11

INDIVIDUAL WELL-BEING AND PERFORMANCE AT WORK

A conceptual and theoretical overview

Toon W. Taris and Wilmar B. Schaufeli

From a historical perspective, one of the main aims of early twentieth-century authors like Emil Kraepelin, Hugo Münsterberg, and Frederick Taylor was to optimize worker performance (e.g., Koppes & Pickren, 2007; Taris, 2018). In the days of industrial capitalism, workers' performance was of great concern. For example, in *The Principles of Scientific Management*, Taylor (1911/2006) argued that

> instead of using every effort to turn out the largest possible amount of work, in a majority of the cases [a worker] deliberately plans to do as little as he safely can . . . Underworking, that is, deliberately working slowly so as to avoid doing a full day's work . . . constitutes the greatest evil with which the working-people of both England and America are now afflicted.
>
> *(p. 7)*

Although few others held as extreme a position as that of Taylor, in those days much scientific and practical research was directed at examining how worker productivity could be increased, e.g., through improved selection of personnel, training, and reducing absenteeism. As Koppes and Pickren (2007) demonstrate, neither the association between work characteristics and well-being, nor that between well-being and productivity, received much attention at the time, at least not in the research published in major psychology journals.

This changed in the 1930s. Following the influential Hawthorne studies in which the effects of working conditions on worker productivity were examined (Mayo, 1933; cf. Kompier, 2006), human motivation, "emotional well-being", and job satisfaction were uncovered as relevant factors for work performance. Textbooks of industrial and organizational psychology started devoting chapters to subjects such as maintaining "fitness" at work, the effects of monotonous work and ways of increasing work motivation (cf. Landy & Conte, 2010; Taris, 2018). At present, emotions and well-being at work are topics that are studied in their own right, and few researchers in the field of work and organizational psychology would contend that examining employee well-being is irrelevant when it comes to improving productivity. Perhaps the most important reason for examining work performance and well-being in relation to each other is that it is often assumed that satisfied and happy workers will be more productive than others (the "happy-productive worker" hypothesis, Lucas & Diener, 2002). A second reason is that many psychologists working in this area believe that high productivity should not be obtained *at the cost*

of worker well-being, a notion that forms the basis for the currently flourishing field of *occupational health psychology* (a subfield in the area of industrial and organizational psychology that focuses on worker health and what might be called *sustainable performance*).

The present chapter addresses the conceptualization of individual well-being and performance in the work context, and discusses theoretical perspectives linking these concepts. We first address theoretical and empirical notions on the structure of well-being, after which the conceptualization of performance and the relations between individual well-being and performance are discussed, respectively.

Individual well-being at work

The literature on subjective well-being often construes well-being as a primarily affective state (Diener, Suh, Lucas, & Smith, 1999), with well-being conceptualized as simply the relative frequency of positive affects compared to negative affects. However, over the past 30 years, several broader conceptualizations of well-being have been proposed, including not only affect, but also behavior and motivation (Ryff, 1989; Ryff & Keyes, 1995; van Horn, Taris, Schaufeli, & Schreurs, 2004; Warr, 1994, 2007). This raises the question of how subjective well-being should be understood: does well-being mainly refer to an affective judgment regarding the events that occur in people's lives (Diener et al., 1999), or should it be considered a broader phenomenon that involves other, non-affective aspects as well?

This issue is especially relevant in the work context. Some of the key outcome variables in work and organizational psychology tap aspects of affective well-being (such as job satisfaction, depression, and affective organizational commitment, cf. Allen & Meyer, 1990), whereas other outcomes relate to aspects of these broader conceptualizations of well-being (e.g., motivation, efficacy, and physical health). Clearly, well-being can be understood in many different ways and it relates to a wide range of concepts. Moreover, well-being can be measured as a context-free (i.e., in relation to life in general) or as a domain-specific concept (e.g., at work, school, or in intimate relationships). Since much seminal work on well-being has focused on context-free well-being, this chapter discusses both context-free and work-related well-being. This allows for a deeper understanding of the nature of work-specific types of well-being, so that the link with general "mainstream" approaches to understanding well-being will become more evident, making it easier to recognize specific types of work-related well-being as subtypes of more general types of well-being.

Conceptualizations of well-being

Current individual-level conceptualizations of well-being can conveniently be classified on two dimensions, namely (a) whether they focus exclusively on affective well-being or employ a multidimensional approach, and (b) whether they are context-free (i.e., do not focus on one particular area of life) or domain-specific. Crossing these two dimensions yields four basic approaches to conceptualizing well-being. Below we briefly discuss each of these approaches.

Context-free, affective well-being

As indicated above, the classic conceptualization of well-being primarily focuses on affect (i.e., pleasure vs. displeasure: Diener et al., 1999). Dictionary definitions of happiness suggest that there are two principal kinds of happiness, namely happiness as peace of mind and contentment versus happiness as fun and excitement (Warr, 2007). This suggests that different types of affective happiness vary on two dimensions, namely *pleasure* and *intensity/arousal* (Russell, 1980). The combination of these two axes in

the so-called *circumplex model* allows for characterizing a wide range of affect/ emotions, e.g., "pleased" (high on pleasure, intermediate on arousal), "tense" (high on arousal, low on pleasure), and "fatigued" (low on arousal, intermediate on pleasure).

Context-free (or *global*) measures of affective well-being often consist of scales whose items refer to a range of positive as well as negative states. One typical example is Watson, Clark, and Tellegen's (1988) Positive and Negative Affect Schedule (PANAS) that includes 10 positive (e.g., excited, inspired) and 10 negative items (e.g., hostile, nervous). People completing this questionnaire must rate the extent to which they experience each mood state (ranging from "very slightly or not at all" to "very much") during a specified time frame (e.g., "last month"). Clearly, this is a context-free measure of affective well-being, since it refers to mood that is not linked to (or experienced in) a particular context.

