

## CONCEPTUAL REVIEW

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

Shoshi Chen<sup>1</sup>, Mina Westman<sup>1</sup> & Stevan E. Hobfoll<sup>2\*†</sup>

<sup>1</sup>Tel Aviv University, Tel Aviv, Israel

<sup>2</sup>Rush University Medical Center, Chicago, IL, USA

### Abstract

Conservation of resources (COR) theory was originally introduced as a framework for understanding and predicting the consequences of major and traumatic stress, but following the work of Hobfoll and Shirom (1993), COR theory has been adopted to understanding and predicting work-related stress and both the stress and resilience that occur within work settings and work culture. COR theory underscores the critical role of resource possession, lack, loss and gain and depicts personal, social and material resources co-travelling in resource caravans, rather than piecemeal. We briefly review the principles of COR theory and integrate it in the crossover model, which provides a key mechanism for multi-person exchange of emotions, experiences and resources. Understanding the impact of resource reservoirs, resource passageways and crossover provides a framework for research and intervention promoting resilience to employees as well as to organizations. It emphasizes that the creation and maintenance of resource caravan passageways promote resource gain climates through resource crossover processes. Copyright © 2014 John Wiley & Sons, Ltd.

### Keywords

stress; resilience; resources; crossover; COR

### \*Correspondence

Stevan E. Hobfoll, Rush University Medical Center, Chicago, IL, USA.

†Email: Stevan\_hobfoll@rush.edu

Published online in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/smi.2574

## 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 et al., 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 the 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 as follows: (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, 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, p. 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 contexts.

Each period 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 lay-offs. 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 Luthans and Youssef (2007, p. 778) referred to as 'proactive learning and growth through conquering challenges'. Further, as Robertson and Cooper (2013) pointed out, it is critical to differentiate between the psychological and behavioural components of resilience. The psychological component enables people to maintain their mental health and well-being when faced with adversity, whereas the behavioural component enables people to remain effective at home and work, focus on relevant tasks and goals and carry them out.

### **Principles of conservation of resources theory and its relationship to resiliency**

COR theory is a motivational theory that broadly predicts people's motivation and behaviour. 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 and house), condition resources (e.g. employment and marriage), personal resources [e.g. key skills and personal traits such as self-efficacy (SE) and self-esteem] and energy resources (e.g. credit, knowledge and 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 the 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. This was noted in a key paper by Hakanen, Perhoniemi, and Toppinen-Tanner (2008) among 2555 Finish dentists. It was hypothesized, on the basis of COR theory, and found that job resources led to better work engagement. Work engagement, in turn, was related to greater personal initiative. This then spiralled 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 such as hardiness, SE, 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 subfactors: commitment, control and challenge. Kobasa, Maddi, and Kahn (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 unfavourable 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 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, SE 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 behavioural 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) indicated that the impact of social support is one of the most robust single markers of resiliency resources. Thus, hardiness, SE 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 towards. '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 have 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 catalyse 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 members a 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 and safety are all aspects of resource caravan-creating and resource caravan-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, Allen, & Grigsby, 1997; Westman, Etzion, & Gattenio, 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, emotion 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 and interaction style such as social undermining), which result in the partner's strain. This is referred to as indirect crossover as, e.g. in the case of undermining, when one person is stressed, he or she expresses his or her stress by undermining the partner, and the partner is stressed because of being undermined. Finally, sharing some common stressors (e.g. economic hardships) may lead to shared, common affects (e.g. anxiety and 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 (2001) broaden-and-build theory 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' (Vaugh & 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 & Csikszentmihalyi, 2000).

It is notable that the three suggested mechanisms for the crossover process are equally applicable to negative and positive crossovers. From a theoretical perspective, positive emotions may be expected to cross over 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 and 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 or 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, Niessen, Sonnentag, and Unger (2013) and Neff, Sonnentag, Niessen, and Unger (2012, 2013) 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 SE 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 co-worker support), the organization of work (e.g. role clarity and participation in decision-making) and the task (e.g. performance feedback and 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 resource pool will offer their employees more passageways that enable the creation of resource 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 vigour, dedication and absorption (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Vigour 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 endeavours. Those who are engaged at work may experience an expansion of energy and personal resources, such as positive affect and SE. In turn, this addition of resources may increase the likelihood that they would participate in other roles, such as providing support to partners and co-workers.

