychologically empowered), transformational leadership will not have an effect on their creative behaviors. This is an important distinction to consider when investigating any of the contextual factors described in this chapter; does the context increase an employee’s willingness to be innovative, or their belief in their ability to be innovative? In this section, transformational leadership has been described as a characteristic of the environment which can potentially support and motivate an individual to be innovative; however there are other factors concerning both the person and the situation that will determine whether an individual feels that they are able to be innovative, regardless of how motivated they are to do so. It should also be noted that the role of a transformational leader is motivational in nature. The leader’s task is not to take responsibility for the creative products of employees, but to encourage them to be willing to attempt innovation, and to provide them a context appropriate to take that risk.

It is not just transformational leadership that affects the creativity of employees. Simply having an identifiable leader has been shown to increase innovation in organizations (West, Borril, Dawson, & Brodbeck, 2003). Mumford et al. (2002) described additional characteristics of effective leadership, such as expertise, creative problem solving, social skills, and planning, which are essential when leading individuals engaged in creative processes. Expertise and creative problem solving skills are of increased importance because these characteristics are highly respected by creative individuals, and thus lead to increased social influence on the part of the leader. Furthermore, these characteristics enable leaders to provide guidance and structure in times of uncertainty because they are able to understand and
relate to the creative process being undertaken by the employees. Without technical expertise, the leader would not be able to evaluate the products of creative processes. Other characteristics of effective leaders include the ability to plan and set goals broadly, thus creating structure without stifling employee autonomy (Mumford et al., 2002). Social skills (e.g., coaching, communication, persuasion, and social intelligence) are also important characteristics for leaders of creative groups—leaders must be able to communicate expectations, and interact with groups and individuals engaged in a stressful, emotionally charged task. It is easy to imagine how these skills would be helpful during a potentially heated debate over which employee’s novel solution to a particular problem is most useful.

The characteristics discussed thus far describe ways in which leaders can most effectively express their expectations for creativity, and support employees in their attempts to reach these expectations. Concerning the expectations themselves, Carmeli and Schaubroeck (2007) conducted a study investigating the mediating effect of self-expectations for creativity on the relationship between referent group expectations for creativity and employee involvement in creative behavior at work. The authors found that leader expectations for creativity had the strongest effect on individual self-expectations for creativity (compared to customer and family expectations). In addition to the proposed mediated effect, a direct effect between leader expectations and creative involvement of employees at work was found. Not only do leader expectations influence self-expectations, but employees are likely to comply to the expectations of leaders even if they do not internalize the expectations themselves (Carmeli & Schaubroeck, 2007). These results seem to be contrary to the suggestions of Mumford et al. (2002), which described conformity pressure as a detriment to creativity.

The authors also found that the relationship between self-expectations and creative involvement was stronger for individuals with high creative self-efficacy (Carmeli & Schaubroeck, 2007). This implies that individuals who do not believe they are capable of creative work are less likely to become involved in such work even if they have high expectations to participate. These results highlight the importance for leaders to not only communicate high expectations for creative work, but to also provide mechanisms for employees to enhance their belief that they are capable of meeting these high expectations. This may require that leaders utilize different behaviors when communicating high expectations—such as by setting challenging group goals, than when communicating confidence in employees’ abilities—such as by providing individualized support (Carmeli & Schaubroeck, 2007).

Successful leadership for creative performance is a unique challenge. Hunter, Thoroughgood, Myer, and Ligon (2011) highlight four clusters of 14 paradoxes that face leaders who value innovation, following in the path of Csikszentmihályi’s (1996) discussion of the paradoxes inherent in being creative. Hunter et al. focus on such conflicts as how to make employees intrinsically motivated in an environment tailored to extrinsic rewards and how to reduce costs while still supporting and nurturing creativity.

