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## Where to go from here: Integration and future research on work engagement

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Modern organizations expect their employees to be proactive, show initiative, take responsibility for their own professional development and to be committed to high quality performance standards. They need employees who feel energetic and dedicated – i.e., who are engaged with their work. It is therefore not surprising that the past decade has witnessed a sharp rise in scientific studies on engagement. The work engagement research discussed in this book offers evidence for the incremental validity of engagement over and above traditional I/O concepts. Work engagement provides a distinct, valuable perspective on the experience of work.

In this final chapter, we integrate the perspectives on work engagement offered in this book and outline a research agenda. We do this by

delineating a theoretical framework and by discussing seven avenues for research on work engagement. We will see that the future looks bright for engagement research. The chapter authors presented dynamic perspectives on work engagement. What we will do is try to synthesize the perspectives, and illuminate avenues for new research.

### Integration

#### *Work engagement: A unique concept*

Schaufeli and Bakker (Chapter 2) review definitions of work engagement in the business context and in academia as a basis for considering the instruments assessing engagement. While the popularity of engagement in organizations





confirms the concept's practical dimension, business consultants have applied the term to a range of concepts and measures that depart from those used in scientific research. Schaufeli and Bakker's analysis shows that consultants use the word "engagement" as a novel, catchy label that covers traditional concepts, such as affective commitment (i.e., the emotional attachment to the organization), continuance commitment (i.e., the desire to stay with the organization), and extra-role behavior (i.e., discretionary behavior that promotes the effective functioning of the organization). They share our focus on the subjective experience of work, but fail to capture the distinct value added by the new concept of work engagement. Hence, the way practitioners conceptualize engagement comes close to putting old wine in new bottles (Macey & Schneider, 2008). Some consultants have even used job characteristics (i.e., job resources) as indicators of engagement (see Harter, Schmidt, & Hayes, 2002). This practice that mixes references to work conditions with references to subjective experience actually inhibits research objectives. Specifically, relinquishing a clear boundary between an experience and the environmental conditions that support that experience prevents clear analyses of the relationship between these two concepts.

In contrast, academic researchers have defined work engagement as a unique concept. Most scholars agree that engagement includes an energy dimension and an identification dimension (Bakker, Schaufeli, Leiter, & Taris, 2008). Work engagement is a positive, work-related state of well-being or fulfillment characterized by a high level of energy and strong identification with one's work. Maslach and Leiter (1997, 2008) have defined engagement as the opposite of burnout; engaged employees have a sense of energetic and effective connection with their work. Accordingly, engagement is characterized by energy, involvement, and professional efficacy – the direct opposites of the three core burnout dimensions. Schaufeli and Bakker (Chapter 2) define work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (see also Schaufeli,

Salanova, González-Romá, & Bakker, 2002, p. 74). In engagement, fulfillment exists in contrast to the voids of life that leave people feeling empty as in burnout. Vigor is characterized by high levels of energy and mental resilience while working. Dedication refers to being strongly involved in one's work, and experiencing a sense of significance and enthusiasm. Absorption is characterized by being fully concentrated and happily engrossed in one's work. Note that these definitions focus on employees' experience of work activity, and not the predictors or outcomes of these experiences. The most often used instrument to measure engagement is the Utrecht Work Engagement Scale (UWES; Schaufeli & Bakker, 2003, 2009; Schaufeli et al., 2002), which includes three subscales: vigor, dedication, and absorption.

Engagement will make a stronger contribution as a unique construct that adds unique value to the nomological network (Halbesleben & Wheeler, 2008). Research presented in this book and elsewhere supports engagement as a distinct construct. Schaufeli and Bakker (Chapter 2) discuss studies showing that work engagement differs from job involvement and organizational commitment. In addition, Halbesleben and Wheeler (2008) have provided evidence for the discriminant validity of work engagement vis-à-vis job embeddedness. Embeddedness represents the collection of forces keeping an employee on the job (i.e., links in the organization, fit with the job, and sacrifices associated with leaving the job). Their study included a sample of employees ( $N = 587$ ), their supervisors, and their closest co-workers from a wide variety of industries and occupations. Findings showed that work engagement and job embeddedness could be empirically discriminated. Importantly, both variables made a unique contribution to explaining variance in job performance (with the exception of embeddedness and supervisor-rated performance). Only job embeddedness offered a unique prediction of turnover intention. These findings held true after controlling for the impact of job satisfaction and affective commitment (Halbesleben & Wheeler, 2008).

Taris, Schaufeli, and Shimazu (Chapter 4) discuss the similarities and differences of work





engagement versus workaholism – the compulsion or the uncontrollable need to work incessantly (Oates, 1971). Compared to workaholics, engaged employees lack the typical compulsive drive that is characteristic of any addiction, including an addiction to work. For engaged workers work is fun and not a compulsion, as was concluded from a qualitative study of 15 engaged workers (Schaufeli, Taris, LeBlanc, Peeters, Bakker, & De Jonge, 2001). These workers worked hard because they liked it and not because they were driven by a strong inner urge they could not resist. Evidence from two independent Dutch studies discussed by Taris et al. (Chapter 4) revealed that workaholism (as measured in terms of working excessively and working compulsively) could clearly be distinguished from work engagement. One remarkable finding here was that the third indicator of engagement (absorption) showed a substantial loading on workaholism as well. Apart from this overlap, it appeared that workaholism and engagement are only weakly related.