The engagement literature identifies job resources (e.g. performance feedback, job autonomy, perceived advancement opportunities and supervisor support) and personal resources (SE, optimism, self-esteem etc.) that predict individual engagement. By their nature, engaged individuals have stores of personal and job resources and enhanced cognitive and behavioural repertoires as a function of their positive emotions (Bakker & 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. SE) that enhance perceptions of control and facilitate effective functioning at work. These benefits subsequently foster intrinsic motivation in the form of engagement. Engaged co-workers 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 vigour and dedication expressed by one partner influenced the other partner. On another level, Bakker, Van Emmerik, and Euwema (2006) found that team-level engagement enhanced individual team members' vigour, dedication and absorption. They found that engagement (especially vigour) 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, and Uy (2008) showed that positive and negative mood can be transmitted between spouses on a daily basis. Similarly, Bakker et al. (2005) found support for crossover paths from women's exhaustion to men's exhaustion and from men's 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 crossovers 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, Peiro, 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 burnt 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 PCB 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 burnt-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 burnt 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 stems 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 favourable outcomes both for employees (e.g. increased job satisfaction and heightened positive mood) and for the organization (e.g. increased commitment and performance and 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 organizational culture is a very important factor that helps 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 behaviour and attitudes of employees. Strong organizational 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 also promote strength in others, be they colleagues, supervisees or persons more senior to them.

### Resource gain, passageways and organizational processes

Another way that the crossover model helps to understand the passageways that create resilience is the *common stressor* 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 POS. 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 et al., 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 are task engagement and success possible. Capitalization, strategic management, technical expertise such as engineering and computer systems and application expertise, e.g. in high-tech organizations, are all interactively required and must be co-occurring and even timed correctly.

### The contribution of the crossover model to the conservation of resources theory

The crossover model provides a key mechanism for multiperson exchange of emotions, experiences and resources that extends COR theory. 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 entities (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 the Westman et al. (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; Fredrickson & Losada, 2005; Tugade, Fredrickson, & Feldman Barrett, 2004). Burns et al. (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 with 'narrow and tear down'. This leaves several important theoretical questions, with enormous potential applied value to be investigated.

Whereas 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) enhances resilience within work settings and work culture and enhances 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 lay-offs, 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, 2000; Fredrickson & Levenson, 1998). Following COR theory and the crossover model, the interdependence in demands and resources among co-workers 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 PCB 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. From 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-building and capital-building process and in the maintaining of the processes that have built resources for sustained growth and development.

On the basis of these arguments and findings, organizations should facilitate engagement by supplying organizational resources and developing personal, social and 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, Schroeder, & Varkey, 2011). These findings should encourage researchers and practitioners to find innovative ways to increase organizational resilience in a process that 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 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.

## Conflict of interest

The authors have declared that they have no conflict of interest.

## Acknowledgments

This research was made possible in part by grants from the NIH, including NIH RO1AT007 143; P50HL105189, the Rush Center for Urban Health Equity; and P20 MD006886, the Rush Center of Excellence on Disparities in HIV and Aging (CEDHA).

