

PERFORMANCE IMPACTS OF APPRAISAL AND COPING WITH STRESS IN WORKPLACE SETTINGS: THE ROLE OF AFFECT AND EMOTIONAL INTELLIGENCE

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ABSTRACT

We review the literature on stress in organizational settings and, based on a model of job insecurity and emotional intelligence by Jordan, Ashkanasy and Härtel (2002), present a new model where affective responses associated with stress mediate the impact of workplace stressors on individual and organizational performance outcomes. Consistent with Jordan et al., emotional intelligence is a key moderating variable. In our model, however, the components of emotional intelligence are incorporated into the process of stress appraisal and coping. The chapter concludes with a discussion of the implications of these theoretical developments for understanding emotional and behavioral responses to workplace.

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INTRODUCTION

Stress is a common feature of organizational life, across all occupational domains (Cooper, 1998; Hancock & Desmond, 2001). Attributed to workplace stressors such as job insecurity (Jordan, Ashkanasy & Härtel, 2002), role ambiguity (Beehr, 1987; Yousef, 2002), time pressures (Salas & Klein, 2001), and interpersonal conflicts (Narayanan, Menon & Spector, 1999), stress is nonetheless a psychological phenomenon that has generated much controversy with regard to its effect on individual and organizational outcomes (Koslowsky, 1997). While some studies have reported the deleterious effects of work stress on job performance (Reilley, Grasher & Schafer, 2002), other research has provided evidence to suggest a positive relationship between stress and productivity (Riley & Zaccaro, 1987). According to Cooper (1998), occupational stress is operationalized as a state of cognitive or physiological arousal or “readiness for action” and as such, variability in the performance in individuals under stress has been attributed to differential mental and physical workload capacities. Capacity theory (Woods & Patterson, 2001) provides an explanation of inter-individual differences in performance under stress based on differences in cognitive and attentional capacities. It does not, however, explain intra-individual differences in behavioral responses to stress. For example, why is it that an individual’s coping capacity fluctuates, such that an event or task in one situation is accepted as a challenge while, in another situation, the same event or task is seen as a threat?

In this chapter, we offer an explanation of intra-individual (or within-person) differences in behavioral responses to workplace stress based on recent theoretical developments by Weiss and Cropanzano (1996) and Jordan et al. (2002). Specifically, we argue that behavioral responses to workplace stressors are contingent upon the nature of the individuals’ affective response to the stressor. As such, workplace stressors affect workplace performance depending on the individuals’ transitory emotional states.

An important foundation of our theory is Weiss and Cropanzano’s Affective Events Theory (AET), which provides a detailed model of the way in which environmental conditions (daily “hassles and uplifts”) affect individuals’ emotional states and, in turn, their affective and behavioral responses to work stress. In particular, AET highlights the existence and significance of emotionality in the workplace. While emotions can enhance certain work-related tasks (Averill, 1999), however, it may also impinge upon an individual’s ability to meet other workplace demands (Baumeister & Heatherton, 1996). Thus, an important question, both for researchers and managers of emotions in the workplace, is how can individuals moderate the impact of emotional states on their performance at work?

In a recent development upon AET, moreover, [Jordan, Ashkanasy and Härtel \(2002\)](#) proposed that emotional intelligence, a dispositional variable, moderates the way in which individual employees' cope with the experience of stress. Much controversy, however, surrounds the validity of emotional intelligence as a psychological construct that is distinct from general intelligence (see [Becker, 2003](#); [Jordan, Ashkanasy & Härtel, 2003](#)). In addition, emotional intelligence has only recently begun to be developed theoretically and empirically, so that there is still little understanding of the nature of the unique cognitive processes that are mediated by this construct. In this respect, [Jordan et al. \(2002\)](#) articulated that their model was based on a theoretically sound content model of emotional intelligence developed by [Mayer and Salovey \(1997\)](#). [Jordan et al. \(2002\)](#), however, focused specifically on the moderating impact of emotional intelligence on employees' emotional and behavioral responses to work-related stress (job insecurity). Hence, the impact of emotional intelligence on the psychological processes underlying the generation and modulation of emotions is yet to be addressed.

In this chapter, therefore, we develop and integrate AET ([Weiss & Cropanzano, 1996](#)) and emotional intelligence ([Jordan et al., 2002](#); [Mayer & Salovey, 1997](#)) by proposing a process model of affective response formation and modulation, which explains the cognitive-affective processes that underlie emotional intelligence. The model provides a systematic explanation of emotional intelligence as a mediator of the way in which workplace stressors trigger emotional responses in employees, and whether these emotional responses have a positive or negative impact on workplace performance.

Intra-individual differences in behavioral responses to workplace stressors have been attributed to task differences ([Salas, Driskell & Hughs, 1996](#)), audience characteristics ([Schmitt, Gilovich, Goore & Joseph, 1986](#)), and differential environmental conditions ([Edwards, Caplan & Van Harrison, 1998](#)). In each case, however, exogenous variables were used to explain intra-individual differences in task performance. As [Weiss and Cropanzano \(1996\)](#) pointed out in AET, however, differences in an individual's performance of the same task at work under similar workplace conditions cannot be explained by exogenous variables alone. [Weiss and Cropanzano](#) suggest further that it is the individual's affective response to the stressor that determines the quality of behavioral response. Furthermore, consistent with [Lazarus and Folkman \(1984\)](#), AET emphasizes that an individual's affective stress response may vary from moment to moment. In this respect, stress is not wholly contingent upon stable environmental and personality variables, but upon the individual's perception of affective events, or daily hassles and uplifts, that create transitory emotional states that may impact upon the individual's performance (see [Lazarus, 1991](#)).

According to [Jordan et al. \(2002\)](#), the generation of emotions in response to workplace stressors and the impact of these emotions on behavioral performance is moderated by emotional intelligence. Emotional intelligence is therefore seen to moderate the relationships between affective events, affective responses, and behavioral responses described in AET, based on individual differences in the cognition of emotional information. In order to moderate these processes, they argue, emotional intelligence functions to mediate the perception of emotional cues in workplace events, the experience of emotion in response to these cues, and the way in which emotions are reduced, or coped with. Consequently, emotional intelligence in their model moderates the perceived significance of an affective event, the intensity of emotional stress associated with the affective response to the event, and the way in which the affective response mediates the behavioral response to the affective event.

The [Jordan et al. \(2002\)](#) model represents a substantial advance on the existing literature on coping with workplace stress, which has not, until recently, considered the role emotional reactions as mediators of the effects of workplace stress on performance. Furthermore, the integration of emotional intelligence as a cognitive construct that facilitates the processing of emotional information is pivotal in the development of a critical understanding of the way in which emotion affects social cognition, and social cognition affects emotion.

As noted above, however, an important and unresolved issue concerns the way in which emotional intelligence actually functions to moderate the affective response process; that is, the cognitive and affective structures underlying emotional intelligence. While [Jordan et al. \(2002\)](#) proposed emotional intelligence as the process that moderates the affective event – affective response – behavioral response linkages proposed in AET, the actual processes involved in emotional intelligence, have not yet been addressed. In this chapter, therefore, we attempt to provide insight into the processes underlying emotional intelligence, that moderate the affective impact of workplace stressors, the generation of emotion and the effect of emotional responses on coping efficacy.

The chapter opens with a review of traditional approaches to the study of workplace stress and performance outcomes, highlighting the importance and neglect of emotions associated with stress in organizational research. In the following section, we outline recent research developments pertaining to the role of emotions in organizational behavior, including AET and emotional intelligence. Upon these conceptual foundations, the [Jordan et al. \(2002\)](#) model of emotional intelligence as a moderator of emotional and behavioral responses in the workplace will be discussed. Following this, interpretive developments upon the [Jordan et al.](#) model will be proposed, and the structures and processes underlying affective responses and emotional intelligence explained. Finally, the implications

of this research for the development of theory, research and practice pertaining to the management of stress and performance in the workplace will be considered.

STRESS AND ITS WORKPLACE EFFECTS

Research suggests that the question of whether work stress has a positive or negative impact on workplace behavior has two answers: work-related stress increases motivation and performance (Driskell & Salas, 1996), and work-related stress is associated with decreased job satisfaction and work commitment (Yousef, 2002). Each of these results is equally valid and supported by a convincing line of empirical research (Cooper, 1998; Hockey, 2002; Salas & Klein, 2001). The nature of work stress, thus, is that it is neither definitively positive nor negative; the impact of stress on performance depends on the nature, intensity, duration, and resources available to the employee to respond adaptively (Riley & Zaccaro, 1987). While the nature of emotional stress responses varies between individuals depending on dispositional stress vulnerabilities (Lazarus, 1966), the intensity and duration of the emotion experienced may fluctuate within individuals depending on emotion-coping resource capabilities between situations and task demands (Hancock & Desmond, 2001). Thus, the impact of emotional responses to stress on performance varies not only between and within emotions (the nature vs. intensity of the emotion), but also between and within individuals (the disposition vs. situation of the individual). The purpose of this section is to provide an overview of the complex and multidimensional effects of stress on workplace behavior. A conceptual framework for understanding the various manifestations of stress is proposed to provide the conceptual basis for development of a model of the emotional stress response process, which is outlined in the following section.

The Nature of Stress

Lazarus (1966) suggested that stress be treated as an organizing concept for understanding a wide range of processes involved in social adaptation. Stress, then, is not a unidimensional variable, but a construct or syndrome consisting of many variables and processes. As such, stress is a response process characterized by physiological, cognitive, behavioral, and emotional changes that function to alert the individual to the need to adapt to environmental demands in the interests of personal wellbeing. Personal well being is a mark of adaptive success, or a person-environment relationship that functions to promote the attainment of personal goals. Environmental demands, when perceived to exceed the person's

adaptive resources, represent obstacles to that person's ability to function adaptively in their environment, and hence present a potential threat to goal attainment. As obstacles to adaptive success, excessive environmental demands, which may be cognitive, behavioral, physical, or emotional, represent a source of strain, and are hence referred to as stressors.

In response to a stressor, an individual may experience physiological, cognitive, behavioral, or emotional changes that function to mobilize the individual to respond to environmental demands in the interests of adaptive success. *Seyle (1976)* originally described this stress response (which he termed the "general adaptation syndrome") as a three-stage process involving an initial alarm reaction, a second stage of coping (that *Seyle, 1976*, referred to as "resistance"), and a third stage involving physical or psychological burnout or exhaustion. Certainly, this theory had some validity, with research demonstrating that there are strong links between stress and illness, and stress and decreased performance outcomes (*Siegrist, 1998*). Unfortunately, however, as an explanation of the stress response process, this model has proved less useful. More recent research has revealed that the stress response is a more complex, multilevel process (*Lazarus, 1999*), and that there are positive as well as negative behavioral effects of stress (see *Brockner, Grover, Reed & Dewitt, 1992*).

There are various physiological reactions to stress, each associated with an increase in activation or levels of arousal in a state of "readiness for action" (*Hancock & Desmond, 2001*). As such, the physiological stress response is indicated by increased skin conductance, heart rate, salivation, hormone output, respiration rate, and sweat gland activity, to name a few. Furthermore, individuals under stress may have heightened sensitivity to sensory stimulus, evidenced by increased reaction time, and awareness of novel bodily sensations (see also *Seyle, 1976*).

Cognitive effects of the stress response may include distraction, narrowing of attention, tunnel vision, decreased search activity, response rigidity, longer reaction time to peripheral stimuli, increased information-processing errors, and memory deficits (*Salas, Driskell & Hughs, 1996*). In this respect, one of the better-established findings in the stress literature is that, as stress or arousal increases, the individual's breadth of attention narrows (*Combs & Taylor, 1952*). For complex tasks in which the individual must attend to a relatively large number of task salient cues, this narrowing of attention may result in the elimination of relevant task information and task performance will suffer. Thus, stress may result in degraded overall performance on complex tasks because attention is narrowed in response to cognitive overload. Furthermore, with regard to decision making under-stress, *Cohen (1952)* found that stressful conditions lead to greater problem-solving rigidity – a tendency to persist with a set method of problem solving – when it ceases to provide a direct task solution. This process has more recently been

shown to be relevant in organizational studies. [Dorner \(1990\)](#), for example, found that individuals under stress were prone to “ballistic decision making”: making decisions without checking the consequences of their decision. Dorner concluded that ballistic decision making tends to increase concreteness of behavior, because evaluating the consequences of one’s action is an essential means of adapting responses to changing environmental demands (see also [Staw, 1981](#)).