The conceptual distinction between engagement and workaholism was further confirmed by inspection of the pattern of relationships between both states on the one hand, and various clusters of other concepts on the other (Taris et al., Chapter 4). Whereas both engagement and workaholism are characterized by high effort expenditure at work (in terms of the time given to working and high job demands), high scores on workaholism are generally accompanied with adverse work characteristics, lack of well-being (especially mental health), and only moderate trust in one's own job performance. Conversely, engaged workers are generally quite satisfied with their jobs and their lives, report good health, and state that they perform well.

Shirom (Chapter 6) adds an interesting view to the literature on work engagement with his elaborated concept of vigor. Accordingly, vigor refers to individuals' feelings that they possess physical strength, cognitive liveliness, and emotional energy – a set of interrelated affective states experienced at work. Feeling invigorated connotes the combined feeling of a positive energy balance and pleasantness or contentment. How is

vigor related to work engagement? Wefald (2008) compared the UWES with the Shirom–Melamed Vigor Measure (SMVM) using a sample of 382 American employees and managers at a financial institution. Results showed that vigor as assessed with the SMVM is moderately high and positively related to vigor as assessed with the UWES. The correlations between physical strength, cognitive liveliness, and emotional energy on the one hand, and UWES-vigor on the other hand are .73, .57, and .43, respectively. This implies that vigor, as assessed with the UWES and integrated in our definition of engagement, is most closely related to physical strength. In addition, the vigor dimensions show positive and moderately high correlations with UWES-dedication and UWES-absorption ( $r$ 's .36 to .57,  $p$ 's < .01).

Within the small body of research on engagement and physical health, vigor was associated with highly important individual health outcomes. According to Shirom (Chapter 6), vigor may enhance the immune system's capacity to mount an effective response to challenges and the adoption of healthy lifestyle habits. Recent studies provide empirical support for these pathways linking vigor and health. Vigor was found to be negatively correlated with several inflammation biomarkers (Shirom, Toker, Berliner, Shapira, & Melamed, 2006), thus suggesting that they could represent possible pathways linking vigor with improved physical health. Other studies have shown that vigor is positively related to self-rated health. For example, feeling vigorous and objective physical fitness (gauged based on functional capacity) were found to interact in predicting the change over time in self-rated health (SRH) among apparently healthy employees – the higher the physical fitness, the more pronounced the effects of the initial levels of vigor on these changes in SRH (Shirom et al., 2008). Another study (Shirom, Vinokur, & Vaananen, 2008), among two samples of employees in Finland and Sweden ( $N = 6188$  and  $N = 3345$ , respectively), found that feeling vigorous was positively associated with both SRH and subjective work capacity, controlling for socio-demographic predictors.

In conclusion, our argument for work engagement as a unique and valuable construct rests not





only on its intuitive appeal, but also on empirical support for its discriminant validity. First, when contrasting work engagement with other concepts in organizational psychology, independent researchers consistently confirm its status. Second, these investigations have consistently confirmed energy and involvement or dedication as the core qualities of work engagement. Debates regarding additional qualities contribute to refinement of the construct; they do not challenge it. Together, the case for work engagement is compelling.

### ***State work engagement***

Research has generally conceptualized work engagement as a relatively stable phenomenon because of the continued presence of specific job and organizational characteristics (Macey & Schneider, 2008). Nevertheless, there is considerable interest in the short-term (i.e., daily or weekly) fluctuations in the experience of work engagement for a particular individual. In many work settings there are specific times and periods during which it is necessary that employees are highly engaged, for example when making an important presentation to a new customer or when facing other novel and challenging job requirements.

Experience sampling studies and diary studies have indeed shown that within-individual variations in work engagement do exist (e.g., Sonnentag, 2003). In Chapter 3, Sonnentag, Dormann, and Demerouti summarize existing evidence that supports a state perspective. The authors discuss quantitative diary studies demonstrating that work engagement fluctuates substantially within individuals. In a typical diary study, 30–40% of the overall variance can be found at the day (i.e., within-individual) level and 60–70% of the overall variance is at the between-individual level. Sonnentag and her colleagues claim that in order to investigate the full phenomenological experience of work engagement, one has to focus on state work engagement as a momentary and transient experience that fluctuates within individuals within short periods of time (i.e., from minute to minute or from hour to hour, perhaps from day to day).

Sonnentag et al. (Chapter 3) identify several

benefits associated with a within-person perspective. First, the within-person approach allows for a closer look at temporal patterns of work-related experiences and behaviors. Individuals are not equally engaged at work across all days. There are days (or weeks) on which employees feel more vigorous, absorbed, and dedicated than on other days (or weeks). Sonnentag and her colleagues argue that averaging across these situations by assessing a general level of work engagement (i.e., by asking individuals to provide retrospective reports over the previous months and providing summary accounts of their psychological states), ignores the dynamic and configurational part of the work engagement phenomenon.

