Resilience at work: Building capacity in the face of adversity

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Abstract:

Building on and extending beyond current definitions, we define resilience at work as a positive developmental trajectory characterized by demonstrated competence in the face of, and professional growth after, experiences of adversity in the workplace. In this chapter, we review, consider, and comment on the research history, nature, and consequences of resilience at work; share our perspective on resilience at work and situate this in current debate; and identify promising directions for future research. Our primary objective is to stimulate a productive conversation about resilience at work in ways that enable our research community to advance this important area of inquiry.

Keywords: resilience | stress | coping | identity

Article:

Turbulent, ambiguous, complex—sound familiar? Uncertain, exhausted, afraid—this too? Every era has its challenges. The fact is that bad things happen. They happen to individuals, to groups, to organizations, and to industries. A large literature on coping has taught us, however, that difficult events do not themselves determine the trajectories of individuals, groups, or organizations. How each responds differentiates those that succeed in the present and into the future. Experiencing negative events and stressors in the workplace can lead to poor personal and professional outcomes such as burnout (e.g., Buunk & Schaufeli, 1993; Lee, 1993; Malach, 1982; Maslach, 2001; Pines, Aronson, & Kafry, 1981), but does not always do so. Many individuals recover and are able to cope with adversity (e.g., Pines et al., 1981). Some even thrive as they experience difficult circumstances (Bonanno, 2004, 2005, 2010; Bonanno et al., 2002). In fact, many individuals actually emerge from adversity with competency, efficacy, and growth (Sutcliffe & Vogus, 2003). These "resilient" individuals, groups, and organizations adapt positively during and following adversity or risk. In this chapter, we focus on such exemplars, those who demonstrate excellence in adverse situations—situations that often

undermine others. In a field in which research on adversity has focused largely on negative coping trajectories, our approach, which focuses on a positive resilience trajectory, contributes to a more complete understanding of how individuals react to adversity at work.

Our primary objectives are to provide an overview of what we know about individual resilience at work, and to pave the way for future research in this important area of inquiry. First, we define resilience at work and situate our definition within the perspectives of other researchers. To this end, we examine how others define resilience in various contexts, explain choices we made in crafting our definition, and distinguish it from similar concepts. Second, we review bodies of literature that illuminate resilience at work. Third, we consider how individuals, groups, and organizations may cultivate individual resilience at work. In so doing, we pay particular attention to connections between identity and the process of resilience. To conclude, we offer suggestions for future research and briefly discuss the theoretical and practical importance of studying resilience at work

Defining Resilience at Work

Resilience had been defined in multiple ways over time and across disciplines. Bridges (1995, p.57) defines resiliency simply, as "the ability to bend and not break." This definition is consistent with the way in which resilience has been used in the physical sciences to refer to a property of a material that enables it to resume its original shape or position after being bent, stretched, or compressed. In contrast, the social sciences use the term *resilience* in a number of ways to describe a general state of being that allows living organisms to positively adapt to adversity. Some have thus defined resilience as a relatively stable personality trait characterized by the ability to bounce back from negative experience and by flexible adaptation to the ever-changing demands of life (Block & Block, 1980; Block & Kremen, 1996). Others have defined resilience as the ability to maintain psychological stability and experience fewer mental health problems when presented with a threat (Bonanno et al., 2005; Bonanno, Wortman, & Nesse, 2004; Fredrickson, Tugade, Waugh, & Larkin, 2003). Yet another group has taken a more dynamic view, defining resilience as a process encompassing positive adaptation within the context of adversity (Luthar & Chicchetti 2000; Luthar, Cicchetti, & Becker, 2000; Masten,1994; 2001; Masten, Best, & Germanzy, 2001).

Two consistent aspects of resilience emerge from these definitions (Luthar et al., 2000). The first is that resilience requires a precondition of some negative stressor, or exposure to a significant threat. The second is the individual's achievement of positive adaptation in the face of this stress or threat (Garmezy, 1990; 1993; Luthar et al., 2000; Masten & Reed, 2002). Positive adaptation is defined in terms of behaviorally manifested social competence (Luthar & Cicchetti, 2000). In other words, resilience involves the ability of an individual to meet developmental tasks (Masten, Best, & Garmezy, 1990; Masten & Coatsworth, 1998). For example, research on resilience in children has demonstrated that a child of schizophrenic parents positively adapts when that child consistently meets social and cognitive developmental standards as he or she grows. Resilience in the context of work also benefits from a developmental perspective. Just as children are prone to rapid growth and development, so too are adults who are progressing in their careers. An adult's resilience in the process of career growth often depends on his ability to meet developmental standards in his profession even when he is exposed to adversity. As Sutcliffe and

Vogus (2003, p. 97) explain: “An entity not only survives/thrives by positively adjusting to current adversity, but also in the process of responding strengthens its capabilities to make future adjustments.” A developmental approach to resilience thus requires that an individual follow a positive developmental trajectory.

