Challenging the universality of job resources: Why, when, and for whom are they beneficial?

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Challenging the universality of job resources: Why, when, and for whom are they beneficial?

Job resources such as autonomy, variety, skill use, and social support are key ingredients to high-quality, meaningful and rewarding work (Parker & Wall, 1998). Job resources are defined as "those physical, psychological, social or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs; (c) stimulate personal growth and development" (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001, p.501). They occupy a prominent position in many work design models aimed at understanding how work impacts on employee well-being and performance (Demerouti et al., 2001; Hackman & Oldham, 1976; Karasek, 1979). In general, empirical studies support the notion that job resources promote a broad set of positive outcomes. Meta-analytic evidence links job resources to well-being (e.g., job satisfaction, motivation and engagement as well as lower burnout), greater productivity, and enhanced proactivity at work (e.g., Christian, Garza & Slaughter, 2011; Rudolph, Katz, Lavigne, & Zacher, 2017). There is also considerable evidence for interaction effects where job resources buffer the adverse effects of job demands on strain and the combination of job resources and job demands boosts work engagement (e.g., Bakker, Hakanen, Demerouti & Xanthopoulou, 2007; Bakker, Van Veldhoven & Xanthopoulou, 2010; Hakanen, Bakker & Demerouti, 2005). In addition, longitudinal and intervention studies show that increasing job resources can lead to these desirable outcomes (e.g., Daniels et al., 2017; Holman & Axtell, 2016; Van Wingerden, Bakker & Derks, 2016).

Despite a growing body of research showing the benefits of job resources, some studies, however, indicate that job resources may also have *adverse* effects on well-being and performance in certain circumstances. For example, Deelstra et al. (2003) report that the experience of social support may elicit negative reactions when imposed on an employee who

does not want or need that support, as unwanted social support evokes feelings of incompetence and restricts one's freedom of choice. In addition, although social support, and other job resources such as job control, are generally thought to buffer job strain, their strain-enhancing or 'reverse' buffering properties have also been documented, albeit more rarely. This suggests that in some situations, job resources may worsen rather than offset the negative impact of job demands (e.g., Biron & Van Veldhoven, 2016; Deelstra et al., 2003).

Yet, frequently cited models of job design and resources barely explore the situations under which job resources can be detrimental for employees. One exception is Warr's (1987) Vitamin model that explicitly predicts inflection points wherein increasing levels of job resources may cease to confer additional benefits, and perhaps, become harmful. Similarly, the Demand-Induced Strain Compensation model (DISC; De Jonge & Dormann, 2006) illustrates the idea that job resources do not randomly interact with job demands, but instead are most effective when their nature (i.e., emotional, cognitive, or physical) matches the nature of job demands. Although research on both theories continues to develop, what we know so far may only partially explain why, when, and for whom job resources do (not) have their expected positive effects. Indeed, earlier theoretical and empirical work has established the importance of context for employees' awareness, interpretation and use of job characteristics and employment conditions (Folkman & Lazarus, 1985; Salancik & Pfeffer, 1978); yet, this early work has focused mostly on how employees deal with job demands rather than how job resources generate their intended effects. An exploration of different individual, meso, and macro contextual factors would therefore seem to matter if we are to fully understand the salience and valence of job resources (Hobfoll, 1989; Hobfoll, Halbesleben, Neveu, & Westman, 2018; Johns, 2006).

We believe it is timely to provide more contextualized research on why, when, and for whom job resources are beneficial, or in contrast, harmful. From a theoretical lens, at least,

such an approach would shed light on some unexpected negative implications of job resources mentioned earlier. Moreover, it will also allow for a more realistic study of the complex phenomena of job resources and an increased understanding of their nature and function in the context of work (Hobfoll et al., 2018). This is also important from a practical point of view, as knowledge on why, when, and for whom resources may have positive or negative effects will provide guidance to help practitioners in designing high-quality work.