Second, the within-person approach enables an examination of proximal predictors of work engagement. Are there specific situational features that have to be present during a specific day in order to feel engaged? For example, one may imagine that not only generally high levels of job resources such as appreciation by one's co-workers and supervisor, but also a supportive comment or encouraging feedback from one's co-workers or supervisor on a specific day increase work engagement. Xanthopoulou and her colleagues did indeed find evidence for unique effects of daily changes in social support on daily work engagement among fast-food restaurant employees (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009b) and among flight attendants (Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008). Similarly, there may be person-specific states that foster work engagement during a specific day or week, including daily self-efficacy, daily optimism, and daily recovery. Indeed, the studies by Xanthopoulou et al. (2008, 2009b) and Sonnentag (2003) provide evidence for this contention.

Although work engagement appears to remain relatively stable over the long term, examining the day-to-day fluctuations in its core elements of energy and dedication can clarify its underlying dynamics. The extent to which engagement responds to environmental changes is especially relevant to designing management interventions to improve work engagement among employees.





### ***An integrative model of work engagement***

Previous studies have consistently shown that job resources such as social support from colleagues and supervisors, performance feedback, skill variety, autonomy, and learning opportunities are positively associated with work engagement (Bakker & Demerouti, 2008; Schaufeli & Salanova, 2007). Job resources refer to those physical, social, or organizational aspects of the job that may: (a) reduce job demands and the associated physiological and psychological costs; (b) be functional in achieving work goals; or (c) stimulate personal growth, learning, and development (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). Hakanen and Roodt (Chapter 7) use the JD-R model to predict engagement, and conclude that job resources are the most important predictors of engagement. For example, in a study among 2555 Finnish dentists using a two-wave cross-lagged panel design, Hakanen, Schaufeli, and Ahola (2008b) found evidence for the motivational process over a 3-year follow-up period: job resources influenced future engagement, which in turn predicted organizational commitment. Job resources seem to set in motion a motivational process through which employees satisfy their basic needs such as the needs for autonomy, competence, and relatedness (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008).

Mauno, Kinnunen, and Ruokolainen (2007) utilized a 2-year longitudinal design to investigate work engagement and its antecedents among Finnish health care personnel. Job resources predicted work engagement better than job demands. Job control and organization-based self-esteem proved to be the best lagged predictors of the three dimensions of work engagement, after controlling for T1 scores on the dimensions of engagement. In Chapter 8, Halbesleben presents the results of a meta-analysis of work engagement using different measures to operationalize the construct. Results indicate that job resources including autonomy, social support, performance feedback, and organizational climate are important predictors of engagement.

In addition to job resources, several studies have focused on state-like personal resources as predictors of work engagement (see also Halbesleben,

Chapter 8). Personal resources are positive self-evaluations that are linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003). It has been shown that such positive self-evaluations predict goal-setting, motivation, performance, job and life satisfaction, and other desirable outcomes (for a review, see Judge, Van Vianen, & De Pater, 2004).

Sweetman and Luthans (Chapter 5) discuss why psychological capital – a concept similar to personal resources – is related to work engagement. Psychological capital (PsyCap) is defined as an individual's positive psychological state of development characterized by self-efficacy, optimism, hope, and resilience (Luthans, Youssef, & Avolio, 2007, p. 3). These characteristics facilitate work engagement. According to Sweetman and Luthans, optimism, for example, plays an influential role in one's approach to job duties, with those high in optimism expecting success when presented with a challenge. Furthermore, those high in optimism tend to attribute success to themselves, while attributing failures to external, uncontrollable circumstances (Seligman, 1998). Thus, optimists conclude success is something they can replicate and control. Finally, while high job demands may limit engagement through a decreased feeling of control, this can be counteracted through the impact of the resource of optimism offering a sense of personal control over the demands at hand (Karasek, 1979). Sweetman and Luthans (Chapter 5) explain that optimism is also related to other PsyCap constructs in that it helps people to “see adversity as a challenge, transform problems into opportunities [hope], put in hours to refine skills, persevere in finding solutions to obstacles or difficult problems [resiliency], maintain confidence [efficacy], rebound quickly after setbacks and persist [resiliency]” (Schulman, 1999, p. 32). A widening stream of research on the PsyCap construct has found support for its relation to a number of desired outcomes, including job performance (see Luthans, Avolio, Avey, & Norman, 2007).