Following from this logic, we define *resilience at work* as a developmental trajectory characterized by demonstrated competence in the face of, and professional growth after, experiences of adversity in the workplace. Each enables an individual to handle future challenges. From our perspective, resilience at work encompasses behavioral, affective, and psychological manifestations of positive adaptation and professional growth within the context of significant adversity at work.

Although most researchers generally agree that resilience entails both adversity and positive adaptation, there is controversy over more specific aspects of the concept of resilience (e.g., Luthar et al., 2000; Masten, 1990; Masten & Reed, 2002). The most important debates encompass three issues (e.g., Bonanno, 2004; Roisman, 2005) that our definition of resilience at work takes a firm position on: whether resilience is conceptualized as a fixed trait (outcome), a developmental process, or a phenomenon; what counts as adversity; and what counts as a positive adjustment.

Is Resilience a Trait, Process, or Phenomenon?

The distinction between resilience as a trait and resilience a process is one of the most heated debates in the psychological study of resilience. Much of the psychological research on resilience has described it as an individual trait (e.g., Fredrickson et al., 2003; Tugade & Fredrickson, 2004; Tugade, Fredrickson, & Barrett, 2004). Psychological researchers often label a person as “resilient” or “invulnerable” and thereby imply that resilience is a fixed state (Luthar et al., 2000). In fact, psychological resilience is defined in many sources as a relatively stable personality trait characterized by the ability to bounce back from negative experience and by flexible adaptation to the ever-changing demands of life (Block & Block, 1980; Block & Kremen, 1996; Fredrickson et al., 2003). Individuals who are able to bounce back from stressful experiences quickly and efficiently are considered resilient.

Yet, studies demonstrating the role of contextual factors suggest that resilience may not be merely a personality attribute. For instance, Luthar and colleagues (2000) argue that resilience is a dynamic process, which changes over time and by situation, and is separate from those who subscribe to Block and Block’s (1980) influential conceptualization of the ego resilience. Ego resilience does not require exposure to substantial adversity, whereas by definition resilience presupposes prior substantial adversity (Luthar, 1991).

More recently, researchers have extended the process-based view of resilience further, defining resilience as “a phenomenon defined by the success (positive developmental outcomes) of the (coping) processes involved” (Leipold & Greve, 2009, p. 41). This conceptualization suggests that resilience is a developmental trajectory that should itself be explained rather than a resource that explains a developmental outcome. This definitional shift focuses attention on the underlying mechanisms and processes that lead to a developmental trajectory. Greve and

Staudinger (2006) conceptualize resilience as a constellation that encompasses the fit among individual resources (capacities, competencies, and attributes), social conditions (e.g., social support), and developmental challenges or problems (e.g., obstacles, deficits, and losses). In the study of organizational resilience, Sutcliffe and Vogus (2003) recognize that for resilience to occur, resources need to be activated as challenges at work arise (Sutcliffe & Vogus, 2003). Our definition of resilience at work is consistent with that of Greve and colleagues' and Sutcliffe and Vogus's (2003) conceptualization of organizational resilience, as a developmental trajectory characterized by competence, efficacy, and professional growth in the face of work-related adversity. We thus capture the idea that resilient individuals are developing in their careers, even when obstacles are in the way. We also suggest that resilience results from an interaction of the individual, the adversity, and the individual's social environment.

What Is Adversity At Work?

Resilience researchers vary in their views about what qualifies as adversity (Luthar et al., 2000). Although studies of childhood resilience have examined both single stressful experiences and an aggregate of multiple risk factors, studies of adult resilience have mainly focused on single critical incidents (e.g., death of a spouse or experience of an extreme event such as September 11, 2001; e.g., Bonanno, 2004, 2005; Mancini & Bonanno, 2009). In contrast, we take a broad, subjective approach to defining adverse events, considering adversity to encompass any events that the person perceives to be disruptive to his or her working environment. We expect adverse events to vary in magnitude, impact, and duration. However, our subjective approach does not place boundaries around what can be experienced as an adverse event. This approach is consistent with field research that found much variability in what nurse-midwife informants considered to be a critical event (Caza, 2010). For some, the death of a patient or being named in a lawsuit was an adverse event. For others, the event was a single negative interaction with a physician. Thus, it is difficult to objectively define an adverse event. Adversity is a subjective experience; an event itself only becomes a stressor if it is perceived as such.

The Role of Adversity

Beyond definitions, the exact role of adversity in a resilience trajectory is debated. Some researchers talk about resilience "in the face of" adversity (e.g., Bonanno, 2004, p. 602), or "despite" adversity (Luthar et al., 2000, p. 554), or "in the context of" adversity (Masten & Reed, 2002, p. 75). Others conceptually assign a more active role to adversity. Roosa (2000), for example, argues that individuals emerge with new knowledge, skills, and increased competence not *despite* but *because* of their experience with an adversity. Experiencing adversity is thus seen as helping to promote growth in individuals in some way. This latter perspective is consistent with the developmental perspective of resilience that Sutcliffe and Vogus (2003) take by positioning resilience as the capacity to rebound from adversity strengthened and more resourceful. They thereby imply that an adversity has a role in promoting growth by serving as a platform for learning.