We are happy to be able to present six papers in this special issue covering various approaches for addressing the issue at hand. In the remainder of this editorial we will briefly introduce the topic of job resources and elaborate on their relevance for research and practice in work psychology, focusing on the need to better understand why, when, and for whom job resources do what they do. After this, we introduce the papers in this special issue, and conclude with a brief summary of the special issue's key messages.

History and current understanding of job resources

Scientists have spent more than a century trying to find out how organizations can design jobs to optimize employees' working conditions, including job resources. Table 1 presents an overview of existing job design/resources theories and models.

<<<insert Table 1 about here>>>

Scientific Management

Early approaches such as Taylor's (1911) Scientific Management theory proposed that employees would perform well if their work is highly specialized and simplified, and their working conditions allow them to exert their skills, attention, and self-regulatory resources at work, leading to performance improvements (see also Beal, Weiss, Barros, & MacDermid, 2005). Scientific Management is still very much a part of the 21st Century

organizations, yet research in the 1950s raised the possibility that this approach to work design may undermine employees' sense of job control and lead to monotonous and skill-reducing work. Employees generally do not feel well in such work systems, are generally discontent, and react by showing greater levels of disengagement and counterproductive work behaviors (e.g., Trist & Bamforth, 1951).

Early Motivational Job Design Models Including Job Resources

These undesirable consequences have prompted organizational scholars to develop new approaches to job design aimed at improving employees' well-being and performance. Consistent with the liberating Zeitgeist of the 1960s, scholars such as Herzberg, Hackman, and Oldham acknowledged the need for jobs to be *enriched* with job resources. In his Two-Factor theory, Herzberg (1966), for example, argued that people should not be pulled and pushed around to do the work, but should be given the right conditions to perform optimally. Hygiene factors such as job security, salary and fringe benefits would prevent employees' job dissatisfaction, while motivators such as challenging work, recognition, responsibility, and involvement in decision making would contribute to improved job satisfaction. Although the two-factor theory was plagued by conceptual and methodological problems, the motivators in Herzberg's theory can be seen as early examples of job resources that foster perceived meaningfulness of work and positive employee attitudes. Moreover, the differentiation between motivation and hygiene factors further suggests that different types of resources may have different consequences.

Inspired by Herzberg's work, Hackman and Oldham (1976) developed Job Characteristics Theory, advocating that all jobs should contain sufficient amounts of autonomy, performance feedback, skill variety, task identity, and task significance, as these five job characteristics would have the motivational potential to make employees know the significance of their work, feel responsible for outcomes, and experience meaningfulness in

relation to work. These psychological states were then proposed as critical predictors of job satisfaction, motivation, and job performance. Meta-analytic studies (Fried & Ferris, 1987; Humphrey, Nahrgang, & Morgeson, 2007) have shown evidence supporting key tenets of Job Characteristics Theory, that is, the five resources show some overlap, are direct predictors of job satisfaction and motivation and are indirect predictors of job performance (Oldham & Fried, 2016).

The works of Herzberg, and Hackman and Oldham, have been important because they were among the first to theorize and show that employees need job resources in order to experience their work as meaningful, be motivated, and perform well. However, these motivational approaches were so much focused on job enrichment that job demands were not even incorporated in the theories. Contrasting sharply with Scientific Management, the assumption of the enrichment approaches was that all jobs have considerable demands (i.e., givens), but that all we need or can do is to add sufficient job resources (i.e., alterables; Cooley & Yovanoff, 1996).

The Introduction of Job Demands

However, scholars in the field of job stress also started focusing particularly on job demands, and begun to incorporate job resources into their models, in order to examine the impact of job resources in interaction with these job demands. First, the Michigan Model (Caplan, Cobb, French, Harrison, & Pinneau, 1980; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), for example, proposed that objective job demands (e.g., role ambiguity, role conflict, job insecurity, workload) are subjectively perceived by employees and indirectly lead to mental and physical health complaints. Personality and social support are expected to moderate these processes such that those with a more emotionally stable personality and a stronger social network experience fewer health complaints in response to high job demands.