We have described the characteristics of leaders that enable them to inspire individuals to engage in creative work and effectively manage these individuals throughout the creative process. Next we will describe how the relationships that effective leaders have with their employees serve to encourage creativity. Atwater and Carmeli (2009) found that high quality relationships with leaders were related to feelings of high energy, which were subsequently related to increased creativity. However, this relationship was stronger for
employees whose jobs had a traditionally low-level demand for creativity. This is important for the current discussion, because we are addressing a range of organizations (which may not be considered to have creative job tasks in the traditional sense) and are arguing that regardless of how “creative” the job is assumed to be, without innovation, that organization will not survive in the current ever-changing economic environment. Thus, leader-member exchange, as a mechanism for sustaining employee energy and thus facilitating creativity, is even more important for leaders in “low creativity” fields than for leaders in characteristically “creative” fields. Their study highlighted the complex nature of the relationship between leadership and employee creativity and distinguished employee feelings of energy as an important intervening variable.

Leadership is an imperative factor in strategic organizational change aimed to increase both the generation of new and useful ideas by employees and the application of these ideas in organizations. Through influence, relationships, and strategic behaviors, leaders with the characteristics discussed in this section can effectively inspire, support, direct, and evaluate the creativity of employees, resulting in organizations that are competitive in today’s ever-changing business environment. Leaders can inspire employees to think more openly and engage more fully in their tasks, in order to produce novel solutions to projects ranging from everyday work tasks to market changing products. Leaders are also in a position to nurture, direct, and support the creativity of employees by molding an organizational climate and culture that is supportive of innovation. Such a climate gives individuals the safety, autonomy, and intellectual stimulation needed to actively attempt creativity while lessening the negative associations linked with such an uncertain and stressful endeavor.

**Group and Organizational Level Factors**

The substantial attention to leadership factors is appropriate, given a leader’s centrality to organizational culture and direct impact on individual outcomes. The larger organizational context however, comprises a multi-level environment with a myriad of individual, group, social, and structural influences on creative function (Agars et al., 2008; Hemlin et al., 2009). In this section we discuss several of those factors, focusing on research that has examined Pro-c outcomes in organizational domains.

**Group Factors**

A fair amount of research on creativity and innovation in the organizational world has focused on group-level phenomena (c.f.: Hulsheger, Anderson, & Salgado, 2009), and recent theories of organizational creativity have also underscored the importance of group influence (e.g., Ford, 1996; West, 2002). Much (not all) of the research underlying these concepts, however, has focused on group-level outcomes as well.

Though primarily interested in team-based creativity, Tagger (2002) examined the creativity of groups and individuals in a study of 94 groups of business students attending a Canadian university. His work revealed that group processes such as goal setting, preparation, idea synthesis, and group problem solving all increased individual group member creativity (a prelude to group-level creativity). Looking at coworker, supervisor, and personal support factors, Madjar, Oldham, and Pratt (2002) found that perceived support for creativity from coworkers and supervisors as well as friends and family members was positively
related to creative performance (as assessed by supervisor perceptions). Interestingly, the impact of each group’s influence was mediated by individual (positive) mood.

In one of the first cross-level examinations of team factors and individual characteristics, Hirst, Van Knippenberg, and Zhou (2009) explored the relationship between goal orientation (learning versus performance) and individual creativity. As Hirst et al. note, the characteristics associated with learning orientation have long been argued to be a prerequisite to individual creativity (Amabile 1983a, 1983b, 1996). They argued, however, that the relationship was in part determined by group-level factors; notably that the strength of the orientation–creative performance relationship was dependent upon team learning behaviors. In a study of 255 individuals comprising 25 research and development teams in the US, UK, and Sweden, Hirst et al. found that learning goal orientation was indeed related to individual creativity. However, consistent with expectations, when team learning behaviors were high, the relationships were strongest among individuals with an intermediate level of learning orientation. When team learning behavior was low, the relationship was strongest among individuals with high level of learning orientation. They also found that for individuals with an approach performance orientation (often expected to be negatively related to creative performance) creative performance was highest when team learning behaviors were high. In other words, when team learning behaviors were high, an approach performance orientation was positively related to creative performance. This finding is an important demonstration of the interaction between individual and (team) context in understanding creative outcomes.