What Is Positive Adjustment?

Just as the conditions associated with resilience vary, so too do the ways that resilience has been operationally defined. These latter definitions have ranged from viewing resilience as the absence of psychopathology in a child of a mentally ill parent, to the recovery of function in a brain-injured patient (Cicchetti & Garmezy, 1993), to the ability to gain capacity during a crisis (Sutcliffe & Vogus, 2003). Definitions thus vary on three dimensions. First, whereas some researchers focus exclusively on the maintenance of functioning, others require evidence of developmental growth. As noted earlier, the definition of "positive adjustment" that we include in our conceptualization of resilience at work requires that the latter show evidence of developmental growth. As individuals proceed through their careers, they are expected to become more professionally competent with time and experience. A resilient individual should be able to continue to achieve developmental milestones in the face of adversity, thereby demonstrating professional growth. Further, the process of responding to the adversity will enable the person to increase his or her ability to handle future adversities (Sutcliffe & Vogus, 2003). Substantial, career-altering growth is not required. Simply cultivating a new practice that works efficiently in a crisis or developing a better understanding of the nature of one's work would signal growth.

A second distinction between definitions of positive adjustment is that, although some researchers claim that resilient individuals must excel in only one domain, others argue that they must achieve above-normal functioning in multiple domains (Masten & Reed, 2002). The latter is a more global definition of resilience (e.g., Tolan, 1996). Each recognizes, however, that individuals may be resilient in one life domain or sphere, but not in others. Tusaie and Dyer (2004, p. 3) illustrate the domain-specificity of resilience by noting that: "an individual from an abusive, impoverished childhood may demonstrate education and work resilience by obtaining a doctoral degree and a high-paying job, but be unable to maintain intimate relationships, and demonstrate impairment in the psychosocial domain." Similarly, a police officer may cope well with the death of a spouse, but fail to cope or fall into a negative spiral of coping when faced with adversity at work—or, vice versa.

Mounting research supports the notion that resilience is not one dimensional and monolithic, but encompasses multiple domains (e.g., Hunter, 2001; Luthar et al., 1993; Werner & Johnson, 1999). Werner and Johnson (1999) argue that, in research and in practice, it is more useful to recognize domain-specificity than to focus on global resilience since behaviors across domains are not often highly correlated. In fact, as Luthar and colleagues (1993) demonstrated, an individual's level of resilience may vary across domains. Individuals can show signs of substandard functioning in some domains but positive development in others. We concur; the way individuals react to adversity is domain-specific. We thus accept that individuals can excel in their personal lives, but succumb to adversity in their work lives and vice versa. Our focus is primarily on how individuals respond to negative stressors in the workplace. Although some contagion effects in resilience across life domains may be likely, it is not necessarily present (e.g., Luthar & Cushing, 1999). We thus treat *resilience at work* and *personal resilience* as separate constructs. An individual may be able to demonstrate growth in the face of adversity at work but not during a general life crisis or vice versa.

Distinguishing Resilience from Similar Concepts

Resilience is distinct from other positive trajectories such as recovery, thriving, and post-traumatic growth (see Table 1 for a summary). First, resilience is conceptually and empirically distinct from recovery because of its developmental component (Bonanno, 2004; Luthar et al., 2000; Masten & Reed, 2002). An individual who has recovered will have returned to his or her prior level of competence (Sonnentag & Neff, 2011, Chapter 66, this volume), whereas an individual who demonstrates resilience will have emerged from the adversity with growth and strengthened capabilities for dealing with future challenges (Sutcliffe & Vogus, 2003).

Second, resilience is also distinct from thriving, defined as the psychological state in which individuals experience both a sense of vitality and a sense of learning at work (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005), because resilience presupposes an element of significant adversity (Cicchetti, 1996; Luthar et al., 2000) before individuals experience vitality and learning, whereas thriving does not. In this way, resilience is also different from positive adjustment, which examines how individuals adjust to varying situations, again not requiring the element of significant adversity (Cicchetti, 1996; Luthar et al., 2000). Highlighting the importance of development with and without adversity, research has demonstrated that these two trajectories have different antecedents (Cicchetti & Rogosch, 1997) and correlates (Luthar et al., 2000).

The emphasis on the role of adversity in promoting growth aligns the concept of resilience at work most closely with the psychological construct labeled *post-traumatic growth* (PTG; as reviewed by Maitlis (2011, Chapter 69, this volume). Post-traumatic growth is defined as a positive psychological change experienced as a result of the struggle with highly challenging life circumstances (Calhoun & Tedeschi, 1999). Both resilience as we define it and PTG thus involve improvement rather than simply returning to baseline functioning. Yet, these concepts are distinguishable in two important ways: the magnitude of change/growth and the source of the change/growth. Post-traumatic growth is most often described as a transformational process, as a complete change in an established set of schemas (Tedeschi & Calhoun, 2004). Post-traumatic growth would be evident, for example, in individuals who completely change their profession in order to find their true calling after experiencing an adverse event at work. In contrast, we conceptualize resilience at work in terms of professional growth that individuals exhibit after experiences of adversity. Although this growth may in fact well be a significant qualitative change in functioning, it may also be more subtle. For example, in response to adversity, a resilient individual may demonstrate growth and learning by deepening his or her knowledge of some aspect of his or her profession, such as a medical procedure or flight protocol, or by coming to a better understanding of his or her own capacity to perform under pressure. Another important distinction between resilience and PTG is the source of change/growth. In the PTG literature, growth is achieved primarily through cognitive processing and disclosure that takes place post-adversity (Tedeschi & Calhoun, 2004). In contrast, resilience focuses on growth and development gained through the process of doing one's work during adversity rather than via a mental crisis endured after the experience of adversity.