Second, the demand-control model (Karasek, 1979) advocated that job demands particularly lead to job strain and health complaints when job control (or decision latitude) is low. Thus, job control (i.e. a combination of autonomy, variety, and skill use) is put forward as the most important job resource and is proposed to buffer the impact of job demands. Even more, the condition of high job demands combined with high job control is expected to create a challenging situation with opportunities for active learning. Karasek and Theorell (1990) expanded the demand-control model by including a second job resource – social support that can also help in dealing with high job demands. Strong evidence was found for the lagged causal effects of job demands, job control and social support, especially for self-reported health and well-being outcomes. Evidence for the interaction effects is, however, rather mixed (De Lange, Taris, Kompier, Houtman, & Bongers, 2003; Van der Doef & Maes, 1999).

Job Demands–Resources (JD-R) theory (Demerouti et al., 2001) builds on and expands these earlier models in suggesting that many different job resources (and demands) could and should be considered, as all organizations and jobs may have unique, distinctive job characteristics. While previous models propose a predefined set of job characteristics to predict job stress and motivation, JD-R theory is flexible and can accommodate various specific job demands and job resources. Job demands are defined as the characteristics of the working environment that require physical, cognitive, and emotional energy and that incur costs to the individual. Job resources are the physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals and stimulate personal growth, learning, and development (Bakker & Demerouti, 2017).

While job demands are the most important causes of a health-impairment process leading to job strain, job resources are seen as the most important causes of a motivational process leading to work engagement (Bakker & Demerouti, 2017). Job resources may further

help in dealing with or ‘buffering’ the effects of job demands and hence become more relevant when job demands are high (Bakker, Demerouti & Euwema, 2005; Hakanen et al., 2005; Tadic, Bakker & Oerlemans, 2015). For example, opportunities for growth (e.g., on the job training in emotion work) help employees acquire new skills (e.g., emotion management skills) that can be utilized when job demands (e.g., frequency of encounters with difficult customers) increase. JD-R theory also acknowledges that employees can proactively mobilize job resources themselves in order to stay engaged in their work (Bakker & Demerouti, 2017).

Conservation of Resources

In all the aforementioned theoretical models on job resources, the idea is that job resources are associated with better well-being and performance. This assumption aligns with the broader Conservation of Resources theory (COR; Hobfoll, 1989), whose main tenet indicates that people strive to maintain and expand their resources, or those things they centrally value. People want resources to help them survive or overcome demanding situations. Those who have resources are better equipped to deal with demanding situations and are likely to gain more resources, while individuals with fewer resources are more susceptible to high work demands, resource loss, and stress. Gaining resources is thus of utmost importance, and especially salient in demanding situations; but unfortunately, resource gain is generally a slow process. Resource loss, in contrast, may happen quickly and have a strong and immediate impact. When resources are depleted or threatened, people may become defensive, irrational, and even aggressive to conserve their remaining resources (Hobfoll et al., 2018). It is important to emphasize here that the value people attribute to a resource might possibly act as a moderator of the effect of that resource. In other words: a job resource is only resourceful if it is valued by the individual employee, and if what the individual employee can achieve by using the job resource is also valued by that individual.

Rooted in clinical psychology, COR was originally designed to understand survival after traumatic events. Since then, the theory has evolved into a more broadly applicable motivational theory, enabling us to understand the important role of resources also in the context of work. Research has shown that resources may indeed be beneficial because they motivate and energize employees (Van den Broeck, Ferris, Chang, & Rosen, 2016; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008), and help them to overcome demanding situations (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Also, employees use their job resources for the purpose of self-regulation (Daniels, Boocock, Glover, Hartley & Holland, 2009; Daniels, Beesley, Wimalasiri, & Cheyne, 2013), and use self-initiated job redesign to gain more resources (Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012; Tims & Bakker, 2010).

Towards a more nuanced perspective on the effects of job resources

Despite the conceptual and empirical attention paid to job resources so far, several critical issues have emerged in the literature, which affect our fundamental understanding of why, when, and for whom job resources are beneficial. Next, we single out two of these critical issues, and present some ideas on how to move towards a more nuanced perspective on the effects of job resources.