Behavioral characteristics of the stress response process include a reduction in the tendency to assist others, increased interpersonal aggression, neglect of social or interpersonal cues, and less cooperative behavior among team members ([Patel & Arocha, 2002](#)). [Cohen \(1980\)](#) noted that the narrowing of attention that occurs under stress may include a restriction of social cues as well, and that stress may lead to a neglect of social or interpersonal cues and sensitivity to others. A further consequence of attentional narrowing is a neglect of behavior monitoring, and hence an increase in self-regulation failure. As such, the stress response may interfere with effective behavioral control, which may have deleterious effects on physical or interpersonal work-related activities ([Driskell & Salas, 1991](#)).

According to [Lazarus \(1991\)](#), the emotional reactions to stress gauge a person’s struggle to adapt to or cope with situational demands, emerging as a psychological response to apparent or anticipated threats to well being. As such, each stress emotion, be it anger, frustration, anxiety, guilt, fright, or fear, is an expression of the way in which a person appraises his or her current relationship with the environment, and how that person is coping with this adaptive transaction. Stress emotions are experienced and expressed physiologically, cognitively, and behaviorally ([Lazarus, 1999](#)). With regard to the experience of emotion on a physiological level, they may be experienced as tonic muscle seizure (tension), activation of the adrenal glands (anxiety), and/or heightened sensory awareness (fear). Cognitively, emotions are experienced as an appraisal or evaluation of a situation that describes the content of the felt emotions (for example, the thought “This situation is frightening!”). Furthermore, emotions may be experienced as behavioral intentions such as impulsivity and inhibition (associated with excitement and depression). Stress emotions are expressed physiologically via sweating, blushing, or shaking; cognitively as “I am anxious,” and behaviorally in the form of facial expression and posture.

Stress in the Workplace

That the stress response can have a positive or negative effect on performance is explained, in part, by an inverted-U hypothesis, where the effect of stress on performance depends on the intensity of the stress experienced. This hypothesis is derived from [Yerkes and Dodson’s \(1908\)](#) famous theory that a curvilinear

relationship exists between physiological arousal (one component of stress) and performance. This theory, known as the Yerkes-Dodson Law, proposes that extremely low and extremely high levels of stress are both related to low performance outcomes. Moderate levels of stress and arousal, on the other hand, are more likely to be associated with optimal performance outcomes. The optimum level of stress for effective performance is not fixed, however. As [Seyle \(1976\)](#) has noted, optimum levels vary across individuals and between tasks. Furthermore, optimal arousal levels vary as a function of task difficulty ([Hendy, East & Farrell, 2001](#)). As task difficulty increases, the level of arousal considered for optimal performance decreases. Thus, it seems that the performance effects of stress depend not only on the intensity of the stress experienced, but also on the nature of the environmental demand, task, or stressor. Indeed, [Beehr and Newman \(1978\)](#) note that “the relationship between stress and measures of effectiveness may vary by type of stressor, and/or the type of performance measured” (p. 690). For example, one stressor, role uncertainty, typically decreases individual performance ([Steiner, 1972](#)), while stressors such as time pressures (deadlines) tend to increase individual performance ([Riley & Zaccaro, 1987](#)).

Not only may the type of stressor affect differences in intra-individual performance, but also the intensity of the stress experienced. Individuals differ in the nature of their emotional responses to stress, and as a consequence, the impact of their emotions on their ability to cope under stress. Individuals also, however, each experience varying levels of emotional stress depending on their emotional vulnerability, which fluctuates with environmental contingencies. Thus, an individual may have the emotional resources to cope with job insecurity in the morning but, as the day progresses, and emotional coping resources are depleted, that same individual may be unable to regulate the intensity of his/her emotions, and hence it becomes more likely that affect will interfere with performance.

[Lazarus and Folkman \(1984\)](#) contend that it is neither the stressor nor the intensity or duration of the stress that predicts the outcome of stress on performance. On the basis of a cognitive-motivational theory of the stress response process, Lazarus and Folkman proposed that it is the individuals’ appraisal of the stressor and method of coping with the stressor that determined the effects of stress on behavior. This leads us to our next topic, the role of appraisal in stress.

Appraisal and Stress

Although certain environmental demands and pressures produce stress in substantial numbers of people, individual and group differences in the degree and kind of reaction are almost always evident. People and groups differ in their sensitivity

and vulnerability to experiencing stress in response to certain workplace events (Lazarus, 1979). Under comparable conditions, for example job insecurity, one employee may perceive that their well being is under threat, while another may feel challenged or motivated (see Jordan et al., 2002). Similarly, individuals can display varying responses to similar workplace stressors, depending on their evaluation of the situation, which may vary depending on a transitory emotional state or different environmental conditions (Weiss & Cropanzano, 1996). For example, when in a positive mood, people are more likely to appraise stressors positively as challenges (Isen, 1999), whereas when in a negative mood, they are more likely to perceive workplace events as hassles, or obstacles to well being (see Fiedler, 2001). Lazarus and Folkman (1984) suggest further that, in order to understand differences in individuals' experience of stress under comparable workplace conditions, individuals must take into account the cognitive appraisal process that intervenes between the encounter and the reaction, and the internal and external factors that affect the nature of this mediation.

Lazarus and Folkman (1984) defined appraisal as a cognitive evaluation of an environmental stimulus that is internal or external to the individual, with respect to its significance for well being, or the attainment of personal goals. It is this cognitive process that gives meaning to situations and events that occur in the workplace. Lazarus and Folkman also distinguished between two forms of appraisal: primary appraisal, which functions to determine whether the stimulus has any affective significance (whether it affects one's well being); and secondary appraisal, which functions to determine the individual's coping potential. The primary appraisal establishes whether the event is a potential threat or stressor, while the secondary appraisal evaluates that whether the outcome of this event will be positive or negative (Lazarus & Folkman, 1984).

Lazarus and Folkman (1984) described three forms of primary appraisal: (1) irrelevant; (2) benign-positive; and (3) stressful. When a workplace event carries no implication for a person's well being, it is appraised as irrelevant. The event will evoke no physiological, cognitive, behavioral, or emotional change in the person, for whom the event has no affective significance. That is, the event presents no perceived obstacle to the person's values or goals and hence has no impact upon personal investment. The benign/positive appraisals occur if the event is perceived to preserve, to maintain, or to enhance a person's situation. These appraisals often evoke positive emotional responses such as joy, happiness, relief, and/or excitement. Stress appraisals, on the other hand, include the perception of an event ensuing harm/loss, threat, or challenge to one's psychological or social well being. While perceptions of harm or loss involve an appraisal of damage that has already taken place, the appraisal of threat concerns the perception of harms or losses that have not yet occurred, but are anticipated outcomes of the workplace

event. As such, perceptions of threat mobilize anticipatory coping behaviors that function to prepare the individual for the need to adapt to changing environmental demands, or to prevent the actualization of the threat. The third kind of stress appraisal, challenge, has much in common with threat in that it also mobilizes the individual for adaptive functioning. The main difference is that challenge appraisals focus on the potential for gain or growth that potentially accompanies adaptive change, and hence functions to ensure the actualization of the anticipated environmental change. Furthermore, while threat is associated with emotions such as fear, anxiety, and anger, challenge is characterized by positive emotions associated with motivation, such as exhilaration.

With regard to the effects of the stress experienced on performance outcomes, Lazarus and Folkman (1984) propose that a positive appraisal of the stressor, as a challenge or motivation, will result in increased effort and positive performance outcomes, while a negative appraisal of the stressor as a threat, will result in a defensive “fight or flight” response, similar to that described as resistance coping by Seyle (1976), which inevitably leads to exhaustion or burn out (see Schaufeli, Maslach & Marek, 1993). Thus, individuals who are, by nature, optimistic will tend to primarily appraisal situational cues as benign or positive, and hence experience positive affect. Furthermore, as noted by Isen (1999), a positive affective state can influence information processing such that either, negative emotional situational cues are undetected, or it is that potential stressors are interpreted otherwise.

Stress appraisal is an adaptive process whereby the task of evaluating events with respect to the implications for personal well being is a continuing struggle to balance environmental realities and personal goals. The primary function of appraisal is, in effect, to integrate the two as effectively as possible for adaptive success. Individuals differ in their appraisal and integration of stressors, however, as both perceptions of environmental realities and personal goals are subject to individual differences. Although people perceive and understand their environments with remarkable objectivity (Patterson & Neufeld, 1987), the number of possible environmental cues significantly outweighs that which we are capable of perceiving and attending. Because situations are often ambiguous, individuals attend to and process them selectively, based on goal hierarchies and psychosocial beliefs or heuristics about themselves and their world. Furthermore, as mentioned above, situational demands may also be processed differentially between, and within individuals depending on the existence of stable or transient emotional states.

The role of appraisal in the stress response process is therefore to identify situational cues that are relevant to personal goals, and then to evaluate the extent of the threat, challenge, harm, loss, or benefit. This secondary appraisal involves the evaluation of personal resources or coping capabilities. The size

of discrepancy between personal resources or capabilities and environmental demands corresponds to the quality or intensity of emotional responses to the stressor. Finally, the impact of emotional stress responses on cognitions and behaviors is influenced by the individual's ability to access and to utilize personal resources effectively in order to modulate the emotional experience of stress into adaptive behavioral expressions under stress. We take up this issue in more detail next.

Stress and Coping

Coping with stress and the behaviors associated with coping have been an area of significant interest for psychologists for many years (see Glass, 1986). Management scholars turned their attention to coping behaviors in the workplace when it was realized that reactions to stressful situations have an impact on performance. Since this realization, research has contributed to our understanding of this phenomenon, with the most notable being the research of Folkman and Lazarus (1988), who proposed the model of emotion-focused and problem-focused coping that we addressed in the previous section of this chapter. Recent research into coping, however, has covered a myriad of issues including coping and self-regulation (Carver & Scheier, 1999), coping difficulties and appraisal of stress (Zohar & Brandt, 2002), links between types of coping and psychological distress (Brown, Mulhern & Joseph, 2002), and gender differences and coping (Porter & Stone, 1995). There has also been a plethora of recent publications examining the link between coping and specific work issues such as coping and job insecurity (Jordan et al., 2002); coping and downsizing (Paterson & Cary, 2002); and coping and organizational change (Callan, Terry & Schweitzer, 1994). Finally, empirical studies into the impact of coping behaviors has been conducted on a range of occupational categories including firefighters (Brown, Mulhern & Joseph, 2002), nurses (Greenglass & Burke, 2000), police officers (Patterson, 1999), psychiatrists (Deary, Agius & Sadler, 1996), welfare supervisors (Erera-Weatherley, 1996), public sector workers (Terry, Tonge & Callan, 1995), and teleworkers (Norman, Collins, Conner & Martin, 1995).

One result of this research is the emergence of a clear definition of coping. Muraven, Tice and Baumeister (1998) define coping as a reaction to feelings of stress and can be defined as a voluntary behavior involving emotion, cognition, and behavior in a process of self-regulation. In this instance, coping is essentially an act of self-regulation that emerges following the experience of cognitive strain and emotional strain. The process of coping thus involves the identification and implementation of strategies designed to reduce the stress experienced.

Coping Strategies

Coping behaviors are intended to reduce job-related tension through amelioration of experienced stress. In this respect, Lazarus and Folkman (1984) identified two types of coping strategy. The first type, referred to as *problem-focused* coping, is intended to address the source of the stress directly. The second, *emotion-focused* coping, is aimed at minimizing the emotional ramifications of stress. Generally, problem-focused coping is seen as an effective strategy because it is task oriented and addresses the source of the stress. Emotion-focused coping, on the other hand, is perceived as less effective, because it merely ameliorates the appraisal of the stress so that the stress trigger still remains. The issue of which style is best, however, not clear-cut. Sears, Unizar and Garrett (2000), for instance, note that problem-focused strategies are appropriate in situations where individuals perceive the problem as changeable, but emotion-focused strategies are more appropriate where the problem cannot be changed.

Working from the Lazarus and Folkman (1984) model of problem-focused and emotion-focused coping, Folkman, Lazarus, Dunkel-Schetter, DeLongis and Gruen (1986) identified eight basic strategies for coping. The first, confrontive coping, is described by Folkman and her colleagues as an aggressive effort to alter the situation. The second strategy involves distancing yourself from the stress amounting to an effort to detach oneself from the issue. The next strategy for coping is emotional self-control or attempts to regulate feelings. Another strategy identified by Folkman et al. involves seeking social support. They explain that this process involves an effort to acquire informational support to confirm perceptions about the situation. Folkman and her associates then go on to suggest that, for some individuals, accepting responsibility or acknowledging their own role in the situation can be a successful coping mechanism. This strategy allows individuals to accept the situation and then to try to put it behind them by acknowledging their role and ensuring that this does not happen again. The sixth strategy identified by Folkman et al. involves wishful thinking. Folkman and her associates have also called this strategy escape avoidance. This strategy can also involve the use of substances such as alcohol, drugs or medication in an attempt to minimize impact of the problem. "Planful" problem solving is a specific strategy involving the development of a deliberate plan designed to altering the stressful situation. Finally, positive reappraisal is an emotion-focused solution intended to create a positive meaning from the situation (Folkman et al., 1986).

