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Explaining Vigor: On the Antecedents and Consequences of Vigor as a Positive Affect at Work

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The focus of this study is on vigor as a positive affect experienced at work, its antecedents and consequences. Vigor refers to individuals’ feelings that they possess physical strength, emotional energy and cognitive liveliness, a set of interrelated affective experiences. This focus is congruent with recent calls that researchers study human strengths and positive psychological capacities (Peterson and Seligman, 2004; Seligman et al., 2005). Vigor has very rarely been the topic of any conceptual and integrative analysis. Vigor may be described as the affective dimension of the energy reservoirs that employees possess and therefore is directly related to the construct of work motivation. Work motivation is often viewed as a set of energetic forces that originate within as well as beyond an individual’s being, to initiate work-related behavior and to determine its form, direction, intensity, and duration (Latham and Pinder, 2005). Thus motivational processes in organizations represent in part individuals’ decisions to allocate energy over time from their energetic resources among different activities. It follows that one could consider a certain threshold of perceived vigor, and individuals’ feelings that they possess it as action orientations or motivation predisposition (Ellsworth and Scherer, 2003), as a prerequisite to any motivational processes in organizations.

Following widely accepted views of emotions and moods (Gray and Watson, 2001), vigor combines elements of a specific emotion in that it is contextualized in individuals’ work situation, but it is closer to a mood state in that it tends to last days and even weeks. Therefore, I refer to vigor as an affective state that combines elements of an emotion and of a mood state. It represents, like all other specific affective states (e.g. Watson, 2002), a fundamental action tendency. Individuals’ appraisals of their energetic resources are discussed below as theoretically distinct from the feeling of vigor, following Lazarus and Folkman’s appraisal theory (1984: 273–4, 284–5). In nature, these appraisals and the feeling of vigor
probably appear conjoined, mutually affecting each other over time. The focus on vigor as an affective state follows the cognitive-motivational-relational theory developed by Lazarus and his colleagues (Lazarus, 2001; Smith and Lazarus, 1993). This theory implies a discrete-category approach to affective states, each having its own core relational themes and coping implications. Furthermore, it posits that conceptualizing the distinctive characteristics, antecedents and consequences of each enriches and extends our understanding of employees’ attempts to survive and flourish in their work environment (Lazarus and Cohen-Charash, 2001).

The chapter is organized in three sections. The first section provides a summary of past conceptual approaches to vigor and of measures constructed to assess it. Elaborating and considerably extending an earlier conceptualization of vigor (Shirom, 2004), I describe in the next section a theoretical model that specifies its antecedents and consequences. This theoretical model is based on the conservation of resources theory. I conclude by pointing out a few open research questions that concern the study of vigor at work

**Vigor as a positive affective state**

The construct of vigor represents one of the affective states referred to in the emerging research area of positive affect (Dahlsgaard et al., 2005; Peterson and Seligman, 2004; Snyder and Lopez, 2002). A leading model in this research area is the positive emotions model (PEM), which proposes that positive emotions, like happiness, joy, pride, and love, have health-protecting physiological effects, including low autonomic reactivity relative to the effects of negative emotions (Fredrickson, 2002; Tugade et al., 2004). Fredrickson’s (2002) broaden-and-build theory posits that positive emotions tend to enhance activity levels while negative emotions have the opposite effect of narrowing activity levels. The enhancing effects of positive feelings on physical health and longevity are supported by an accumulating body of evidence (Faragher et al., 2005; Lyubomirsky et al., in press; Rozanski and Kubzansky, 2005; Salovey et al., 2000). The biological mechanisms underlying these effects of positive emotions are likely to include their enhancing the immune system’s capacity to mount an effective response to challenges and the adoption of healthy life-style habits like smoking abstention (Rozanski and Kubzansky, 2005; Ryff et al., 2004).

How does vigor relate to other affective states? Russell (1980, 2003) proposed that each affective state can be identified and differentiated from other affective states by where it lies on the two-dimensional space that consists of the horizontal dimension of pleasure-displeasure and of the vertical dimension of arousal-sleepiness. In this two-dimensional space, vigor represents positive arousal or a combination of moderate amounts of arousal and pleasure. In the same space, vigor’s counterpart in the quadrant of displeasure-arousal is anxiety, and its mirror-image in the
quadrant of displeasure-sleepiness is burnout, combining displeasure with lack of arousal. In contrast to burnout and anxiety, however, vigor is a component of the approach-oriented behavior facilitation system. This system, according to Watson (2002), directs organisms toward situations and experiences that potentially may yield pleasure and reward and facilitates the procuring of resources like food, shelter and sexual partners – resources that are essential for the survival of both the individual and the species. Carver and Scheier’s (1998) model of regulated behavior expresses an analogous theoretical perspective in that it regards positive emotions as resulting from advancement or doing better on goal attainment at a pace faster than expected.