Additionally, several authors have investigated the relationships between personal resources and





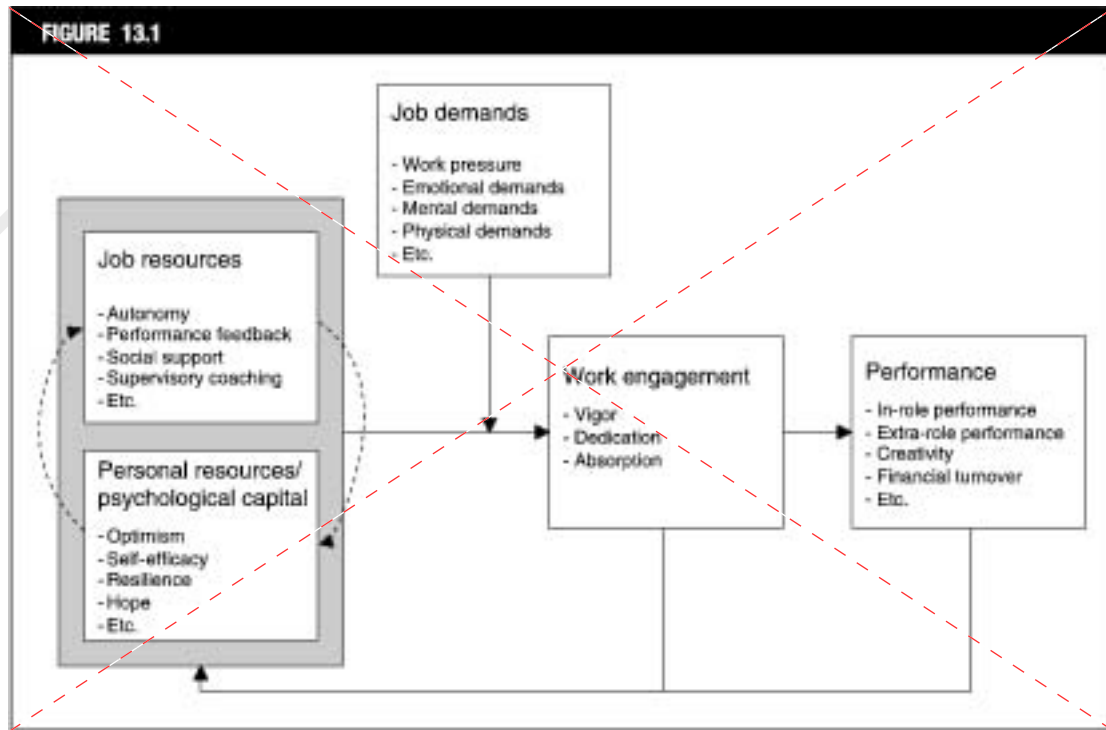
work engagement. For example, Rothmann and Storm (2003) conducted a cross-sectional study among 1910 South African police officers, and found that engaged police officers have an active coping style. They are problem-focused, taking active steps to attempt to remove or rearrange stressors. Further, in their study among highly skilled Dutch technicians, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) examined the role of three personal resources (self-efficacy, organizational-based self-esteem, and optimism) in predicting work engagement. Results showed that engaged employees are highly self-efficacious; they believe they are able to meet the demands they face in a broad array of contexts. In addition, engaged workers believe that they will generally experience good outcomes in life (optimistic), and believe they can satisfy their needs by participating in roles within the organization (organizational-based self-esteem; see also Mauno et al., 2007). These findings were replicated and expanded in a 2-year follow-up study (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009a). The results indicated that self-efficacy, organizational-based self-esteem, and optimism make a unique contribution to explaining variance in work engagement over time, over and above the impact of job resources and previous levels of engagement. These findings substantiate Sweetman and Luthans' claim in Chapter 5 that psychological capital is an important predictor of work engagement.

In short, research shows that job and personal resources (PsyCap) are predictive of work engagement (see Halbesleben, Chapter 8). These relationships have been incorporated in an overall model of work engagement (Bakker & Demerouti, 2008; see Figure 13.1). Additionally, the model delineates that job demands moderate the resources–engagement relationship. Indeed, a central assumption in the JD-R model is that resources become more salient and gain their motivational potential when employees are confronted with high job demands (Bakker & Demerouti, 2007; Hakanen & Roodt, Chapter 7). Hakanen, Bakker, and Demerouti (2005) tested this interaction hypothesis in a sample of Finnish dentists employed in the public sector. It was

hypothesized that job resources (e.g., variability in the required professional skills, peer contacts) are most beneficial in maintaining work engagement under conditions of high job demands (e.g., workload, unfavorable physical environment). The results showed clear evidence for this interaction hypothesis. For example, it was found that variability in professional skills boosted work engagement when qualitative workload was high, and mitigated the negative effect of high qualitative workload on work engagement. Conceptually similar findings have been reported by Bakker, Hakanen, Demerouti, and Xanthopoulou (2007) in their study among Finnish teachers. They found that job resources act as buffers and diminish the negative relationship between pupil misbehavior and work engagement. In addition, they found that job resources particularly influence work engagement when teachers are confronted with high levels of pupil misconduct.

The model in Figure 13.1 also proposes that engagement is positively related to performance. Demerouti and Cropanzano (Chapter 11) discuss several reasons why engaged employees perform better. One perspective taken by these authors and which holds valuable promise for future research is the broaden-and-build theory of positive emotions (Fredrickson, 2001). Accordingly, certain positive emotions, including joy, interest, and contentment, all share the capacity to broaden people's momentary thought–action repertoires and build their personal resources through widening the array of thoughts and actions that come to mind. For instance, joy broadens resources by creating the urge to play and be creative. Evidence for the broadening hypothesis has been reported in several studies (e.g., Fredrickson & Branigan, 2005; Fredrickson & Losada, 2005; Isen, 2000). Accordingly, positive affect produces a broad and flexible cognitive organization as well as the ability to integrate diverse material. Fredrickson (2003) suggests that positive emotion also tends to encourage employee development, such as learning new skills and forming closer interpersonal relationships. Demerouti and Cropanzano argue that positive emotions also facilitate the use of cooperative interpersonal tactics and reduce workplace conflict.