These strategies are separated into problem-focused and emotion-focused strategies. Problem-focused strategies include confrontive coping, seeking social support, and "planful" problem solving. Emotion-focused coping strategies include distancing, emotional self-control, accepting responsibility, wishful thinking (escape avoidance), and positive reappraisal (Folkman et al., 1986).

While this categorization is convenient, it overlooks the fact that there is some leakage between emotion-focused and problem-focused strategies. For instance the act of seeking social support is a problem-focused strategy, which may provide emotional support and therefore can also be seen as an emotion-focused strategy.

An alternative model was postulated by Carver, Scheier and Weintraub (1989). They identified fourteen discrete methods of coping: active coping, planning, suppressing competitive activities, restraint coping, seeking social support for instrumental reasons, seeking social support for emotional reasons, positive reinterpretation and growth, acceptance, turning to religion, focusing on the venting of emotion, denial, behavioral disengagement, and alcohol drug disengagement. Subsequent factor analysis of this instrument by Lyne and Rogers (2000) suggested that these methods of coping can also be broadly categorized as active coping (intention to act to reduce the stressor), emotion-focused coping (attempts to ameliorate one's feelings of stress), and avoidance coping (including denial and giving up).

In terms of empirical findings in work settings, Sears et al. (2000) found a greater prevalence of emotion-focused coping than problem-focused coping. In fact, they found strong correlations between emotion-focused coping and role overload, role ambiguity, role boundaries and responsibility. On the other hand, there was a negative correlation between problem-focused coping and role ambiguity and role boundaries and no relationship between problem-focused coping and role overload and responsibility. Their findings indicated that problem-focused coping is more likely to be used to cope with the physiological, cognitive, and behavioral effects of stress; rather than the emotional effects of stress, which are associated with uncertainty in the workplace. Evidently, the effects of stress in the workplace are emotional, as well as physiological, cognitive, and behavioral. Thus, the distinct role of emotion in the stress appraisal and coping processes is important for understanding and managing workplace behavior.

In summary, as an adaptation process, the concept of stress outlined so far in this chapter emphasizes the inter-relationship between person and environment, which takes into account the physical, cognitive, behavioral, and emotional resources of the person, on the one hand, and the nature of environmental demands on the other. Thus, stress is a process that unfolds in response to a perceived discrepancy between situational demands and personal resources or goals. The discrepant person-environment relationship triggers the stress response process in order to facilitate the adaptive changes required to achieve personal goals in the face of new environmental contingencies. Whether or not the physiological, cognitive, behavioral, and emotional changes associated with the stress response function to increase or interfere with performance efficacy, however, depends

on the individual's evaluation of the significance of the stressor (appraisal) and coping capabilities.

Finally, we note that emotion plays a key role within this model. Yet research into the effects of stress on workplace performance has predominantly focused on the physiological, behavioral, and cognitive effects of stress. In the remainder of this chapter, therefore, we focus our attention on the effects of stress-induced emotions in the workplace.

EMOTION AND STRESS IN THE WORKPLACE

The role of emotional responses to stress in the workplace is a relatively neglected area of research, considering the pervasive effects of emotions on individual and organizational outcomes (Ashforth & Humphrey, 1995). We suggest three reasons for this. First, while physiological stress responses may be measured objectively, the emotional components of the stress response are not easily observed or quantified, and hence seem to defy empirical research. Second, the transitory and uncontrollable nature of emotions means that subjective reports of emotions are often unreliable, as they are most often retrospective and subject to bias (Ashforth & Humphrey). Third, because of their rapidly changing nature, emotions can be dependent variables as they are the effect of some event at work, and then immediately become independent variables as they are then the cause of some behavior or action by the person who experiences the emotion. Traditionally, however, psychological research has tended to focus on variables which are relatively static and which can be clearly categorized as independent or dependent rather than dynamic variables.

Recent developments around the study of emotions at work, however, have laid the foundations for understanding of the causes and consequences of affective responses to workplace stressors on individual and organizational performance (see Ashkanasy, Härtel & Daus, 2002; Fisher & Ashkanasy, 2000). In this chapter, we focus on AET (Weiss & Cropanzano, 1996) as an appropriate basis for understanding the role of stress and emotions.

Affective Events Theory

Weiss and Cropanzano (1996) have proposed Affective Events Theory (AET), which emphasizes the importance of understanding emotion in terms of transactions and processes, rather than simple cause and effect. AET represents a unique development in emotions research that provides a model of the nature of affective

responses to workplace stressors and the direct relationship between various emotions and workplace behaviors. Weiss and Cropanzano posit in AET that environmental conditions, internal and external to the organization, determine the occurrence of discrete “affective events” that, in turn, lead to affective responses such as moods and emotions.

A key component of AET is that work events (i.e. daily hassles and uplifts) are determined by elements of the work environment such as job characteristics, role stressors, and mental load. These work events lead to experiences of positive and negative emotions that have the effects on behaviors and attitudes that can lead to emotion-driven behavior. Typical emotion-driven behaviors include negative emotional outbursts such as anger, sadness, or even violence; but can also include positive emotional experiences of joy or pleasure, and altruistic behavior. Moreover, in the longer term, stable moods and emotions can accumulate to influence more stable workplace attitudes and behaviors such as job satisfaction and work involvement. It is these emotions, driven by workplace events, which lead to behavioral decision making that affects outcomes at an organizational level, such as decisions to quit, or to systematically engage in anti- or pro-social workplace behavior. AET is thus a unique development in organizational research. It presents a model of emotions that looks to the peculiarities of the individual’s work conditions for an understanding of person-environment transactions that may be contributing to the experience of emotion in the workplace, and determining whether these emotions have a positive or negative impact on individual and organizational outcomes.

Research on AET is still at a relatively early stage of development. Nonetheless, research to date has supported the central tenets of AET: that affective states underlie much of the way that workers think and behave at work (Fisher & Ashkanasy, 2000; O’Shea, Ashkanasy, Gallois & Härtel, 1999); and that affective states are responses to workplace events that are perceived to promote or impinge upon personal well being (Weiss & Cropanzano, 1996). For example, research has consistently demonstrated that positive affect predicts better creativity and cognitive flexibility (Isen & Daubman, 1984; Isen, Daubman & Nowicki, 1987). Furthermore, the data have also supported in general the hypothesis that positive affect is positively related to job satisfaction and work commitment, and thus leads to less turnover, more prosocial organizational behaviors and even improved performance (see Ashkanasy et al., 2002).

Positive affect does not, however, consistently result in increased workplace performance. While it appears that positive mood facilitates performance on creative and interpersonal tasks, research suggests that people in positive moods will avoid tasks that may detract from their positive mood, and hence may be more likely to engage in procrastinating or avoidant workplace behaviors (Baumeister

& Heatherton, 1996). Furthermore, there are certain tasks for which a negative affect is desirable. People in a negative mood tend to be more careful and sensitive to stimulus details, and hence exhibit an analytic cognitive style that is best suited for abstract problem solving or tasks requiring attention to detail (Fiedler, 2001).

Hence, individual effectiveness and organizational performance depends on an individual's ability to cope with emotional reactions to workplace stressors. In effect, they must be able to moderate the generation of emotion and its effect on behavioral coping. In this respect, emotional intelligence describes the set of cognitive mechanisms for emotional information processing and control. Thus, as Jordan et al. (2002) suggest, emotional intelligence moderates affective responses to workplace stressors. Hence, it is argued in this chapter, consistent with Jordan et al., that emotional intelligence plays a critical role in employees' abilities to moderate the emotional effects of stress and the impact of emotional stress on their workplace performance. In the following section, therefore, we examine the role of emotional intelligence in the workplace, followed by a detailed explanation of Mayer and Salovey's (1997) structural model of emotional intelligence. Following this, we will introduce the Jordan et al. model of emotional intelligence as a moderator of affective responses to workplace stressors, upon the basis of which we will begin to deconstruct the contents, structures, and functions of emotional intelligence with a view to developing an understanding of the cognitive processes that underlie the affective response process.

EMOTIONAL INTELLIGENCE AND ORGANIZATIONAL BEHAVIOR

A key tenet of this chapter is that the individual difference construct of emotional intelligence (Mayer & Salovey, 1997; Salovey & Mayer, 1990) can contribute to our understanding of successful and unsuccessful coping behaviors in organizations. While there are many dispositional variables, including self-efficacy (Bandura, 1977) and locus of control (Rotter, 1960), that affect an employees' ability to deal with stressful situations, we argue that the appraisal of stress results in emotional activation and emotional responses. It is appropriate therefore to consider an individual difference variable that deals with emotion. In this case, we argue that emotional intelligence is an emotional variable that is important to consider in the context of coping.

Some authors have argued that positive and negative mood states, referred to by Watson, Clark and Tellegen (1988) as dispositional affectivity, have the potential to affect behavior. Subsequently, this variable has been researched extensively in organizational settings (e.g. George, 1991). Affectivity, however, applies to

emotional traits and states, rather than the manner by which individuals deal with emotions during stressful episodes. In this respect, Mayer and Salovey (1997) argue that emotional intelligence is differentiated from other forms of intelligence and personality because it deals directly with the way people recognize and deal with emotions and emotional content. The focus on recognizing and regulating emotion also differentiates emotional intelligence from impression management (Lennox & Wolfe, 1984; Snyder, 1979), which is primarily a social skill used in interpersonal relationships.

The utility of emotional intelligence and its impact on organizational performance has been contentious for some time, however, and continues to attract controversy (see Jordan et al., 2003). Although not implicitly stated, an undertone of those who seek to downplay the role of emotional intelligence in determining behavior in organizations falls into two categories, those who consider general intelligence alone to have sufficient power for predicting performance (e.g. Becker, 2003) and those who see emotional intelligence as just another personality construct (Davies, Stankov & Roberts, 1998). Dealing with these two issues in more detail, the first argument considers that all behavior, including those behaviors that can be linked to the emotions can be considered as a function of cognition. Proponents of this view question the inclusion of emotional intelligence research within the area of organizational behavior and suggest that it is a fad that could be replaced by assessments of general intelligence (Becker, 2003). We concede that intelligence and cognition play a major role in determining behavior in the workplace. We note, however, that many researchers argue that both emotion and cognition play a role in decision making (Weiss & Cropanzano, 1996). Indeed, research into organizational commitment (Allen & Meyer, 1990) demonstrates the importance of emotion in determining organizational behavior. To draw on Damasio (1994), human behavior cannot be understood fully without understanding its underlying emotional dimensions. Ashforth and Humphrey (1995) offer a similar view at an organizational level, arguing that work life is intrinsically emotional and value-based, and that ostensibly rational organizational behavior reflects the extent to which organizational members are able to deal with their emotions.

Now we turn the argument that emotional intelligence is just another personality variable in organizational behavior research. As noted earlier, this opinion has some merit given the muddled constructs of emotional intelligence that emerge particularly from the populist literature. Jordan et al. (2003) clearly state that in order to overcome this perception that researchers need to adhere to the construct of emotional intelligence developed by Mayer and Salovey (1997). Indeed, we are probably at a crossroads in emotional intelligence research, where considered evidence-based research needs to overtake the populist conceptualizations

of emotional intelligence or the construct will be reduced to the status of a fad.

Finally, Caruso and Wolfe (2001) argue that emotional intelligence in the workplace expands on the abilities employees have to improve their performance. In particular, they differentiate between emotional competencies in the workplace and emotional intelligence. In this instance, Caruso and Wolfe point out in particular that emotional competencies such as stress tolerance, empathy, and optimism are all really personality traits, which have been relabeled. As such, competencies do not provide new insights into the application of emotional intelligence in the workplace. On the other hand, emotional awareness, or ability to perceive their own and others' emotions; ability to use emotions to generate ideas; understanding emotions and being able to see issues from other peoples' perspectives; and managing those emotions constructively all provide a different set of skills which can enhance performance in organizations.

In summary, we argue that emotional intelligence has a role in individual performance in organizations and more specifically that these skills contribute to coping in the workplace. In the next section, we discuss in detail the nature of emotional intelligence, and then outline existing research that has examined the link between emotional intelligence, stress appraisal and coping.

What is Emotional Intelligence?

