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The Commerce and Crossover of Resources: Resource Conservation in the Service of Resilience

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Conservation of Resources Theory, Resiliency and the Organization

Conservation of resources (COR) theory is one of the two leading theories of stress, along with the pioneering theory of Lazarus and Folkman (1984). COR theory departs markedly from Lazarus and Folkman's personal appraisal theory, as well as having some major points of overlap. Rather than emphasizing individual, idiographic appraisals, COR theory emphasizes objective elements of threat and loss. COR theory does not ignore appraisals, but depicts *common*, shared appraisals held jointly by people who share a biology and culture, as the paramount frames by which they measure and approach their world. For example, a child marrying at age 18 is seen as normal, too young, or too old, depending on shared cultural norms, and marriage at 18 would be stressful for many where it was seen as too young or too old. Another example is terrorism. What is a terrorist for one culture is a freedom fighter for another, and would be reacted to by most within each of those cultures accordingly. This places greater weight on objective reality and the shared reality construed by people sharing a culture or organization, and calls into focus the circumstances where clear stressors are occurring.

COR theory was introduced as a framework for understanding and predicting the consequences of major and traumatic stress (Benight et al., 1999; Freedy, Saladin, Kilpatrick, Resnick, & Saunders, 1994; Freedy, Shaw, Jarrell, & Masters, 1992; Hobfoll, Canetti-Nisim, & Johnson, 2006; Ironson et al., 1997; Kaiser, Sattler, Bellack, & Dersin, 1996; Norris, Perilla, Riad, Kaniasty, & Lavizzo, 1999). However, a seminal article by Hobfoll and Shirom (1993) translated COR theory into an architecture for understanding and predicting work-related stress and translating both the stress and resilience that occurs within work settings and work culture. It consequently has become a major theory in the field of organization psychology, organizational stress, and research on burnout (Brotheridge & Lee, 2002; Buchwald & Hobfoll, 2004; Freedy & Hobfoll, 1994; Hobfoll & Freedy, 1993; Hobfoll & Shirom, 2001; Ito & Brotheridge, 2003; Neveu, 2007), as well as the emerging work in positive psychology (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Halbesleben & Bowler, 2007; Ito & Brotheridge, 2003; Jawahar, Stone, & Kisamore, 2007; Sun & Pan, 2008; Zellars, Perrewe, Hochwarter, & Anderson, 2006). Because COR theory underscores the critical role of resource possession, resource lack, and resource loss

and gain, it is a pivotal theory for interpreting and predicting both positive and negative impacts of stress, as well as the resilience process.

In this article, we briefly review the principles of COR theory, first exploring aspects of specific resource gain, loss, and exchange. We then place particular emphasis on how these resources translate to the study of resilience. We focus, in particular, on the crossover model (Westman, 2001), integrating it with COR theory and resilience in organizations. We use the term commerce in resources as the two primary definitions of commerce are: 1) The interchange of ideas, opinions, and sentiments, and 2) the exchange of commodities and resources (Merriam-Webster, 2014). Together, these two definitions combine to express the exchange of valued social, personal, and material resources captured in both COR theory and crossover models. Concepts surrounding the study of resilience are not new, but recent work has been more careful in applying resilience-related constructs and theory to empirical test, particularly in work settings. These investigations are increasingly examining thriving in the face of stress rather than most prior work's emphasis on succumbing or not succumbing to stress. Although we share the excitement over the study of resilience, we must not overly romanticize the positive outcomes of resilience. Even as we focus on resilience and growth, work-related distress is still critical and, as COR theory posits, where resource loss is salient, negative consequences will outweigh positive outcomes. Indeed, thriving and resilience are fostered by circumstances where people are able to apply, grow, and sustain their personal, social, and material resources.

When we use the term resilience we mean two things (Hobfoll, 2011). First, resilience refers to people's ability to withstand the most negative consequences of stressful challenge, including the full range from everyday challenges to traumatic challenges. Second, resilience refers to people remaining vigorous, committed, and engaged in important life tasks, even amidst significant stressful circumstances. In the first instance, we focus on people's ability to remain relatively free of depression, post-traumatic stress disorder (PTSD), burnout, and health problems in the face of stress and trauma, or at least to bounce back in a timely fashion after some initial disequilibrium and distress. In the second instance, we turn to how people continue to function in their work, social, and family spheres, even if at the same time they may have a mix of positive and negative emotions. This examination of ongoing functioning is both understudied and fascinating, as it raises the question of how even when facing significant stressors, many if not most individuals continue to be involved and committed in their life tasks, whether or not they are simultaneously suffering from difficult emotions and stress-related health problems. That significant life challenges and losses cause psychological and physical distress is not surprising. That people may experience distress and disease and yet remain committed and absorbed in their life tasks as parents, partners, workers, citizens, and friends is fascinating and something we know little about. ... it is nothing less than the next horizon for research in stress (Hobfoll, 2011, pg. 128).

Likewise, there is no one definition of the resilient organization. Still, we might hazard some basic parameters of the resilient organization (Horne & Orr, 2011). First, they accept everyday and major challenges without entering into crisis mode or promoting a sense of catastrophe. Rather, these are interpreted with a positive sense of excitement and sense of

shared efficacy and ability to meet demands. Second, they provide a sense of positive meaning and belonging for their employees. That is, they promote positive values. Third, they seek improvement and invest resources in improvement. Fourth, they are open and flexible, at the same time that they appreciate and promote a sense of tradition. Their success should be measured in producing a successful product, but at the same time keeping a satisfied and engaged workforce.

Related to resilience are concepts that have been studied under the rubric of post traumatic growth (PTG). PTG has been defined as the experience of positive change resulting from struggle with major life events (Calhoun & Tedeschi, 1999). Other related terms are stress related growth (Park, Cohen & Murch, 1996), adversarial growth (Linley & Joseph, 2004), and thriving (O'Leary, & Ickovics, 1995). We will also consider how these concepts have been studied and may be conceptualized in work and organizational context.

Each period of time has its own elements of work-related stress. Our current period is marked by its own challenges, especially as organizations and workers face downsizing and layoffs. This stress is further heightened in many regions by the backdrop of wars, natural disasters, and terrorist threats that affect the individual, the family and the whole community. Yet the majority of people do not succumb to the everyday stressors of work, and most people are at least partially and often markedly resilient to stressful events at work.

Hence it is critical that we both focus on and more fully explore what Youssef and Luthans (2007, p. 778) referred to as "proactive learning and growth through conquering challenges." Further, as Robertson and Cooper (2013) point out, it is critical to differentiate between the psychological and behavioral components of resilience. The psychological component enables people to maintain their mental health and well-being when faced with adversity, whereas the behavioral component enables people to remain effective at home and work, focus on relevant tasks and goals and carry them out.