In a more extensive examination of group-level influences, Hulsheger et al. (2009) conducted a meta-analysis of research looking at team-level predictors of innovation at the team- and individual-levels. Although effects were generally larger for the relationships at the team-level, several predictors of individual level innovation emerged. Taking Hackman’s (1987) I-P-O approach to examining team level influences, Hulsheger et al. found that in terms of team characteristics, background diversity had a negative impact on creativity while job relevant diversity positively related to innovation. The authors appropriately note that many questions about the impact of diversity on creative performance remain, but also note that these findings, which are inconsistent with research on diversity and general performance, underscore the importance of looking at the multidimensionality of performance. The strongest team characteristic predictor of innovation was goal interdependence. In terms of team processes, strong relationships with innovation were found for team vision, internal and external communication, support for innovation, and task orientation.

**Social Systems and Coworkers**

Despite an increase in the consideration of organizational context, Perry-Smith (2006) notes that little research has examined the social context. This finding was echoed in a review of creativity-based dissertations published from 2005–2007 (Kahl, da Fonseca, & Witte, 2009). Building on a social-network approach to understanding creativity (Perry-Smith & Shalley, 2003), Perry-Smith (2006) examined the impact of social networks, finding that a greater number of weak ties relate to increased levels of individual creativity. The relationship was mediated by heterogeneity of direct contacts, supporting the importance of having interactions with and access to individuals with varying backgrounds and skill sets.
Madjar (2005) has also argued for the importance of expanding our consideration of social factors in creative performance, and has demonstrated the importance of both internal and external sources of social support (Madjar et al., 2002). More recently, Madjar (2008) demonstrated that the type of support may be differentially important depending on the social group source. Specifically, she found that while both information and emotional support from coworkers was related to creative performance, emotional support from social groups outside of the organization was not.

In advancing the interactionist perspective, Zhou, Shin, Brass, Choi, and Zhang (2009) conducted a study of Chinese organizations. They looked at how the role of social networks in the production of creative behaviors might be moderated by individual values, specifically the value for conformity. Similar to Perry-Smith (2006), Zhou et al. found that having an intermediate level of weak ties is related to increased creativity. Importantly, however, this relationship was present for individuals with low value for conformity. For individuals who highly valued conformity, weak ties did not predict creativity. Contrary to their expectations, strong ties were unrelated to creativity (i.e., not negative as expected).

Other aspects of the social context have proven to be important. In a set of two studies, Zhou (2003) looked at the impact of creative coworkers and the interaction of leader feedback and coworker creativity on individual creative performance. This was an integration of social cognitive theory and the intrinsic motivation arguments. In study 1, Zhou found that developmental feedback from the supervisor and the presence of creative coworkers interacted to influence individual creative behaviors. Specifically, creative behaviors were greatest in the presence of developmental feedback and creative coworkers. Interestingly, when the presence of creative coworkers was low, supervisor feedback did not meaningfully affect creative performance. In study 2, Zhou found that this effect was magnified for individuals with less creative personalities, underscoring the important role context may play in the development of creative behaviors even among employees who have individual characteristics that are less likely to produce individual creativity.

Choi, Anderson, and Veillette (2009) found that coworker creativity interacted with individual creative ability, but in a positive direction. Low creative ability individuals were more creative when surrounded by coworkers who had less creative ability. This goes counter to a means-efficacy explanation, which would suggest increased resources enhance creativity (Agars et al., 2008), but may reflect a heightened sense of self-efficacy because of positive relative comparisons, or a sense of importance because creative success is dependent upon a single individual.

**Organizational Culture and Climate**

The levels of organizational context, both formal and informal, present challenges for the study of creativity. Among these, culture and climate factors have received some attention, in part because of their relationship with leadership and other social factors. It is clear, however, that aspects of an organization’s culture and/or climate matter for individual creative behaviors.