While Salovey and Mayer (1990) were the first to propose a model of emotional intelligence as a precursor of behavior, there has been a long history of research into the interaction of emotions and intelligence. Piaget (1954/1981) explored theoretical links between affectivity and intelligence, while Izard (1985), LeDoux (1989) and Lazarus (1982) have discussed the link between emotion and cognition in the 1980s. Examining the links between the current work on emotional intelligence and earlier work on emotions and cognition, Salovey and Mayer's ideas on emotional intelligence can be linked to Thorndike's (1920) work on social intelligence and Gardner's (1983) work on multiple intelligences that included interpersonal and intra-personal intelligence.

As we noted earlier, one problem that has dogged emotional intelligence research is the plethora of differing definitions that have emerged over the last ten years. Significantly, much of the new theoretical work on emotional intelligence has been conducted outside of academic literature (Bar-On, Brown, Kirkcaldy & Thome, 2000; Cooper & Sawaf, 1997; Goleman, 1995, 1998; Steiner & Perry, 1997; Weisinger, 1998). Mayer (2001) notes that, while these writings contribute to our understanding of multiple aspects of personality, they do not

really contribute to our understanding of emotional intelligence. Factors identified in these populist constructs of emotional intelligence include motivation, attitude, and empathy. Goleman (1995, 1998) and Bar-On (1997) included motivation in their research. Goleman also suggested that emotional intelligence is largely a set of (positive) attitudes (see also Cooper & Sawaf, 1997). Finally, both Goleman (1995, 1998) and Bar-On (1997) include empathy in their definitions of emotional intelligence. In line with Mayer's position, however, we argue that to accept all these definitions only weakens the construct. Although these various constructs are interesting and may impact behavior in various ways, and may be related to emotional intelligence, they are not in themselves facets of emotional intelligence.

In fact, only Mayer and Salovey's (1997) model of emotional intelligence focuses solely on the link between the cognitive and emotional aspects of intelligence. As we have discussed, the other models of emotional intelligence, which incorporate emotional skills or competencies, personality traits, and attitudinal variables (Mayer, Caruso & Salovey, 1999), in many respects would seem to serve only to confound the construct. Consequently, Mayer and Salovey's (1997) definition of emotional intelligence is the one we will employ in the remainder of this chapter.

Mayer and Salovey's (1997) definition is their most recent, and includes four components, or "branches": perception, assimilation, understanding, and management of emotions. In the multidimensional model, perception provides a platform for assimilation that, in turn, provides a foundation for understanding, and understanding then contributes to emotional management. Using the Mayer and Salovey terminology of "branches," we discuss each facet of emotional intelligence in the following paragraphs.

Emotional Perception

Mayer and Salovey (1997) outline emotional perception as the ability to be self-aware of emotions, and to be able to express emotions and emotional needs accurately to others. Mayer and Salovey also note that this includes an ability to distinguish between accurate and inaccurate expressions of emotions, and between honest and dishonest expressions of emotions by others. The issue of emotional awareness is particularly important when discussing the link between emotional intelligence and coping, because emotional self-awareness is a starting point for dealing with an appraisal of stress. In other words, employees' feelings that emerge following the appraisal of stress drive the emotional and behavioral consequences that follow. The ability to recognize others' emotions and the sincerity of those emotional expressions is also of use in dealing with stressful situations. For instance, as a part of an appraisal, individuals may compare their situation and their feelings in relation to that situation with others who are currently in the same situation or those who have experienced a similar situation in the past.

If following this comparison they observe that the other parties were genuinely stressed or distressed then this may contribute to their selection of an appropriate coping strategy.

Emotional Assimilation

This refers to the ability of an individual to distinguish between the different emotions they may be feeling and to prioritize those that are influencing their thought processes (Mayer & Salovey, 1997). During an employee's appraisal of a situation, s/he may experience a range of emotions that may include frustration, anger, and fear. Emotional assimilation enables the employee to cognitively process *why* feelings are being experienced. In other words, employees can determine whether these emotions are reasonable in the situation. During the appraisal process, this is a skill that determines the level of stress one is going to endure. Assimilation can also act as a trigger for level of emotional management required in making a decision about which coping strategy to adopt. If the initial emotional reaction is out of proportion to the stressor, then the emotional control one asserts may need to be greater. A good example, with which we are all familiar, is a jammed photocopier. Generally, this type of incident will result in a range of reactions. These include just fixing the jam (problem-based strategy with good emotional control emanating from the assessment of a minor inconvenience) to a full-blown tantrum with swearing and kicking of the machine (emotion-focused strategy of blaming with poor emotional control emanating from the assessment of a major obstacle). Emotional assimilation can be of use in assessing the potential reaction and deciding how much emotional control needs to be applied in the situation to resolve the problem.

This branch also includes the ability to adopt multiple perspectives to assess a problem from all sides, including pessimistic and optimistic perspectives. By adopting multiple perspectives, employees can determine the appropriate emotional state to facilitate the solution of the problem, or they can resolve the conflicting emotions they may be feeling. In the present context, adoption of multiple perspectives may provide a key process that may enable employees to break out of the cycle of negativity that can emerge as a result of feeling stressed.

Emotional Understanding

The third branch represents an ability to understand complex emotions such as a "double-bind," or simultaneous feelings of loyalty and betrayal (Mayer & Salovey, 1997). This branch also refers to the ability of individuals to recognize the likely transitions between emotions, moving, for example, from feelings of fear over a threat to goal attainment to feelings of anger or hopelessness if the threat is appraised as insurmountable. Recognizing and analyzing the sequence of emotions that emerge from perceptions is another important tool in overcoming

negative responses to emotions. Just as generating multiple perspectives may assist in providing a hiatus in negative-coping cycles, emotional understanding can contribute to reconciliation of the feelings of emotional dissonance that can emerge from appraisals of stress. This branch also allows the individual to prepare for the likely emotions they may encounter during a stressful period. Just as understanding that the grief cycle can assist grieving individuals to work through a painful period in their lives, so understanding the varying emotions that can emerge during a stressful episode can assist individuals to overcome negative feelings and address the problem.

Finally, emotional understanding also enables the individual to examine the reactions and motivations of other employees. In this case, emotional understanding allows the individual to assess the likely transitions other employees may experience during a stressful episode, thereby providing insight into others' emotional expressions and behaviors. Recently, Kelly and Barsade (2001) completed research that demonstrated that emotions are contagious in the workplace. Both the positive and negative emotions that are expressed by fellow workers can infect other workers. From this research, we can see that understanding the emotions expressed by others and being able to track their source may be vital to coping with stress in the workplace.

Emotion Management

The fourth branch of emotional intelligence revolves around the regulation of emotions. This branch refers to the ability to connect or to disconnect from an emotion depending on its usefulness in any given situation (Mayer & Salovey, 1997). In the case of perceptions of stress, it may be useful to disconnect from feelings of frustration if such feelings are distracting the individual from completing tasks. For instance, Fitness (2000) found that open expressions of anger in the workplace could negatively affect relationships in the workplace and lead to unresolved conflict. Connecting with feelings of anger, on the other hand, may be useful if this feeling provides motivation. The emotional management dimension of emotional intelligence separates emotional intelligence from the personality domain, because emotional regulation can vary to suit specific personality traits (Mayer & Salovey, 1997).

While the focus in much of the popular literature has been on emotional regulation as the suppression of emotion (e.g. Goleman, 1998), Salovey (2001) notes that both expressing and suppressing emotion can have a negative impact on health. He suggests that emotional management is really about focusing on actions that are best for one's health. In other words, in line with the coping literature, there are times when emotion-focused strategies involving the expression of emotion will result in the best outcome and at other times

emotion-focused strategies involving the suppression of emotion will provide the best outcome.

Emotional Intelligence and Stress

Recent research by Ciarrochi, Deane and Anderson (2002) has explored the link between emotional intelligence and stress. Their findings suggest that there is a definite link between inability to manage one's own emotions and feelings of hopelessness and depression. Ciarrochi and his colleagues concluded that individuals who are more emotionally perceptive might indeed be more vulnerable to stress. While this is an intriguing idea, the result does not discount that the possibility is, maybe, an artifact of the self-reporting measure used in the study.

Examination of research into empathy (e.g. Davis, 1994) reveals that empathy can operate on a continuum from perspective taking, where an actor is able to see another person's points of view, to personal distress, where actors essentially take on the other person's distress. Emotional intelligence may have a similar curvilinear relationship with stress. In other words, being high in empathy may be as debilitating (for different reasons) as being low in empathy. Another issue, still to be explored, is that emotional intelligence is a complex set of skills. For instance, Ciarrochi and his associates (2002) found that having high emotional perception with low emotional control made the respondents more susceptible to stress. The underlying question here is whether an individual, who is high in one emotional intelligence skill, but low in another, can be considered emotionally intelligent. In essence, if an individual has excellent emotional self-awareness, but poor emotional control, can s/he be considered emotionally intelligent? Certainly if we take the example of alexithymic individuals, who can have excellent emotional control, such people are not considered emotionally intelligent (see Palmer, Donaldson & Stough, 2002).

In the final part of this discussion of emotional intelligence, we examine some of the mechanisms whereby the branches of emotional intelligence contribute to effective coping. While it may seem intuitive that people with high emotional intelligence will have better coping behavior, examining the individual branches of emotional intelligence and how they contribute to this outcome allows us to increase our understanding of the emotional intelligence construct.

Emotional Intelligence and Coping

Existing literature in the area of coping discusses strategies to deal with stress and to improve work performance through the application of a general set of

problem-focused or emotion-focused strategies (Auerbach, 1989; Folkman & Lazarus, 1980). In other words, to cope with stress in an organizational setting, employees can either apply affective solutions or cognitive solutions. As noted earlier, affective solutions or emotion-based coping strategies assist employees to deal internally with the stressor. Cognitive solutions or problem-based strategies, on the other hand, address the source of the stress. In the lexicon of researchers within the coping paradigm, emotional intelligence may explain why some employees manage stress, while other employees allow stress to manage them. In other words, in the face of an appraisal of a stressful situation, why do some employees adopt positive behaviors such as seeking support, cognitive reappraisal and goal setting and successfully deal with stress, while others adopt negative behaviors such as avoidance and withdrawal and subsequently fail to adapt to stress over time?

An explanation of behavior modified by emotional intelligence contributes to our understanding of why individuals in similar situations are not consistent in applying the positive emotional and problem-based coping strategies. Emotional intelligence provides this explanation by linking both emotional and cognitive elements to provide a holistic assessment of coping. While researchers working in the area of coping have focused on programs that either eliminate the stress or cognitively reappraise the stressor (Ivancevich, Matteson, Freedman & Phillips, 1990; Kahn & Byosiére, 1992; O’Driscoll & Cooper, 1996), they have yet to identify the antecedents of successful coping strategies to maintain high performance. To maintain performance, an individual difference variable needs to enable the individual to maintain the positive benefits of job-related stress and also to minimize the negative aspects of stress. To achieve this outcome, an emotional intelligence perspective suggests that affective influences on behavior will need to be addressed at differing points for each individual. Emotional intelligence therefore provides the ability to fine tune coping strategies to individual requirements.

Emotional Intelligence as a Moderator of Affective Responses to Stress

In the Jordan et al. (2002) model, emotional reactions to workplace stressors lead to negative coping behaviors and poor performance outcomes. Specifically, Jordan and his colleagues proposed job insecurity as a case in point of a job stressor associated with divergent behavioral performance outcomes. They suggested that job insecurity triggers an emotional reaction that, like stress, can motivate positive or negative behavioral responses. They therefore proposed emotional intelligence as the variable that moderates the nature of affective responses to job insecurity, as well as the impact of the affective responses on motivated actions.

The foundation of the model outlined by [Jordan et al. \(2002\)](#) is a two-stage representation of the affective response process linking workplace stressors to workplace behavior. This approach conforms to [Ortony, Clore and Collins's \(1988\)](#) theory of the cognitive processes involved in the generation of emotions. The first stage of the [Jordan et al.](#) model proposes that an emotional response emanates from an employee's perception of an emotional cue or affective event in the workplace. They proposed further that cognitive evaluation of this perception ([Ortony et al., 1988](#)) results in effect in two inter-related affective reactions, involving cognitive and affective change. In response to the cognitive and affective changes instigated in the first stage of the affective response process, the second stage of the [Jordan et al.](#) model details the modulation of coping behaviors. The role of emotional intelligence in the affective response process is described as the moderation of: (1) the appraisal of the workplace stressor as an emotional cue, and hence the instigation of the affective response process; (2) the cognitive and affective change in response to the workplace stressor; and (3) the formulation of behavioral strategies to cope with affective and cognitive change.