Principles of COR Theory and its Relationship to Resiliency

COR theory is a motivational theory that broadly predicts people's motivation and behavior. Basic to COR theory is the premise that even when stress is not occurring, people are motivated and directed biologically, socially, cognitively, and culturally to shepherd their resources to obtain, retain and protect their resource reservoirs. COR theory is based on several principles and corollaries that are fundamental to understanding the stress process.

COR theory begins with the tenet that individuals strive to obtain, retain, foster, and protect those things they centrally value. This tenet means that people employ key resources in order to conduct the regulation of the self, their operation of social relations, and how they organize, behave, and fit into the greater context of organizations and culture itself (Hobfoll, 1988, 1989, 1998, 2001; Hobfoll & Lilly, 1993).

Principle 1: The primacy of resource loss. The first principle of COR theory is that resource loss is disproportionately more salient than resource gain. Resources include object resources (e.g., car, house), condition resources (e.g., employment, marriage), personal resources (e.g., key skills and personal traits such as self-efficacy and self-esteem), and

energy resources (e.g., credit, knowledge, money). *Principle 2: Resource investment.* The second principle of COR theory is that people must invest resources in order to protect against resource loss, recover from losses, and gain resources. Related to this, those with greater resources are less vulnerable to resource loss and more capable of orchestrating resource gain. Conversely, those with fewer resources are more vulnerable to resource loss and less capable of resource gain. *Principle 3: Resource gain increases in salience when resource loss has been high or chronic.* This is a paradoxical principle, as although COR theory places greatest weight on resource loss, this principle asserts a key role of resource gain in the resilience process. Thus, whereas resource gains may have little impact on people who are not experiencing loss or loss cycles, these gains become potent where major or sustained resource loss has been experienced.

Resources Enhancing Resilience

According to COR theory the factors that are the primary building blocks of resilience are the resources available to the individual and group and the fit of those resources to situational demands. Much less, has been written, however, about how personal, social and material resources aid the course of recovery and the process of potential growth and improved adaptation. COR theory sheds light on the dynamics of resources, including loss and gain spirals. Initial resource gain begets future gain, thus generating “gain spirals.” These gain cycles are plausible, because when initial gains are made greater resources become available. This principle distinguishes COR as a proactive rather than reactive theory, and its focus on the significance of proactive resource investment has important implications for stress prevention and developing resilience. As noted in a key paper by Hakanen, Perhoniemi, and Toppinen-Tanner (2008) among 2555 Finish dentists. It was hypothesized, based on COR theory, and found that job resources led to better work engagement. Work engagement, in turn, was related to greater personal initiative. This then, spiraled further into greater work-unit innovativeness. Likewise, a gain spiral emerged from work-unit innovativeness to great work resources..

Research has supported the beneficial role of resources in successful coping, adjustment and growth. There is evidence that resources like hardiness, self-efficacy, self-esteem and social support can develop and increase resilience. In the next paragraphs, we discuss shortly the unique proposed contribution of these three resources that may lead to resilience and focus on the crossover of such resources between partners.

Hardiness has been conceptualized by Kobasa (1979) as a multidimensional construct consisting of three sub facets: commitment, control, and challenge. Kobasa (1982) claimed and demonstrated that hardiness is associated with a tendency to perceive potentially stressful events in less threatening terms. Accordingly, hardiness alters two appraisal components that may lead to resilience. It reduces the appraisal of threat and increases the expectations of successful coping. Hardy employees may be predisposed to focus on the “silver lining” even when presented with an objectively unfavorable working environment. Thus, hardiness is considered an important factor in psychological resilience and an individual-level pathway leading to resilient outcomes.

Another resource that may lead to resilience is **Self-efficacy** (SE) which refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1995). Efficacy beliefs regulate human functioning and emotional well-being. Those who possess high levels of SE might be more capable of selecting, altering, and implementing their other resources (e.g., hardiness and social support) to meet stressful demands. Efficacy theory should be applied to resilience research for two major reasons; at the individual level, SE is likely to have an impact on the way employees cope with stressors in the workplace (Leiter, 1991; Stumpf, Brief, & Hartman, 1987); at the group level, efficacy beliefs may lead to resilience as a strong sense of collective efficacy (Benight, 2004; Chen, & Bliese, 2002; Jung & Sosik, 2003; Stajkovic, Lee, & Nyberg, 2009) contributes to both a positive interpersonal climate and greater cooperation and helping among group members. Such a climate may buffer the effects of stressors by providing group members with support during stressful periods (Cohen & Wills, 1985; Gore, 1987). Several studies have demonstrated positive relationships between hardiness, self-efficacy and social support.

Social support is defined by Hobfoll, Parris and Stephens (1990) as the interactive process between individuals and their environments for the purpose of attaining behavioral or emotional assistance and is considered as one aspect of the repertoire of resources that individuals utilize to cope with stress (Hobfoll, 1998). According to Hobfoll (2002) people who possess social support are more stress resistant and enjoy better health. Therefore, COR theory views social support as a robust type of resource and the main route for expanding resources available to the individual to meet environmental demands and achieving personal goals (Hobfoll, 2002). Schumm, Briggs-Phillips, and Hobfoll (2006) indicate that the impact of social support is one of the most robust single markers of resiliency resources. Thus, hardiness, self-efficacy and social support, among other similar resources, lead to a caravan of resources leading to resilience.

Caravan Passageways

According to COR theory, resources do not occur separately, but instead tend to aggregate and create and sustain one another. This, in turn, introduces the concept of resource passageways that are precisely what healthy, highly productive work settings should strive toward. Caravan passageways are the environmental conditions that support, foster, enrich, and protect the resources of individuals, families, and organizations, or that detract, undermine, obstruct, or impoverish people's resource reservoirs. Employees and managers will be best capable of developing and maintaining their resource caravans, or will contrariwise fail to develop and maintain them, mainly in response to the overall structure and culture of their work settings. As most employees and indeed most managers have limited control over these overall circumstances, achieving rich and sustaining caravan passageways must be a shared responsibility and often has its seeds in the most senior levels of management or ownership.