Table 1. Comparison of resilience to similar concepts (in the context of work)

Term	Definition	Role of Adversity	Reaction to Adversity	Functioning after the event
Recovery	The process of regaining something that has been lost and of returning to a former state (Sonnentag & Neff, Chapter 66, this volume).	Negative events are considered a necessary precondition.	Negative states are reduced, but positive states are also increased.	Return to an earlier state of functioning.
Resilience	A developmental trajectory characterized by demonstrated competence in the face of, and professional growth after, experiences of adversity in the workplace.	Essential precondition that causes a trajectory of positive adaption.	Demonstrated competence during the adversity, and some degree of professional growth post-adversity.	The individual continues on a positive developmental trajectory and is better prepared for future challenges.
Posttraumatic Growth	The experience of positive change that occurs as a result of the struggle with highly challenging life crises (Maitlis, Chapter 69)	Large adversity that shatters previously held schemas is essential.	The individual endures a period of distress after the event that leads to a significant positive transformation.	Transformational growth after the event.
Thriving	A psychological state in which individuals experience both a sense of vitality and a sense of learning at work (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005).	Thriving does not require adversity as a precondition	This state is not in reaction to an external event.	Individuals demonstrate vitality and learning.

Learning About Resilience at Work

One of the challenges in studying resilience is the requirement for both vulnerability and adaptability to an adverse event. As noted, operationalizing these terms can be difficult. And, even if definitions are agreed, it may be difficult to create or find situations to study that involve both. Much knowledge of resilience in adults is based on a rich literature on resilience in vulnerable children (Sutcliffe & Vogus, 2003). The psychological study of resilience emerged from studies of individuals' (primarily children's) positive adaptation despite extremely difficult circumstances, such as familial mental illness or poverty (Garmezy, 1971; Luthar, 1999; Lutharet al., 2000; Masten & Reed, 2002; Werner & Smith, 1982). Early research on resilience was thus largely dominated by a focus on childhood resilience, and definitions were based upon development-based that would be expected in a child.

Only in the past decade have researchers focused their attention on understanding resilience in adult populations (Bonnano, 2004; Sutcliffe & Vogus, 2003). It has thus become necessary to recalibrate the construct of resilience at work to anchor it to developmental outcomes expected in an adult. Bonnano's (2004) research on adults' psychological and physical functioning after exposure to an isolated and potentially highly disruptive event, such as the death of a close relation or a violent or life-threatening situation, has confirmed that the process of resilience in adults is qualitatively different from resilience in children. Although the childhood resilience literature may provide a starting point for understanding the process of resilience in adults, there are likely key differences in protective factors and process in the two populations (Bonanno, 2004).

To date, most empirical research studies on adult populations have focused primarily on acute, critical life events such as individuals facing illness, disability, or the loss of a loved one (Bonanno & Manacini, 2008). These studies have sought to understand how some individuals overcome and even thrive in the face of negative events while others are unable to do so. Much research has studied resilience in individuals with chronic illness and disabilities (Davidson et al., 2005; Farber, Schwartz, Schaper, Moonen, & McDaniel, 2000), chronic pain (Karoly & Ruehlman, 2006; Zautra, Johnson, & Davis, 2005), mental health disorders (e.g.; Tugade & Fredrickson, 2004), and even learning disorders (Sorensen et al., 2003; Werner, 1993). A second stream of research has focused on understanding how individuals cope with disasters, such as the loss of a loved one or national tragedies like 9/11 (e.g., Bonanno, 2004, 2005).

Three different, yet complementary, streams of research are aimed specifically at building an understanding of resilience in the context of work. First, in the field of positive organizational scholarship, a literature on organizational resilience (Sutcliffe & Vogus, 2003), examines ways that individuals, groups, and organizations are collectively resilient in the face of adversity at work. A second stream of research has focused on career resilience, defined as "the ability to adapt to changing circumstances" (London, 1993, p. 55) in individuals who are faced with the sudden loss of a job (Waterman, Waterman, & Collard, 1994). The third, practitioner-focused stream aims to understand and promote individual correlates of resilience at work (e.g., Maddi & Khoshaba, 2005). Although these three literatures appear to overlap minimally, and to approach resilience from different angles, they all focus on ways in which resilience at work can be cultivated. They thus seek to understand the trajectory that illuminates ways in which individuals, social groups, and organizations can cultivate resilience at work. Toward this end, in the next section, we summarize the findings and propose a framework for understanding how to promote resilience at work.