Domain-specific, affective well-being

Global measures of well-being are useful when researchers are interested in people's level of affective well-being in general. However, in specific contexts focused (domain-specific) measures of affective well-being will often be much more appropriate, e.g., when evaluating the effects of a workplace intervention designed to increase affective well-being *at work*. Since such interventions primarily target the workplace, it makes sense to focus on well-being in that specific context as well (i.e., it is unlikely that such interventions will equally strongly affect one's level of well-being as experienced in other contexts). Fortunately, it is not particularly difficult to devise such domain-specific measures. For example, building on Russell's (1980) general pleasure-arousal model of emotions, Warr (1990) developed and tested a similar two-dimensional model of affective well-being at work. He collected data from 1,686 working men and women, giving them a list of 12 emotions and asking them to indicate for each emotion how much of the time *their job* had made them feel this emotion during the past few weeks (1 = "never", 6 = "all of the time"). After factor-analyzing these data, Warr found that these emotions loaded on two broad dimensions, which he termed anxiety-contentment and depression-enthusiasm. Thus, by explicitly specifying the context in which the 12 emotions should be experienced, Warr (1990) devised a work-specific measure of affective well-being.

Context-free, multidimensional well-being

Other researchers in this area have proposed multidimensional (or non-affective) conceptualizations of general well-being. Currently, the approach of Ryff and colleagues (Ryff, 1989; Ryff & Keyes, 1995; Ryff & Singer, 2008) is the best-known. Ryff attempted to answer the question, what does it *mean* to be well psychologically? She noted that previous conceptualizations of well-being (e.g., in terms of affective well-being, or of life satisfaction) were data-driven rather than theory-driven. Therefore, based on previous notions of happiness, she proposed a six-dimensional framework of general well-being. Table 11.1 presents these dimensions. As this table shows, the six dimensions proposed by Ryff (1989) cannot be mapped directly on the familiar triad of affect, motivation, and cognition, and in this sense her classification goes beyond the traditional approach of equating well-being to affect.

Ryff's classification has been criticized on several grounds. For instance, it is not immediately clear why well-being should include these six dimensions and not more, fewer, or wholly different dimensions; the choice for these six dimensions is to some degree arbitrary and seems to be based on normative rather than theoretical considerations. For example, Peterson (2003) argued that personal growth as conceptualized by Ryff (1989) is likely to be a culture-bound concept that is primarily a concern to the Western upper-middle class, rather than tapping a central universal aspect of well-being. Moreover, the

TABLE 11.1 Multidimensional conceptualizations of well-being

Ryff's (1989) context-free conceptualization of well-being

(1) *Self-acceptance* – a positive evaluation of one's self and one's past, accepts one's self (including one's negative features)
(2) *Personal growth* – continuous growth and development as a person, openness to new experiences
(3) *Purpose in life* – the belief that one's life is purposeful and has meaning, sense of directedness, has aims and objectives for living
(4) *Positive relations with others* – having warm and satisfying relations with others, capable of strong empathy, understands give and take in relationships
(5) *Environmental mastery* – the capacity to manage one's life effectively, makes effective use of surrounding opportunities
(6) *Autonomy* – a sense of self-determination and independence, evaluates one's self by internal standards

van Horn et al.'s (2004) conceptualization of work-related well-being

(1) *Affective well-being* – e.g., job satisfaction, organizational commitment, emotional exhaustion/fatigue
(2) *Professional well-being* – e.g., aspiration and competence at work, autonomy
(3) *Social well-being* – e.g., depersonalization towards colleagues, quality of social functioning at work
(4) *Cognitive well-being* – the capacity to take up new information at work, ability to concentrate at work
(5) *Psychosomatic well-being* – health complaints such as headaches, stomach aches, and symptoms of possible cardiovascular issues

dimensions of autonomy, environmental mastery, and positive interpersonal relations may be construed better as *antecedents* of well-being rather than being central features of that concept itself (Ryan & Deci, 2001; Warr, 2007). In spite of these criticisms, Ryff's ideas have been (and are still) influential when it comes to current thinking about what well-being actually involves.

Domain-specific, multidimensional well-being

Multidimensional classifications of well-being can also be developed for specific contexts, in this case, the work setting. The advantage of conceptualizing well-being as a job-specific rather than as a context-free phenomenon is that its relationships with job-related antecedents are likely to be stronger because they refer to the same life domain, which potentially offers a better understanding of how particular work characteristics affect employees' well-being. For example, Warr (1994) focused on well-being at work in proposing a multidimensional conceptualization of well-being. He distinguished between four primary dimensions (affective well-being, aspiration, autonomy, and competence) and a secondary fifth dimension ("integrated functioning") that encompassed the four primary dimensions and reflected the person as a whole. (1) *Affective well-being* taps the pleasurableness and intensity of particular moods at work (see previous). (2) *Aspiration* as a general concept refers to people showing interest in their environment, engaging in motivated activity, and seeking to extend themselves in ways that are personally significant. Job-related aspiration refers to the degree to which a person pursues challenging goals in the job, and may be compared to Ryff's (1989) concept of personal growth. (3) *Autonomy* refers to the degree to which people can resist environmental demands and follow their own opinions, preferences, and actions, and resembles Ryff's (1989) concept of autonomy. (4) Finally, *competence* covers a person's (psychological) ability to cope with problems and act on the environment with at least a moderate amount of success, and is similar to Ryff's (1989) concept of environmental mastery.

Van Horn et al. (2004) argued that many concepts currently used in work and organizational psychology could conveniently be located in a job-specific integration of Warr (1994) and Ryff's (1989)

multidimensional models. They distinguished among affective, cognitive, professional, social, and psychosomatic dimensions of well-being at work (Table 11.1), showing that concepts such as organizational commitment (affect), depersonalization (i.e., distancing oneself from one's colleagues and recipients of one's services, which is part of the burnout concept), and health could be placed on different dimensions of worker well-being. Moreover, they demonstrated factor-analytically that these five dimensions loaded on a single overarching construct, with affect being the highest-loading dimension. These findings are important in that they show that (a) particular commonly used outcome measures (such as job commitment and job satisfaction) may tap the same underlying concepts, and (b) although affective well-being is indeed the most important dimension of work-related well-being, well-being should not be narrowed down to affect only: it includes cognitive, professional, social, and psychosomatic dimensions as well.