As Zautra, Hall, and Murray (2010) argued, the concept of workplace resilience can be applied to individuals, groups and communities, and the resilient workplace may be a key to creating passageways that catalyze and enhance resilience, and limit destructive, loss-

generating aspects of the work environment. For work and organizational settings, resource investment rests in a large part on the collective pool of resources available within that organizational ecology, and individuals' and groups' abilities to access those resources. This ties in to the concept of resource caravans within COR theory (Hobfoll, 2002). Successful organizations offer a members marketplace of shared resources, imbue their departments, sections, managers and employees with resources, and facilitate the internal transaction of resources to meet the organization's mission. As in all marketplaces, resources of value are exchanged, and within successful organizations, those who are members or who belong, have the special status of use of these resources. Organizational support, stability, safety are all aspects of resource caravan-creating and sustaining organizational ecologies. These ecologies can be seen to be creating passageways in which resources are supplied, protected, shared, fostered, and pooled. In this article we focus mainly on passageways that include psychological resources and the way they cross over from one person to another.

The Crossover Model

Crossover was defined by Bolger, DeLongis, Kessler and Wethington (1989) as the interpersonal process that occurs when job stress or psychological strain experienced by one person affects the level of strain of another person in the same social environment. The crossover model (Westman, 2001) adds another level of analysis to previous approaches by adding the inter-individual level, specifically the dyad, the team, and the organization as additional foci of study (Westman, 2001). The crossover model presents a mechanism by which experiences, emotions and resources are transferred within social and organizational contexts. Thus, crossover may act as one of the mechanisms for resource exchange within resource caravans. Most crossover studies have investigated and found evidence of the crossover of psychological stress and strains such as anxiety (Westman, Etzion, & Horovitz, 2004), burnout (e.g., Bakker & Schaufeli, 2000; Westman & Etzion, 1995), and work-family conflict (e.g., Hammer, Ilen, & Grigsby, 1997; Westman, Etzion, & Gatteniu, 2008). However, less is known about positive resource crossover and its vital contribution to resilience.

Westman (2001) proposed three mechanisms delineating how these crossover processes may transpire. First, the experiences, emotions states and resources between the partners are transmitted via empathy. This is referred to as direct crossover, as the emotions transfer directly from one person to another. The basis for this view is the finding that crossover effects appear between closely related partners or team members who care for each other and share the greater part of their lives together. Second, crossover can occur indirectly via specific mediating or moderating mechanisms (e.g., coping, interaction style such as social undermining) which result in the partner's strain. This is referred to as indirect crossover as for example in the case of undermining, one person is stressed, he /she expresses his/her stress by undermining the partner, and the partner is stressed because of being undermined. Finally, thirdly, sharing some common stressors (e.g., economic hardships) may lead to shared, common affects (e.g., anxiety, dissatisfaction) in both partners.

Fundamental to our thesis, Westman (2001) suggested broadening the definition of crossover to include the transmission of positive experiences and states. Accordingly, just as

stressful job demands have a negative impact on the partner's well-being, positive feelings following positive job events may also cross over to partners or colleagues and have a positive effect on the latter's well-being. The extension of the crossover process to positive experiences and states is also consistent with Fredrickson's broaden-and-build theory (2001) that postulates that positive emotions broaden individuals' thought-action repertoires, prompting them to pursue a wider range of thoughts and actions than they typically use. In the interpersonal context, the broaden-and-build theory predicts that positive emotions broaden people's sense of self to include others, and enhance individuals' identification with others, consequently producing greater feelings of self-other overlap and "oneness" (Vaughan & Fredrickson, 2006). Such feelings may lead to positive crossover through the suggested direct crossover process, via empathy. The proposition to investigate the crossover of positive emotions is also in line with the growing interest in positive psychology (e.g., Seligman and Csikszentmihalyi, 2000).

It is notable that the three suggested mechanisms for the crossover process are equally applicable to negative and positive crossover. From a theoretical perspective, positive emotions may be expected to crossover as well through the same suggested processes for negative crossover. Thus, Westman (2001) argued that if the crossover process operates via empathy, one would expect to find crossover positive experiences as well. Just as strain in one partner may produce an empathetic reaction in the other, which increases the recipient's strain, work engagement expressed by one partner may fuel the other partner's engagement. One can think of many positive instances, such as enjoyable experiences at one's job (reaching one's sales targets, promotion), which lead to the crossover of job satisfaction and engagement to a partner. Furthermore, crossover of positive emotions may occur indirectly, following the interaction between the partners. When one person's resources at work (such as support and personal control) increase, he/she has a positive interaction with the spouse and provides support. Finally, spurious positive crossover effects may occur in a work environment where all workers are exposed to the same levels of job resources (e.g., flexible work arrangements). By virtue of belonging to the same work environment, these individuals experience the same types and levels of job resources, and therefore have similar levels of engagement.

Crossover of resources between spouses or colleagues may contribute towards a more resilient family, team or organization and slowly into a more resilient society. For example, Neff Sonnentag, Niessen, & Unger (2012, 2013a,b) demonstrated crossover of resources from one person to another suggesting, that one's partner can act as a source of positive work-related resources. By transferring self-esteem and self-efficacy from one person to their partner, partners' work engagement was also enhanced (Neff et al., 2012). This represents a potential spiral of gains that illustrates how resource caravans share resources among their members. Such resource gain transfers are transmitted to partners either at the family or in the workplace. In this manner, those who possess resources are not only more capable of resource gain, but also help generate "gain spirals" for the dyad, group or organization. According to COR, these gain cycles have positive forward momentum because initial resource gains lead to still greater resource reservoirs. Subsequently, with resource surpluses employees and work-units are less vulnerable and able to invest more

resources that are not required for everyday functioning or reserve capacity (Hobfoll, 1998, p. 82).

Resources may be pooled at many levels of the organization, salary, career opportunities, interpersonal and social relations (e.g., supervisor and coworker support), the organization of work (e.g., role clarity, participation in decision making), and the task (e.g., performance feedback, skill variety). Strong resource pools lead to a greater likelihood that individuals will seek opportunities to risk resources for increased resource gains (gain spiral). In the same way organizations with a large resources pool will offer their employees more passageways that enable the creation of resources caravans which may lead to resilience.

Positive Crossover and the Crossover of Engagement

Most of the studies that have demonstrated positive crossover focused on crossover of engagement or its components (e.g., Bakker & Xanthopoulou, 2009; Demerouti, Bakker, & Schaufeli, 2005; Westman, Etzion, & Chen, 2009). Engagement is defined as a positive, fulfilling, work-related emotional response that is characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá & Bakker, 2002b). Vigor refers to high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence also in the face of difficulties. Dedication refers to a sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption is characterized by being fully focused on and happily engrossed in work or other life endeavors. Those who are engaged at work may experience an expansion of energy and personal resources, such as positive affect and self-efficacy. In turn, this addition of resources may increase the likelihood that they would participate in other roles, such as providing support to partners and coworkers.