Cultivating Resilience at Work

One could easily infer from the literature that, to develop resilience in their workforces, organizations should select and hire people who are resilient and release (fire) those who do not maintain and develop their competence in adverse circumstances. The underlying view would be that resilience is an individual difference; some have it and others do not, some can develop it and others cannot, so selecting those who do is good for business. This would be an impoverished viewpoint. As we have pointed out, resilience at work should be viewed as a developmental process rather than a fixed trait (Sutcliffe & Vogus, 2003). It is therefore essential to understand the dynamics that help to cultivate resilience at work.

Psychological resilience scholars use the terms *risk factors* and *protective factors* to describe an individual's potential for resilience (e.g., Werner & Smith, 1982). A risk factor is an aspect of the individual (or environment) that makes him or her more likely than other individuals to develop a specific negative outcome after experiencing adversity (Luthar et al., 1993; Rutter, 1993). In contrast, a protective factor is an aspect of the individual (or environment) that lessens or eliminates the effects of risk factors, thus protecting individuals from the effects of risk factors (Tusaie & Dyer, 2004). The defining feature of a protective factor is that its presence modifies an individual's response to a risk situation(Luthar et al., 2000). Debate continues about whether protectors must only work under adversity (e.g., akin to an airbag on an automobile), or

may also operate under normal conditions, but become stronger in adverse times (Masten & Reed, 2002).

Reviews of the psychological resilience literature indicate that three broad sets of protective factors promote resilience: aspects of the individuals, characteristics of their family, and components of the wider social context (e.g., Garmezy, 1985; Luthar et al., 2000; Masten, Morrison, Pellegrini, & Tellegen, 1990; Rutter, 1987, 1993; Werner & Smith, 1982). This work suggests that, to cultivate resilience at work, individual, social, and organizational factors must be considered. Resilience emerges through an interaction of these three factors, which we now explore. We first consider how individuals can develop and maintain their resilience, and how others at work can help them do so. Our premise is that individual and social factors work in tandem to create, maintain, and develop resilient individuals, work groups, units, and organizations. We focus on individual resilience and thus consider how individuals themselves, the organizational members with whom they interact, and organizations can develop and maintain a resilient workforce.

After considering how individuals can cultivate their own resilience, we consider the pivotal role of social support and, in our concluding sections, bridge to the role of organization culture and structure. We argue that colleagues and organizations themselves may support and develop or, alternatively, undermine the resilience of organization members however resilient these members are when they are recruited. Research suggests that shared identity bonds, high-quality relationships, and identity validation and confirmation are social processes that facilitate individual resilience. At the system level, organizations that value and normalize resilience and that affirm and otherwise support the value and practice of resilience via organization culture and structure will similarly do so.

Individual Protective Factors

Scholars have emphasized the importance of individual variables, or resources, in fostering resilience (e.g., Sutcliffe & Vogus, 2003; Wildavsky, 1991). For instance, Wildavsky (1991) discussed three essential elements of resilience resources: storability, malleability, and the ability for useful conversion when challenge arises. In organizational resilience literature, Sutcliffe and Vogus (2003) focus on knowledge and adaptability as important capacity building resources for resilience. Maddi and Khoshaba (2005) insist that the key to resilience is the development of psychological hardiness, which is composed of three attitudes: commitment, control, and challenge (Kobasa, 1979). Other work on career resilience proposes that those who are resilient in the face of sudden job loss are high in self-efficacy and risk taking, but low in dependency (London, 1993). Outside the workplace, personality researchers have found evidence suggesting that individual differences (e.g., self-enhancing biases, attachment style, repressive coping and positive emotions) promote resilience to life's stressors (Fraley & Bonanno, 2004; Fredrickson et al., 2003; Tugade & Fredrickson, 2004; Mancini & Bonanno, 2009).

Individual differences such as these are important correlates of resilience at work. However, to cultivate resilience, individuals need to also know how to create and mobilize these resources. Molinsky and Stoltz (2010) suggest that individuals can build their capacity for resilience by viewing adversity from four different lenses: controlling the factors causing the crisis, the impact

of management's actions, the breadth of the crisis, and duration of the situation. Similarly, Mancini and Bonanno (2009) posit that the appraisal process is a key mechanism to the resilience process. We agree that how individuals understand a situation affects their resilience base. We complement this perspective by proposing that an individual's view of him or herself, identity, constitutes another key mechanism through which individuals can cultivate, mobilize, and maintain resources that support resilience.

Identity As a Key Factor in the Resilience Process

Research suggests and we argue that one's identity encompasses a cognitive schema that includes the individual's goals, values, and practices at work (Schein, 1978), and can be a key source of resources that enable individuals to be resilient at work. For instance, research on resilience to loss has indicated that identity plays a key role in shaping how individuals respond (Mancini & Bonanno, 2006). Experiencing adversity at work often increases the salience of one's professional identity (Caza, 2010). A literature on meaning-focused coping posits that individuals react to adverse events by trying to understand the experience and integrate it with their self-views (Park & Folkman, 2004). As a result, identity processes and mechanisms become important resources that shape individuals' responses to adversity. We posit that identity plays three key roles in the resilience process: as a resource that affects resilience potential, as a mechanism for behavioral elasticity, and as a key sense-making framework.