Rasulzada and Dackert (2009) looked at organizational factors and perceptions of creativity and innovation in high-technology industry in Sweden. Their results revealed that in organizations where employees perceived a creative innovative climate, and in organizations where resources were made available, employees perceived higher levels of creativity.
and innovation. Although their findings are somewhat limited by the concentration on perceptions of creativity (i.e., not creative performance itself), the relationships do support the basic relationships between climate and creativity.

Other research has examined the learning orientation of an organization. Indeed, there is a clear link between organizational learning culture and creativity at the organizational level (Kim & Wilemon, 2007). What implications does this relationship have, however, for learning culture and individual-level creativity? Part of the answer may be found in the research on feedback and creativity. Creativity research both within and outside of the organizational domain has shown that feedback interpreted as evaluation is detrimental to creative performance (Amabile, Goldfarb, & Brackfield, 1990; Shalley & Oldham, 1985). In organizations with a learning culture, however, feedback is central to employee development. Supporting the possibility of a positive impact of learning culture on individual creativity, several studies have found that developmental feedback (Zhou, 2003; Zhou & George, 2001) or feedback that is framed as potentially developmental (Shalley, 1995) improves creative performance.

Training, another core component to a learning culture, has also shown to be related to an increase in creativity in an organizational domain (Scott, Leritz, & Mumford, 2004). Finally, again both within and outside of the organizational domain, the presence of developmental goals associated with creativity has also been related to increased creative behavior at the individual-level (Carson & Carson, 1993; Shalley, 1991, 1995).

The extent to which an organizational culture is viewed as threatening may also impact creative behaviors at the individual-level. In a study of post-merger creativity, Zhou, Shin, and Cannella (2008) found that individuals who evaluated the post-merger culture as an opportunity engaged in more creative behaviors than individuals who viewed the culture as threatening. As we have noted previously however, contextual factors often do not act independently. Zhou et al. also found that among individuals who viewed the culture as threatening, the presence of resources and a supportive culture for creativity made creative behaviors more likely.

In their review of 42 studies examining organizational climate and creativity, Hunter, Bedell, and Mumford (2007) identified several elements which have been linked to a climate for creativity. Some, such as challenge, and intellectual stimulation, reflect findings that are consistent with creativity research outside of the organizational domain (Kaufman, 2009). Others, such as the importance of positive exchanges with colleagues, fit well with Perry-Smith’s argument for the importance of social context (Perry-Smith, 2006; Perry-Smith & Shalley, 2003), and further illustrate the interdependence of contextual dimensions. In that spirit, Hunter et al. (2007) also found that climate–creativity relationships were stronger when organizations were operating in high-pressure competitive environments. Consistent with their review, a recent meta-analysis examining individual-level innovation, also found climate linked with creativity (Hammond, Neff, Farr, Schwall, & Zhao, 2011).

Organizational Context as Inhibitory Factors

In response to the increased research which considers organizational factors that foster or facilitate creativity, Choi et al. (2009) examined potential contextual inhibitors of individual creativity. They focused on a range of contextual factors, including climate, coworker, and leader characteristics, with results revealing both direct and some more complex findings. Aversive leadership style and unsupportive climate emerged as the most powerful
creativity inhibitors. Specifically, regardless of individual creative ability, the presence of aversive leaders diminished creative performance. Unsupportive climate also had a negative effect on creative performance, but was particularly detrimental for individuals with low creative ability. Conversely, task standardization was particularly negative for highly creative individuals.

In a similar vein, Elsbach and Hargadon (2006) argued conceptually that workload pressures may actually prohibit intrinsically oriented individuals from engaging in creative behaviors. They argue for the increase of “mindless work”—work that is low in cognitive demands and low on performance pressures—and that such work should alternate with cognitively challenging work to enhance creativity. Although theirs is clearly a work-design approach to enhancing creativity, the direct implication is that high-demand work contexts, which are all-too-common today, may be a primary inhibitor of creative performance in individuals.