Well-being at work: concluding remarks

In this section we have discussed context-free and domain(work)-specific conceptualizations of well-being. We have provided examples of four approaches to conceptualizing well-being, showing that both unidimensional (affect-only) and multidimensional measures of context-free well-being could easily be adapted to the work context.

Although there is consensus among researchers that affect is a key dimension of well-being, our discussion has shown that other dimensions could also be seen as part of this concept. One important criticism of multidimensional approaches is that it is often unclear why these other dimensions – besides affect – should be part of well-being, and how these dimensions relate to each other. Moreover, it is interesting to note that it is conceivable that not all dimensions of these multidimensional approaches of well-being correlate highly. Indeed, high scores on one dimension may covary with low scores on the other. For example, high scores on Ryff's (1989) dimension of self-acceptance could be expected to coincide with low scores on the dimension of personal growth, since being satisfied with the current state of affairs should not foster the motivation for change and growth (cf. Carver & Scheier, 1998). Consistent with this reasoning, Ryff and Keyes (1995) report that the associations among their six dimensions range from .13 to .46 (median correlation = .22). Apparently, we arrive at the somewhat paradoxical conclusion that, even though it can be shown that these dimensions load on a single higher-order factor, different dimensions of well-being may share as little as 2% of their variance. Grant, Christianson, and Price (2007) even argue that there may be trade-offs between different types of well-being, for example, high levels of job challenge and opportunities for growth may coincide with high levels of stress.

At this point it is important to note that so far we have only concerned ourselves with individual-level conceptualizations of well-being. However, note that well-being is *not necessarily* only an individual-level concept, and that it can be useful to aggregate individual-level measures of well-being to the group-level. For example, sickness absence could be part of a health-focused individual-level measure of well-being; however, it is also possible to speak of sickness absence levels for particular work teams or even whole organizations. Similarly, it is possible to speak about individual as well as group-level affect, e.g., individual and group task satisfaction, with the latter concept referring to a group's shared attitude towards its task and their work environment (Mason & Griffin, 2003). Note that group-level concepts do not necessarily correlate highly with seemingly similar individual-level concepts, implying that concepts measured at different levels are substantively different.

In the next section we discuss the conceptualization of performance at work, after which theoretical perspectives on the associations between well-being and performance are addressed.

Individual performance at work

Apparently, it is intuitively clear what we mean by saying that a particular worker performs well at work. However, on second thought it may be less evident to what sort of behaviors we refer to when a worker is performing well. For example, consider the case of Nick Leeson, a former derivatives broker who worked for Barings Bank, the UK's oldest merchant bank that collapsed in 1995 as a result of Leeson's speculative trading. Initially, his unauthorized deals made large profits for Barings, accounting for some 10% of the bank's annual income. However, his luck soon turned. Leeson had covered his bad trades on a secret account; early in 1995, when this was discovered, Leeson's losses exceeded £200 million. Ultimately the losses reached £827 million (then $1.4 billion) – twice the bank's available trading capital. Barings went bankrupt soon afterwards and disappeared from the scene.

What about Leeson's performance? In some respects he performed fantastically well: in 1992 he received a bonus of 2.5 times his yearly salary, showing how impressed management was with his performance. However, in other respects Leeson performed poorly: his high-risk transactions caused the demise of the organization he was working for and led to what is perhaps the largest financial scandal of the twentieth century. Apparently, performance is a concept that cannot be described along a single continuum. Rather – like well-being – it is a multidimensional concept. The same behavior (e.g., Leeson's speculative and illicit transactions) can be rated high on one dimension, but low on another. But what are the relevant dimensions of performance?

Following Roe (1999), Reijseger, Schaufeli, Peeters, and Taris (2013) distinguished between process performance and outcome performance (see also Campbell, 1990; Sonnentag & Frese, 2002). *Process performance* refers to the actions or behaviors employees engage in to achieve the goals of their job, i.e., what they do at work. Conversely, *outcome performance* refers to the products or services that are produced and whether these are consistent with the overall strategic goals of the organization. As this distinction suggests, high levels of process performance may or may not coincide with high outcome performance. For example, take a politician who is elected prime minister of a small country and who intends to promote the economy of that country. She devises all sorts of clever plans, wins support for these plans from employers' organizations and the unions, explains these plans to the voters, etc. – she does all the right things right (i.e., good process performance). Unfortunately, since this country is so small its economy is heavily dependent upon external factors such as the economic situation in the country's neighboring countries, meaning that ultimately all plans of the prime minister could well be irrelevant in achieving her ultimate goal of stimulating her country's economy (i.e., bad outcome performance). Generally speaking, because of its closer and inherent links with employee behavior process performance is more relevant in occupational psychology, compared to the more distal outcome performance that depends on a multitude of external factors that are far beyond the employees' control.

Types of process performance

Process performance (behavior at work) precedes outcome performance by definition. However, workers may do very different things at work, and whereas some of these are functional in bringing about their work goals, others are not (Sonnentag & Frese, 2002). In a review of conceptual frameworks of work performance, Koopmans et al. (2011) distinguished among three main dimensions of individual process performance at work: (a) in-role performance (also dubbed task performance or job-specific proficiency), (b) extra-role performance (also called contextual performance, non-job-specific proficiency, or organizational citizenship behavior), and (c) counterproductive work behavior (i.e., destructive and/or hazardous behaviors) (cf. also Reijseger et al., 2013).

In-role performance refers to the proficiency (competency) with which workers perform their central job tasks, or sometimes to the degree to which workers achieve the central goals of their jobs. This dimension often refers to issues such as productivity (quantity) and quality of the goods produced or services delivered by the workers, i.e., goals that are often part of formal job descriptions. According to Koopmans et al. (2011), this is the central dimension of job performance; all conceptual frameworks included in their review included this aspect. Note that what constitutes focal job tasks differs across jobs; behaviors that are functional in one job may well be dysfunctional in another. Also note that this type of performance tends to overlap with outcome performance as defined previously, since in-role performance tends to be defined in terms of achieving the goals (i.e., intended outcomes) of one's job. Strictly speaking this is not desirable, since in-role performance should refer to employee *behavior and acts* on the job, not the *outcomes* thereof.