First, a valued professional identity may provide an individual with a sense of efficacy, control, positive emotion, and a strong sense of self, each of which affects his or her resistance. In a study of mental health crisis clinicians, Edwards (2005) found that sense of self was a primary factor of resilience. Other researchers have found that individuals who display resilience to loss are more likely to feel continuity within their selves and identities; they are thus more able respond effectively to external demands (Mancini & Bonanno, 2006).

Second, an individual's identity may be useful as a resource that helps guide behavior in times of crisis and thereby fosters capability and effectiveness. Recently, Mancini and Bonanno (2009) proposed flexible adaptation or behavioral elasticity as a key to individual resilience. Flexible adaptation entails the ability to match behavior to the demands of a stressor. We believe that complex identity structures enable individuals to engage in flexible adaptation. An individual's identity is an important source of practice schemas and resources that individuals can rely on and combine creatively to react appropriately in adverse situations (Callero, 1986; 1994; Caza & Bagozzi, 2010). These findings suggest that not only is it important to have a valued identity, but that the structure of one's identity may influence resilience. Specifically, having a complex identity may provide individuals with more practice-based schemas or resources for flexible adaptation. Indeed, Mancini and Bonanno (2009) posit that identity complexity serves as an important coping factor that is operative at high distress levels.

Third, an individual's identity serves as an important meaning-making framework that will help individuals to understand and to grow from the adversity (Caza, 2010). Research has shown that identity construction is critical for sense-making behavior in organizations (Pratt, Rockmann, & Kaufmann, 2006; Weick, Sutcliffe, & Obstfeld, 2005). Making sense of adversity is pivotal to

helping individuals follow a positive developmental trajectory and emerge with increased learning and competence.

In addition to these three functions of identity during the resilience process, identity change can also be an important indicator of the resilience process. Through the process of experiencing and responding to adversity at work, individuals may learn more about themselves, including their capabilities and professional strengths. As a result, their identities may broaden and become more complex, thus enabling them to more capably handle future adversities via the three mechanisms noted above.

Social Protective Factors

Individuals undoubtedly play an important role in shaping resilience, but it is indeed true that no person is an island. Individuals are social creatures embedded in social systems (Granovetter, 1985), and therefore the process of resilience at work is often shaped by supportive relationships with other people (Peterson, 2006) and social structure. Research on organizational resilience has underlined the critical role of relationships in fostering resilience at the collective level (Gittell, 2008; Gittell, Cameron, & Lim, 2006; Sutcliffe & Vogus, 2003). Specifically, the way in which individuals relate to one another before, during, and after an adverse event has been shown to impact resilience. Building on this work, we focus on how others in the organization can help to foster individual resilience at work. Our premise is that colleagues and organizations themselves may support and develop or, alternatively, undermine the resilience of organization members.

Social relationships play a pivotal role in buffering individuals from the negative effects of adversity (Cohen & Willis, 1985) and in allowing individuals to function at a higher level in the face of adversity (Mancini & Bonanno, 2009; Shih, 2004). Studies have found that children are more likely to be resilient if they have close relationships with caregiving adults (Luthar, Cicchetti, & Becker, 2000; Masten & Reed, 2002; Rutter, 1990). Social support has also been found to reduce the harmful effects of stress during times of adversity (Aspinwall & Taylor, 1997; Cohen & Willis, 1985) and to prevent workplace burnout (for a review see Lee & Ashforth, 1996). We posit that three sets of social forces affect the relationship between perceived social support and resilience: shared social identities, high-quality relationships, and confirming identities.

Individuals who share social identities with others at work are more likely to perceive themselves as having strong social support. Haslam and Reicher (2006) demonstrated that having a strong identification with a social group increases an individual's ability to respond to stressors through its impact on social support. Individuals who are strongly identified with a group are more likely to feel empowered when facing adversity, even when the group they receive social support from is stigmatized (Shih, 2004).

Individuals who share common identities or who have complementary identities may be particularly able to help one another become and remain resilient. Such individuals relate particularly effectively in adverse circumstances inasmuch as sharing similar outlooks and behaviors facilitates their interdependent work. Individuals who share identities may spend more time together, become more familiar with one another (Shah & Jehn, 1993), and develop other

bonds (e.g., work friends, social friends, mentor and mentee). Over time, as they acquire a history of relating successfully to one another, they may develop protocols for dealing with adversity and providing one another with support in so doing. For example, they may develop debriefing routines within which they help one another learn from adverse circumstances or share material, social, or other forms of help.