**Mood states and vigor**

In past research, vigor has been studied predominantly as a mood state, hardly as an emotion, and primarily in clinical samples. However, in actual research practice, virtually identical techniques, such as gift-giving, were used for inducing positive moods as well as positive emotions (Fredrickson, 2002).

*The Profile of Mood States (POMS).* The Profile of Mood States (POMS: McNair et al., 1971) was one of the earliest measures of any positive mood, and included, among the six subscales of different moods, an eight-item subscale gauging vigor, using items like feeling cheerful, lively, alert, active and vigorous. In the studies using the POMS, results that concern the vigor subscale have often been reported. In the area of sports psychology, a recent meta-analysis of studies that have used the POMS in association with either athletic achievement or athletic performance (Beedie et al., 2000) found a moderate effect size between the POMS vigor subscale and performance outcomes. Studies that have used the POMS and its vigor subscale to predict physiological outcomes abound in the literature. For example, the vigor subscale was found to positively predict sleep quality (Bardwell et al., 1999), as well as shorter duration of recovery from injury (Quinn and Fallon, 1999). As Payne (2001) noted, different aspects of the construct validity of this scale have been extensively studied, but primarily with clinical samples such as cancer patients, drug abusers and brief psychotherapy patients, with hardly any past use in work organizations.

*Other measures of vigor as a mood state.* Following the above limitations of POMS, the Brunel Mood Scale, largely based on it and including simplified items but the same dimensions as POMS, was developed (Terry et al., 1999). Its vigor scale was found to be positively associated with athletic (Lane and Lane, 2002) and scholastic (Lane et al., 2005) performance. Yet another widely used measure of mood is the Activation-Deactivation Adjective Check List, available in short and long forms (Thayer, 1996). It includes a subscale that gauges energy level. Mood inventories developed by other researchers also include measures of vigor or energy levels. The
UWIST Mood Adjective Checklist (Matthews et al., 1990) includes a subscale of energetic arousal that contained eight items, including the four items of ‘active,’ ‘energetic,’ ‘alert,’ and ‘vigorous,’ and also four tiredness items, like ‘sluggish,’ ‘tired,’ and ‘passive’ (Payne, 2001). Matthews et al. (1990) reported that the subscale of energetic arousal was negatively correlated with workload and that it was the only mood measure sensitive to drugs.

This review of past attempts to gauge vigor leads to the following conclusions. First, vigor has hardly been studied at work; in most past studies, respondents were mentally ill persons, students, or sportsmen. Second, in all past research, vigor has been conceptualized to reflect one form of energy – physical strength. This differs from the current focus on vigor as an affective experience at work reflecting three interrelated forms of energetic resources. Third, most measures of vigor as a mood state were based on the theoretical position that the pair of vigor and fatigue, burnout or tiredness represents bipolar affective states that cannot be experienced simultaneously. This theoretical position is reflected in the practice of reverse-scoring tiredness or fatigue items in the vigor scales to arrive at a total score representing the positive mood of vigor. This practice has been followed by several researchers who have assessed vigor either as a component of job-related affective well-being (Daniels, 2000; Payne, 2001), or as a stress reaction (William and Cooper, 1998). In contrast, I argue for the theoretical position that vigor and burnout are obliquely related and do not represent the extreme poles of the same continuum, perhaps with the exception of situations characterized by very high levels of stress (Reich and Zautra, 2002). This theoretical position rests first on the fact that the biological systems underlying approach and avoidance activations have been shown to be basically independent (Cacioppo et al., 1999). Second, positive and negative affective states are physiologically represented in different systems (Davidson, 2000). Third, positive and negative affective states are known to have different antecedents (Baumeister et al., 2001), may function relatively independently (Davis et al., 2004), and are differentially represented in peoples’ behaviors (Gendolla, 2000). Therefore, it could be concluded that the affective state structure is flexible, and that the relationships between positive and negative affective states is not bipolar but bivariate.