Having more of a job resource is not always beneficial

A first issue is that job resources do not always yield beneficial effects for employee's well-being and performance. This issue has been elaborated especially by Peter Warr in his Vitamin model (1987; 2007). Warr noted that job factors (mostly job resources) may show two different types of relationships (patterns) with well-being and job performance. The first pattern is comparable to the effect that vitamins C and E have on our health as they increase for low to high intake. This "CE-pattern" includes resources such as the availability of money (salary, income), physical security, and valued social position. These resources will increase

well-being and performance as they increase until a certain level where their effects plateau. At this plateau level, any increases in well-being and performance level off or remain constant, suggesting that the maximum level of effects has been gained. For example, a low level of income coincides with low motivation and low satisfaction. As the level of income increases, motivation and satisfaction increase up to the inflection point. After that, further increases in income level add very little to individuals' level of motivation and satisfaction. The second pattern is comparable to the effect that vitamins A and D have on our health as they increase from low to high intake or exposure. The "AD-pattern" operates differently from the CE-pattern. First, as with the CE-pattern, any initial increases in job resources within the AD-pattern are accompanied by corresponding increases in well-being and performance. However, after a certain point when optimal effects have been reached, further increases in job resources will have detrimental –rather than constant –effects on well-being and performance, which are coined as "toxic effects". Job variety is an example: at low levels of job variety we encounter low levels of psychological well-being. As variety increases, so does well-being, up to the point where the optimum variety is reached. After this point, further increases in job variety start being experienced by workers as negatively impacting their well-being, as they lead to "chaos".

Compared to the theoretical models presented in the previous section, the Vitamin model presents a much more complicated picture of how job resources might impact on well-being and performance at work. Not only are there many job factors to consider (mostly job resources), but also these job resources follow two different general patterns, showing that different job resources may have fairly different to even "toxic" effects. Finally, the Vitamin model states that our understanding of when and for whom the plateau stage and/or the toxic effects are reached depends on a wide range of individual workers' characteristics, including their values, abilities, and their baseline mental health.

Although Peter Warr's (2007) book on "Work, happiness and unhappiness" provides an impressive overview of the Vitamin model, it also reveals that the existing evidence base is quite limited or equivocal at best. We do not fully understand whether the complexities of this model actually (all) hold, neither do we have clear insights as to where plateaus and inflection points are located, nor which mechanisms are involved in the emergence of toxic effects of specific job resources. Notably, JD-R theory proposes that there is a third possible pattern of job resource effects: according to the boosting hypothesis (Bakker & Demerouti, 2017; Bakker et al., 2010), job resources are particularly likely to motivate when employees are simultaneously challenged. Like plateaus and inflection points for toxic effects, inflection points after which amplification takes place are also hitherto mostly uninvestigated.

The value of a job resource depends on context

This brings us to a second fundamental issue that is inconclusive in models and research on job resources at the moment. Building on the above-mentioned reports on "tipping points" and "toxic effects", Schaufeli and Taris (2014) have raised the possibility that -after a certain "tipping point"- people may experience a job resource rather as demanding. Such a position is complicated from a phenomenological point of view. By arguing that a job resource can become a job demand, the phenomenology and nature of the job resource changes. However, what changes is not the job resource (e.g., autonomy) as such, but rather its effect, as the perception changes. For example, if self-regulatory resources are taxed, a given level of job autonomy may be perceived as being too limited or too excessive to allow self-regulation, and thus is appraised as the burden of responsibility.

Another possibility is that the phenomenon described (e.g., job resources becoming demanding after a certain "tipping point") involves both an environmental and a perceptual change: for example, if autonomy is increased, but not the kind of autonomy that would allow self-regulation – e.g., giving someone with caring responsibility autonomy over setting

performance requirements when what is really needed is autonomy over work scheduling. Or, as another example, when jobs are designed to have more variety but without providing necessary training in the new skills needed to address the greater variety of tasks. When workers experience such an increase in variety as a stressor, this is in part a reflection of an actual change in this job feature, while at the same time this is also a reflection of the workers' inability to appraise this increase as a blessing (Tregaskis, Daniels, Glover, Butler, & Meyer, 2013). However, to date, such an interpretation may still be rather controversial.