The JD-R model of work engagement (based on Bakker & Demerouti, 2007, 2008).

The research evidence indeed shows that engagement predicts performance. For example, Halbesleben and Wheeler (2008) found a positive relationship between engagement and other ratings (colleagues and supervisors) of performance in a study among US employees from a wide variety of industries and occupations. Demerouti and Cropanzano (Chapter 11) discuss several other studies that report evidence for a relationship between work engagement and performance. For example, Salanova, Agut, and Peiró (2005) conducted an important study among personnel working in Spanish restaurants and hotels. Contact employees from over one hundred service units (hotel front desks and restaurants) provided information about organizational resources, engagement, and service climate. Furthermore, customers from these units provided information on employee performance and customer loyalty. Structural equation modeling analyses were consistent with a full mediation model in which organizational resources and work engagement

predicted service climate, which in turn predicted employee performance and then customer loyalty. As another example, Xanthopoulou et al. (2009b) conducted a diary study among employees working in a Greek fast-food restaurant, and found that daily levels of work engagement were predictive of objective daily financial returns.

#### ***Accumulation of resources and engagement***

The integrative model of work engagement in Figure 13.1 (see also Bakker & Demerouti, 2008) shows that engagement and performance have feedback loops to job resources. The model proposes that those who are highly engaged and perform well will also mobilize more personal resources or psychological capital, and more job resources like autonomy, social support, and career opportunities. In their chapter on gain spirals of resources and engagement, Salanova, Schaufeli, Xanthopoulou, and Bakker (Chapter 9) use three theories to argue that resources and work engagement may be reciprocally related.





Using conservation of resources theory (Hobfoll, 2002), Salanova and her colleagues argue that individuals strive to protect their resources, and to *accumulate* resources over time. For instance, employees learn new skills and competencies in order to increase their employability and reduce the risk of being laid off. Increased employability does not only reduce the risk of unemployment but also increases the possibility of finding a better job that offers additional opportunities for learning and development, which enhance engagement at work. Hence, gaining resources increases the resource pool, which makes it more likely that additional resources will be subsequently acquired.

Salanova et al. (Chapter 9) discuss several studies showing that resources positively affect work engagement which, in turn, positively affects resources over time. For example, Hakanen, Perhoniemi, and Toppinen-Tanner (2008a) in a 3-year panel study among 2555 Finnish dentists found evidence for positive and reciprocal cross-lagged associations between job resources and work engagement and between work engagement and personal initiative. In a similar vein, Xanthopoulou et al. (2009a) conducted a panel study (with 18 months in between the two measurement waves) among Dutch technicians, and found evidence for reciprocal associations between personal resources (i.e., self-efficacy, self-esteem, and optimism) and job resources (i.e., job autonomy, supervisory coaching, performance feedback, and opportunities for professional development), and between these resources and work engagement.

The studies discussed by Salanova et al. (Chapter 9) offer a good illustration of what Spreitzer, Lam, and Fritz (Chapter 10) mean by human thriving. Thriving is “a sense of progress or forward movement in one’s self-development” (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005, p. 538). People who thrive have a high level of vigor and bring new knowledge and skills to their work. They develop and continually improve, and look forward to each new day at work. Spreitzer et al. discuss empirical research on the role of thriving at work, and its relationship with engagement. Research has shown that thriving contributes to positive adaptation

amidst a changing work environment (Porath, Spreitzer, & Gibson, 2008). Additionally, thriving has been positively related to in-role and extra-role job performance (Porath et al., 2008) as well as to innovative behavior (Carmeli & Spreitzer, 2008).

Finally, the model in Figure 13.1 guides the design of effective organizational interventions. Whereas the work on designing, implementing, and evaluating interventions to build engagement has barely begun, Leiter and Maslach (Chapter 12) started a forward-looking discussion on the future development of engagement interventions. The perspective emphasizes enhancing the positive qualities of worklife in contrast to an exclusively problem-oriented perspective. These interventions include new learning opportunities or enhanced resources permitting employees to work more effectively. This approach strives to improve the balance of demands with resources. Its long-term goals are to foster employee health, safety, and engagement.

### Future research

The work engagement studies discussed in this book offer evidence for the incremental validity of engagement over and above traditional I/O concepts. The chapters have introduced a wealth of perspectives and have posed a variety of questions regarding work engagement. Below we discuss seven avenues for research that seem highly relevant for further progress in the emerging field of work engagement.

### Conceptual development

Further progress in research on work engagement would be more effective with broad agreement on the meaning of the concept. We propose to define work engagement as a subjective experience with two core dimensions: energy and involvement/identification. The inclusion of both dimensions within the UWES (Schaufeli et al., 2002), the MBI (Maslach, Jackson, & Leiter, 1996), and the OLBI (Demerouti & Bakker, 2008) supports that perspective.