The engagement literature identifies job resources (e.g., performance feedback, job autonomy, perceived advancement opportunities, supervisor support, etc.) and personal resources (self-efficacy, optimism, self-esteem, etc.) that predict individual engagement. By their nature, engaged individuals have stores of personal and job resources and enhanced cognitive and behavioral repertoires as a function of their positive emotions (Bakker and Demerouti, 2008). Bakker and Demerouti (2008) described engaged individuals as mentally resilient and energetic, viewing work as both challenging and meaningful.

According to the Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007), job resources reduce job demands and their associated negative outcomes (e.g., burnout); aid in the achievement of work-related goals; stimulate growth, learning, and development; and increase personal resources (e.g., self-efficacy) that enhance perceptions of control and facilitate effective functioning at work. These benefits subsequently foster intrinsic motivation in the form of engagement. Engaged coworkers provide more support to the focal individual, who in turn, experiences higher levels of engagement upon receiving this support.

To illustrate the interplay of crossover with engagement, Bakker, Demerouti, & Schaufeli (2005) found that positive feelings of vigor and dedication expressed by one partner

influenced the other partner. On another level, Bakker, Van Emmerik, & Euwema (2006) found that team-level engagement enhanced individual team members' vigor, dedication, and absorption. They found that engagement (especially vigor) crossed over from one employee to another, particularly on days when colleagues interacted frequently. They concluded that expressiveness manifested through frequent daily communication may increase the chances for work engagement to cross over among team members

A few studies demonstrated crossover of both positive and negative states. For example, Song, Foo, & Uy (2008) showed that positive and negative mood can be transmitted between spouses on a daily basis. Similarly, Bakker, Demerouti and Schaufeli (2005) found support for crossover paths from females' exhaustion to males' exhaustion and from males' life satisfaction to their partners' life satisfaction. Similarly, Totterdell, Wall, Holman, Diamond, and Epitropaki (2004) found that the extent to which affect converges between individuals in work groups depends on the intensity of their communications, because interactions are the channels of the affect-sharing processes. These studies offer clear preliminary support for crossover of positive experiences and states among partners and team members. This work extends Westman and colleagues' findings by indicating that such effects hold for positive as well as negative emotional experiences. Westman, Shadach and Keinan (2013) found both negative and positive crossover of emotions from an individual to a group. Furthermore, they found for the first time to the best of our knowledge that the crossover of positive emotions was stronger than that of negative emotions.

Crossover at the Organizational Level

The next level to consider is the crossover of positive states across an organization. Here it is instructive to consider what González-Morales, Peiró, Rodríguez and Bliese (2012) termed "perceived collective burnout" (PCB). PCB describes a mechanism that underpins how the social context can be an antecedent to individual burnout. Using a top-down perspective they proposed the conceptualization of PCB as an organizational level construct defined as the shared perceptions of the work environment in terms of how burned out the people we work with are. Cumulative experiences of perceiving colleagues as "burnt out" make workers regard their organization as a place where "people are used up or burnt out." In this manner, PCB represents an abstraction of the organizational environment in relation to burnout. We would argue that perceived collective resilience develops in a similar manner as PCB and may be instrumental for the individual and organization's resilience. This mechanism can just as easily be applied to capacity building and resilience enhancing processes within organizational settings.

The organizational top-down process of perceived collective burnout can be due to common demands or scarcity of resources that every employee in the same organization must face (Bakker, Demerouti, & Schaufeli, 2003). PCB can signal the availability or scarcity of resources. On the basis of COR theory (Hobfoll, 1989), the burned out social environment can be experienced as a source of stress because it signals a threat of lack of resources. If people perceive that colleagues are burned out and depleted, they make a secondary assessment that help from colleagues is unlikely to be forthcoming when needed. At the same time, we can see by this process that general expectancies and group held norms of

robustness, capacity, strength, and availability can also pervade an organizational culture. They would signal collegial availability, a shared resource reservoir, supportive problem-solving, and the sense of a safety net. According to COR theory, such resource richness is fundamental to risk taking, as people conserve resources when they lack capacity or fear loss, but are willing to make resource investments when they assess their resource reservoir as rich and supportive.

There are additional organizational factors that may be involved in resilience creation and development. One such organizational resource is **perceived organizational support** (POS). POS refers to employees' general belief that their work organization values their contributions and cares about their well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). POS is valued as assurance that aid will be available from the organization when it is needed to deal with stressful situations (cf. George, Reed, Ballard, Colin, & Fielding, 1993). POS can be conceptualized as an organization-based resource: support is stemming from the organization, a top-down process. In COR terms, POS is the environmental condition that provides resources to individuals. POS strengthens employees' beliefs that the organization recognizes and rewards increased efforts and performance. These processes have favorable outcomes both for employees (e.g., increased job satisfaction and heightened positive mood) and for the organization (e.g., increased commitment and performance, reduced turnover). Therefore POS enables growth and performance even when the employee experiences stress and thus may contribute to resilience.

An additional important factor for building resilience is the **organizational culture**. The organization culture is a very important factor that helps the organizations cope with the changing environment. Earley, Ang, and Tan (2006, p. 20) defined culture as "patterned ways of thinking, feeling, and reacting to various situations and actions". Core cultural values shape behavior and attitudes of employees. Strong organization culture exists where employees respond to stimulus because of their alignment to organizational values, such that their contributions and work are organically in line with the organization. Thus, if the organizational culture emphasizes resilience, they would naturally not only seek to become more resilient themselves, but would promote strength in others, be they colleagues, supervisees or persons more senior to them.

Resources Gain, Passageways and Organizational Processes

Another way that crossover model helps to understand the passageways that create resilience is the *common stressors* mechanism (Westman, 2001). This mechanism refers to common stressors in a shared environment that increase both partners' strain. "What appears to be a crossover effect is the result of common stressors in a shared environment increasing the strain in both partners." This suggests that people in close relationships may experience shared stressors (e.g., economic hardship) creating common psychological strain. Common positive events or common positive characteristics of the team or the organization may likewise impact team members and employees across the organization. This mechanism of positive events and sharing of commonly held resources at the team or organizational level may be fundamental to the creation and sustaining of resilient teams and organizations.