The critical implication of the [Jordan et al. \(2002\)](#) model therefore is that the branches of emotional intelligence moderate the effect of affective responses to workplace stressors on workplace behavior. This represents a substantial advance on the existing literature on coping with workplace stress previously discussed in this chapter. The model holds that high emotional intelligence employees are likely to be able to recognize and cope proactively with the emotional consequences of workplace stressors. Furthermore, [Jordan et al.](#) proposed that differences in emotional intelligence also provide an explanation of employees' selection of coping mechanisms. For instance, in meeting deadlines, the same individual can adopt very different coping mechanisms even within similar situations. At one time s/he may leave a task until the last minute to allow time pressure to build and force urgent action to achieve results within the required timeframe. At another time, given a similar amount of warning, s/he may carefully prepare a schedule, which allows time to work towards completing the task. In this example, emotional intelligence functions to inform the individual's decision making with regard to the management of stress. This requires an ability to monitor stress level (emotional perception and assimilation), and to understand the effects of increasing or decreasing stress levels on situational coping capabilities (emotional understanding and management).

Earlier in this chapter, we discussed in detail the four branches of emotional intelligence as posited by [Mayer and Salovey \(1997\)](#), and the application of the branches in the [Jordan et al. \(2002\)](#) model. Nonetheless, it is important to point out that the unity of the emotional intelligence construct is still largely unresolved. Although [Jordan et al. \(2002\)](#) addressed the four branches with regard to their

individual effects on emotional and behavioral moderation, the inter-relationships between the components are still essentially unexplored, especially in a workplace context. The Jordan et al. model thus suggests that emotional awareness and emotional management are of primary importance as a moderator of job stress, but it fails to differentiate between the components in terms of basic processes of emotion generation and modulation.

Based upon our earlier discussion of each component of emotional intelligence, we will consolidate what we have already established and further investigate the differential effects of the four branches of emotional intelligence, where each contributes to the moderation of affective responses to work stressors and subsequent impact on performance. This will involve a deconstruction of the processes involved in each of the components of emotional intelligence and the processes that they moderate in the affective response process.

AFFECTIVE RESPONSES TO WORKPLACE STRESSORS: A NEW PROCESS MODEL

Weiss and Cropanzano (1996) describe affective events as the proximal cause of affective reactions. Affective reactions are thus social psychological responses constructed in the process of social development to facilitate effective responding to important social encounters (Ekman, 1992). In this way, affective responses have a direct influence on behaviors and attitudes. This is because, as Lutz and White (1986) note, affective responses are an integral part of a social psychological process that monitors the adaptive success of the self in social relations with the environment.

Behavioral and attitudinal functioning are therefore regulated by emotional responses to social encounters in which the individual has inadequate social resources with which to respond (Keltner & Haidt, 2001). In this regard, emotions function as a negative feedback process that motivates the adaptive change in attitudinal and behavioral resources that, in turn, shapes relations with the environment (Bonanno, 2001; Gross, 1999). Affective responses are therefore conceptualized in our model as a process of social self-regulation, wherein social behaviors and attitudes that determine social relations are monitored according to their success in progressing the individual toward desired goals. If social input indicates that these resources are inadequate to meet the goals, an emotion is elicited that acts as an error signal (Keltner & Haidt, 2001). This error signal thus becomes a resource for making subsequent adjustments to social functioning (Carver & Scheier, 1999).

The model we present is shown in Fig. 1. In this model, we identify that the affective responses are a function of social self-regulation, wherein the affective

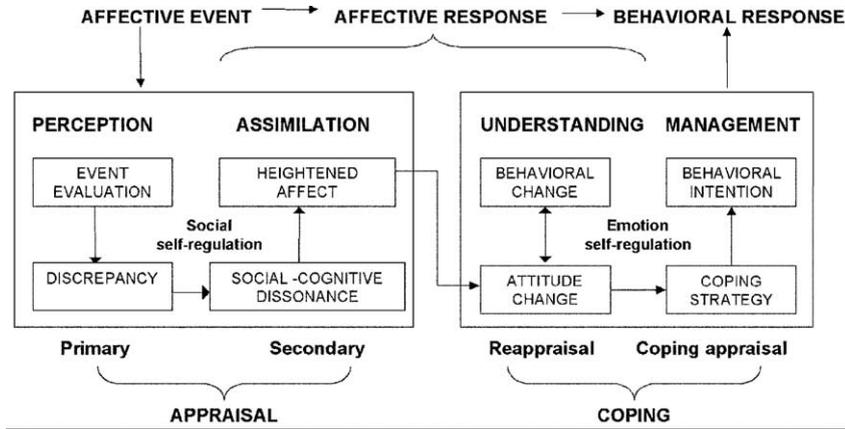


Fig. 1. A Process Model of Affective Response.

significance of events is appraised (Scherer, 2001) and with which it is coped (Carver & Scheier, 1999). Thus, social self-regulation initiates a process of emotional self-regulation. We propose that the appraisal of affective events involves the perception of a discrepancy in social functioning (Scherer, 2001) and an identification of the attitudes and behaviors, or social psychological resources, that are dissonant with social situational demands. This “social psychological dissonance” produces an emotional response that motivates the adjustment of social attitudes and behaviors (Erber & Erber, 2001). Consistent with Lazarus (1999), the emotion-motivational state generated by social psychological dissonance is then responded to, or coped with. Dissonance is accompanied by psychological discomfort or negative affect, because it indicates an error or deficit in social psychological resources for adaptive functioning.

Thus, the appraisal component of social self-regulation triggers a negative emotional feedback response (Adolphs & Damasio, 2001). The psychological dissonance accompanying this emotional response feeds into the second phase of social self-regulation, coping, which utilizes the emotional feedback to formulate appropriate social psychological changes in attitudinal and behavioral functioning. Affective responses are therefore triggered by the appraisal of affective social information (Adolphs & Damasio, 2001) that, in effect, functions as a reference value for the extent of social self-regulation or coping needed (Gross, 1999).

The model that we propose in Fig. 1 is based on the four branches of emotional intelligence as defined by Mayer and Salovey (1997). As such, and consistent

with the arguments developed earlier in this chapter, the model links two primary components: appraisal and coping.

Appraisal

The first phase of an affective event in Fig. 1 is appraisal. As described earlier in the chapter, appraisal involves the perception of the event and evaluation of the demands upon personal resources that would be incurred in response to the event. In our model, the appraisal process has both involuntary and voluntary consequences for emotions (Frijda, 1993). The primary stage of appraisal involves that perception of events and detection of their relevance for social functioning (Scherer, 2001). This is an involuntary, or automatic psychological function based on the peripheral processing of social stimuli with reference to the social psychological resources of the individual (Scherer, 1997). Thus, primary appraisal is the mechanism through which the valence of social stimuli is implicitly perceived (Roseman, 2001). The identification of a stimuli-resource discrepancy triggers a reflex response, analogous to a psychophysiological orienting response that directs attentional resources to the affective event for further evaluation of its relevance or consequences for social adaptive functioning (Scherer, 2001).

Social psychological resources thus shape the affective meaning of the event for the individual (King & Sorrentino, 1983). Social psychological resources are those physiological, cognitive, emotional, or behavioral patterns of responding to social demands that have been reinforced through social development and habituated for efficient person-environment interactions (Keltner & Haidt, 2001; Lazarus, 1991; Mesquita, 2001). Social psychological resources are deployed in everyday interactions in the workplace as a reference value for the regulation social functioning (Armor & Taylor, 1998). An affective event is thus perceived as a discrepancy between the social psychological resources, or tools for social functioning, required for successful completion of tasks, and the resources available to the person (Weiss & Cropanzano, 1996). In this situation, either there is a deficit in the deployment of social psychological resources, which may be reversed by increasing social psychological capacities (Pyszczynski & Greenberg, 1992), or the conflict lies in the absence of available resources to respond to the demands of the affective event (Baumeister & Scher, 1988).

The nature of the affective event, that is, whether the source of discrepancy is caused by a deficit of resource utilization or an absence of resource capabilities, is evaluated by the secondary appraisal component of social self-regulation. The secondary appraisal mechanism thus assesses the relationship between social goals, social functioning, and social outcomes in order for the individual to

understand whether the discrepancy between social goals and social outcomes is attributable to a deficit in social (cognitive and behavioral) functioning, or whether the discrepancy is between social goals and social functioning capabilities (Lazarus, 1999). Secondary appraisal is thus a comparative process wherein the consonance or dissonance between social cognitions, behaviors and the reality of social events or outcomes is evaluated. The outcome of this evaluation is an appraisal of the extent of discrepancy in social functioning and, hence, the extent of adaptive cognitive or behavioral change required for a renewal of adaptive functioning.

In summary, the first step of social self-regulation is primary appraisal, in which implicit social cognitive processes detect an affective event, or social outcome that is discrepant with social goals and expectations (Gross, 1999). This discrepancy triggers an emotional reflex that orients attentional resources toward the affective event for further evaluation (Scherer, 2001). The secondary appraisal engages in a comparative evaluation process to identify the magnitude of the discrepancy (Lazarus, 1991). This is a process that we term social cognitive dissonance, wherein social cognitions conflict with goals or resources in the work context.

Emotion Generation

Social cognitive dissonance evokes heightened affectivity in individuals because discrepancy between social demands and social psychological resources undermines the requirement for effective functioning (Harmon-Jones, 2001). When perceptions about the environment or oneself are dissonant, decisions cannot be implemented, and protective or facilitative action may be impeded or inefficient. Dissonance is associated with negative affectivity most commonly, because it is an unstable psychological state that signals undesirable social relations (Jones & Gerard, 1967). The negative affective that results from dissonance motivates the individual to respond to the dissonance by either by adapting social psychological resources to meet social demands, which may mean a change in either behavior or attitudes, or a re-evaluation of the valence of the goal for which the social event is an obstacle (Carver & Scheier, 1999). Thus, the individual's emotional reaction to social dissonance functions to motivate people to engage in information processing that may accomplish the goal of reducing negative affect and/or behaving adaptively (Erber & Erber, 2001).

This view of dissonance fits with the views of emotion that posits that emotional states serve adaptive functions (Keltner & Haidt, 2001). Following Darwin (1872/1985), emotional scientists (e.g. Frijda, 1986; Izard, 1977) suggest that emotions serve the function of increasing chances of survival by organizing, motivating and sustaining behavior in response to significant events that impact upon their social success. The emotions associated with dissonance may serve

the function of motivating cognitive and behavioral changes that assist with the execution of adaptive behavioral and attitudinal change (Erber & Erber, 2001).

That social dissonance causes an increase in negative affect is explained by the psychological uncertainty as to how to respond to the affective event. For instance, Festinger (1957) proposed that dissonance was “psychologically uncomfortable” (p. 3). Furthermore, more recent research has tested this idea and found that discrepancy can induce self-reported changes in negative affect (Elkin & Lieppe, 1986). The experience of negative affect associated with dissonance has been related to Seyle’s (1976) concept of the fight or flight response. As such, negative affect is explained as the felt experience of a drive state that is tied to physiological arousal (Brehm & Cohen, 1962).

In summary, the social self-regulation model proposed in this chapter is an explanation of the function of emotional responses to affective, or stressful events. This is because the model proposes that affective reactions are in response to the comparative evaluation (secondary appraisal) of a perceived social discrepancy (primary appraisal). The social cognitive dissonance that arises from secondary appraisal causes an increase in negative affect, which is described as an adaptive motivational state in response to social psychological instability.

Emotional Intelligence and Affective Responses

At the core of our model lies the idea that an individual’s emotional intelligence, their ability to perceive, to assimilate, to understand, and to manage emotional information (Mayer & Salovey, 1997), can also represent the functionality of the processes we have described above. That is, emotional intelligence is presented in our model as involving social self-regulatory processes involved in the monitoring and adjustment of social functioning (Gross, 1999). Emotional intelligence thus represents the individual’s ability to execute the first stage of the social self-regulation process described above. As such, and consistent with Jordan et al. (2002), emotional intelligence, which measures individual differences in functioning ability, is a moderator of appraisal and coping. If this is so, then it follows that the nature of the emotions generated in response to the perception of an affective event, and the way in which these emotions are utilized in the modulation of cognitive and behavioral adaptive change, is a function of emotional intelligence.

Consistent with Mayer and Salovey (1995), and as we discussed earlier, we propose that each component of emotional intelligence functions more or less interdependently in the process of social self-regulation. Thus, while the strength of one’s ability has resonance for the outcome of other emotional intelligence processes, it corresponds to the moderation of distinct processes and functions involved in the appraisal and coping processes. Our model therefore holds that emotion perception, the first component of emotional intelligence, is explainable

in terms of the processes involved in primary appraisal. In this respect, we posit that emotional assimilation represents the function of secondary appraisal. With regard to coping process (discussed later), we propose that emotional understanding is required for the first component of coping (reappraisal), and that emotion management corresponds to the individual's ability to succeed in and to maintain social self-regulation.