However, although the literature is not yet set on Warr's vitamin model or ideas about tipping points as mentioned by Schaufeli and Taris, the core message is growing that we need to *have the right resources and the right time to do the right thing*. When taking a singular look at a specific job resource it may be hard to understand how this resource can start being demanding after a certain "tipping point," or whether a specific job resource combines with job demands and/or personal resources to amplify or undermine well-being and performance. This needs to be understood in light of the full context/configuration of all job factors and the context of the job. In line with this, Bakker and Sanz-Vergel (2013), for example, showed in a study among nurses that the positive impact of personal resources on well-being at work was *amplified* by emotional demands but *undermined* by work pressure.

The idea that the value that people attach to a particular resource depends on the context, is also acknowledged within COR-theory (Hobfoll et al., 2018) and within human resource management literature, and Ability-Motivation-Opportunity (AMO) theory in particular (Appelbaum, Bailey, Berg, Kalleberg, & Bailey, 2000). The AMO-theory emphasizes that only when the job and HR system allow people to have the personal resources to affect decisions and changes to satisfy their motivations, this will lead to positive performance outcomes. Ogbonnaya, Daniels, Connolly, & Van Veldhoven (2017) found that if all elements in this configuration are in place, one is likely to find mutual gains for

employees and organizations, e.g. both employee well-being and organizational performance are optimized. When one of the key elements is lacking, however, results are suboptimal. Yet, within the literature focused on job design and well-being, the importance of the micro (i.e., individual), meso, and macro contexts in understanding the experienced nature and effect of job resources remains underdeveloped.

This underdevelopment is perhaps surprising given the influence of the socio-technical-systems (STS) approach to job and system design – and the importance of the human experience of work, as evident in the genesis of STS thinking (Trist & Bamforth, 1951). Socio-technical-systems thinking is less prescriptive than many other models of job design on the characteristics of a good job: Instead, the STS approach emphasizes the joint optimization of human and technical elements of systems (and human and technical outputs) through a series of design principles that may be more or less useful in any given instance (Clegg, 2000). So, while job characteristics such as job autonomy (known as variance at source and delegated authority in STS approaches) and skill variety are important things to consider in job design – in any given instance, they may be more or less prominent in well-designed jobs depending on other elements of the human and technical systems.

Some ideas on how to move towards a more nuanced perspective

If job resources may not contribute to well-being or if they even become demanding, this raises a more pragmatic question: how can we call something a job resource if it can also be a job demand? This will be difficult to explain, especially to stakeholders in practice. Schaufeli and Taris (2014) propose that a reconceptualization of job resources and job demands is necessary. Pending such a more fundamental reconceptualization, it might be a conceptual improvement to specify whether we define a job resource ex ante, e.g. based on its potential positive contribution to well-being and performance, or ex post, e.g. based on whether it has actually contributed to positive well-being and performance. A similar

conceptual dilemma has recently been highlighted by Britt, Shen, Sinclair, Grossman and Klieger (2016) with respect to employee resilience. These authors propose to distinguish between the capacity for resilience (ex ante) and the demonstration of resilience (ex post). Similarly, job resources can be conceptualized ex ante as job factors that have the capacity to contribute to positive well-being and performance at work. But such effects are not always demonstrated, and indeed the opposite might even occur, depending on the full context/configuration of the job. So, using an ex post stance, we could also decide to define job resources as only those factors that have actually contributed to well-being and performance at work. The debate around the tipping point issue suggests that we need a better specification of the effects of a job resources in relation to time (ex ante/ex post).