## REFERENCES

- Bakker, A., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, 13(3), 209–223.
- Bakker, A. B., & Schaufeli, W. B. (2000). Burnout contagion processes among teachers. *Journal of Applied Social Psychology*, 30, 2289–2308.
- Bakker, A. B., & Xanthopoulou, D. (2009). The crossover of daily work engagement: Test of an actor-partner interdependence model. *Journal of Applied Psychology*, 94, 1562–1571.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2003). The socially induced burnout model. In S. P. Shohov (Ed.), *Advances in psychology research* (Vol. 25, pp. 13–35). New York: Nova.
- Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2005). The crossover of burnout and work engagement among working couples. *Human Relations*, 58, 661–689.
- Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology*, 99(2), 274–284.
- Bakker, A. B., Van Emmerik, H., & Euwema, M. C. (2006). Crossover of burnout and engagement in work teams. *Work and Occupations*, 33, 464–489.
- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 1–45). New York: Cambridge University.
- Benight, C. C. (2004). Collective efficacy following a series of natural disasters. *Anxiety, Stress and Coping*, 17, 401–420.
- Benight, C. C., Ironson, G., Klebe, K., Carver, C. S., Wynnings, C., Burnett, K., ..., Schneiderman, N. (1999). 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*, 12(2), 107–126.
- Bolger, N., DeLongis, A., Kessler, R. C., & Wethington, E. (1989). The contagion of stress across multiple roles. *Journal of Marriage and the Family*, 51, 175–183.
- Brotheridge, C. M., & Lee, R. T. (2002). Testing a conservation of resources model of the dynamics of emotional labor. *Journal of Occupational Health Psychology*, 7(1), 57–67.
- Buchwald, P., & Hobfoll, S. E. (2004). Burnout aus ressourcentheoretischer Perspektive. *Psychologie in Erziehung und Unterricht*, 51(4), 247–257.
- Burns, A. B., Brown, J. S., Sachs-Ericsson, N., Ashby Plant, E., Thomas Curtis, J., Fredrickson, B. L., & Joiner, T. E. (2008). Upward spirals of positive emotion and coping: Replication, extension, and initial exploration of neurochemical substrates. *Personality and Individual Differences*, 44, 360–370.
- Calhoun, L. G., & Tedeschi, R. G. (1999). Facilitating posttraumatic growth: A clinician's guide. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Chen, G., & Bliese, P. D. (2002). The role of different of levels of leadership in predicting self- and collective efficacy: Evidence for discontinuity. *Journal of Applied Psychology*, 87(3), 549–556.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310–357.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499–512.
- Demerouti, E., Bakker, A. B., & Schaufeli, W. B. (2005). Spillover and crossover of exhaustion and life satisfaction among dual-earner parents. *Journal of Vocational Behavior*, 67, 266–289.
- Earley, P. C., Ang, S., & Tan, J. S. (2006). CQ: Developing cultural intelligence at work. Stanford, CA: Stanford University Press.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500–507.
- Folkman, S., & Moskowitz, J. T. (2000). Stress, positive emotion, and coping. *Current Directions in Psychological Science*, 9, 115–118.
- Fredrickson, B. L. (1998). Cultivated emotions: Parental socialization of positive emotions and self-conscious emotions. *Psychological Inquiry*, 9, 279–281.
- Fredrickson, B. L. (2000). Cultivating positive emotions to optimize health and well-being. *Prevention & Treatment*, 3(1).
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218–226.
- Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society, B: Biological Sciences*, 359, 1367–1377.
- Fredrickson, B. L., & Levenson, R. W. (1998). Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion*, 12, 191–220.
- Fredrickson, B. L., & Losada, M. F. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, 60, 678–686.
- Freedy, J. R., & Hobfoll, S. E. (1994). Stress inoculation for reduction of burnout: A conservation of resources approach. *Anxiety, Stress & Coping: An International Journal*, 6(4), 311–325.
- Freedy, J. R., Saladin, M. E., Kilpatrick, D. G., Resnick, H. S., Saunders, B. E. (1994). Understanding acute psychological distress following natural disaster. *Journal of Traumatic Stress*, 7(2), 257–273.
- Freedy, J. R., Shaw, D. L., Jarrell, M. P., & Masters, C. R. (1992). Towards an understanding of the psychological impact of natural disasters: An application of the conservation resources stress model. *Journal of Traumatic Stress*, 5(3), 441–454.
- George, J. M., Reed, T. F., Ballard, K. A., Colin, J., & Fielding, J. (1993). Contact with AIDS patients as a source of work-related distress: Effects of organizational and social support. *Academy of Management Journal*, 36, 157–171.
- González-Morales, M. G., Peiro, J. M., Rodríguez, I., & Bliese, P. D. (2012). Perceived collective burnout: A multilevel explanation of burnout. *Anxiety, Stress & Coping*, 25, 43–61.
- Gore, J. A. (1987). Development and applications of macroinvertebrate instream flow models for regulated flow management. In B. Kemper, & J. Craig (Eds.), *Regulated streams: Advances in ecology* (pp. 99–115). NY: Plenum.
- Hakanen, J., Perhoniemi, R., & Toppinen-Tanner, S. (2008). Positive gain spirals at work: From job resources to work engagement, personal initiative and work-unit innovativeness. *Journal of Vocational Behavior*, 75, 78–91.
- Halbesleben, J. R. B., & Bowler, W. M. (2007). Emotional exhaustion and job performance: The mediating role of motivation. *Journal of Applied Psychology*, 92(1), 93–106.
- Hammer, L. B., Allen, E., & Grigsby, T. D. (1997). Work-family conflict in dual-earner couples: Within-individual and crossover effects of work and family. *Journal of Vocational Behavior*, 50, 185–203.