Performing well at work may involve more than just meeting one's prescribed work goals. *Extra-role performance* can be defined as behaviors or actions that help bring about the organization's goals while at the same time not being part of a worker's formal job description (cf. Organ, Podsakoff, & MacKenzie, 2006). For example, helping others at work, acting with integrity, and showing respect to others are all aspects that are usually not part of formal job descriptions but that are nevertheless beneficial for the organization.

The third dimension distinguished by Koopmans et al. is *counterproductive work behavior*. This type of behavior involves deliberate acts that are harmful to the organization and impede achieving its goals. This includes behaviors such as being late for work, theft, absenteeism, presenteeism (working while being ill, cf. Claes, 2014), engaging in off-task behavior ("soldiering"), consciously violating rules and procedures, and "underworking", that is, deliberately working slowly so as to avoid doing a full day's work (Taylor (1911/2006, p. 7).

Returning to the case of Nick Leeson, his *in-role performance* was excellent, in that his acting as a rogue trader[1] in the short run helped bring about Barings' goals of making good money for the bank and its customers. However, he also showed *counterproductive work behavior* by neglecting organizational rules and procedures by closing unauthorized transactions. Interestingly, this case also shows that there may be *trade-offs* between different types of work performance: Leeson would have been less successful in closing his deals if he had dutifully stuck to the organization's procedures with respect to these transactions. The possibility of trade-offs between types of work performance is often easily conceivable. For instance, workers may engage in high levels of extra-role behavior and help others to achieve the goals of *their* jobs, at the cost of achieving the primary goals of their *own* job (in-role performance).

In a study on the reasons for not complying with safety regulations at work (an aspect of counterproductive work behavior), Lawton (1998) examined the views of UK railway personnel as regards their motives for not complying with risk-related rules during shunting operations (i.e., the process of sorting wagons, locomotives, and railroad cars into complete train sets, or the reverse). Out of 14 endorsed reasons, the most common referred to violations being seen as a quicker way of working, due to time pressure and high workload. Least common were reasons referring to psychological gratification, that is, violations being seen as exciting or macho ways to work. This example shows that workers may neglect safety regulations intended for their own good (high counterproductive work performance) in order to achieve their work goals (high in-role performance) (cf. Chmiel & Taris, 2014).

Work performance: concluding remarks

In this section we have discussed two ways of classifying individual work performance. The first focused on the distinction between process performance (what is done and how it is done) and outcome performance (whether these behaviors and actions achieve the intended goal). The second classification

distinguished among in-role performance (behaviors and acts that constitute the focal part of the job and that are often specified in formal job descriptions), extra-role performance (behaviors and acts that help bring about the organization's goals while not being part of a worker's formal job description), and counterproductive work behavior (behavior and acts that are harmful to the organization and impede achieving its goals; obviously, these are also not part of any job description). Theoretically, there may be trade-offs between these three different types of performance. Koopmans and colleagues (2011) showed that in-role and extra-role are positively related, i.e., workers engaging in in-role behaviors also often engage in extra-role behaviors. As regards counterproductive behavior, findings have shown that in-role and extra-role performance on the one hand, and counterproductive work behavior on the other, are negatively related (Dalal, 2005; Sackett, 2002); that is, workers who engage in high levels of in-role and extra-role behaviors tend *not* to engage in counterproductive behaviors. This pattern of results suggests that there are basically two types of workers: those who tend to strive towards promoting the interests of the organization, versus those who do not.

As was also the case for well-being, performance can be seen as an individual-level phenomenon and as an organizational-level phenomenon; here we have only addressed the former. However, it often makes sense to focus on higher levels of performance, e.g., teams or organizations as a whole can perform well or not (in terms of profit, cost reduction, innovation, implementation of policies designed to bring about a more environmentally friendly production process, etc.). Indeed, it is often difficult to identify the contributions of individual workers to the overall performance of their team or organization, and in these cases it makes sense to consider productivity a higher-level concept.

Theoretical perspective on well-being and performance

How do performance and well-being relate to each other? Sonnentag and Frese (2002) describe three general perspectives that have been adopted for studying individual performance. First, the individual perspective emphasizes the role of individual differences in personality or abilities to account for differences in performance. Second, the situational perspective examines differences in performance as a function of situational and environmental factors (e.g., organizational and work characteristics) that stimulate or impede performance. Finally, the performance regulation perspective focuses on performance as a process, examining questions such as "what does the performance process look like?" and "how can the performance process be improved to facilitate performance?" In this approach, the role of factors such as goal-setting and providing feedback on performance are studied.

Note that the individual and situational perspectives on the relation between individual well-being and performance are interconnected, in that "well-being" may be construed as an individual-level concept. Indeed, previous research has documented links between personality factors (such as neuroticism, extraversion, and Type A behavior) and aspects of well-being such as work engagement and burnout (among others, Hallberg, Johansson, & Schaufeli, 2007; Taris, Van Beek, & Schaufeli, 2014). Although this is consistent with the idea that well-being (and, hence, performance) is to some degree determined by personality factors, in the context of the current chapter on work, well-being, and performance, the situational perspective is most useful. This perspective assumes that environmental factors (i.e., work characteristics) affect worker well-being, which in turn would affect worker performance.

The happy-productive worker hypothesis

At present a variety of theoretical viewpoints exist that examine individual performance as a consequence of worker well-being. One important rationale behind this interest is the belief that happy workers tend

to be more productive than other workers (Lucas & Diener, 2002). This "happy-productive worker hypothesis" dates from the Hawthorne studies/Human Relations Movement of the 1930s (Wright, Cropanzano, & Bonett, 2007), but is still popular today. Interestingly, the evidence for this hypothesis is mixed. In three reviews of the relation between individual-level job satisfaction (tapping the affective dimension of well-being) and "performance", their correlation was estimated at .14 (Vroom, 1964), .17 (Iaffaldano & Muchinsky, 1985), and .30 (Judge, Thoresen, Bono, & Patton, 2001), respectively. Using emotional exhaustion as an indicator of affective well-being, Taris (2006) showed that across 16 studies, the average correlation of this concept with objectively recorded in-role performance was –.22. Although the association between well-being and performance is perhaps not as strong as one might have expected, these studies clearly show that well-being and performance are related.