**The Complexity of Context and Domains**

As evidenced in the current review, the literature on individual creativity in organizations considers issues of domain specificity rarely and then only nominally. Several key findings, however, point to the importance of considering domain characteristics more precisely. In their investigation of contextual inhibitors of creativity in several Canadian organizations, Choi et al. (2009) noted that aversive leadership (e.g., punishing, intimidating, and oppressive styles) interacted with leader monitoring behaviors in impacting creativity. Specifically, although there was a negative impact of aversive leadership on creativity when leaders did not engage in monitoring behaviors, this effect did not emerge among close monitoring aversive leaders. This surprising interaction illustrates the complexities of context. Compounding this complexity is how “monitoring” is defined. As Choi et al. note, the positive impact that monitoring displayed in their work was inconsistent with past studies of leader monitoring and creativity (George & Zhou, 2001; Zhou, 2003). They suggest the explanation may lie in how monitoring was put into operation. Specifically, their behavioral measurement of monitoring may have led to perceptions of support, information, and guidance, whereas perceptual measures used in prior works had negative connotations of over-monitoring embedded in the instrument itself.

The importance of domain precision is also evidenced in the differing effects of context on different forms of creativity. Reiter-Palmon et al. (2009) found that efficacy in a particular problem-solving domain resulted in increased creativity in terms of the number of solutions, but decreased creativity in terms of solution originality. Similarly, in a study on interpersonal group conflict and individual creativity, Troyer and Youngreen (2009) found that higher levels of conflict resulted in more creative ideas, but fewer ideas were generated overall. Yuan and Zhou (2008) also reported different effects of context (expected evaluation) on creativity as idea development or as improved idea appropriateness. Mostafa (2005) found that manager evaluations of what is and is not creative differed based on functional area in which one worked. Although these examples seem at first to be about how we define creativity, they have direct implications for context because different contexts will value forms of creativity differently. This distinction is therefore central to understanding how context facilitates individual creativity.

In summary, the complexities revealed in the aforementioned studies underscore how important a careful consideration of context is, both for researcher efforts to understand
creativity in organizations, and equally for organizational leaders looking for guidance on how to identify the appropriate methods for inspiring creative work. For such guidance to emerge, greater attention must be paid to the complexity of organizational context and work domains.

**DISCUSSION**

**Future Research Directions**

Although it is clear from our review that the organizational context plays an important role in the facilitation of employee creativity, it is also clear that there is much left to be understood. As we note in the beginning of this chapter, we argue for a domain specific approach to understanding workplace creativity; an approach that underscores the fundamental importance of the consideration of context and identifies several key directions for future research. To begin with, concerns about domain specificity lead directly to questions about defining the construct of creativity ([Kaufman & Baer, 2005](#)), and its value to organizations. Current definitions of creativity fail to capture the complexity of the construct as it relates to the context within which it occurs. Even the distinction between creativity and innovation can be ambiguous in certain organizational contexts. For example in a high-tech research and development firm, the development of a novel and useful product may not lead directly to implementation (i.e., innovation), but may serve as the springboard to the development and implementation of an even better product. From a creativity and innovation standpoint this is a desired outcome, yet it is unclear how such an outcome would be explained by current creativity theory and research.

Similarly, it is also necessary to explore how the domain of interest impacts our understanding and defining of creativity. For one, domains necessarily define the performance construct and thus determine the parameters for what is and is not creative. This is more than just differences in defining the specific performance construct, but also includes the fact that the overall value of creativity to a particular organization will impact what is or is not defined as creative. Lastly, the multidimensionality of performance, even within a particular job, implies that “creative” employees may produce certain outcomes that are positive and others that are negative, even within the same performance episode. Such differences may emerge simply as a function of the extent to which creativity is valued differently for different performance criteria. Clearly these are challenges, but if we are to advance our understanding of creativity in organizations, we must continue to explore how the construct of creativity is defined as a function of context.