Appraisal and Emotional Intelligence

Emotional perception is involved in the initial, involuntary affective appraisal of the event (Mayer & Salovey, 1997). Thus, the structure of emotional perception is mapped onto the structure of primary appraisal, and the social psychological processes underlying emotional perception involve the peripheral information processing of environmental stimuli and detection of cues that are inconsistent with existing social psychological response resources. Emotional intelligence thus moderates the perception of affective events (cf. Mayer & Salovey; Jordan et al., 2002). That is, according to this new process model, emotional perception describes the ability to process continuous environmental input and also accurately detects those stimuli that are relevant to the success of a person's social functioning.

By implication, people with high emotional intelligence will have more effective social self-regulation in that they will only respond emotionally to events that are relevant to their pursuit of social goals, while someone with low emotional perceptual intelligence is more likely to either be oversensitive to affective stimuli or insensitive to affective stimuli (Jordan et al., 2002). This is because social psychological attitudes and behaviors vary in their significance to individual well being depending on whether they are of current concern (Carver & Scheier, 1999). Thus, a hierarchy of need determines whether attentional resources should be pared in order to attend to affective environmental cues (Greenwald, 1980). Over-sensitivity as well as insensitivity to emotional cues are examples of low emotional intelligence (Gross, 1999; Mayer & Salovey, 1997), and hence social self misregulation. In the case that an individual is oversensitive to affective stimuli, this means that s/he is attending to social stimuli that are irrelevant to proximal goals. This may be because social psychological resources are limited, or simply that the individual has failed to work to his or her potential. As a result, such an individual is particularly vulnerable to affective response formation, because his or her self-regulation system is signaling a deficit in resources (emotions are the error signal).

This brings us to the second phase of appraisal (secondary appraisal), which, we noted earlier, functions to establish the relevance of the emotional cue, or the nature of the discrepancy. Thus, we propose that this secondary appraisal component is explainable in terms of emotional assimilation. In this sense,

emotional assimilation defines the accuracy with which the social psychological resource discrepancy is evaluated. In the case above, environmental cues are being detected as being of affective significance due to the misregulation of social psychological perceptual processes. Each of these event perceptions triggers an emotional-orienting response that automatically draws social cognitive resources to the detected source of discrepancy, even though the social cues are affectively irrelevant. The secondary appraisal process identifies the source of discrepancy and evaluates its potential impact upon adaptive functioning with reference to the goals of existing social psychological behaviors and attitudes. If emotional assimilation ability is high, the secondary appraisal can modify primary appraisal. For instance, a goal that was perceived to be significantly affecting adaptive functioning, may not be seen to be relevant after secondary appraisal. If, however, the person who is low in emotional perception is also low with regard to emotional assimilation, the misregulation will not be identified. Instead, on the basis that an emotional cue has been drawn to one's attention, it is evaluated as a significant problem for social adaptive functioning.

Individual differences in emotional assimilation may also explain differences in the nature and intensity of an individual's emotional reactions to the appraisal of affective events. Emotional assimilation abilities ensure that the person understands the meaning of the emotional cue: whether it is salient and reflects a need for social adaptive changes, or whether it has been detected erroneously because the person's social psychological resources for coping with everyday hassles are being deployed for coping with another task. In the latter instance, they may not be readily available to facilitate a relatively automated behavioral or cognitive response to the social event. If emotional assimilation is accurate, the emotional reaction to the situational stimuli will reflect a social psychological discrepancy that is an impediment to social adaptive functioning. Furthermore, the intensity of the emotional response will reflect the urgency with which the individual must adjust social cognitive and behavioral functioning (Higgins, 2001). This is because emotions with high intensity are associated with greater dissonance, and hence greater motivational drive and response facilitation (Petty, DeSteno & Rucker, 2001).

In summary of the appraisal phase of our model, we propose that emotion is generated through a process of event evaluation and discrepancy identification, leading to social psychological dissonance. Consistent with Jordan et al. (2002), we have cast this process in terms of Mayer and Salovey's (1997) model of emotional intelligence, where emotional perception and assimilation moderate the nature and intensity of the emotions generated. The resulting affect motivates attitudinal and/or behavioral changes. This emotional modulation is dealt with in the second phase of our model, coping.

Coping

As previously discussed, coping is the social self-regulation process whereby emotional reactions are modified and modulated in order to reduce negative affect (Harmon-Jones, 2001; Petty et al., 2001) and restore effective functioning (Carver & Scheier, 1999). We propose that coping involves two phases: reappraisal and coping appraisal (Folkman, Lazarus, Dunkel-Schetter, De Longis & Gruen, 1986). Both reappraisal and coping appraisal involve cognitive and emotional control (Lazarus, 1991). In contrast to the appraisal component of social self-regulation, which involves the monitoring and evaluation of emotional affective events, the coping component involves the evaluation and adjustment of affective reactions (Carver & Scheier, 1999). As such, in our model, coping involves social cognitive (attitudinal) and behavioral change, in the interests of decreasing negative affect and increasing the adaptive success of social psychological resources (social cognitive facilities and behavioral intentions).

As noted earlier, secondary appraisal induces social dissonance as the individual strives to understand the genesis of the social cognitive discrepancy that has triggered his or her affective state (Erber & Erber, 2001). A heightened affective state results from this dissonance, signaling error in social self-regulation and a need to make adjustments to social psychological resource utilization (Carver & Scheier, 1999; Scherer, 1997). It is the task of reappraisal to determine the most appropriate social psychological adjustments to make (Folkman et al., 1986). Either the individual must increase social psychological resources, by making adjustments to social goal priorities, and in effect, redirecting resources allocations from other social tasks/concerns, or the individual must make adjustments to the social goal structure that is discrepant with his or her available resources to cope with events relevant to the attainment of this goal (Petty et al., 2001). Reappraisal requires an accurate understanding of the individual's own resource capabilities in order to make either attitudinal or behavioral adjustments. If the discrepancy is caused by social psychological goals that cannot be met by personal resources, then the adaptive adjustment required is a change in attitudes regarding the affective significance of the social goals. That is, goal priorities must be adjusted such that the affective significance of an obstacle to its attainment is reduced. On the other hand, if the discrepancy in goal attainment is owing to inadequate social psychological resource deployment, the person affected can either increase resource output (behavioral) to cope with the demands of the social task, or reduce the affective significance of the social outcomes by making adjustment to social goals (attitudes). In this case, it would be maladaptive for the individual to adjust attitudes or goals rather than modulating the emotional response for the facilitation of behavioral change. In this way, reappraisal is the psychological

comparative process, analogous to primary appraisal, which functions to orient behavioral decision making. Whereas primary appraisal detects the discrepancy and instigates a process of evaluation for adaptive change, reappraisal is a comparative process of behavioral decision making that detects the most adaptive avenue for adaptive change.

Based on this understanding, the individual develops a coping strategy and behavioral or attitudinal intention for the manifestation of adaptive change (cf. Folkman et al., 1986). It is thus the function of coping appraisal to develop the content of the attitudinal change, or the direction of behavioral action. For example, in the workplace, if job insecurity is the affective event, and it is perceived to be discrepant with an employee's social psychological resources for understanding and functioning adaptively under these changed social environmental conditions, then an emotional response will be elicited. The nature and intensity of this response will, in turn, depend on the social dissonance associated with the secondary appraisal process. Ultimately, the employee will decide how to reduce heightened affect and to increase social functioning by either changing his attitude toward the job (reduced work commitment would reduce the affective significance of job insecurity), or by making adaptive changes to behavior (increased work performance will increase social psychological resources for coping with job insecurity and reduce the affective significance associated with this social event). Thus, coping appraisal formulates an adaptive coping strategy based on the orientation of adaptive change (behavioral or attitudinal) evaluated during reappraisal. The coping strategy developed through the processes of coping appraisal is therefore manifest as a behavioral or attitudinal intention (Forgas, 2001).

In effect, our model posits a process of emotional self-regulation. That is, an emotional response mediates the impact of the affective event and emotional appraisal on social cognition and behavior (cf. Baumeister & Heatherton, 1996; Weiss & Cropanzano, 1996). As an emotion self-regulation process, coping involves the processing of emotional information generated by appraisal (a social self-regulation process) with reference to its meaning for adaptive functioning. The reappraisal process utilizes this emotional information as a reference value by which to formulate an understanding of what change in attitude or behavior is required, and this emotional information continues to provide feedback as to whether the attitudinal or behavioral intentions for change, formulated in the coping appraisal process, meet the requirements for adaptive functioning (Gross, 1999). That is, emotional feedback informs the person as to the success or adaptiveness of the behavioral intentions (Gross, 1999). Affect will be reduced as social psychological goals are regulated to fit social goals and social goals are regulated or modulated to meet social demands (Erber & Erber, 2001; Petty et al.,

2001). On the other hand, affective dissonance will maintain or increase if the individual's attempt at emotional regulation (through behavioral and attitudinal change) is unsuccessful, or maladaptive (Trope, Ferguson & Raghunathan, 2001). The emotion self-regulation process of coping thus serves two roles. In the first instance, it acts to minimize the emotional consequences of affective events. Secondly, it acts to alert the individual to potentially maladaptive or negative coping response strategies. As such, coping can be seen as a process that involves the self-regulation of cognition, emotion and behavior.

Coping and Emotional Intelligence

Emotion-regulation in effect requires an understanding of the way in which cognitive and behavioral change can modulate emotional states. In this case, our model includes the notion that coping requires the ability of emotional understanding associated with emotional intelligence (Mayer & Salovey, 1997) for the effective adjustment of cognition and behavior in response to the affective reaction. As noted previously, emotional understanding involves an appreciation of the way in which emotions can affect behavior and cognitions negatively and positively; it encompasses the ability to modulate affective responses for the facilitation of social performance, rather than the decrement of performance (Mayer & Salovey, 1997). Thus, emotional understanding becomes the reappraisal process by which the individual can make an adaptive decision as to the direction of cognitive or behavioral change required to modify the affective response.

The modification of affectivity arising from reappraisal signals progress toward adaptive social psychological resource utilization and social goal orientation (Scherer, 1997). We propose that the emotional intelligence ability, referred to as emotion management, functions to monitor the individual's changing affective state as a gauge of adaptive change. If the coping strategies formulated in the coping appraisal process are maladaptive, negative coping responses (for example, a decision to make behavioral changes to meet goals that are either irrelevant to the priorities of social functioning or goals remain discrepant with the person's social psychological coping capabilities), emotional management will function to detect the remaining discrepancy with reference to sustained or increased affectivity. Thus, our model incorporates the idea that coping requires a capacity for emotion management in order for the individual to maintain or to regain self-regulation of emotions and cognitions, and subsequently of their behavior. In parallel with Jordan et al. (2002), we see emotional intelligence as a moderator of coping as well as appraisal, in that it increases the accuracy of emotional understanding, and the efficacy of emotion management.

In summary, the model that we propose is an elaboration of AET, where affective responses are described as a social self-regulatory feedback mechanism

to alert the individual to an error in social psychological resources for coping with the affective event. Furthermore, in our model, affective responses function also to motivate social adaptive change in the behaviors or attitudes that are discrepant with environmental demands. In this phase of social self-regulation, emotional responses to appraisal are modulated into adaptive attitudinal or behavioral changes. As in the first phase of self-regulation, autonomic affective responses correspond to errors in self-regulation, owing to self-regulation failure or misregulation. As such, emotions intensify or reduce depending on the adaptive success of the coping. We have cast the model in terms of the four branches of emotional intelligence as conceptualized by Mayer and Salovey (1997) to make the point that individuals, who vary in terms of their level of emotional intelligence, will have different capacities to appraise and to cope with the processes inherent in their affective responses to events in their environment. Accurate primary appraisal, thus, is a function of emotional perception, secondary appraisal is determined by emotional assimilation, the accuracy of reappraisal and subsequent attitudinal or behavioral change is the domain of emotional understanding, and the efficacy of coping, and the monitoring of the success of social psychological adjustments to affective responses can be explained in terms of emotional management.

Implications for Workplace Settings and Conclusion

As Ashkanasy and his associates (Ashkanasy et al., 2002; Ashkanasy & Daus, 2002) point out, the principal theoretical and practical implication of AET is that it demonstrates how emotions are a “missing link” between the workplace environment and the behavior of employees (see also Fisher, 2000). AET therefore enables development of a more cogent framework for studying the environment-behavior nexus. In this presentation, we take the next step, and suggest a model of the workings of the “black box” within AET. We acknowledge that the propositions in our model have not yet been subjected to empirical testing, but we see the model as providing a potentially deeper explanation of the workings of AET, based on principles of emotional intelligence, psychosocial process, and emotional self-regulation. Furthermore, our model provides a more cogent explanation for the role of emotional intelligence as a moderator of affective responses, as proposed in Jordan et al. (2002).