The vital nature of resource gain can be used to emphasize the critical role played by organizations and teams within organizations in fostering passageways for resource caravans. In this regard, organizations, managers and team members filter and translate the meaning of challenges faced in the work world. Several key organization characteristics are fundamental in this process. These include the organization's strategy, the culture and the perceived organizational support. Workplaces may play a crucial role in increasing the likelihood of sustained resilience, especially where individuals may be lacking their own resources or where they have undergone rapid or chronic resource loss. A supportive environment often provides essential conditions for fostering people's engagement. Supportive environments provide such conditions as meaningful goals, share resources that may be lacking, give guidance on how to successfully engage, and potentially include individuals in the shared opportunities for success of the social unit (Sonnentag & Lange, 2002). Hence, organizations that share high levels of work resources are likely to have higher levels of individual and team engagement (Bakker, van Emmerik, & Euwema, 2006). We underscore that this increases in importance with organizational and task complexity, because in such cases it is unlikely for one or even a few members of the organizations to hold the necessary pieces of the puzzle. Rather, only when they join resources is task engagement and success possible. Capitalization, strategic management, technical expertise such as engineering and computer systems, and application expertise, for example in high tech organizations, are all interactively required and must be co-occurring and even timed correctly.

The Contribution of the Crossover Model to COR Theory

The crossover model provides a key mechanism for multi person exchange of emotions, experiences and resources that extends conservation of resource theory (COR). COR predicts that stress occurs when individuals lose resources, face the threat of resource loss, or fail to gain resources following significant resource investment. The crossover model, in turn, lays out a series of mechanisms by which resource gains and losses are transferred in social settings from the dyad to the team and to the organization.

There has been an assumption in crossover research that the same processes are valid for resource gain and crossover of positive states or experiences and enhanced resilience, as for resource loss and transfer of negative states and experiences. Whereas crossover models have not spoken to this point, COR theory would posit that the commerce of resource and emotional transfer across social enteritis (individuals and organizations) would be slower, more incremental, and less impactful for resource gain and translation of positive states than for their loss and negative equivalents. It would be of great interest to examine whether organizational culture can affect this speed of transfer. Healthy organizations would slow and deflate the transfer of resource loss and negatively valenced emotional states and accelerate and enhance the transfer of resource gains and positive emotional states and climates. However, this is actually a future empirical question. One step in dealing with this issue is Westman, Shadach and Keinan's (2013) study which compared the intensity of positive and negative crossover and found that positive crossover had a stronger impact on a group than did negative crossover.

Research based on the broaden-and-build theory supports the notion that positive emotions can widen the range of potential coping strategies during times of stress, consequently enhancing their resilience against hardship (Folkman & Moskowitz, 2000; Fredrickson, 2004, 2005; Tugade, Fredrickson, & Feldman Barrett, 2004). Burns, Brown, Sachs-Ericsson, Ashby Plant, Thomas, Fredrickson, & Joiner, (2008) and Tugade et al. (2004) have demonstrated that positive emotions can improve people's ability to cope with stress, and subsequently enhance their resilience. Thus, an additional contribution of the crossover model is the spread of positive emotions and experiences from one person to another or to team members using adequate coping which increases resilience under stressful conditions. However, the speed of transfer and degree of impact of "broaden and build" has never been compared to "narrow and tear down." This leaves several important theoretical questions, with enormous potential applied value to be investigated.

While COR theory claims that passageways increase resilience, the crossover model does not demonstrate a crossover of resilience per se, but rather of the components that increase resilience. Similar to COR, the crossover model proposes that a set of resources (resource caravans) enhance resilience within work settings and work culture and enhance families' and teams' resilience via the crossover of resources process.

Another way where the crossover model complements COR theory is in furthering our understanding of the mechanisms that underpin engagement. Whereas COR theory emphasizes resource caravans and passageways, it seldom relates to specific positive outcomes of these phenomena except for resilience. The crossover model shows that engagement might result from resources (see the JD-R model) or from the crossover of resources. Through the crossover process, engagement leads to engaged and resilient teams and organizations. Some of the most well-founded positive resource outcomes include a strong communication system, open communication, flexibility, an engaged workforce, productive work output, employee commitment to stay with the organization, and employee health.

Implications for Organizations

In today's complex and often unpredictable organizational environment, employees constantly face threatening situations, including layoffs, mergers and acquisitions, reduction in income and benefits, and rapidly advancing technology that might outpace them. Understanding the impact of resource pool, passageways, crossover and resilience may contribute to employees as well as to organizations. The goal of this paper was to demonstrate that shared resource gain climates and resource crossover are fundamental to creating and sustaining resilience in organizations. At the same time, we must not ignore the fact that resource loss-imbued settings will limit resilience and undermine organizational resilience efforts. Integrating the crossover model as a mechanism for applying COR theory enriches our understanding of the transfer, commerce, and obstacles to the passageways leading to organizational resilience.

Just as crossover at the workplace can cause a burnout climate in the organization, we can focus on positive crossover where positive experiences impact the team, the department and the organization (Westman, 2001, p. 743). In the workplace setting, the crossover of positive

emotions and well-being from one employee to another may lead to what Fredrickson (1998) called an upward spiral. Fredrickson's (1998, 2001) "broaden-and-build" theory of positive emotions states that positive emotions serve to broaden momentary thought and action repertoires and build enduring positive resources. Accordingly, the effect of such "broadening" is enhanced creativity and problem solving - both of which are critical to the successful organization. The effect of "building" is also positive with positive individuals being more likely to seek out interaction with others and thus build social capital (Fredrickson, 1998). Research has shown that positive emotions can accelerate people's recovery from the effects of negative emotions (Fredrickson and Levenson, 1998; Fredrickson et al., 2000). Following COR theory and the crossover model, the interdependency in demands and resources among coworkers would be an important factor to examine at the organizational level. It affects the individual appraisal of demands and resources and its relationship with both perceived collective burnout and collective resilience and operates to build objective resources and shared resource reservoirs.

One of the main questions is whether the impact of resources on resilience is a top down process, a bottom up process or both. Based on the reviewed literature we propose that engaged employees impact the team and organization's resilience and also that a resilient workplace or organization helps employees to become more engaged and resilient. So, clearly our interpretation of the literature suggests that these processes co-occur. Still, this invites new research on the relative strength of these downward and upward processes, how to accelerate positive crossover, and how to dampen negative crossover. Moreover, we have highlighted that this occurs during different organizational phases, including after organizational upset and major loss, in the resource and capital building process, and in the maintaining of the processes that have built resources for sustained growth and development.

Based on these arguments and findings, organizations should facilitate engagement by supplying organizational resources and developing personal, social, material resources. Research suggests that although resilience is related to stable personality characteristics, it is not a fixed personality characteristic and is influenced by supportive social interactions and facilitating environmental structures. Research on resilience training has shown that resilience is amenable to change and can be effected in many kinds of organizations (Sood, Prasad, Shroeder, & Varkey, 2011). These findings should encourage researchers and practitioners to find innovative ways to increase organizational resilience in a process which is based on resource principles as we have delineated here.