- Hobfoll, S. E. (1988). *The ecology of stress*. Washington, DC: Hemisphere.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524.
- Hobfoll, S. E. (1998). *Stress, culture, and community: The psychology and philosophy of stress*. New York: Plenum.
- Hobfoll, S. E. (2001). The Influence of culture, community, and the nested-self in the stress process: Advancing Conservation of Resources Theory. Lead article. *Applied Psychology*, 50, 337–370.
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6, 307–324.
- Hobfoll, S. E. (2011). Conservation of resources theory: Its implication for stress. In S. Folkman (Ed.), *The Oxford handbook of stress, health, and coping* (pp. 127–147). New York, NY: Oxford University Press.
- Hobfoll, S. E., & Freedy, J. (1993). Conservation of resources: A general stress theory applied to burnout. In W. B. Schaufeli, C. Maslach, & M. Tadeusz (Eds.), *Professional burnout: Recent developments in theory and research. Series in applied psychology: Social issues and questions* (pp. 115–133). Philadelphia, PA: Taylor & Francis.
- Hobfoll, S. E., & Lilly, R. S. (1993). Resource conservation as a strategy for community psychology. *Journal of Community Psychology*, 21, 128–148.
- Hobfoll, S. E., & Shirom, A. (1993). Stress and burnout in the workplace: Conservation of resources. In R. T. Golembiewski (Ed.), *Handbook of organizational behavior*. (pp. 41–60). New York: Marcel Dekker.
- Hobfoll, S. E., & Shirom, A. (2001). Conservation of resources theory: Applications to stress and management in the workplace. In R. T. Golembiewski (Ed.), *Handbook of organizational behavior* (2nd ed., rev. and exp. ed., pp. 57–80). New York, NY: Marcel Dekker.
- Hobfoll, S. E., Canetti-Nisim, D., & Johnson, R. J. (2006). Exposure to terrorism, stress-related mental health symptoms, and defensive coping among Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology*, 74, 207–218.
- Hobfoll, S. E., Parris, M., & Stephens, A. (1990). Social support during extreme stress: Consequences and intervention. In B. R. Sarason, & I. G. Sarason (Eds.), *Social support: An international view*. Wiley series on personality processes (pp. 454–481). Oxford, England: Wiley & Sons.
- Horne, J., & Orr, J. (2011). Assessing behaviors that create resilient organizations. *Employment Relations Today*, 24, 29–39.
- Ironson, G., Wynings, C., Schneiderman, N., Baum, A., Rodriguez, M., Greenwood, D., ..., Fletcher, M. A. (1997). Posttraumatic stress symptoms, intrusive thoughts, loss, and immune function after Hurricane Andrew. *Psychosomatic Medicine*, 59(2), 128–141.
- Ito, J. K., & Brotheridge, C. M. (2003). Resources, coping strategies, and emotional exhaustion: A conservation of resources perspective. *Journal of Vocational Behavior*, 63(3), 490–509.
- Jawahar, I. M., Stone, T. H., & Kisamore, J. L. (2007). Role conflict and burnout: The direct and moderating effects of political skill and perceived organizational support on burnout dimensions. *International Journal of Stress Management*, 14(2), 142–159.
- Jung, D. I., & Sosik, J. (2003). Group potency and collective efficacy: Examining their predictive validity, level and analysis, and effects of performance feedback on future group performance. *Group & Organization Management*, 28(3), 366–391.
- Kaiser, C. F., Sattler, D. N., Bellack, D. R., & Dersin, J. (1996). A conservation of resources approach to a natural disaster: Sense of coherence and psychological distress. *Journal of Social Behavior & Personality*, 11(3), 459–476.
- Kobasa, S. C. (1979). Stressful life events, personality and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*, 37, 1–11.
- Kobasa, S. C., Maddi, S. R., & Kahn, S. (1982). Hardiness and health: A prospective study. *Journal of Personality and Social Psychology*, 42, 168.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Leiter, M. (1991). The dream denied: Professional burnout and the constraints of human service organizations. *Canadian Psychology*, 32, 547–558.
- Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17, 11–21.
- Luthans, F., & Youssef, C. M. (2007). Emerging positive organizational behaviour. *Journal of Management*, 33(3), 321–349.
- Merriam-Webster (2014). On-line dictionary. Retrieved from <http://www.merriam-webster.com/dictionary/commerce> (Accessed 10 January 2014).
- Neff, A., Niessen, C., Sonnentag, S., & Unger, D. (2013). Expanding crossover research: The crossover of job-related self-efficacy within couples. *Human Relations*, 66, 803–827.
- Neff, A., Sonnentag, S., Niessen, C., & Unger, D. (2012). What's mine is yours: The crossover of day-specific self-esteem. *Journal of Vocational Behavior*, 81, 385–394.