Note that these results tell us nothing about the underlying processes that might account for these associations. Indeed, how these findings should be interpreted is still a matter of debate, and whereas the ultimate goal of many theoretical perspectives in work and organizational psychology is to account for variations in individual performance at work, these perspectives tend to highlight different processes for this relationship. It is sometimes contended that the relationship between well-being and performance is spurious, and largely due to personality traits, work locus of control, and self-esteem, and that it disappears after controlling for such factors (Bowling, 2007). Whereas it may well be true that the association between *self-rated* performance and well-being is inflated by failing to control for personality factors, it is less clear how such processes would affect the associations between *other-rated, objective* performance and well-being (Taris, 2006). Therefore, although stimulating, Bowling's (2007) study has not ended the debate on how to interpret the association between well-being and performance. In this section we address a number of theoretical perspectives that link various aspects of well-being to performance. Some of these primarily focus on individual-level processes, whereas others focus on organizational level aspects. Although this overview is certainly not exhaustive, it provides a fair impression of the sort of processes that could link well-being to performance.

Effort-recovery theory

Clearly, achieving work goals requires that employees spend effort on working. One theory that focuses on the effects of effort on fatigue (as an indicator of well-being) and performance is effort-recovery theory (Meijman & Mulder, 1998). This approach emphasizes recovery from effort as a factor that affects health and performance. Its core assumption is that expending effort at work has short-term costs or load effects (e.g., fatigue, stress, and negative affect). These effects are transient and disappear after complete recovery has occurred. If so, the employee will start the next working day fully recuperated from the effort spent the day before. However, in case of insufficient recovery, workers will start the next working day in a suboptimal condition which necessitates the expenditure of additional (compensatory) effort to achieve one's work goals (cf. Hockey, 1997). This additional effort will make an even higher demand on the recovery process, which can initiate a process in which load effects accumulate, in the long run resulting in health problems such as burnout (Geurts, Beckers, & Tucker, 2014). What is important here, though, is that this theory proposes that fatigued workers (with fatigue being an affective state, cf. Table 11.1) face three choices. First, being fatigued, they could *increase their effort* in order to keep their performance up (Hockey, 1997). Second, they could *redefine their task requirements*. For example, a bus driver who has just started her shift will often attempt to drive according to the schedule without making any mistakes (e.g., forgetting to drop off passengers at a bus stop). However, when becoming fatigued she could consciously or unconsciously decide that the core of her task is to drive according to schedule, and to put less effort into preventing mistakes. In this way she could keep up the core of her performance without investing

additional effort. Third, instead of increasing their effort or redefining their task requirements, they could just *stop attempting to keep their performance up to par* – and deliver sloppy work instead. Thus, this theory proposes that higher levels of un-well-being (i.e., fatigue) could lead to lower performance, since fatigued workers may well choose to perform suboptimally or fulfill only part of their tasks.

Self-determination theory

A second perspective on the relation between individual well-being and performance focuses on the degree to which work fulfills basic psychological needs. Fulfillment of these needs would trigger different types of motivation; in turn, this motivation would affect work performance. According to Deci and Ryan's (2000) self-determination theory (SDT), human beings possess three basic, innate needs: (1) the *need for relatedness*, which refers to experiencing positive relationships with others; (2) the *need for competence*, which refers to accomplishing challenging tasks successfully; and (3) the *need for autonomy*, which refers to experiencing freedom of choice and the opportunity to initiate behavior. The degree to which a particular activity (e.g., work) satisfies these needs relates positively to the degree to which that behavior is intrinsically or extrinsically motivated. Workers who are intrinsically motivated for an activity perform that activity because they consider it as interesting, enjoyable, and satisfying (cf. Ryff's, 1989, dimensions of well-being, especially positive relations with others, environmental mastery, and autonomy). Intrinsically motivated workers engage in activities for their own sake and act with a full sense of volition (Gagné & Deci, 2005), and this type of behavior will be sustained as long as it continues to contribute to the satisfaction of these needs. Conversely, workers who are extrinsically motivated for an activity conduct this activity for its instrumental value (e.g., monetary rewards, social prestige, or promotion prospects) since it does not satisfy their personal needs, and they will therefore minimize the effort invested in this activity as much as possible (Taris et al., 2014). Thus, SDT proposes that higher levels of well-being (defined as satisfaction of one's basic needs) are related to higher performance because satisfaction of these needs affects employee motivation. Good performance will be achieved if workers find their work interesting and satisfying, and are intrinsically motivated for their jobs (cf. Baard, Deci, & Ryan, 2004).

Job characteristics, well-being, and performance

SDT argues that jobs may affect motivation, well-being, and performance. However, which task characteristics are relevant here? A major stream of research in this area has focused on Karasek's (1979; Karasek & Theorell, 1990) Job Demand-Control (-Support) (JDC) model. This model is well-known for proposing that the combination of high levels of demands and low levels of control (and support) elicit high levels of strain. However, it also states that the combination of high levels of demands and high levels of control (and support) provides workers with the opportunity to develop themselves in their jobs, which is conducive to performance (Taris & Kompier, 2004). When high demands and high control are combined, demands turn into "challenges" and control allows workers to decide for themselves on how they work. Karasek and Theorell (1990) argue that it is the fact that workers can decide for themselves how to conduct their tasks that has a positive effect on their productivity. However, this type of work environment would also satisfy SDT's needs for personal growth (through challenge and learning), autonomy, and – in the presence of high levels of support – that of the need for relatedness as well, leading to high levels of motivation. Apparently, well-being (taken as satisfaction of basic needs, or high motivation) also takes a place in the JDC as a possible antecedent of individual performance.