Another position would be to use a probabilistic approach to defining job resources. Here, a resource is a job characteristic that is intended or will probably prevent harm for/confer benefits to the employee. If a job characteristic is later found to mostly cause harm, it can be reclassified as a demand. Within such a "probabilistic" approach to job resources, the objective of research would be to delineate boundary conditions on classification systems of resources – i.e. when is a job characteristic most likely to confer benefits in most situations or become less likely to confer benefits? In this sense, one could imagine a continuum of job resources from 'almost certainly universally beneficial' to 'almost certainly benefits are highly contingent to a constrained set of circumstances'. Practically, one then concentrates on (a) developing the more universal job resources, and (b) developing bundles or systems of job factors that are mostly beneficial together for employees and organizations alike (mutual gains). Both approaches, e.g. universally beneficial job resources and beneficial bundles/systems of fitting job factors are likely to be part of what is needed in practice and research. In the adjacent study area of research on HRM, there is an on-going debate on "best practice" versus "best fit" approaches, with both approaches having something to offer

(Boxall & Purcell, 2011). We expect a similar debate to also apply to job design, once the perspective shifts away from a focus on a limited number of variables at a time to a more holistic or configurational view of jobs.

A theoretical model that -at least to some extent- takes this contextual/configurational issue into account, is the DISC model (De Jonge & Dormann, 2006). This model advocates that the effects of job resources depend on the nature of the job demands that prevail in the context. Specifically, like the JD-R model, the DISC-model states that job resources and job demands should be seen as multidimensional in nature including emotional, cognitive, and physical components. The DISC-model then assumes that job resources do not randomly moderate the impact of job demands but interact most effectively with job demands that are of a common kind. Emotional job resources – such as social support – are thus most likely to interact with emotionally demanding tasks such as serving customers, while cognitive resources such as technical support are most effective in moderating cognitively demanding tasks, and physical resources are most functional in dealing with physical demands. This is termed a 'double match' as the two constructs (demands and resources) are similar in nature. On the one hand, this interaction may take the form of *buffering* effects such that specific job resources compensate for the adverse effects of matching job demands on health, well-being, and performance. Being able to vent emotions with a colleague may for example particularly decrease the experienced stress after an emotionally aggressive encounter with a customer. On the other hand, a balance between specific job resources and their *matching* job demands may have an *activity enhancing* effect, increasing optimal learning, creativity and performance such that receiving informational support/feedback on a cognitive task may allow employees to learn new skills. Following the 'triple-match' principle, these interactions are most likely to occur when the nature of the outcomes matches the nature of the job demands and resources at hand. For example: employees doing heavy lifting may experience

particularly less physical pain (rather than e.g. emotional stress) when they are supported by exoskeletons or other equipment that facilitates lifting.

At the moment, the state of the research evidence for the matching principles of the DISC model is still limited (Van den Tooren, 2011). In addition, it is important to mention that while evidence for matched effects is limited, there is considerable evidence for non-matched interaction effects on strain and work engagement to also exist (e.g., Bakker et al., 2010; Bakker et al., 2007; Hakanen et al., 2005). So, it remains a matter of research whether matching is a necessary or just an enhancing condition for buffering and amplification effects. Following Hobfoll's idea of resource caravans (Hobfoll et al., 2018), it may be the case that the more resources you have in general, the more self-regulatory options you have, which makes positive use of job resources of a non-matched type more likely. This brings us back to the contingencies, e.g. when and why and for whom having matched job resources would be more relevant.

In the DISC-model, the matching of demands and resources in terms of their mental-emotional-physical nature is essential. However, the effects of job resources may also be contingent on other factors, for example, contingent on personal resources and organizational policies and practices. There is insufficient space here to cover all the literature on such contingencies, but we will give a brief overview. There is evidence that the relationship between job resources and well-being or performance is dependent on individual characteristics (i.e., micro-level). Following the initial study by Xanthopoulou et al. (2007), research on the role of personal resources at work has become a lively field of inquiry. Personal resources are defined as those aspects of oneself that contribute to one's resilience and ability to control and affect their environment (Hobfoll et al., 2018; Xanthopoulou et al., 2007). Such aspects range from self-efficacy and optimism to mindfulness and extraversion and -following the assumptions of COR-theory- may relate directly to employee well-being