The role of other constructs provides a focus for future research and conceptual development. Research could consider the absorption dimen-





sion of the UWES that its developers proposed as a core aspect of work engagement, but may on closer examination appear as an outcome of energy and identification. Another important conceptual question is the role of professional efficacy included in the MBI. Resolving these questions requires further development in theory and measurement. It may be more constructive to view efficacy as a personal resource or form of psychological capital contributing to work engagement rather than as a core dimension of engagement.

Additional empirical research can address the positioning of burnout and work engagement: are they polar opposites or neighboring or even overlapping work experiences? A recent study conducted in South Africa using the UWES, MBI, and the OLBI (Demerouti, Mostert, & Bakker, 2009) suggested that the identification components of burnout and work engagement, namely cynicism/distancing and dedication, form a bipolar dimension. In addition, cynicism and dedication showed no substantial differences in the pattern of relationships with other constructs (work pressure, autonomy, and organizational commitment). In contrast, for the energy component the results suggest two distinguishable yet highly related dimensions of exhaustion and vigor. Vigor and exhaustion show a different pattern of relationships with work pressure, autonomy, organizational commitment, and mental health. Vigor is more strongly related to autonomy and commitment than is exhaustion, whereas exhaustion has stronger associations with work pressure and mental health than does vigor. These findings further substantiate the argument that vigor and exhaustion represent independent dimensions.

The finding that the distancing and dedication factors represent two ends of one construct is not very surprising because people can hold either negative or positive attitudes towards their work and it is unlikely that they can endorse both simultaneously. This is also justified by the distribution of the scores across the identification dimensions. Thus, responses to the identification items of burnout and work engagement constructs seem to follow the structure of the circumplex of emotions as suggested by Watson and

Tellegen (1985) where distancing and dedication are considered as two opposites of one continuum. However, as indicated by Demerouti et al. (in press), more research is needed on the exhaustion and vigor dimensions. Their results suggest that although employees who score low on vigor generally score high on exhaustion, other combinations are not uncommon. Future research could investigate whether the energy dimensions are more variable than the attitudinal dimensions. One could argue that even on a specific day high levels of vigor (e.g., at the start of the day) might coincide with *high* levels of exhaustion (e.g., at the end of the day).

### **Daily work engagement**

Most previous studies on work engagement used a between-person design and cannot explain why even highly engaged employees may have an off-day and sometimes show below average or poor performance. Researchers have therefore begun to examine daily changes in work engagement. An important advantage of diary research is that it relies less on retrospective recall than regular surveys, since the questions relate to individuals' perceptions and feelings on a certain day. In addition, when daily changes in work engagement are temporarily separated from daily changes in outcomes like performance and personal initiative, state work engagement could be causally related to such outcomes. Diary research may also reveal what the day-to-day triggers are of state engagement. Sonnentag et al. (Chapter 3) summarize the existing research on state engagement, and identify avenues for future research.

Sonnentag et al. (Chapter 3) suggest intensifying conceptual development on day-specific (or even momentary) work engagement in order to arrive at a better understanding of how day-specific engagement corresponds to enduring engagement in experienced quality and configuration. In addition, they argue that it is an open question whether the scales used to assess enduring work engagement (see Schaufeli & Bakker, Chapter 2) are valid for the measurement of state work engagement. Clearly, the time anchors on the UWES and the MBI-GS (e.g., "a few times





a month”) do not fit with a daily reporting schedule. The appropriateness of item wording to capture the day-to-day variations in energy and dedication/involvement remains an open question. Expanding existing measures with new items or alternative response formats would help to refine critical instruments.

Until now, individual difference variables have made a minor contribution in research on state work engagement. According to Sonnentag et al. (Chapter 3) personality may influence the variability of work engagement within a person, interacting between predictors and state work engagement, or between engagement and outcomes. As an example of this kind of research, Bledow and Schmitt (2008) argued that positive affectivity would make employees less dependent on positive events occurring during a work day. Consistent with this hypothesis, their diary study among German software engineers showed that positive affectivity moderated the relationship between positive events and work engagement. The positive relationship was stronger for engineers low in positive affectivity. In another diary study, Bakker and Xanthopoulou (in press) hypothesized that daily engagement would cross over from one colleague to another. In addition, since extraversion is the disposition to be sociable and cheerful, they predicted that extraverts would interact more often with their colleagues than would introverts. The frequency of daily communication was expected to moderate the crossover of daily work engagement, which in turn would determine colleagues’ daily performance. Results confirmed the crossover of daily work engagement, but only on days that employees within a dyad interacted frequently. Moreover, as predicted, members of the dyad influenced each other’s daily performance through a process of engagement crossover.

### ***Engagement and job crafting***

Sonnentag et al. (Chapter 3) and Salanova et al. (Chapter 9) argue that engagement is not just “happening” to employees, but rather that employees can actively create engagement experiences. As Grant and Ashford (2008) put it, “Employees do not just let life happen to them.

Rather, they try to affect, shape, curtail, expand, and temper what happens in their lives.” (p. 3). Employees may actively change the design of their jobs by choosing tasks, negotiating different job content, and assigning meaning to their tasks or jobs (Parker & Ohly, 2008). It is our view that particularly engaged employees will behave in such a way.