Beyond fundamental issues with defining creativity and accounting for domain specificity, there are additional aspects of organizational context that provide fruitful avenues of pursuit. One such aspect is the climate for competition. Although some examples exist of organizations facilitating intergroup competition to foster creativity, few researchers have examined the impact of competition on creative outcomes ([Baer, Leenders, Oldham, & Vadera, 2010](#)). One lab-based study demonstrated that individuals operating in a competitive “pro-self” group produced more creative results than individuals in a non-competitive “prosocial” group ([Beersma & De Dreu, 2005](#)). A second lab-based study ([Baer et al., 2010](#)) noted
a “U-shaped” relationship between competition and creativity in open groups (i.e., groups where membership change was possible), but not in closed groups. Together, these studies reflect the growing awareness around the need for consideration of competition as a predictor of creative outcomes in an applied context, and the complexity inherent in such research.

Our review has also revealed the need for greater consideration of the relationship between individual characteristics and organizational context. In their examination of social networks, Zhou et al. (2009) noted the importance of the interaction between social context and individual values. Similarly, in an investigation of the impact of risk and creativity, Simmons and Ren (2009) confirmed that individuals performing in high-risk context exhibit more creativity than individuals performing in low-risk contexts, and that individual goal orientation impacted that relationship. Specifically, for individuals with an avoid performance goal orientation, creativity was lower in the high-risk context. Another study found that individuals who perceived their work to be meaningful were more likely to identify with their organization and were rated by their supervisors as displaying higher levels of creativity (Cohen-Meiter, Carmeli, & Waldman, 2009). That individual values and characteristics interact with organizational context in determining creative outcomes is clear, and consistent with a domain-specific approach (Kaufman & Baer, 2005). We are really only beginning, however, to understanding how such interactions may become manifest in organizations, and the range of individual characteristics and contexts to consider remains wide.

One additional need for future research is an expanded consideration of leadership factors. Initial examinations of trust, for example, have demonstrated a link with creative outcomes both for partners (Bidault & Castello, 2009) and for subordinate trust in leaders (Wang & Casimir, 2007). Others have found that leaders who engender empowerment beliefs in their employees inspire creative process engagement (Zhang & Bartol, 2010). In addition to direct consideration of leader characteristics, researchers should continue to extend beyond the consideration of leadership style and examine leaders in context. Indeed, many of the contextual factors that have been demonstrated to hinder or facilitate creativity, such as a controlling context (Amabile, 1986) or social support (Madjar, 2005, 2008), are often directly or indirectly impacted by leaders. It is also likely that the domain will impact the relationship between leadership factors and employee creativity. Rather than thinking about universal leadership factors that may impact creativity, a more direct examination of leader-in-context effects offers great promise.

**Recommendations for Leaders**

Miettinen (2006) has argued that we need not search for “best practices” in terms of managing creativity, as they do not exist. Rather we should explore the problems and possibilities that emerge with domains and learn to develop new practices that support (develop) creativity. Our review of the literature suggests Miettinen may be right. Consequently, we present the following recommendations, which, though too broad to be considered traditional “best practices”, provide guidance for organizational leaders looking to determine effective means to facilitate creativity in their own organizational environments. Despite the challenges presented by the complexity of contextual factors and the volume of creativity research completed in non-organizational populations, there are many lessons to heed.
**Recommendation #1: Emphasize Leadership**

Leaders are critical to creative behaviors in organizations, both because of the direct impact they have on individual behaviors, and through their influence on the development of organizational culture and climates. Leaders may model creative behavior (Jaussi & Dionne, 2003) or may inspire and encourage individual creativity by supporting employee attainment of expertise (Mumford et al., 2002). The development of transformational leadership (Mumford et al., 2009) is also a critical step, as recent evidence suggests transformational leadership to be linked to creativity and innovation (Elenkov & Manev, 2009; Jansen et al., 2009; Reuvers et al., 2008). Conversely, aversive leadership styles, including punishment and criticism, are clear inhibitors to creativity, and should be avoided (Choi et al., 2009).