The latter is certainly the case for the Job Demands-Resources (JDR) model (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). This model is in many respects an extension of

the JDC model. However, rather than focus on a limited number of particular job characteristics (as the JDC does), the JDR followed Lee and Ashforth (1996) in distinguishing between two broad categories of job demands and job resources. These job demands are defined as the "physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs" (Demerouti et al., 2001, p. 501). Job resources are the "physical, social, or organizational aspects of the job that [are] . . . functional in achieving work goals . . . reduce job demands and the associated physiological and psychological costs [or] stimulate personal growth and development" (p. 501). Similar to the JDC and drawing on effort-recovery theory, the JDR states that high levels of demands lead to stress, strain, and ill-health (especially burnout) and low job performance. Conversely, high levels of resources are expected to trigger work motivation (engagement; a combination of high levels of energy, dedication to work, and absorption in work) and high work performance. Thus, the JDR explicitly proposes that individual-level well-being (i.e., engagement and burnout) affects job performance (Taris, Leisink, & Schaufeli, 2017, for a review).

Broaden-and-build theory

In a small but interesting study, Wright et al. (2007) proposed that the relation between job satisfaction (a measure of affective well-being) and performance would be moderated by positive well-being, such that this relation would be stronger for workers reporting high levels of psychological well-being (also measured in terms of affective well-being). This assumption was grounded in the work of Fredrickson and colleagues (Fredrickson, 2001; Fredrickson & Branigan, 2005), who argued that experiencing positive emotions (such as positive well-being) would broaden an individual's momentary thought-action repertoire through expanding the obtainable array of potential actions and thoughts that come to mind – i.e., people in a positive mood tend to consider more alternatives in any given situation than others. In turn, these broadened mindsets would carry indirect and long-term adaptive value because they assist in "building" an individual's physical, psychological, intellectual, and social resources. Wright et al. (2007) argue that this state of mind would make employees more proactive and less prone to experiencing stress, which would not only affect their work performance directly but also as a moderator, in that these broadened mindsets would strengthen the already existing positive effects of other types of well-being on performance even further. Their empirical study among 109 managers supported these ideas, showing that the relation between job satisfaction and performance was indeed strongest for those reporting high levels of psychological well-being. This finding, albeit preliminary in nature due to the small scale of the study, lends further credence to the notion that well-being and performance are positively related.

Well-being and performance: concluding remarks

In this section we have discussed theoretical perspectives on the relation between well-being and performance. As this selective overview demonstrated, a wide range of such perspectives has been proposed and tested. These perspectives focus on very different types of well-being. Some of these clearly tap the affective dimension of well-being (e.g., job satisfaction, fatigue), whereas others are more motivational (satisfaction of one's basic needs, work engagement, and intrinsic motivation) in nature. The processes linking these different conceptualizations of well-being to job performance vary as well; feeling good broadens people's mindset or increases the motivation to expend effort on work.

What they have in common, though, is that they examine the link between well-being and work performance from an individual-level perspective. What was noted for well-being and performance applies here as well: the processes linking these concepts can be studied at various levels. For example, Quinn and

Rohrbaugh (1983) focused on *organizational-level* factors in accounting for *organizational* performance, arguing that organizations differ in terms of their focus (on the well-being and development of the people in the organization or on the organization and its environment) and degree of stability, flexibility, and control. Dependent on external factors (such as the market in which an organization operates), optimizing organizational performance may sometimes require that much effort is invested in maximizing employee well-being, whereas in other cases organizational performance is promoted by restricting employee autonomy in order to increase efficiency. Apparently, the place assigned to well-being as an antecedent of performance varies with the type of organization that is involved and the circumstances under which this organization operates.

Finally, in this chapter we have touched upon the issue of trade-offs between different types of well-being (e.g., a challenging job may lead to high satisfaction, but also to high levels of stress-related complaints, cf. Grant et al., 2007), between different types of performance (e.g., high levels of in-role performance may be achieved at the cost of extra-role performance) and between well-being and performance (e.g., higher productivity may be obtained at the cost of employee well-being and vice versa). Such trade-offs are highly plausible and especially the trade-off between well-being and performance has received much attention; for example, many studies on the associations between stress and performance can be construed as addressing the *trade-offs* between these concepts, in that high levels of stress tend to be negatively associated with performance and vice versa. This underlines the complex nature of the phenomena studied in this chapter; optimization of one aspect of performance or well-being could well have adverse consequences for other aspects of performance and/or well-being.

Where do we go from here?

In this chapter we have discussed the conceptualization of individual-level well-being and performance, and the associations between these concepts. We have shown that many different conceptualizations of well-being exist, ranging from simple "affect only" approaches to complicated and sometimes idiosyncratic multidimensional frameworks that incorporate different aspects of human experience. Moreover, these frameworks could be general and context-free (not linked to any area of life in particular) or focused/domain-specific (e.g., tapping well-being at work). As regards work performance, we made a principal distinction between process and outcome performance, and further divided process performance into in-role performance, extra-role performance, and counterproductive behavior. Our discussion of the theoretical frameworks linking well-being to performance revealed very different ideas concerning the nature of these underlying processes.

All this might yield the impression that research into the relations between well-being and performance at work is in a state of confusion, and that after several decades it has been unable to arrive at strong and practically relevant conclusions. Although it cannot be denied that the field of work and organizational research is lively, we consider the fact that so many researchers have made so many contributions from so many different perspectives to this area a strong, and not a weak point. Not surprisingly, these complex and societally relevant concepts have generated much attention from different angles, and it is probably a reality that such difficult-to-capture phenomena cannot be studied from a single point of view. Further, in spite of all these different perspectives on the association between well-being and performance, the general view is that well-being matters as an antecedent of performance: the links between these two concepts may be numerous and varied, but it cannot be denied that there is considerable evidence for many of the mechanisms that theoretically link well-being to performance. In this sense, previous research underlines the idea that performance and well-being are multifaceted concepts that can – and probably even *should* – be studied from different points of view.

Having said that, the question arises of which issues should be studied in future. The overview presented in this chapter suggests at least three broad areas would need more research attention. First, rather than attempting to answer the question what well-being "really" involves, it would seem best to accept the fact that well-being is a complex and multifaceted phenomenon that encompasses a range of different aspects. Which aspects are included could well be to some degree a matter of personal and cultural preferences, or pragmatic concerns. However, accepting this notion implies that it is important to examine the cross-cultural generalizability of different conceptualizations of well-being; it seems conceivable that well-being is conceptualized differently from one culture to another. For example, it would seem likely that dimensions that relate to one's place in society and relations with others (cf. Table 11.1) are even more important in collectivistic cultures than in Western, individualistic cultures. In a well-cited review paper, Diener, Oishi, and Lucas (2003) discuss the evidence for cross-cultural differences in general individual well-being. Whereas they conclude that "mean level differences" in subjective (individual) well-being across cultures exist (p. 419), they also acknowledge that such research is "challenging" (p. 403). Apparently, more (methodologically sound) research in this area is badly needed.