and performance, as well as buffer the impact of job demands. However, most important here is that personal resources may also mediate and moderate the effects of job resources: The availability of job resources is likely to help build a resource pool and strengthen one's personal resilience, while having personal resources equally helps to act upon available resources. For example, the supply of job resources increases employees' self-esteem, self-efficacy, and optimism, which makes them feel more engaged (Xanthopoulou et al., 2007), while attaching importance to growth and development helps to boost the positive association of skill use with work engagement (Van den Broeck, Schreurs, Guenter, & Van Emmerik, 2015). Furthermore, research on job resources' moderators at the micro-level has evidenced for example that the meaning of organizational support received and its effect on individual's performance changes depending on the level of an individual's organizational identification (Van Knippenberg, Van Dick & Tavares, 2007; Tavares, Van Knippenberg & Van Dick, 2016).

Meso-level factors may equally come into play. In the Socio-Technical Systems approach, for example, much attention is paid to team-level decision making and participation, and how this is connected to the technology used in the workplace, as well as supervisor behavior. Furthermore, a growing body of research aims to establish how strategic HRM decisions made by organizations and/or business units translate into tangible job resources for workers (Van de Voorde & Boxall, 2015; Van de Voorde, Veld, & Van Veldhoven, 2016), and/or moderate how such job resources impact well-being and performance at the individual level. In this literature stream, the aim is to create a high-performance work system within the organization/business unit, e.g. an integrated system of job design and employment (HR) practices that is paired with monitoring of their impact via performance metrics. Job design enhancement is achieved through, for example, team working, autonomy, skill use, and variety. Personal resource enhancement is achieved

through training and development practices. Employment practice enhancement is realized through job security, enhanced fairness in grievance, reward and promotion decisions.

Yet another line of research focuses on macro-economic factors (Daniels, Tregaskis, & Seaton, 2007) and shows that macro-economic and institutional factors influence the development of job resources in different countries (Holman, 2013). Theoretically, there is thus growing interests in understanding how micro-, meso-, and macro-organizational contexts may influence worker's well-being and performance (Van Veldhoven & Peccei, 2015). Practice further indicates that interventions to improve job resources should be based on assessments of job resources tailored to specific contexts and without strict preconceptions of which job resources to target (e.g., Nielsen, Abildgaard, & Daniels, 2014). This contrasts with other approaches, favored by national and EU policy bodies, which are based on standardized assessments and a pre-defined list of job resources to enhance.

Both the issue of job resources not always generating positive effects depending on context, and the issue of a lack of both theoretical and empirical specification of how the full context/configuration of a job may alter the effects of job resources (or even make employees evaluate job resources as if they were demands), point to the need for more knowledge on why, when and for whom job resources work. That is to say, towards the need for more knowledge that enables a more nuanced perspective on the effects of job resources. In table 2, we summarize such a nuanced perspective, capturing how the effects of a job resource may depend on a range of other factors in the configuration of the job.

<<<insert Table 2 about here>>>

In Table 2 we also mention how the papers in the Special Issue map onto this summary of factors that are part of such a configuration. The papers presented hereafter nicely cover the whole range. This brings us to the contents of the Special Issue.

Introducing the papers in the SI

The six papers in this Special Issue make two main contributions: they provide more insight as to when job resources may become detrimental and shed light on how the micro, meso, and macro contexts influence the links between job resources and outcomes.

First, building on Warr's Vitamin Model (1987; 2007), Wang, Johnson, Nguyen, Goodwin, & Groth (2020) provide evidence that job resources may not always have positive effects and that their effects tend to diminish after a certain level, or may even become detrimental after a certain tipping point. Specifically, using a sample of Australian hospital workers, these authors show that opportunities for skill use may become 'too much of a good thing' when employees are faced with high qualitative demands. When employees need to hide their true emotions and display the desired emotions for the job (i.e., engage in surface acting), their opportunities to use a variety of skills may become a burden which may be associated, perhaps curvilinearly, with employees' absenteeism from work. The authors, however, found no such curvilinear effects when looking at job satisfaction. In contrast, opportunities for skill use were linearly and positively related to job satisfaction, yet this effect was most pronounced under conditions of low surface acting, suggesting that skill use is most beneficial when the context is not too demanding. These results also hint at the importance of the micro, meso, and macro contexts in which job resources occur, and advance our understanding of when, why, and for whom they may be beneficial. The next contributions in this special issue elaborate on these issues further.