From a practical perspective, our model further reinforces the point that emotional events in organizations play a pivotal role in determining behavioral and attitudinal outcomes for employees. Employees face “hassles” from varied sources on a daily basis. Events can come from interactions with peers, subordinates, or supervisors, and from within or without the organization. Similarly, “uplifts,” can

be derived from exactly the same sources. In this respect, Fisher (2000) has noted that affective states do not so much derive from the intensity of a particular hassle or uplift, as from an accumulation of events. In other words, it is the frequency with which events occur that leads to the strongest effects. Fisher (2000) argues that employees can generally manage one or two negative events, even if quite intense, but they struggle when the hassles are unrelenting. But there is an upside implicit here, too. This is that negative affect can be ameliorated by a succession of uplifting events, including support by supervisors, colleagues, friends, and family (Grzywacz & Marks, 2000). The situation is much worse if there is an unremitting series of negative events. The implication here is that managers need to focus on developing a supportive climate that facilitates such ongoing positive interactions. Ashkanasy and Daus (2002) refer to this as “the new challenge for managers.”

The model that we have proposed in this chapter represents an ambitious attempt to amalgamate three previously published models in organizational behavior and social psychology. Firstly, the model is an expansion of the Jordan et al. (2002) model of emotional intelligence as a moderator of the effects of job insecurity on work outcomes. The model is also founded in Affective Events Theory (Weiss & Cropanzano, 1996) in that we represent stress as the result of environmental stimuli in the organization, where affective responses play a central mediating role. Finally, Mayer and Salovey’s (1997) four factor conceptualization of emotional intelligence, also represented in Jordan et al. (2002), is deconstructed using basic principles of appraisal and coping. The resulting model, deeply rooted in social psychological processes, provides a deeper explanation of the role of emotion in appraisal and coping with stress in workplace settings, and its effects on employee attitudinal and behavioral outcomes. As such, our model answers Ashforth and Humphrey’s (1995) call for understanding of the underlying roles of emotions in organizational settings.

In conclusion, we have argued that AET and emotional intelligence provide a new perspective on our understanding of stress and coping in organizational settings. A review of the organizational stress literature demonstrates that responses to stress can be either emotion-focused or problem-focused. While this represents an important insight, and provides some understanding of coping mechanisms, it provides little insight into the mechanisms employees adopt when faced with stressful contingencies. Jordan et al. (2002) attempted to resolve this conundrum in part by proposing a model where emotional intelligence moderated the effect of job stress induced by job insecurity. That model, however, failed to provide a deep understanding of the mechanisms underlying coping and the role of emotional intelligence. In this chapter, we have attempted to address this shortcoming by providing a more detailed model, based on AET and the processes of stress coping, that provides a deeper understanding of the role of

emotional intelligence as a moderator of work stress. The model has implications for research in that it provides a framework for studying the interaction of personal characteristics and environment as determinants of behavior. From a practical perspective, the model implies that development of a supportive organizational climate that will facilitate positive interactions is an important goal for managers.

REFERENCES

- Adolphs, R., & Damasio, A. R. (2001). The interactions of affect and cognition: A neurobiological perspective. In: J. P. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp. 27–49). Mahwah, NJ: Lawrence Erlbaum.
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63, 1–18.
- Armor, D. A., & Taylor, S. E. (1998). Situated optimism: Specific outcome expectancies and self-regulation. *Advances in Experimental Social Psychology*, 30, 309–379.
- Ashforth, B. E., & Humphrey, R. H. (1995). Emotion in the workplace: A re-appraisal. *Human Relations*, 48, 97–125.
- Ashkanasy, N. M., & Daus, S. D. (2002). Emotion in the workplace: The new challenge for managers. *Academy of Management Executive*, 16, 76–86.
- Ashkanasy, N. M., Härtel, C. E. J., & Daus, C. S. (2002). Advances in organizational behavior: Diversity and emotions. *Journal of Management*, 28, 307–338.
- Auerbach, S. M. (1989). Stress management and coping research in the health care setting: An overview and methodological commentary. *Journal of Consulting and Clinical Psychology*, 57, 388–395.
- Averill, J. R. (1999). Creativity in the domain of emotion. In: T. Dalgleish & M. Power (Eds), *The Handbook of Cognition and Emotion* (pp. 765–782). Chichester, UK: Wiley.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191–215.
- Bar-On, R. (1997). *The Bar-On Emotional Quotient Inventory (EQ – i): A test of emotional intelligence*. Toronto, Canada: Multi-Health Systems.
- Bar-On, R., Brown, J. M., Kirkcaldy, B. D., & Thome, E. P. (2000). Emotional expression and implications for occupational stress: An application of the Emotional Quotient Inventory (EQ – i). *Personality and Individual Differences*, 28, 1107–1118.
- Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry*, 7, 1–15.
- Baumeister, R. F., & Scher, S. J. (1988). Self-defeating behavior patterns among normal individuals: Review and analysis of common self-destructive tendencies. *Psychological Bulletin*, 104, 3–22.
- Becker, T. (2003). Is emotional intelligence a viable concept? *Academy of Management Review*, 28, 192–195.
- Beehr, T. (1987). The themes of social-psychological stress in work organizations: From roles to goals. In: A. Riley & S. Zaccaro (Eds), *Occupational Stress and Organizational Effectiveness* (pp. 71–102). New York: Praeger.
- Beehr, T., & Newman, J. E. (1978). Job stress, employee health and organizational effectiveness: A facet analysis, model and literature review. *Personnel Psychology*, 31, 665–699.

- Bonanno, G. A. (2001). Emotion self-regulation. In: T. J. Mayne & G. A. Bonanno (Eds), *Emotions: Current Issues and Future Directions. Emotions and Social Behavior* (pp. 251–285). New York: Guilford Press.
- Brehm, J. W., & Cohen, A. R. (1962). *Explorations in cognitive dissonance*. New York: Wiley.
- Brockner, J., Grover, S., Reed, T. F., & Dewitt, R. L. (1992). Layoffs, job insecurity and survivors work effort: Evidence of an inverted-U relationship. *Academy of Management Journal*, 35, 413–425.
- Brown, J., Mulhern, G., & Joseph, G. (2002). Incident-related stressors, locus of control, coping, and psychological distress among firefighters in Northern Ireland. *Journal of Traumatic Stress*, 15, 161–168.
- Callan, V. J., Terry, D. J., & Schweitzer, R. (1994). Coping resources, coping strategies and adjustment to organizational change: Direct or buffering effects? *Work and Stress*, 8, 372–383.
- Caruso, D. R., & Wolfe, C. J. (2001). Emotional intelligence in the workplace. In: J. Ciarrochi, J. P. Forgas & J. D. Mayer (Eds), *Emotional Intelligence in Everyday Life* (pp. 150–167). Philadelphia, PA: Taylor and Francis.
- Carver, C. S., & Scheier, C. S. (1999). Stress, coping, and self-regulatory processes. In: L. A. Pervin & O. P. John (Eds), *Handbook of Personality: Theory and Research* (pp. 553–575). New York: Guilford Press.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267–283.
- Ciarrochi, J., Dean, R. P., & Anderson, S. (2002). Emotional intelligence moderates the relationship between stress and mental health. *Personality and Individual Differences*, 32, 197–209.
- Cohen, E. L. (1952). The influence of varying degrees of psychological stress on problem-solving rigidity. *Journal of Abnormal and Social Psychology*, 47, 512–519.
- Cohen, S. (1980). After-effects of stress on human performance and social behavior and health. *Journal of Social Issues*, 37, 36–70.
- Combs, A. W., & Taylor, C. (1952). The effect of the perception of mild degrees of threat on performance. *Journal of Abnormal and Social Psychology*, 16, 1–4.
- Cooper, C. L. (Ed.) (1998). *Theories of organizational stress*. New York: Oxford University Press.
- Cooper, R. K., & Sawaf, A. (1997). *Executive EQ: Emotional intelligence in leadership and organizations*. New York: Grossett/Putnam.
- Damasio, A. R. (1994). *Descartes' error: Emotion reason and the human brain*. New York: G. P. Putnam's Sons.
- Darwin, C. R. (1985). *The expressions of emotion in man and animals*. Chicago: Chicago University press (originally printed in 1872).
- Davies, M., Stankov, L., & Roberts, R. D. (1998). Emotional intelligence: In search of an elusive construct. *Journal of Personality and Social Psychology*, 75, 989–1015.
- Davis, M. H. (1994). *Empathy: A social psychological approach*. Dubuque, IA: Brown and Benchmark.
- Deary, I. J., Agius, R. M., & Sadler, A. (1996). Personality and stress in consultant psychiatrists. *International Journal of Social Psychiatry*, 42, 112–123.
- Dorner, D. (1990). The logic of failure. In: D. E. Broadbent, J. Reason & A. Baddeley (Eds), *Human Factors in Hazardous Situations*. Oxford, UK: Clarendon Press.
- Driskell, J. E., & Salas, E. (1991). Group decision making under stress. *Journal of Applied Psychology*, 76, 473–478.
- Driskell, J. E., & Salas, E. (Eds) (1996). *Stress and human performance*. Manwah, NJ: Lawrence Erlbaum.
- Edwards, J. R., Caplan, R. D., & Van Harrison, R. (1998). Person-environment fit theory. In: C. L. Cooper (Ed.), *Theories of Organizational Stress*. New York: Oxford University Press.

- Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion*, 6, 169–200.
- Elkin, R. A., & Lieppe, M. R. (1986). Physiological arousal, dissonance and attitude change: Evidence for a dissonance-arousal link and a “don’t remind me” effect. *Journal of Personality and Social Psychology*, 51, 55–65.
- Erber, M. W., & Erber, R. (2001). The role of motivated social cognition in the regulation of affective states. In: J. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp. 275–292). Manwah, NJ: Lawrence Erlbaum.
- Erera-Weatherley, P. (1996). Coping with stress: Public welfare supervisors doing their best. *Human Relations*, 49, 157–170.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford: Stanford University Press.
- Fiedler, K. (2001). Affective influences on social information-processing. In: J. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp. 163–185). Manwah, NJ: Lawrence Erlbaum.
- Fisher, C. D. (2000). Mood and emotions while working: Missing pieces of job satisfaction? *Journal of Organizational Behavior*, 21, 185–202.
- Fisher, C. D., & Ashkanasy, N. M. (2000). The emerging role of emotions in organizational life: An introduction. *Journal of Organizational Behavior*, 21, 123–129.
- Fitness, J. (2000). Anger in the workplace: An emotion script approach to anger episodes between workers and their superiors, co-workers and subordinates. *Journal of Organizational Behavior*, 21, 147–162.
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21, 219–239.
- Folkman, S., & Lazarus, R. S. (1988). The relationship between coping and emotion: Implications for theory and research. *Social Science and Medicine*, 26, 309–317.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 30, 992–1003.
- Forgas, J. P. (2001). Affective intelligence: The role of affect in social thinking and behavior. In: J. Ciarrochi, J. P. Forgas & J. D. Mayer (Eds), *Emotional Intelligence in Everyday Life* (pp. 46–63). Philadelphia, PA: Taylor and Francis.
- Frijda, N. (1986). *The emotions: Studies in emotion and social interaction*. New York: Oxford University Press.
- Frijda, N. (1993). The place of appraisal in emotion. *Cognition and Emotion*, 7, 375–387.
- Gardner, H. (1983). *Frames of mind*. New York: Basic Books.
- George, J. M. (1991). State or trait: Effects of positive mood on prosocial behaviors at work. *Journal of Applied Psychology*, 76, 299–307.
- Glass, G. V. (1986). Reactions to the stress-coping meta-analysis. *Counseling Psychologist*, 14, 550–552.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. New York: Bantam.
- Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam Books.
- Greenglass, E. R., & Burke, R. J. (2000). The relationship between hospital restructuring, anger, hostility and psychosomatics in nurses. *Journal of Community and Applied Social Psychology*, 10, 155–161.
- Greenwald, G. A. (1980). The totalitarian ego: Fabrication and revision of personal history. *American Psychologist*, 35, 603–618.
- Gross, J. J. (1999). Emotion and emotion regulation. In: L. A. Pervin & O. P. John (Eds), *The Handbook of Personality: Theory and Research* (pp. 525–552). New York: Guilford Press.

- Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology, 5*, 111–126.
- Hancock, P. A., & Desmond, P. A. (Eds) (2001). *Human factors in transportation: Stress, workload and fatigue*. Manwah, NJ: Lawrence Erlbaum.
- Hendy, K. C., East, K. P., & Farrell, P. S. E. (2001). An information-processing model of operator stress and performance. In: P. A. Hancock & P. A. Desmond (Eds), *Human Factors in Transportation: Stress, Workload and Fatigue* (pp. 34–80). Manwah, NJ: Lawrence Erlbaum.
- Higgins, E. T. (2001). Promotion and prevention experiences: Relating emotions to non-emotional motivational states. In: J. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp. 186–212). Manwah, NJ: Lawrence Erlbaum.
- Hockey, R. (2002). Human performance in the working environment. In: P. Warr (Ed.), *Psychology at Work* (pp. 26–50). Hammondsworth, UK: Penguin.
- Isen, A. M. (1999). Positive affect. In: T. Dalgleish & M. Power (Eds), *The Handbook of Cognition and Emotion* (pp. 521–540). Chichester: Wiley.
- Isen, A. M., & Daubman, K. A. (1984). The influence of affect on categorization. *Journal of Personality and Social Psychology, 47*, 1206–1217.
- Isen, A. M., Daubman, K. A., & Nowicki, G. P. (1987). Positive affect facilitates creative problem solving. *Journal of Personality and Social Psychology, 52*, 1122–1131.
- Ivancevich, J. M., Matteson, M. T., Freedman, S. M., & Phillips, J. M. (1990). Worksite stress management interventions. *American Psychologist, 45*, 252–261.
- Izard, C. E. (1977). *Human emotions*. New York: Plenum Press.
- Izard, C. E. (1985). Emotion-cognition relationships and human development. In: C. E. Izard, J. Kagan & R. B. Zajonc (Eds), *Emotions, Cognition, and Behavior* (pp. 17–37). New York: Cambridge University Press.
- Jones, E. E., & Gerard, H. (1967). *The foundations of social psychology*. Chichester, UK: Wiley.
- Jordan, P. J., Ashkanasy, N. M., & Härtel, C. E. J. (2002). Emotional intelligence as a moderator of emotional and behavioral reactions to job insecurity. *Academy of Management Review, 27*, 361–372.
- Jordan, P. J., Ashkanasy, N. M., & Härtel, C. E. J. (2003). The case for emotional intelligence in organizational research. *Academy of Management Review, 28*, 195–197.
- Kahn, R., & Byosiere, P. (1992). Stress in organizations. In: M. Dunnette & L. Hough (Eds), *Handbook of Industrial and Organizational Psychology* (Vol. 3, pp. 571–650). Palo Alto, CA: Consulting Psychologists Press.
- Kelly, J. R., & Barsade, S. G. (2001). Mood and emotions in small groups and work teams. *Organizational Behavior and Human Decision Processes, 86*, 99–130.
- Keltner, D., & Haidt, J. (2001). The social function of emotions. In: T. Mayne & G. A. Bonanno (Eds), *Emotions: Current Issues and Future Directions* (pp. 192–213). New York: Guilford Press.
- King, G. A., & Sorrentino, R. M. (1983). Psychological dimensions of goal-oriented interpersonal situations. *Journal of Personality and Social Psychology, 44*, 140–162.
- Koslowsky, M. (1997). Commuting stress: Problems of definition and variable identification. *Applied Psychology: An International Review, 46*, 153–173.
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York: McGraw-Hill.
- Lazarus, R. S. (1979). Positive denial: The case for not facing reality. *Psychology Today* (November), 47–60.
- Lazarus, R. S. (1982). Thoughts on the relations between cognition. *American Psychologist, 37*, 1019–1024.

- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lazarus, R. S. (1999). *Stress and emotion: A synthesis*. New York: Springer.
- Lazarus, R. S., & Folkman, S. (1984). *Stress appraisal and coping*. New York: Springer.
- LeDoux, J. E. (1989). *The emotional brain: The mysterious underpinnings of emotional life*. New York: Simon and Schuster.
- Lennox, R. D., & Wolfe, R. N. (1984). Revision of the self-monitoring scale. *Journal of Personality and Social Psychology*, *46*, 1349–1364.
- Lutz, C. A., & White, G. (1986). The anthropology of emotions. *Annual Review of Anthropology*, *15*, 405–436.
- Lyne, K., & Roger, D. (2000). A psychometric re-assessment of the COPE questionnaire. *Personality and Individual Differences*, *29*, 321–335.
- Mayer, J. D. (2001). A field guide to emotional intelligence. In: J. Ciarrochi, J. P. Forgas & J. D. Mayer (Eds), *Emotional Intelligence in Everyday Life* (pp. 3–24). Philadelphia, PA: Taylor and Francis.
- Mayer, J. D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, *27*, 267–298.
- Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applied and Preventive Psychology*, *4*, 197–208.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In: P. Salovey & D. J. Sluyter (Eds), *Emotional Development and Emotional Intelligence: Educational Implications* (pp. 3–31). New York: Basic Books.
- Mesquita, B. (2001). Culture and emotion: Different approaches to the question. In: T. Mayne & G. A. Bonanno (Eds), *Emotions: Current Issues and Future Directions* (pp. 214–250). New York: Guilford Press.
- Muraven, M., Tice, D. M., & Baumeister, R. F. (1998). Self-control as a limited resource: Regulatory depletion patterns. *Journal of Personality and Social Psychology*, *74*, 774–789.
- Narayanan, L., Menon, S., & Spector, P. E. (1999). Stress in the workplace: A comparison of gender and occupations. *Journal of Organizational Behavior*, *20*, 63–73.
- Norman, P., Collins, S., Conner, M., & Martin, R. (1995). Attributions, cognitions, and coping styles: Teleworkers' reactions to work-related problems. *Journal of Applied Social Psychology*, *25*, 117–128.
- O'Driscoll, M. P., & Cooper, C. L. (1996). Sources and management of excessive job stress and burnout. In: P. B. Warr (Ed.), *Psychology at Work* (pp. 203–228). Hammondsworth, UK: Penguin.
- Ortony, A., Clore, G. L., & Collins, A. (1988). *The cognitive structure of emotions*. New York: Cambridge University Press.
- O'Shea, M., Ashkanasy, N. M., Gallois, C., & Härtel, C. E. J. (1999). The relationship between the work environment and work attitudes/behaviors: A preliminary test of Affective Events Theory. Paper presented at the Annual Meeting of the Society of Australasian Social Psychologists, Coolool, Australia (May).
- Palmer, B., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences*, *33*, 1091–1100.
- Patel, V. L., & Arocha, J. F. (2002). Decision making in healthcare: Theory, psychology, and applications. *Applied Cognitive Psychology*, *16*, 239–240.
- Paterson, J. M., & Cary, J. (2002). Organizational justice, change anxiety, and acceptance of downsizing: Preliminary tests of an AET-based model. *Motivation and Emotion*, *26*, 3–103.

- Patterson, G. T. (1999). Coping effectiveness and occupational stress in police officers. In: J. M. Violanti & D. Paton (Eds), *Police Trauma: Psychological Aftermath of Civilian Combat* (pp. 214–226). Springfield: Charles C. Thomas.
- Patterson, R. J., & Neufeld, W. J. (1987). Clear danger: Situational determinants of the appraisal of threat. *Psychological Bulletin*, *101*, 404–416.
- Petty, R. E., DeSteno, D., & Rucker, D. D. (2001). The role of affect in attitude change. In: J. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp. 212–236). Manwah, NJ: Lawrence Erlbaum.
- Piaget, J. (1981). *Intelligence and affectivity: Their relationship during child development*. T. A. Brown and C. E. Kaegi (Trans.). Palo Alto, CA: Annual Reviews. (Original work published 1954.)
- Porter, L. S., & Stone, A. A. (1995). Are there really gender differences in coping? A reconsideration of previous data and results from a daily study. *Journal of Social and Clinical Psychology*, *14*, 184–202.
- Pyszczynski, T., & Greenberg, J. (1992). *Hanging on and letting go: Understanding to onset, progression and remission of depression*. New York: Springer.
- Reilley, S., Grasher, A., & Schafer, J. (2002). Workload error detection and experienced stress in a stimulated pharmacy verification task. *Perception and Motor Skills*, *95*, 27–46.
- Riley, A. W., & Zaccaro, S. J. (1987). *Occupational stress and organizational effectiveness*. New York: Praeger.
- Roseman, I. J. (2001). A model of appraisal in the emotion system: Integrating theory, research, and applications. In: K. R. Scherer & A. Schorr (Eds), *Appraisal Processes in Emotion: Theory, Methods, Research* (pp. 68–91). New York: Oxford University Press.
- Rotter, J. B. (1960). Generalized expectancies for internal vs. external control of reinforcement. *Psychological Measurement*, *80*, 1–27.
- Salas, E., Driskell, J. E., & Hughs, S. (1996). The study of human stress and performance. In: J. E. Driskell & E. Salas (Eds), *Stress and Human Performance* (pp. 1–46). Manwah, NJ: Lawrence Erlbaum.
- Salas, E., & Klein, G. (Eds) (2001). *Linking expertise and naturalistic decision making*. Manwah, NJ: Lawrence Erlbaum.
- Salovey, P. (2001). Applied Emotional intelligence: Regulating emotions to become healthy, wealthy, and wise. In: J. Ciarrochi, J. P. Forgas & J. D. Mayer (Eds), *Emotional Intelligence in Everyday Life* (pp. 168–184). Philadelphia, PA: Taylor and Francis.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, *9*, 185–211.
- Schaufeli, W. B., Maslach, C., & Marek, T. (Eds) (1993). *Professional burnout: Recent developments in theory and research*. Washington, DC: Taylor and Francis.
- Scherer, K. R. (1997). The role of culture in emotion-antecedent appraisal. *Journal of Personality and Social Psychology*, *73*, 902–922.
- Scherer, K. R. (2001). Appraisal considered as a process of multi-level sequential checking. In: K. L. Scherer & A. Schorr (Eds), *Appraisal Processes in Emotion: Theory, Methods and Research* (pp. 92–120). New York: Oxford University Press.
- Schmitt, B. H., Gilovich, T., Goore, N., & Joseph, L. (1986). Mere presence and social facilitation: One more time. *Journal of Experimental Social Psychology*, *17*, 227–251.
- Sears, S. F., Unizar, G. G., & Garrett, D. E. (2000). Examining a stress coping model of burnout and depression in extension agents. *Journal of Occupational Health Psychology*, *5*, 56–62.
- Seyle, H. (1976). *Stress in health and disease*. London, UK: Butterworth Press.

- Siegrist, J. (1998). Adverse health effects of effort-reward imbalance at work. In: C. L. Cooper (Ed.), *Theories of Organizational Stress* (pp. 190–204). New York: Oxford University Press.
- Snyder, M. (1979). Self-monitoring processes. *Advances in Experimental Social Psychology*, 12, 85–128.
- Staw, B. M. (1981). The escalation of commitment to a course of action. *Academy of Management Review*, 6, 577–587.
- Steiner, I. (1972). *Group processes and productivity*. New York: Academic Press.
- Steiner, C., & Perry, P. (1997). *Achieving emotional literacy: A program to increase your emotional intelligence*. New York: Avon.
- Terry, D. J., Tonge, L., & Callan, V. J. (1995). Employee adjustment to stress: The role of coping resources, situational factors, and coping responses. *Anxiety, Stress and Coping*, 8, 1–24.
- Thorndike, E. L. (1920). Intelligence and its uses. *Harpers Magazine*, 140, 227–235.
- Trope, Y., Ferguson, M., & Raghunathan, R. (2001). Mood as a resource in processing self-relevant information. In: J. Forgas (Ed.), *The Handbook of Affect and Social Cognition* (pp. 256–274). Mahwah, NJ: Lawrence Erlbaum.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070.
- Weisinger, H. (1998). *Emotional intelligence at work*. San Francisco: Jossey-Bass.
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research into Organizational Behavior*, 18, 1–74.
- Woods, D. D., & Patterson, E. S. (2001). How unexpected events produce an escalation of cognitive and coordinative demands. In: P. A. Hancock & P. A. Desmond (Eds), *Human Factors in Transportation: Stress, Workload and Fatigue* (pp. 290–304). Mahwah, NJ: Lawrence Erlbaum.
- Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus of rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, 18, 459–482.
- Yousef, D. A. (2002). Job satisfaction as a mediator of the relationship between role stressors and organizational commitment: A study from an Arabic cultural perspective. *Journal of Managerial Psychology*, 17, 250–266.
- Zohar, D., & Brandt, Y. (2002). Relationships between appraisal factors during stressful encounters: A test of alternative models. *Anxiety, Stress and Coping: An International Journal*, 15, 149–161.