Relationships do not have to stem from a shared-identity in order to facilitate individual resilience at work. Researchers have shown that relationships can be critical during adversity experiences by influencing core collective processes such as coordination (Gittell, 2008) and error detection (Weick & Roberts, 2003). High-quality relationships in particular are likely to have a potent and positive impact on how individuals respond to stressors (Dutton & Heaphy, 2003). More specifically, these high-quality relationships help individuals to feel valued and connected. We propose that high-quality relationships foster individual resilience, in part, because these confirm the identities of others. As discussed earlier, individuals tend to behave in ways that are consistent with their identities (Bem, 1972). Those who work in occupations or who engage in work that is consistent with their identities will tend to enact their roles competently, and go that extra mile to contribute (Milton, 2003). Those who work in organizations whose image is consistent with their personal professional identities cooperate more therein than do others (Dukerich, Golden, & Shortell, 2002). Even in emergency response teams, to the extent that a workmate validates and values and in multiple ways thus confirms a person's identity, this person tends to cooperate more with the workmate (Milton & Westphal, 2005), which often leads to resilience (Gittell, 2008). Individuals who work with others who confirm their identities will tend to be more psychologically centered and behaviorally predictable and hence reliable and able to perform at their best. Their social situation is consistent with and supportive of who they are; they are valued and can be authentic. In interviews, members of these groups attributed positive performance to being able to rely on others to help them stay centered in difficult circumstances and to debrief experiences and lessons learned thereafter.

The social support (by way of cooperation and helping) that emanates from identity confirmation ties may be the bedrock that supports (behavioral and emotional) resilience in diverse group members operating in demanding contexts. Polzer, Milton, and Swann (2002) found that diverse groups characterized by high levels of interpersonal congruence—one form of confirmation—tended to outperform other groups on innovative tasks. These may be groups within which strong mutual identity confirmation-based networks and the cooperation and support associated with these are embedded (Milton & Westphal, 2005). High-quality relationships, characterized by identity confirmation, may also help individuals to grow and learn from the adverse situations they encounter together. High-quality connections are more likely to be associated with learning behaviors in the workplace (Carmeli, Brueller, & Dutton, 2009), which is critical to a resilience trajectory (Sutcliffe & Vogus, 2003).

Summary

Research on coping with loss, childhood resilience, career resilience, and organizational resilience has all contributed to our understanding of individual resilience at work. In this section, we have explored the individual and relational factors that help to cultivate individual

resilience at work. Specifically, we found that identity is an important mechanism of resilience at work, and that relational practices that support and enrich an individual's identity will influence his or her ability to follow a resilient trajectory.

Future Directions

Research on resilience at work has several important directions to pursue and many questions to answer. In this section, we propose three research pathways that we believe will enrich our understanding of resilience at work. The first is an examination of resilience in individuals working in high-risk professions. The second is research investigating the role of organizational protective factors in developing individual resilience at work. The third is the development of measurement tools for resilience at work.

Resilience At Work in High-risk Professions

Although the formal study of resilience at work is still in its infancy, resilience trajectories have been captured for decades in studies of individuals in high-risk professions. Those who work in these professions either endure chronic stressors or are frequently exposed to critical acute adversity, or both. The burnout literature suggests that individuals in some professions are constantly faced with stress and adversity at work. Most often, these professions either entail large amounts of emotional labor (e.g., nursing, teaching) (Halbesleben & Buckley, 2004; Maslach, 1982; Maslach Schaufeli, Leiter, P., 2001), or constant role stress (e.g., nursing managers, pharmacists) (Bakker, Schaufeli, Sixma, Bosveld, & van Dierendonck, 2000; Lee & Ashforth, 1996; Sitkin & Sutcliffe, 1991 Zellars, Perrewe, Hochwarter, 2006). Other professions are at risk for severe, acute forms of adversity. For example, due to the nature of their work, emergency care workers, doctors, social workers, and police often face tragedies at work (e.g., the unexpected death of a patient or client). Dealing with such events takes a psychological and emotional toll on individuals and thereby increases the likelihood that they will experience burnout (e.g., Razavi, Delvaux, Farvacques, & Robaye, 1988).

Examining individuals in these professions indicates that, despite the focus on burnout in these professionals, a large number of these individuals refuse to burn out in the context of chronic or acute stressors. Many display resilience, although the label "resilience" may not have been applied. Noting this reality, there has been a recent surge of interest in resilience within these populations. For example, Edward (2005) examined resilience in mental health care crisis clinicians who were constantly at risk of burnout. Gillespie, Chaboyer, Wallis, and Grimbeek (2007) built and tested a model of resilience in operating rooms. We believe that organizational scholars can learn a great deal by examining resilience that takes place constantly in many high-risk professions, and we suggest that additional research in this domain would be valuable.

Organizational Protective Factors

Organizations play an important role in shaping individual resilience at work. Although organizations may do so in many ways, we suggest that research on whether and how organization culture and structure affect resilience shows particular promise. Organizations whose cultures and structures support individual resilience may benefit considerably.

Organizational culture forms the social context and provides structure for organization members and for relations among them. To fully develop the resilience of their members, research suggests that organizations themselves adopt an ideology that espouses beliefs, values, and norms that are consistent with and advance resilience. To the extent that their symbols, language, narratives, and practices are aligned with this ideology, the culture would be said to support resilience (cf. Trice & Beyer, 1993, for a related argument).