Wrzesniewski and Dutton (2001) call the process of employees shaping their own jobs “job crafting”; this includes the physical and cognitive changes individuals make in their tasks or relational boundaries. Physical changes refer to the form, scope or number of job tasks, whereas cognitive changes refer to perception of the job. Relational boundaries include employees’ discretion over their social interactions while doing the job. Job crafting has the potential to improve employees’ balance of job demands with resources, increasing their person–job fit.

Wrzesniewski, McCauley, Rozin, and Schwartz (1997) suggest that employees who view their work as a calling (i.e., focus on enjoyment or fulfillment) are more likely to engage in job crafting, because work is more central to their lives. In a similar vein, engaged employees may be more inclined to proactively change their job demands and resources so that their performance is optimal. It would be interesting to examine the strategies employees use to increase their work engagement. Are engaged workers better able to mobilize their job resources? Do they search actively for feedback about their performance? Studies on engagement and job crafting may answer the question whether engaged employees really create virtuous circles (Salanova et al., Chapter 9).

### ***Is there a dark side of engagement?***

Virtually all chapters in this book offer evidence for the benefits of work engagement. Engaged employees have psychological capital, seem to create their own resources, perform better, and have happier clients. This raises the question whether there is also a dark side of work engagement. Previous research on positive organizational behavior (POB) constructs has indeed shown that there can be a dark side of POB.





For example, high self-esteem can lead to an underestimation of the time that is necessary for goal achievement (Buehler, Griffin, & Ross, 1994), and unrealistic optimism can harm individuals and organizations by promoting inappropriate persistence (Armor & Taylor, 1998). Furthermore, overconfidence has been found to hinder subsequent performance (Vancouver, Thompson, Tischner, & Putka, 2002; Vancouver, Thompson, & Williams, 2001), and creativity may lead to frustration given the unfocused effort and diminished productivity that creative individuals may experience (Ford & Sullivan, 2004).

Whereas this book has identified several of the above-mentioned qualities (e.g., self-esteem, optimism) as potential predictors of work engagement, it seems evident that “over-engagement” can also have negative consequences. For example, although engaged employees are not workaholics, they may become so engaged in their work that they take work home. Indeed, Beckers et al. (2004) conducted a survey-study among a representative sample of the Dutch workforce and found that work engagement was positively related to working overtime. The work–life balance literature has consistently shown that work–home interference undermines recovery, and may consequently lead to health problems (Geurts & Demerouti, 2003).

Furthermore, one may wonder whether work engagement may create workaholics, i.e., employees who have an inner drive to work hard, even when they no longer like working overtime. Indeed, some scholars have noted that “In order to burn out, a person needs to have been on fire at one time” (Pines, Aronson, & Kafry, 1981, p. 4). This would imply that, over time, the high arousal, positive affect (e.g., enthusiasm) of engaged workers turns into negative affect and strain. The design of future research should include ways of assessing potential long-term negative effects of high work engagement. The absorption component of work engagement seems a likely candidate for evoking unhealthy behavior. Employees may become so immersed in their work that they forget to rest or to maintain their personal relationships. A persistent pattern of excessive commitment could contribute to health or relationship problems.

### **Engagement and health**

To date, only a handful of studies have addressed the relationship between work engagement and health. Demerouti, Bakker, De Jonge, Janssen, and Schaufeli (2001) found moderate negative correlations between engagement (particularly vigor) and psychosomatic health complaints (e.g., headaches, chest pain). In their study among four different Dutch service organizations, Schaufeli and Bakker (2004) found that engaged workers suffer less from, for instance, self-reported headaches, cardiovascular problems, and stomach aches. Similarly, Hakanen, Bakker, and Schaufeli (2006), in their study among Finnish teachers, showed that work engagement was positively related to self-rated health and workability. Peterson, Demerouti, Bergström, Samuelsson, Åsberg, & Nygren (2008) found that engaged Swedish health care workers reported fewer back pain and neck pain problems, and lower anxiety and depression. Furthermore, we have seen in Chapter 6 that vigor (physical strength, cognitive liveliness, and emotional energy) is positively related to mental and physical health. Since Wefald (2008) has shown positive relationships between the Shirom–Melamed vigor measure and work engagement, Shirom’s findings can also be taken as evidence for a link between engagement and health.

However, recent research has generally failed to find evidence for a link between engagement and *physiological* indicators. Langelan, Bakker, Schaufeli, Van Rhenen, and Van Doornen (2006, 2007) examined the relationship between burnout and work engagement on the one hand, and two physiological stress systems on the other hand, namely the hypothalamic-pituitary-adrenal (HPA) axis and the cardiac autonomic system. The HPA axis is the central mechanism in the long-term adaptation of an individual to his or her environment. The cardiac autonomic system consists of two different branches, the sympathetic system and the parasympathetic (vagal) system. The sympathetic system is involved in activity and arousal (e.g., leading to elevated blood pressure and heart rate), whereas the parasympathetic system has a prominent role in recovery and restoration (e.g., leading to a reduction in heart rate).