Second, the fact that well-being and performance are multifaceted concepts leads to the question, which aspects of well-being relate most strongly and consistently to which aspects of performance? Previous research (Taris & Schreurs, 2009) has suggested that a general measure of affective well-being (i.e., job satisfaction) is not as strongly related to (in-role) performance as more focused measures of well-being (i.e., burnout). Moreover, most of the theoretical perspectives on the link between well-being and performance discussed above did not distinguish between different types of well-being and different types of performance. For example, none of these frameworks accounts for the occurrence of counterproductive work behavior, and they do not distinguish systematically between in-role and extra-role performance. This is unfortunate, since it is more than just a possibility that these frameworks are more applicable to one type of performance than to other types of performance. For example, Meijman and Mulder's (1998) effort-recovery theory predicts that fatigued workers take a strategic decision as regards their work performance: will they invest extra effort, will they redefine their task requirements, or will they just perform suboptimally? It seems likely that fatigued workers will attempt to keep up their in-role performance, while giving up on their extra-role performance; i.e., in the presence of limited energetic resources, workers will concentrate on their core tasks, whereas their performance regarding other aspects will suffer. Apparently, it could be worthwhile to incorporate the distinction among different types of well-being and performance more systematically in current insights on the happy-productive worker. In a similar vein, it could be worthwhile to study the trade-offs between various types of well-being, various types of performance, and well-being and performance more systematically (Grant et al., 2007). For example, maximization of one type of performance is not usually intended to have adverse effects on other types of performance, meaning that obtaining more insight in the degree to which trade-offs occur is not only scientifically interesting but also practically relevant.

Finally, in this chapter we have mainly focused on individual-level perspectives on worker well-being and work performance. However, the questions addressed in this chapter can also be studied from higher-level (team and organizational) perspectives, and the combination of individual-level and higher-level perspectives could yield additional perspectives on the role of well-being as an antecedent of performance.

Conclusion and practical implications

In conclusion, the present chapter has shown that whereas at present there is no single overarching theoretical framework for the effects of worker well-being on work performance (indeed, there is no consensus regarding the basic conceptualizations of well-being and performance), currently there is a

wide array of promising and interesting ideas as regards these relations. It is likely that these ideas all capture different and valid aspects of the relation between well-being and performance. Which framework is most relevant may well depend on the particular situation or context in which well-being and performance are studied.

From a practical point of view, the findings and theories discussed in this chapter indicate that promoting performance through enhancing worker well-being is not an easy feat. Practitioners should be aware of the fact that there are different types of performance and different types of well-being, and that promoting one type of performance (e.g., in-role performance) may adversely affect other types of performance (e.g., extra-role performance). This trade-off issue also applies to different types of well-being, and certainly also to the association between well-being and performance: promoting higher performance may well be achieved at the cost of (certain aspects of) worker well-being and vice versa. In this sense, the issue of trade-offs among different types of well-being and performance certainly requires much attention from practitioners. Grant et al. (2007) suggest that those wanting to promote worker performance and/or well-being should carefully consider the possible consequences of their planned interventions, preferably not only in the short run but also taking a longer-term perspective.

Note

1 A rogue trader is an employee who legitimately makes trades on behalf of their employer, yet also enters into unapproved deals. This term is mostly used in the context of financial trading where traders enter into transactions on behalf of their employer without permission.

References

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational and Organizational Psychology*, *63*, 1–18.

Baard, P. B., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, *34*, 2045–2068.

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, *22*, 309–328.

Bowling, N. A. (2007). Is the job satisfaction-performance relationship spurious? A meta-analytic examination. *Journal of Vocational Behavior*, *71*, 167–185.

Campbell, J. P. (1990). Modeling the performance prediction problem in industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (pp. 687–732). Palo Alto, CA: Consulting Psychologists Press.

Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior.* Cambridge: Cambridge University Press.

Chmiel, N., & Taris, T. W. (2014). Safety at work. In M. C. W. Peeters, J. De Jonge, & T. W. Taris (Eds.), *An introduction to contemporary work psychology* (pp. 342–366). Chichester, UK: Wiley-Blackwell.

Claes, R. (2014). Abseenteeism and presenteeism. In M. C. W. Peeters, J. De Jonge, & T. W. Taris (Eds.), *An introduction to contemporary work psychology* (pp. 367–390). Chichester, UK: Wiley-Blackwell.

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, *90*, 1241–1255.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*, 227–268.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*, 499–512.

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology*, *54*, 403–425.

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, *56*, 219–226.

Fredrickson, B. L., & Branigan, C. A. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion*, *19*, 313–332.

Gagné, M., & Deci, E. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, *26*, 331–362.

Geurts, S. A. E., Beckers, D. G. J., & Tucker, P. (2014). Recovery from demanding work hours. In M. C. W. Peeters, J. De Jonge, & T. W. Taris (Eds.), *An introduction to contemporary work psychology* (pp. 196–219). Chichester, UK: Wiley-Blackwell.

Grant, A. M., Christianson, M. K., & Price, R. H. (2007). Happiness, health, or relationships? Managerial practices and employee well-being trade-offs. *Academy of Management Perspectives*, *21*, 51–63.

Hallberg, U. E., Johansson, G., & Schaufeli, W. B. (2007). Type-A behavior and work situation: Associations with burnout and work engagement. *Scandinavian Journal of Psychology*, *48*, 135–142.

Hockey, G. R. J. (1997). Compensatory control in the regulation of human performance under stress and high workload: A cognitive-energetical framework. *Biological Psychology*, *45*, 73–93.

Iaffaldano, M. T., & Muchinsky, P. M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin*, *97*, 251–273.

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction: Job performance relationship: A qualitative and quantitative review. *Psychological Bulletin*, *127*, 376–407.