Organizations may facilitate and cultivate frequent exchanges between engaged colleagues to promote the crossover of engagement among employees. The end result of such a process may be an "engaged and resilient organization." By helping employees acquire needed resources that lead to resilience and by limiting or removing obstacles to resource investment, organizations can prevent unnecessary stress and strain, and enhance employee well-being and effectiveness. Knowledge about the impact of the resources on resilience in a work environment opens new directions for research and applications in organizations, using both the COR theory and the crossover model. The understanding gained in this paper

highlights the challenge of helping employees, teams and organizations to use passageways and caravans of resources that create and enhance resilience.

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References

- Bakker A, Demerouti E. Towards a model of work engagement. *Career Development International*. 2008; 13(3):209–223. DOI: 10.1108/13620430810870476.
- Bakker, AB.; Demerouti, E.; Schaufeli, WB. The socially induced burnout Model. In: Shohov, SP., editor. *Advances in psychology research*. Vol. 25. Nova; New York: 2003. p. 13-35.
- Bakker AB, Demerouti E, Schaufeli WB. The crossover of burnout and work engagement among working couples. *Human Relations*. 2005; 58:661–689. DOI: 10.1177/0018726705055967.
- Bakker AB, Hakanen JJ, Demerouti E, Xanthopoulou D. Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*. 2007; 99(2):274–284. DOI: 10.1037/0022-0663.99.2.274.
- Bakker AB, Schaufeli WB. Burnout contagion processes among teachers. *Journal of Applied Social Psychology*. 2000; 30:2289–2308. DOI: 10.1111/j.1559-1816.2000.tb02437.x.
- Bakker AB, Van Emmerik H, Euwema MC. Crossover of burnout and engagement in work teams. *Work and Occupations*. 2006; 33:464–489. DOI: 10.1177/0730888406291310.
- Bakker AB, Xanthopoulou D. The crossover of daily work engagement: Test of an actor-partner interdependence model. *Journal of Applied Psychology*. 2009; 94:1562–1571. DOI: 10.1037/a0017525. [PubMed: 19916663]
- Bandura, A. Exercise of personal and collective efficacy in changing societies. In: Bandura, A., editor. *Self-efficacy in changing societies*. Cambridge University; New York: 1995. p. 1-45.
- Benight CC. Collective efficacy following a series of natural disasters. *Anxiety Stress and Coping*. 2004; 17:401–420. doi: 10.1080/10615800512331328768.
- Benight CC, Ironson G, Klebe K, Carver CS, Wynnings C, Burnett K, et al. Conservation of resources and coping self-efficacy predicting distress following a natural disaster: A causal model analysis where the environment meets the mind. *Anxiety, Stress & Coping: An International Journal*. 1999; 12(2):107–126. DOI: 10.1080/10615809908248325.
- Bolger N, DeLongis A, Kessler RC, Wethington E. The contagion of stress across multiple roles. *Journal of Marriage and the Family*. 1989; 51:175–183. DOI: 10.2307/352378.
- Brotheridge CM, Lee RT. Testing a conservation of resources model of the dynamics of emotional labor. *Journal of Occupational Health Psychology*. 2002; 7:57. DOI: 1076-8998.7.1.57. [PubMed: 11827234]
- Brotheridge CM, Lee RT. Testing a conservation of resources model of the dynamics of emotional labor. *Journal of Occupational Health Psychology*. 2002; 7(1):57–67. DOI: 10.1037/1076-8998.7.1.57. [PubMed: 11827234]
- Buchwald P, Hobfoll SE. Burnout aus ressourcentheoretischer Perspektive. *Psychologie in Erziehung und Unterricht*. 2004; 51(4):247–257.
- Burns AB, Brown JS, Sachs-Ericsson N, Ashby Plant E, Thomas Curtis J, Fredrickson BL, Joiner TE. Upward spirals of positive emotion and coping: Replication, extension, and initial exploration of neurochemical substrates. *Personality and Individual Differences*. 2008; 44:360–370. DOI: 10.1016/j.paid.2007.08.015. [PubMed: 21753863]
- Calhoun, LG.; Tedeschi, RG. *Facilitating posttraumatic growth: A clinician's guide*. Lawrence Erlbaum Associates Publishers; Mahwah, N.J.: 1999.
- Chen G, Bliese PD. The Role of Different of Levels of Leadership in Predicting Self- and Collective Efficacy: Evidence for Discontinuity. *Journal Of Applied Psychology*. 2002; 87(3):549–556. doi: 10.1037//0021-9010.87.3.549. [PubMed: 12090612]

- Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. *Psychological Bulletin*. 1985; 98:310–357. DOI: 10.1037//0033-2909.98.2.310. [PubMed: 3901065]
- Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demands-resources model of burnout. *Journal of Applied Psychology*. 2001; 86:499–512. DOI: 10.1037//0021-9010.86.3.499. [PubMed: 11419809]
- Demerouti E, Bakker AB, Schaufeli WB. Spillover and crossover of exhaustion and life satisfaction among dual-earner parents. *Journal of Vocational Behavior*. 2005; 67:266–289. DOI: 10.1016/j.jvb.2004.07.001.
- Earley, PC.; Ang, S.; Tan, JS. CQ: Developing cultural intelligence at work. Stanford University Press; Stanford, CA: 2006.
- Eisenberger R, Huntington R, Hutchison S, Sowa D. Perceived organizational support. *Journal of Applied Psychology*. 1986; 71:500–507. doi:10.1037/0021-9010.71.3.500.
- Hakanen J, Perhoniemi R, Toppinen-Tanner S. Positive gain spirals at work: From job resources to work engagement, personal initiative and work-unit innovativeness. *Journal of Vocational Behavior*. 2008; 75:78–91.
- Hammer LB, Allen E, Grigsby TD. Work-family conflict in dual-earner couples: Within-individual and crossover effects of work and family. *Journal of Vocational Behavior*. 1997; 50:185–203. DOI: 10.1006/jvbe.1996.1557.
- Folkman S, Moskowitz JT. Stress, positive emotion, and coping. *Current Directions in Psychological Science*. 2000; 9:115–118. DOI: 10.1111/1467-8721.00073.
- Fredrickson BL. Cultivated emotions: Parental socialization of positive emotions and self-conscious emotions. *Psychological Inquiry*. 1998; 9:279–281. DOI: 10.1207/s15327965pli0904-4.
- Fredrickson BL. Cultivating positive emotions to optimize health and well-being. *Prevention & Treatment*. 2000; 3(1) DOI: 10.1037//1522-3736.3.1.31a.
- Fredrickson BL. The role of positive emotions in positive psychology: The broaden- and-build theory of positive emotions. *American Psychologist*. 2001; 56:218–226. DOI: 10.1037/0003-066X.56.3.218. [PubMed: 11315248]
- Fredrickson BL. The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 2004; 359:1367–1377. DOI: 10.1098/rstb.2004.1512.
- Fredrickson BL, Levenson RW. Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion*. 1998; 12:191–220. DOI: 10.1080/026999398379718. [PubMed: 21852890]
- Fredrickson BL, Losada MF. Positive affect and the complex dynamics of human flourishing. *American Psychologist*. 2005; 60:678–686. DOI: 10.1037/0003-066X.60.7.678. [PubMed: 16221001]
- Freedy JR, Hobfoll SE. Stress inoculation for reduction of burnout: A conservation of resources approach. *Anxiety, Stress & Coping: An International Journal*. 1994; 6(4):311–325. DOI: 10.1080/10615809408248805.
- Freedy JR, Saladin ME, Kilpatrick DG, Resnick HS, et al. Understanding acute psychological distress following natural disaster. *Journal of Traumatic Stress*. 1994; 7(2):257–273. DOI: 10.1002/jts.2490070207. [PubMed: 8012746]
- Freedy JR, Shaw DL, Jarrell MP, Masters CR. Towards an understanding of the psychological impact of natural disasters: An application of the conservation resources stress model. *Journal of Traumatic Stress*. 1992; 5(3):441–454. DOI: 10.1002/jts.2490050308.
- George JM, Reed TF, Ballard KA, Colin J, Fielding J. Contact with AIDS patients as a source of work-related distress: Effects of organizational and social support. *Academy of Management Journal*. 1993; 36:157–171. DOI: 10.2307/256516. [PubMed: 10123743]
- González-Morales MG, Peiro JM, Rodríguez I, Bliese PD. Perceived collective burnout: A multilevel explanation of burnout. *Anxiety, Stress & Coping*. 2012; 25:43–61. DOI: 10.1080/10615806.2010.542808.
- Gore, JA. Development and applications of macroinvertebrate instream flow models for regulated flow management. In: Kemper, B.; Craig, J., editors. *Regulated Streams: Advances in Ecology*. Plenum; NY: 1987. p. 99-115.