With respect to the HPA axis, Langelaan et al. (2006) found that their burned-out and engaged study group neither differed from each other, nor from a control group, with respect to morning cortisol levels, the cortisol awakening response (CAR), dehydroepiandrosteronesulfate (DHEAS) levels, and the cortisol/DHEAS ratio. Engaged employees only showed slightly better cortisol suppression than the burned-out and control group in response to dexamethasone, indicating a higher feedback sensitivity of their HPA axis. Furthermore, burned-out and engaged employees did not differ either from each other or from a control group with regard to cardiac autonomic (sympathetic and parasympathetic) functioning, as assessed by ambulatory measurements in their daily life (Langelaan et al., 2007). These findings were also not in line with predictions. It was hypothesized that burnout would be associated with increased sympathetic and/or reduced vagal control, whereas work engagement was expected to be associated with reduced sympathetic and/or increased vagal control.

Taken together, previous studies suggest that engagement is related to better subjectively reported health. However, engagement is not accompanied by deviances in (stress) physiological functioning. Even using a sensitive design including extreme groups (burnout versus engaged employees) did not produce the expected findings. The HPA axis and the sympathetic and parasympathetic cardiac systems did not function more optimally in engaged employees than in “normal”, healthy individuals. Future studies should try to illuminate physiological processes that explain the relationship between engagement and health. What is needed is sensitive in-depth research on the psychophysiological indicators of engagement, as well as longitudinal studies on the relationship between engagement and health.

### ***Crossover of engagement***

In most organizations, performance is the result of the combined effort of individual employees. It is therefore conceivable that the crossover of engagement among members of the same work team increases performance. Crossover can be defined as the transfer of positive (or negative)

experiences from one person to the other (Bakker, Westman, & Van Emmerik, 2009).

There is indeed some experimental evidence for such a crossover process. Barsade (2002) examined the transfer of moods among people in a group and its influence on performance. Using a trained confederate enacting mood, she showed that the pleasant mood of the confederate influenced (video coders' ratings of) the mood of the other team members during a simulated managerial exercise (a leaderless group discussion). The positive mood contagion consequently resulted in more cooperative behaviour and better task performance. In a similar vein, Damen (2007) asked a professional actor to show high arousal, positive emotions (e.g., enthusiasm) to business students. The students were encouraged by the actor (a presumed leader) to work on a task that asked them to process as many orders as possible relating to personal computers (including software, printers, and other hardware). Results showed that those exposed to engaged leaders were more effective and produced more. One of the reasons for this is that the emotions of the leader conveyed action readiness. The effect only worked when followers' emotions were similarly positive, suggesting that a contagion effect may have been responsible for the enthusiasm–performance link.

Future research on work engagement may focus on the crossover of engagement and performance in real-life work settings. Some researchers have started to examine reciprocal emotional reactions among employees who closely collaborate. For example, in a field setting, Totterdell, Kellet, Teuchmann, and Briner (1998) found evidence that the moods of teams of nurses and accountants were related to each other even after controlling for shared work problems. Bakker, Van Emmerik, and Euwema (2006) in their study among 2229 officers working in one of 85 teams found that team-level work engagement was related to individual team members' engagement (vigor, dedication, and absorption), after controlling for individual members' job demands and resources. Thus, engaged workers who communicated their optimism, positive attitudes, and proactive behaviors to their colleagues, created a positive team climate, independent of the





demands and resources to which they were exposed. The question remains whether such a crossover of work engagement also translates into better team performance. Future studies should further illuminate the processes fostering the crossover of engagement at the workplace.

### **Management intervention**

Intervention studies hold the greatest potential for theory, research, and practice. The process of introducing a new educational program or changing working conditions tests the limits of an idea. A serious challenge in organizational research is that researchers approach systems that maintain a certain balance between their demands, resources, and subjective experiences of employees. A single assessment in a cross-sectional survey provides a valuable snapshot, but sheds very little light on interrelationships between things. Longitudinal panel studies certainly improve the quality of information, but cannot provide definitive information on how one element has an impact on another.

Intervention studies provide a conceptual richness. They target a specific quality of the work environment, first to determine its susceptibility to change and secondly to assess downstream consequences of those changes on other aspects of worklife. In addition, from a practical perspective, intervention studies are useful. Well-informed action has the potential of contributing to the quality of life within the participating organization and beyond. Rather than just talking about work engagement, we can strive to do something about it.

The research evidence on spirals suggests that we have considerable latitude in intervention design. Studies could improve employee empowerment by improving their access to knowledge, materials, or support staff to determine its impact on work engagement. Intervention studies could examine crossover or contagion through programs that enhance the quality of collegial relationships (Leiter & Laschinger, 2008).

### **Overall conclusion**

This book demonstrates that research on work engagement has broad and profound implications

for work in the 21st century. Employees with energy and strong identification with their work access critical resources and seem to perform better. It is even conceivable that engaged workers create their own job resources over time. Our overview supports the contention that focusing on work engagement offers organizations a competitive advantage. We hope that our research agenda stimulates future research on work engagement and will be an important resource for scientists and practitioners alike.

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