Karasek, R. A. (1979). Job demands, job decision latitude and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24*, 285–308.

Karasek, R. A., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life.* New York, NY: Basic Books.

Kompier, M. A. J. (2006). The Hawthorne effect is a myth, but what keeps the story going? *Scandinavian Journal of Work, Environment and Health*, *32*, 402–412.

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Schaufeli, W. B., De Vet, H. C. W., & Van Der Beek, A. J. (2011). Conceptual frameworks of individual work performance: A systematic review. *Journal of Occupational and Environmental Medicine*, *53*, 856–866.

Koppes, L. L., & Pickren, W. (2007). Industrial and organizational psychology: An evolving science. In L. L. Koppes (Ed.), *Historical perspectives in industrial and organizational psychology* (pp. 3–36). Mahwah, NJ: Erlbaum.

Landy, F. J., & Conte, J. M. (2010). *Work in the 21st century: An introduction to industrial and organizational psychology* (3rd ed.). Hoboken, NJ: Wiley.

Lawton, R. (1998). Not working to rule: Understanding procedural violations at work. *Safety Science*, *28*, 77–95.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, *81*, 123–133.

Lucas, R. E., & Diener, E. (2002). The happy worker: Hypotheses about the role of positive affect in worker productivity. In M. R. Barrick & A. M. Ryan (Eds.), *Personality and work: Reconsidering the role of personality in organizations* (pp. 30–59). San Francisco, CA: Jossey-Bass Ltd.

Mason, C. M., & Griffin, M. A. (2003). Identifying group task satisfaction at work. *Small Group Research*, *34*, 413–442.

Mayo, E. (1933). *The human problems of an industrial civilization.* New York, NY: Palgrave Macmillan.

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth & H. K. Thierry (Eds.), *Handbook of work and organizational psychology, Vol. 2: Work psychology* (pp. 5–33). Hove, UK: Psychology Press.

Organ, D. W., Podsakoff, P. M., & MacKenzie, S. P. (2006). *Organizational citizenship behavior: Its nature, antecedents, and consequences.* London, UK: Sage Publications.

Peterson, C. (2003). Classification of positive traits. In D. Wertlieb, F. Jacobs, & R. M. Lerner (Eds.), *Promoting positive youth and family development* (Vol. 3, pp. 227–256). Thousand Oaks, CA: Sage Publications.

Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science*, *29*, 363–377.

Reijseger, G., Schaufeli, W. B., Peeters, M. C. W., & Taris, T. W. (2013). Ready, set, go! A model of the relation between work engagement and work performance. In S. P. Gonçalves & J. G. Neves (Eds.), *Occupational health psychology: From burnout to well-being* (pp. 289–306). Rose Meadow: Scientific & Academic Publishing.

Roe, R. A. (1999). Work performance: A multiple regulation perspective. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol. 14, pp. 231–335). Chichester, UK: Wiley-Blackwell.

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, *39*, 1161–1178.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, *52*, 141–166.

Ryff, C. D. (1989). Happiness is everything, or is it? Exploration of the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*, 1069–1081.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, *69*, 719–727.

Ryff, C. D., & Singer, B. (2008). Know thyself and become what you are: An eudaimonic approach to psychological wellbeing. *Journal of Happiness Studies*, *9*, 13–39.

Sackett, P. R. (2002). The structure of counterproductive work behaviors: Dimensionality and relationships with facets of job performance. *International Journal of Selection and Assessment*, *10*, 5–11.

Sonnentag, S., & Frese, M. (2002). Performance concepts and performance theory. In S. Sonnentag (Ed.), *Psychological management of individual performance* (pp. 3–26). Chichester, UK: Wiley-Blackwell.

Taris, A. W., Leisink, P. L. M., & Schaufeli, W. B. (2017). Applying occupational health theories to educator stress: Contribution of the job demands-resources model. In T. McIntyre, S. McIntyre, & D. J. Francis (Eds.), *Educator stress: An occupational health perspective* (pp. 237–259). Dordrecht: Springer.

Taris, T. W. (2006). Burnout and objectively recorded performance: A critical review of 16 studies. *Work & Stress*, *20*, 316–334.

Taris, T. W. (2018). *The psychology of working life*. Abingdon, UK: Routledge.

Taris, T. W., & Kompier, M. A. J. (2004). Job characteristics and learning behavior: Review and psychological mechanism. In P. L. Perrewe & D. C. Ganster (Eds.), *Research in occupational stress and well-being, Vol. 4: Exploring interpersonal dynamics* (pp. 127–166). Bingley, UK: Emerald.

Taris, T. W., & Schreurs, P. J. G. (2009). Well-being and organizational performance: An organizational-level test of the happy-productive worker hypothesis. *Work & Stress*, *23*, 120–136.

Taris, T. W., Van Beek, I., & Schaufeli, W. B. (2014). The beauty versus the beast: On the motives of workaholic and engaged employees. In I. Harpaz & R. Snir (Eds.), *Heavy work investment: Its nature, sources, outcomes, and future directions* (pp. 121–139). New York, NY: Routledge.

Taylor, F. W. (1911/2006). *The principles of scientific management*. Teddington, UK: The Echo Library.

Van Horn, J. E., Taris, T. W., Schaufeli, W. B., & Scheurs, P. J. G. (2004). The structure of occupational well-being: A study among Dutch teachers. *Journal of Occupational and Organizational Psychology*, *77*, 365–375.

Vroom, V. H. (1964). *Work and motivation*. New York, NY: Wiley.

Warr, P. B. (1990). The measurement of well-being and other aspects of mental health. *Journal of Occupational Psychology*, *63*, 193–210.

Warr, P. B. (1994). A conceptual framework for the study of work and mental health. *Work & Stress*, *8*, 84–97.

Warr, P. B. (2007). *Work, happiness, and unhappiness*. Mahwah, NJ: Lawrence Erlbaum Associates.

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.

Wright, T. A., Cropanzano, R., & Bonett, D. G. (2007). The moderating role of employee positive well-being on the relation between job satisfaction and job performance. *Journal of Occupational Health Psychology*, *12*, 93–104.