- Halbesleben JRB, Bowler WM. Emotional exhaustion and job performance: The mediating role of motivation. *Journal of Applied Psychology*. 2007; 92(1):93–106. DOI: 10.1037/0021-9010.92.1.93. [PubMed: 17227154]
- Hammer LB, Allen E, Grigsby TD. Work-family conflict in dual-Earner couples: Within-individual and crossover effects of work and family. *Journal of Vocational Behavior*. 1997; 50:185–203. DOI: 10.1006/jvbe.1996.1557.
- Hobfoll SE. Social and psychological resources and adaptation. *Review of General Psychology*. 2002; 6:307–324. DOI: 10.1037/1089-2680.6.4.307.
- Hobfoll, SE. Conservation of Resources Theory: Its implication for stress. In: Folkman, S., editor. *The Oxford handbook of stress, health, and coping*. Oxford University Press; New York, NY: 2011. p. 127-147.
- Hobfoll SE, Canetti-Nisim D, Johnson RJ. Exposure to terrorism, stress-related mental health symptoms, and defensive coping among Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology*. 2006; 74:207–218. DOI: 10.1037/0022-006X.74.2.207. [PubMed: 16649865]
- Hobfoll, SE.; Freedy, J. Conservation of resources: A general stress theory applied to burnout. In: Schaufeli, WB.; Maslach, C.; Tadeusz, M., editors. *Professional burnout: Recent developments in theory and research*. Series in applied psychology: Social issues and questions. Taylor & Francis; Philadelphia, PA: 1993. p. 115-133.
- Hobfoll, SE.; Parris, M.; Stephens, A. Social support during extreme stress: consequences and intervention. In: Sarason, BR.; Sarason, IG., editors. *Social support: An international view*. Wiley series on personality processes. Wiley & Sons; Oxford, England: 1990. p. 454-481.
- Hobfoll, SE.; Shirom, A. Conservation of Resources Theory: Applications to stress and management in the workplace. In: Golembiewski, RT., editor. *Handbook of organizational behavior*. 2nd. ed, rev. ed and, exp.ed.. 2001. p. 57-80.
- Horne J, Orr J. Assessing behaviors that create resilient organizations. *Employment Relations Today*. 2011; 24:29–39.
- Jung DI, Sosik J. Group potency and collective efficacy: Examining their predictive validity, level and analysis, and effects of performance feedback on future group performance. *Group & Organization Management*. 2003; 28(3):366–391.
- Ironson G, Wynings C, Schneiderman N, Baum A, Rodriguez M, Greenwood D, et al. Posttraumatic stress symptoms, intrusive thoughts, loss, and immune function after Hurricane Andrew. *Psychosomatic Medicine*. 1997; 59(2):128–141. DOI: 0033-3174/97/5902-0128\$03.00/0. [PubMed: 9088048]
- Ito JK, Brotheridge CM. Resources, coping strategies, and emotional exhaustion: A conservation of resources perspective. *Journal of Vocational Behavior*. 2003; 63(3):490–509. DOI: 10.1016/S0001-8791(02)00033-7.
- Jawahar IM, Stone TH, Kisamore JL. Role conflict and burnout: The direct and moderating effects of political skill and perceived organizational support on burnout dimensions. *International Journal of Stress Management*. 2007; 14(2):142–159. DOI: 1037/1072-5245.14.2.142.
- Kaiser CF, Sattler DN, Bellack DR, Dersin J. A conservation of resources approach to a natural disaster: Sense of coherence and psychological distress. *Journal of Social Behavior & Personality*. 1996; 11(3):459–476.
- Kobasa SC. Stressful life events, personality and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*. 1979; 37:1–11. DOI: 10.1037//0022-3514.37.1.1. [PubMed: 458548]
- Kobasa SC, Maddi SR, Kahn S. Hardiness and health: A prospective study. *Journal of Personality and Social Psychology*. 1982; 42:168. DOI: 10.1037//0022-3514.42.1.168. [PubMed: 7057354]
- Lazarus, RS.; Folkman, S. *Stress, Appraisal, and Coping*. Springer; New York: N.Y.: 1984.
- Leiter M. The dream denied: Professional burnout and the constraints of human service organizations. *Canadian Psychology*. 1991; 32:547–558. DOI: 10.1037/h0079040.
- Linley PA, Joseph S. Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*. 2004; 17:11–21. DOI: 0894-9867/04/0200-0011/1. [PubMed: 15027788]
- Miriam-Webster. On-line dictionary. 2014. <http://www.merriam-webster.com/dictionary/commerce>