**Recommendation #2: Provide Social Support**

Our review clearly illustrates the value of having a socially supportive work context for enhancing creative outcomes. Social networks seem to be particularly important as they increase access of employees to individuals with varying areas and levels of expertise. Consequently, facilitating the development of network ties, particularly weak ties (Perry-Smith, 2006) will have a positive impact on creativity. It is also clear that within the workplace, both informational and emotional support from colleagues is related to higher levels of creativity (Madjar, 2008), therefore organizations (or leaders) interested in generating creativity should afford strong collegial relationships among employees. Finally, the presence of creative colleagues may be necessary for leaders to realize the impact of their own efforts to enhance creativity. As found by Zhou (2003), individuals displayed the highest level of creativity in response to supervisor feedback when they were in the presence of creative coworkers. Clearly, fostering individual creativity requires a consideration not just of the individual, but of his or her social context.

**Recommendation #3: Pay Attention to Culture and Climate within Domains**

Organizations must define what creativity means within their organization and within particular micro-domains. Norms and expectations (including group-level) around the desired creative behaviors should be clearly evident and supported by leadership, and goal development should include those tied to creativity. Additionally, organizational leaders should create a climate that provides a sense of psychological safety as it pertains to creativity, rewarding idea generation rather than solely productivity. Creativity often requires an element of risk-taking and breaking social norms (Sternberg & Lubart, 1996). Obviously, organizations do not want counterproductive or antisocial behavior. However, creating a safe and nurturing environment where people feel able to take chances and suggest new ideas is essential. The idea of “psychological safety” has been proposed as a mutual feeling in a group that risk-taking is okay (Edmondson, 1999). One way that psychological safety can be increased is by a leader meeting with team members and talking honestly and openly with them (Roussin, 2008); another is to enable employees to speak up and voice dissatisfaction (Detert & Burris, 2007). Ford and Sullivan (2004) argue that experiencing psychological safety can aid both innovative contributions and personal satisfaction. In addition to safety, climates that are challenging and intellectually stimulating have been consistently associated with creativity (Hunter et al., 2007; Kaufman, 2009; Rasulzada & Dackert, 2009).
At the organizational level, developing a culture that is supportive of learning and development has clear benefits for creativity. Aspects of such a culture include developmental rather than evaluative feedback, opportunities for training on creativity or in general forms to increase expertise, and the incorporation of developmental goals tied to creativity. Finally, creating an organization-wide culture of innovation requires attention to strategic decisions ranging from long term goals to distribution of employee breaks. Innovative values and ideals must exude from what the company proclaims to be, who they hire and the reward systems they establish. When an innovative culture is instituted, these values percolate throughout all levels of the organization and the likely result is industry-changing applications of creativity.

**Recommendation #4: Manage Resources**

Creativity has a cost, and indeed this cost is one of the paradoxes identified by Hammond et al. (2011). To allow creativity to blossom, employees need to be given allotted time and materials (if needed) in pursuit of these new ideas. In addition, the motivation literature indicates that factors that raise extrinsic motivation (such as deadlines and feedback) may impede creativity. As a result, encouraging creativity may mean giving employees opportunities to pursue original ideas and solutions without the standard requirements for most work assignments that ensure accountability.

Often resources are at the hands of leaders, and research supports the concept that leaders who provide resources such as time, information, and expertise, enhance creativity in their employees (Mumford et al., 2002). Interestingly, it has even been suggested that time may be beneficial for creativity even if it means allotting it for “mindless work” so that greater energies are available for creative productivity (Elsbach & Hargadon, 2006). Team or group resources are also valuable. As noted above, a lack of creative expertise among team members limits the benefit of creativity-based feedback from leaders. Further, expertise in a domain or throughout the organization enhances the likelihood of creative behaviors. Finally, resources as straightforward as training and development on creativity have proven to enhance creativity in individuals (Mumford, Hunter, Eubanks, Bedell, & Murphy, 2007).

**CONCLUSION**

Organizational context plays a clear role in the emergence of individual creative behaviors. Leader factors, organizational characteristics, and the social fabric of the workplace each provide mechanisms for enhancing employee creativity. Attention must always be given to factors specific to the organizational domains of interest. Within those parameters, however, organization leaders are afforded a myriad of opportunities to foster employee creativity by attending to organizational context.

References


B. INDIVIDUAL LEVEL INFLUENCES


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