The set of studies on engagement by Schaufeli and his colleagues (Schaufeli and Bakker, 2004) is not covered here because these investigators have defined the vigor component in the conceptualization of engagement as comprising high levels of energy, motivation to invest effort at work, and resilience; it follows that they refer to vigor as a cluster of different evaluative or attitudinal facets and not as an affective state. In sharp contrast, vigor, as conceptualized in this chapter, refers to it as an affective state and does not confound it with motivational processes or with individuals’ behaviors following encounters with adverse events – namely
resilience (Davidson, 2000). Vigor at work can be experienced with or without encounters with adverse events. While I have proposed above that vigor and motivation to invest effort at work are closely related, they belong to different conceptual domains, those of affect and action orientations, respectively.

A theoretical model of vigor

Vigor represents a positive affective response to one’s ongoing interactions with significant elements in one’s job and work environment that comprises the interconnected feelings of physical strength, emotional energy, and cognitive liveliness. Theoretically, this view of vigor is derived from Hobfoll’s (1989, 1998) Conservation of Resources (COR) theory. The COR theory’s central tenets are that people have a basic motivation to obtain, retain and protect that which they value. The things that people value are called resources, of which there are several types, including material, social and energetic resources. Hobfoll maintained that resources are those personal energies and characteristics, objects and conditions that are valued by individuals or that serve as the means for the attainment of other objects, personal characteristics, conditions or energies (Hobfoll, 2002). Examples of internal personality factors that are considered resources are optimism, self-esteem and self-efficacy. Examples of external resources are employment, social support and economic status. The concept of vigor relates to proximal energetic resources only, namely to physical, emotional and cognitive energies. These three types of energetic resources are individually owned, closely interrelated, and socially embedded in that emotional energy always concerns significant others in one’s social milieu. Vigor represents an affective state that individuals attribute to their job and workplace when asked about it and do so spontaneously, in contrast to affective traits like positive affectivity that refers to the tendency to experience positive affect across situations and times (cf. Fox and Spector, 2002).

The theoretical rationale for focusing on the combination of physical strength, emotional energy and cognitive liveliness in the conceptualization of vigor is as follows. First, these forms of energy are individually possessed. The COR theory predicts that the three factors constituting vigor are closely interrelated (cf. Hobfoll and Shirom, 2000). The COR theory argues that personal resources affect each other and exist as a resource pool, and that an expansion of one is often associated with the other being augmented (Hobfoll, 1999, 2002). Second, this focus on proximal energetic resources is theoretically justified in that they are a major precondition to any goal-directed behavior and thus are essential for one’s survival (Hobfoll, 2002). Third, they represent a coherent set that does not overlap any other established behavioral science concept, like resilience or potency, or any aspect of the self-concept, such as self-esteem and self-efficacy. Furthermore, this
conceptualization of vigor clearly differentiates it from its likely consequences like engagement or job involvement.

For the sake of simplicity, vigor is depicted in the following theoretical model as a unidimensional variable, although it is possible for each of its components to be differentially associated with the antecedents and consequences of vigor. Vigor is associated with the approach biobehavioral tendency, and therefore it is expected to be more closely associated with mental health outcomes rather than with performance outcomes; however, I do not discuss the relative proximity of vigor’s consequences or predictors.

**Predictors of vigor: personality factors**

Personality and physiological factors are likely to impact directly vigor and moderate its relationships with its consequences. I expect that men would experience higher levels of physical vigor than women because the accepted norms associated with the masculine gender role emphasize strength, independence, and invulnerability (Stanton et al., 2002). The literature on dispositional influences on affective states may lead to the
expectation that those high on the personality trait of extraversion (or positive affectivity) are more likely to experience vigor relative to those high on the trait of neuroticism (cf. Brief and Weiss, 2002).

Work-related predictors of vigor

Because employees’ work-related affective states reflect their appraisals of their on-the-job experiences, organizations do not have a direct way of eliciting specific affective responses in their employees. Organizations do attempt to regulate employees’ emotions, including by means of prescribing, neutralizing, buffering, or normalizing them (cf. Ashforth and Humphrey, 1995). In the following, I will discuss work elements and features likely to increase the likelihood of employees feeling invigorated.

Job-related resources

Hackman and Oldham (1980) have developed one of the most influential models explaining, inter alia, employee positive affective states by certain job features. The job characteristic model (Hackman and Oldham, 1980) posits that the higher the levels of five job characteristics, namely task autonomy, significance, feedback, identity and skill variety, the more pronounced the resultant psychological states which lead in turn to higher employee job satisfaction and performance. Empirical research has shown that the most powerful predictors of employee job satisfaction and performance were job autonomy and feedback (Fried and Ferris, 1989). Brousseau (1983) has argued that autonomous jobs, namely jobs that allow employees to formulate more elaborated work plans and pursue self-determined goals, would enhance feelings of personal efficacy and thereby enhance their feelings of cognitive liveliness.