- Neff, A., Sonnentag, S., Niessen, C., & Unger, D. (2013). The crossover of self-esteem: A longitudinal perspective. *European Journal of Work and Organizational Psychology*, 23, 1–14.
- Neveu, J. P. (2007). Jailed resources: Conservation of resources theory as applied to burnout among prison guards. *Journal of Organizational Behavior*, 28(1), 21–42.
- Norris, F. H., Perilla, J. L., Riad, J. K., Kaniasty, K., & Lavizzo, E. A. (1999). Stability and change in stress, resources, and psychological distress following natural disaster: Findings from Hurricane Andrew. *Anxiety, Stress & Coping: An International Journal*, 12(4), 363–396.
- O'Leary, V. E., & Ickovics, J. R. (1995). 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*, 1, 121–142.
- Park, C. L., Cohen, L. H., & Murch, R. L. (1996). Assessment and prediction of stress-related growth. *Journal of Personality*, 64, 71–105.
- Robertson, I., & Cooper, L. (2013). Resilience. *Stress & Health*, 29(3), 175–176.
- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3, 71–92.
- Schumm, J. A., Briggs-Phillips, M., & Hobfoll, S. E. (2006). Cumulative interpersonal traumas and social support as risk and resiliency factors in predicting PTSD and depression among inner-city women. *Journal of Traumatic Stress*, 19, 825–836.
- Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5–14.
- Song, Z., Foo, M. D., & Uy, M. A. (2008). Mood spillover and crossover among dual-earner couples: A cell phone event sampling study. *Journal of Applied Psychology*, 93, 443.
- Sonnentag, S., & Lange, I. (2002). The relationship between high performance and knowledge about how to master cooperation situations. *Applied Cognitive Psychology*, 16(5), 491–508.
- Sood, M. D., Prasad, K., Schroeder, D., & Varkey, P. (2011). Stress management and resilience training among Department of Medicine faculty: a pilot randomized clinical trial. *Journal of General Internal Medicine*, 26, 858–861.
- Stajkovic, A. D., Lee, D., & Nyberg, A. J. (2009). Collective efficacy, group potency, and group performance: Meta-analyses of their relationships, and test of a mediation model. *Journal of Applied Psychology*, 94(3), 814–828.
- Stumpf, S. A., Brief, A. P., & Hartman, K. (1987). Self-efficacy expectations and coping with career-related events. *Journal of Vocational Behavior*, 31, 91–108.
- Sun, L.-Y., & Pan, W. (2008). HR practices perceptions, emotional exhaustion, and work outcomes: A conservation-of-resources theory in the Chinese context. *Human Resource Development Quarterly*, 19(1), 55–74.
- Totterdell, P., Wall, T. D., Holman, D., Diamond, H., & Epiropaki, O. (2004). Affect networks: A structural analysis of the relationship between work ties and job-related affect. *Journal of Applied Psychology*, 89, 854–867.
- Tugade, M. M., Fredrickson, B. L., & Feldman Barrett, L. (2004). Psychological resilience and positive emotional granularity: Examining the benefits of positive emotions on coping and health. *Journal of Personality*, 72, 1161–1190.
- Waugh, C. E., & Fredrickson, B. L. (2006). Nice to know you: Positive emotions, self-other overlap, and complex understanding in the formation of a new relationship. *The Journal of Positive Psychology*, 1, 93–106.
- Westman, M. (2001). Stress and strain crossover. *Human Relations*, 54, 557–591.
- Westman, M., & Etzion, D. (1995). Crossover of stress, strain and resources from one spouse to another. *Journal of Organizational Behavior*, 16, 169–181.

- Westman, M., Etzion, D., & Chen, S. (2009). The crossover of exhaustion and vigor between international business travelers and their spouses. *Journal of Managerial Psychology, 24*, 269–284.
- Westman, M., Etzion, D., & Gattenio, E. (2008). Business travels and the work–family interface: A longitudinal study. *Journal of Organizational and Occupational Psychology, 81*, 459–480.
- Westman, M., Etzion, D., & Horovitz, S. (2004). The toll of unemployment does not stop with the unemployed. *Human Relations, 57*, 823–844.
- Westman, M., Shadach, E., & Keinan, G. (2013). The crossover of positive and negative emotions: The moderating effect of empathy. *International Journal of Stress Management, 20*, 116–133.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands–resources model. *International Journal of Stress Management, 14*, 121–141.
- Zautra, A., Hall, J., & Murray, K. (2010). Resilience: A new definition of health for people and communities. In W. Reich, & A. Zautra (Eds.), *Handbook of adult resilience* (pp. 3–35). New York: Guilford.
- Zellars, K. L., Perrewe, P. L., Hochwarter, W. A., & Anderson, K. S. (2006). The interactive effects of positive affect and conscientiousness on strain. *Journal of Occupational Health Psychology, 11*(3), 281–289.