From a cultural perspective, just as cooperative group norms mediate the effect of demographic heterogeneity on work processes and outcomes such as satisfaction, individual performance, team efficiency, and effectiveness in groups (Chatman & Flynn, 2001), so too may organizational norms that support resilience in organizations (e.g., recognize that effective professionals learn to cope over time and benefit from social support) foster resilience within the organization. Just as organization practices, such as addressing conflict constructively, helped members of SEMATECH (a consortium of competitors such as Intel and Motorola) cooperate to revitalize the U.S. semiconductor industry in the 1990s (Browning, Beyer, & Shetler, 1995), so too may practices such as debriefing tough situations as they unfold and providing support to those experiencing adversity help organization members to resile. Symbols that recognize individual learning and excellence in the face of adversity may similarly do so. In organizations whose culture validates and values and in other ways confirms the identities of organization members and thereby embeds cooperation (Milton & Westphal, 2005), social and structural systems that advance individual resilience may be prevalent. Differences between the cultures of organizations within which individuals do and do not resile warrant research scrutiny, as do mechanisms through which organization culture affects resilience.

Organizations seem to have recognized the impact of structure on resilience (e.g., by creating staff wellness centers, structures to control workload and workflow and to reconcile competing demands). However, we believe that research evaluating the effectiveness of different structures and illuminating mechanisms through which structures affect individual resilience, prevent the erosion of resilience, and resolve fractures in resilience warrants attention. We similarly call for additional research investigating the impact of organization culture on resilience. Formalized support practices and critical incident debriefing practices that are embedded in the organizational culture are likely to impact the ways in which organizational members play a key role in each other's resilience process.

Measuring Resilience At Work

A third high-priority direction for future research is to develop and validate a reliable measure of resilience at work. To do so, it is imperative to develop a concrete understanding of the concept of resilience at work that can be operationalized. Critics have noted that, depending upon how resilience is defined and measured, the prevalence of resilience in any given population ranges from 15% to 50% (Rutter, 1987; Werner, 1993). Confusion regarding the antecedents, processes, and outcomes of resilience has similarly hindered research progress. In multiple ways, the lack of conceptual clarity has and continues to create theoretical confusion.

Whereas some measures of resilience focus on traits associated with resilience (e.g., ER89, Block & Block, 1980; Bernard et al., 1991), others concentrate on psychological resources

included in the construct of psychological capital (Luthans, Avolio, Avey, & Norman, 2007). Each aims to distinguish individuals who have the capacity for resilience from others who do not. Although they abstractly measure capacity for resilience, they do not assess whether a resilience trajectory has been activated or followed by individuals.

Mancini and Bonanno (2009) insist that resilience can only be measured by operationalizing it as an outcome that follows a highly stressful event. By doing so, one can assess the extent to which individuals function after adversity. In contrast, we adopt a developmental approach that requires individuals to emerge from adversity demonstrating professional growth. Thus, we argue that it is important for measures of resilience to capture more than the absence of pathogenic symptoms (Luthar et al., 2000), but also the presence of development and growth. Doing so requires that one's level of functioning before the event is captured and compared to functioning after the event, so that a level of growth or development can be assessed. Ideally, levels of functioning would be assessed periodically during an adverse event so that resilience trajectories could be examined.

Doing so would also allow for a better understanding of the trajectory of resilience over time. To date, we and other researchers have posited that one of the distinguishing factors of a resilience trajectory is that the individual is able to display competence during the adversity. This suggests that individual performance and well-being is relatively stable during and right after the adversity. In this way, resilience is different from recovery and post-traumatic growth, which both entail lower levels of functioning during and after an adversity. It also would be interesting to better understand whether the developmental growth observed in resilient individuals is constant or whether it proceeds in fits and starts—via, for example, periods of growth in resilience punctuated by periods of consolidation or trauma or both.

Conclusion

Resilience is much needed in today's business environment. In fact, organizational resilience is often pinned as a critical strategic advantage in businesses today (Hamel & Välikangas, 2003), and an increasing number of articles and cases have been aimed at teaching individuals how to build resilience at work (e.g., Coutu, 2002; Margolis & Stoltz, 2010). Yet, despite this energy around the importance of resilience, research on resilience in adults has taken off only recently (Bonanno, 2004; Sutcliffe & Vogus, 2003). Most of this research has focused on resilience to critical life stressors, such as the death of a spouse or a traumatic life event. And, although disciplines such as psychology and education have been studying resilience for almost half a century (Masten, Cutuli, Herbers, & Reed, 2009), organization scientists have only recently joined the conversation. The fact that our understanding of the nature, antecedents, and consequences resilience at work is still evolving bespeaks this broader history. In this chapter, we have reviewed the literature on individual resilience at work, providing an overview of what we currently know and suggesting what we have yet to learn. We hope that our perspective motivates and excites other organizational researchers to help illuminate resilience at work.

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