Group-level resources.

Work groups tend to share emotions because of common socialization experiences and common organizational features, norms and regulations that govern the expression of emotions, task interdependence, and the phenomenon of emotional contagion (Brief and Weiss, 2002). It has been found that work teams characterized by mutual trust and high social support tend to be more cohesive and goal-directed, and that these qualities in turn lead to favorable employee morale and job-related well-being (Karasek and Theorell, 1990). Specifically, work group cohesion was found to predict vigor, measured as a mood state (Terry et al., 2000).

Leadership style

There are indications in the literature that leaders who feel energetic are likely to energize their followers (cf. Brief and Weiss, 2002). Displaying vigor is probably expected from employees in managerial roles (e.g. Church and Waclawsk, 1998). In a similar vein, the leadership literature often makes the claim that transformational leaders often exhibit energizing emotions in order to arouse similar emotional states among their followers (Avolio, 1999). This literature suggests that intellectual stimulation, a component of transformational leadership which consists of encouraging followers to think creatively (Avolio, 1999), is likely to have a direct positive effect on cognitive liveliness, a component of vigor.
Organizational resources. Employee participation in decision making has the potential to increase one’s exposure to many sources of information, enhance one’s being able to adjust more flexibly to the demands of diverse role partners, and enable one’s capability to develop cognitive skill such as finding creative solutions that integrate diverse viewpoints (Spector, 1986).

Consequences of vigor

Job performance and organizational effectiveness

Existing research on positive affect has supported the view that both naturally occurring and induced positive affective states tend to facilitate flexible, effective problem solving and decision making (Baumann and Kuhl, 2005; Isen, 2001). A body of studies suggests that positive affective states are closely associated with more efficient cognitive processing of information and therefore have direct impact on the ability component of task performance (Isen, 2004). In addition, positive affective states have been found to antecedes creativity in work organizations (James et al., 2004; Staw and Barsade, 1993). However, there has been relatively little consideration of the impact of vigor as an affective state on various individual- and organizational-relevant outcomes.

The close relationship between vigor and motivation was noted in the introductory section. Recently, it has been shown that when the mental representation of a behavioral goal is associated with positive affects, it automatically signals to the person that the goal is desired and worth pursuing and therefore promotes motivational activity designed to accomplish the goal (Custers and Aarts, 2005). Vigor, like most other positive affects, facilitates goal-directed behavior (Carver and Scheier, 1990) or approach behavior (Fredrickson, 2002; Watson, 2002) and therefore could be expected to prompt individuals to engage with their job and work environment.

Several studies have documented the role of positive emotions in promoting performance (Huy, 1999; Rafaeli and Worline, 2001; Staw et al., 1994). Indeed, performance is interwoven with emotion in organizational life. Positive emotions have been linked to several performance-related behaviors, including enhanced creativity, more effective decision-making, sales-related prosocial behaviors, and the use of more successful negotiation strategies (Baron, 1990; Forgas, 1998; George, 1991; Staw and Barsade, 1993). While vigor is not specifically referred to in the above literature, I assume that the relationship between vigor and job performance will be positive, and that it is likely to be reciprocal rather than recursive.

Physical and mental health

Individuals’ level of vigor may be considered as an indicator of their optimal psychological functioning. The reason: many investigators defined the
conceptual domain of health-related quality of life as including vigor. To illustrate, the operational definition of well-being by the World Health Organization (WHOQOL Group, 1994), used in their questionnaire, includes items like ‘I feel energetic’, ‘I feel active’, ‘I feel vigorous’, and ‘I wake up feeling fresh’, items used in part in the measure of vigor described elsewhere (Shirom, 2004).

While vigor’s likely effects on mental well-being are straightforward, its effects on physical well-being are more complex (cf. Edwards and Cooper, 1988). One of the limitations regarding the body of knowledge on the effects of positive emotions on physical health is that while we know that these effects tend to be positive in sign, the nature of the physiological pathways linking these two entities are hardly understood (Ryff and Singer, 2002). It has been suggested that positive emotions change the levels of brain dopamine (Ashby et al., 1999), thereby simultaneously expanding cognitive functioning and regulating cardiovascular activity. Another possible physiological pathway is that linking positive emotions with improved immune function (e.g. Salovey et al., 2000).