- Neff A, Sonnentag S, Niessen C, Unger D. What's mine is yours: The crossover of day-specific self-esteem. *Journal of Vocational Behavior*. 2012; 81:385–394. DOI: 10.1016/j.jvb.2012.10.002.
- Neff A, Niessen C, Sonnentag S, Unger D. Expanding crossover research: The crossover of job-related self-efficacy within couples. *Human Relations*. 2013; 66:803–827. DOI: 10.1177/0018726712465095.
- Neff A, Sonnentag S, Niessen C, Unger D. The crossover of self-esteem: A longitudinal perspective. *European Journal of Work and Organizational Psychology*. 2013; 23:1–14. DOI: 10.1080/1359432X.2013.856298.
- Neveu JP. Jailed Resources: Conservation of Resources Theory as applied to burnout among prison guards. *Journal of Organizational Behavior*. 2007; 28(1):21–42. DOI: 10.1002/job.393.
- Norris FH, Perilla JL, Riad JK, Kaniasty K, Lavizzo EA. Stability and change in stress, resources, and psychological distress following natural disaster: Findings from Hurricane Andrew. *Anxiety, Stress & Coping: An International Journal*. 1999; 12(4):363–396. DOI: 10.1080/10615809908249317.
- O'Leary VE, Ickovics JR. Resilience and thriving in response to challenge: An opportunity for a paradigm shift in women's health. *Women's Health: Research on Gender, Behavior, and Policy*. 1995; 1:121–142.
- Park CL, Cohen LH, Murch RL. Assessment and prediction of stress-related growth. *Journal of Personality*. 1996; 64:71–105. DOI: 10.1111/j.1467-6494.1996.tb00815.x. [PubMed: 8656319]
- Schaufeli WB, Salanova M, González-Romá V, Bakker AB. The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*. 2002; 3:71–92. DOI:10.1023/A:1015630930326.
- Schumm JA, Briggs-Phillips M, Hobfoll SE. Cumulative interpersonal traumas and social support as risk and resiliency factors in predicting PTSD and depression among inner-city women. *Journal of Traumatic Stress*. 2006; 19:825–836. DOI: 10.1002/jts.20159. [PubMed: 17195981]
- Seligman ME, Csikszentmihalyi M. Positive psychology: An introduction. *American Psychologist*. 2000; 55:5–14. DOI: 10.1037//0003-066X.55.1.5. [PubMed: 11392865]
- Song Z, Foo MD, Uy MA. Mood spillover and crossover among dual-earner couples: A cell phone event sampling study. *Journal of Applied Psychology*. 2008; 93:443. DOI: 10.1037/0021-9010.93.2.443. [PubMed: 18361643]
- Sonnentag S, Lange I. The relationship between high performance and knowledge about how to master cooperation situations. *Applied Cognitive Psychology*. 2002; 16:491–508. DOI: 10.1002/acp.
- Sood MD, Prasad K, Schroeder D, Varkey P. Stress management and resilience training among Department of Medicine faculty: a pilot randomized clinical trial. *Journal of General Internal Medicine*. 2011; 26:858–861. DOI: 10.1007/s11606-011-1640-x. [PubMed: 21279454]
- Stajkovic AD, Lee D, Nyberg AJ. Collective efficacy, group potency, and group performance: Meta-analyses of their relationships, and test of a mediation model. *Journal of Applied Psychology*. 2009; 94(3):814–828. [PubMed: 19450017]
- Stumpf SA, Brief AP, Hartman K. Self-efficacy expectations and coping with career-related events. *Journal of Vocational Behavior*. 1987; 31:91–108. DOI: 10.1016/0001-8791(87)90037-6.
- Sun L-Y, Pan W. HR practices perceptions, emotional exhaustion, and work outcomes: A conservation-of-resources theory in the Chinese context. *Human Resource Development Quarterly*. 2008; 19(1):55–74. DOI: 10.1002/hrdq.1225.
- Totterdell P, Wall TD, Holman D, Diamond H, Epitropaki O. Affect networks: A structural analysis of the relationship between work ties and job-related affect. *Journal of Applied Psychology*. 2004; 89:854–867. DOI: 10.1037/0021-9010.89.5.854. [PubMed: 15506865]
- Tugade MM, Fredrickson BL, Feldman Barrett L. Psychological resilience and positive emotional granularity: Examining the benefits of positive emotions on coping and health. *Journal of Personality*. 2004; 72:1161–1190. DOI: 10.1111/j.1467-6494.2004.00294.x. [PubMed: 15509280]
- Wagh CE, Fredrickson BL. Nice to know you: Positive emotions, self-other overlap, and complex understanding in the formation of a new relationship. *The Journal of Positive Psychology*. 2006; 1:93–106. DOI:10.1080/17439760500510569. [PubMed: 21691460]
- Westman M. Stress and strain crossover. *Human Relations*. 2001; 54:557–591. DOI: 10.1177/0018726701546002.

- Westman M, Etzion D. Crossover of stress, strain and resources from one spouse to another. *Journal of Organizational Behavior*. 1995; 16:169–181. DOI: 10.1002/job.4030160207.
- Westman M, Etzion D, Chen S. The crossover of exhaustion and vigor between international business travelers and their spouses. *Journal of Managerial Psychology*. 2009; 24:269–284. DOI: 10.1002/job.4030160207.
- Westman M, Etzion D, Gattenio E. Business travels and the work-family interface: A longitudinal study. *Journal of Organizational and Occupational Psychology*. 2008; 81:459–480. DOI: 10.1348/096317908X310265.
- Westman M, Etzion D, Horovitz S. The toll of unemployment does not stop with the unemployed. *Human Relations*. 2004; 57:823–844. DOI: 10.1177/0018726704045767.
- Westman M, Shadach E, Keinan G. The crossover of positive and negative emotions: The moderating effect of empathy. *International Journal of Stress Management*. 2013; 20:116–133. DOI: 10.1037/a0033205.
- Xanthopoulou D, Bakker AB, Demerouti E, Schaufeli WB. The role of personal resources in the job demands-resources model. *International Journal of Stress Management*. 2007; 14:121–141. DOI: 10.1037/1072-5245.14.2.121.
- Zautra, A.; Hall, J.; Murray, K. Resilience: A new definition of health for people and communities. In: Reich, W.; Zautra, A., editors. *Handbook of Adult Resilience*. Guilford; New York: 2010. p. 3-35.
- Zellars KL, Perrewe PL, Hochwarter WA, Anderson KS. The interactive effects of positive affect and conscientiousness on strain. *Journal of Occupational Health Psychology*. 2006; 11(3):281–289. DOI: 10.1037/1076-8998.11.3.281. [PubMed: 16834475]