Directions for future research

The suggested focus on vigor is in tune with the new development of the field of positive psychology (Seligman et al., 2005) and the emergence of positive organizational behavior (Luthans, 2002). Vigorous feelings at work possibly allow employees to effectively cope with work-related demands, and more importantly are likely to have a positive impact on their well-being. Researchers’ future efforts to increase our understanding of the antecedents and etiology of vigor at work may be aided by the conceptual framework of vigor described in this chapter. This conceptual framework integrates past disparate efforts and allows researchers to pose new research questions and offer new theoretical interpretations.

From the review of past attempts to assess vigor, primarily as a mood state, it appears that this core affect tends to promote goal-directed behavior likely to increase individuals’ personal resources. Hobfoll (1999) hypothesized that such increases in individuals’ pool of personal resources may initiate an upward spiral toward further increases in these individuals’ personal resources. Fredrickson and Joiner (2002) found that positive emotions broaden the scopes of attention and cognition and, by consequence, initiate upward spirals toward increasing emotional well-being. The augmented personal resources can be drawn on to cope with any work-related demand that may arise in one’s job. In work organizations, employee vigor should promote skill building and learning, prosocial behaviors, and organizational commitment, among other important aspects of organizational effectiveness.

The study of vigor at work may offer new insights into the process of goal-directed behaviors, or the process by which employees initiate,
regulate and maintain over time and over changing circumstances their
task-related behaviors. DeSchon and Gillepsie (2005) proposed that goal-
directed behaviors be viewed as specific manifestations of self-regulation
efforts. Individuals self-regulate their behaviors to a considerable extent
based their feeling states, as documented above. One way of assessing the
validity of the proposition that views vigor as a prerequisite of goal-
directed behavior is to examine these relationships over time. Such a lon-
gitudinal study may also test the propositions that elevations in vigor
lead to a positive spiral of resource augmentation and to more effective
coping with work-related demands.

There are several open questions awaiting empirical clarification with
regard to using vigor in actual research. Are there individual differences in
the ability to ‘intelligently’ use vigor as a means of guiding and maintain-
ing one’s behavior? Feelings provide meaning to work-related employee
experiences. In line with recent thinking on emotional intelligence, the ability
to identify and regulate feelings and use the information provided by feel-
ings are considered important for adaptive social behavior (Salovey
et al., 1995). If such differences are found to exist, do they reflect differences
in the above skills, and can these skills be learnt (Salovey et al., 2000)?
Emotional intelligence represents just one, albeit important, possible mod-
ulator of vigor’s relationship with behavioral responses.

Another open question has to do with the effects of vigorous feelings at
work on organizations. In this chapter, the emphasis has been on job and
work characteristics conducive to employee vigor, and on the influence of
employee vigor on job performance. However, how does employee vigor
affect the organization as a whole? Are there vigorous organizations and, if
so, what are their inherent characteristics? Vigorous organizations could be
regarded as organizations whose managerial apex effectively create the
conditions that generate, foster and maintain employee vigor throughout
the organization and mobilize these energetic resources in the pursuit of
organizational effectiveness. Based on emotional and cognitive contagion
processes (Barsade, 2002), organizational vigor probably reflects the syner-
gistic accumulation of individual employees’ level of vigor. Vigorous orga-
nizations could be expected to be highly innovative, proactively adjust to
environmental changes, and otherwise distinguish themselves in their
product and labor markets (Bruch and Ghoshal, 2003; Cross et al., 2003).

The emphasis throughout this chapter has been on vigor at work. However, vigor may be experienced in and outside of work. That is, it
may be experienced as an affective response to events and situations that
individuals encounter outside of work. It is possible that vigor felt at
work spills over to the family and other life domains and vice versa.
These are open questions that need to be address in future research. The
same is true regarding the possible reciprocal relations between vigor and
job performance or proactive behavior in organizations.

Vigor represents an affect experienced at work. While available research
on vigor at work is in its infancy, existing research on vigor as a mood state
would suggest that it is strongly related to individuals’ well-being and health. The link proposed above between vigor and physical health, indirectly supported by the body of studies that have examined positive affect–physical health relationships, indicates that additional research on vigor at work may provide an understanding of possible pathways by which organizations can reduce absenteeism and healthcare costs. Therefore, there exists a need for future research on vigor at work.

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Note

1. The full scale is also available for downloading in Word format in: http://recanati.tau.ac.il/faculty/shirom_arie.htm

References