Focusing on the individual (micro) level in which job resources may exert their effects, Tong, Chong, Chen, Johnson, & Ren (2020) noted that for some employees the

effects of job resources such as low organizational identification may be negative. Using a sample of Chinese workers, the authors showed that employees who do not identify adequately with work may not necessarily benefit from detaching from it in the evening hours. People who take some psychological distance from work may experience benefits in terms of charging one's batteries and for re-engaging in work the next day. However, when people who do not identify adequately with work do switch off from work, they become even more – rather than less – cynical about work, and this increased cynicism is associated with counterproductive behaviors. Thus, depending on one's personal characteristics, job resources, in this case (opportunities for) detachment, may have unintended negative effects.

Moving to the (meso) job context and taking job demands into account, Madrid & Patterson (2020*)* show that under some conditions job resources may have particularly strong positive effects. Based on a sample of Chilean workers, the authors showed that perceived control over one's time promotes positive affect and the experience of being innovative, especially when employees were faced with the demands of solving complex problems. Hence, this study highlights the possibility that, in certain configurations/contexts, the effects of job resources could be amplified, e.g. the effects could go beyond the normal, linear expectations of job resources' contributions to well-being and performance.

Building on the assumptions of the DISC-model, Balk, De Jonge, Oerlemans, & Geurts (2020) provide a theoretical explanation for when and why job resources may have a stronger positive effect than usual. Examining a sample of semi-professional and professional sportsmen in the Netherlands who are paid to engage in their sports, these authors found support for the triple match principle: high emotional resources buffered the detrimental effect of high emotional resources on emotional energy (i.e., buffering effect), while the combination of high physical job resources and job demands resulted in increased physical strength (i.e., activity enhancing effect).

Moving to the social context in which the job takes place, Molina & O'Shea (2020) conducted a field experiment among Irish workers and found that the wider, social context may serve as an important modifier of what job resources (can) achieve. Specifically, these authors established that the level of supervisory support (social context) changed the effects of two interventions that were implemented to help engaged employees (resources targeted at relaxation and mindfulness) become more proactive at work. Under high supervisory support, employees benefitted more from taking part in a restorative 'savoring nature' intervention, where they could relax while watching nature images and listening to a piece of music. Under low supervisory support, in contrast, the savoring nature intervention was less effective. The relation between engagement and proactive behavior became stronger when employees took part in a mindful emotional regulation intervention in which employees were trained to become more aware, yet less overwhelmed by their own emotions. This study provides not only evidence to demonstrate interactions among job resources, it also shows that such interactions may be qualitatively different depending on the nature of these resources.

Finally, moving to the macro-context, Rattrie, Kittler, & Paul (2020) engaged in the challenging endeavor of examining whether characteristics of the national context may alter the associations of job resources. This study builds on data from 25 countries, covering all continents. Meta-analyzing the literature on job demands and job resources, these authors found evidence that job demands are more problematic for employees (i.e. are associated with higher burnout and lower engagement) in masculine and tight cultures, attaching importance to values such as achievement, heroism, assertiveness and material rewards for success, and being characterized by high agreement to common social norms. Most importantly in the context of this special issue, Rattrie, Kittler, & Paul (2020) also established that job resources were less beneficial (i.e. had weaker relationships with burnout and engagement) in cultures characterized by high power distance, long term orientation and high

collectivism. This suggests that employees benefit less from working in a relatively resourceful environment when their culture strongly emphasized hierarchies, adaptively strives for economic growth in the long term, and is built on tightly-integrated relationships.

Conclusion

The six papers comprising this special issue provide important insights into when, where, and for whom job resources are beneficial. First, the studies indicate that resources may be "too much of a good thing" and have negative implications once their effects exceed a certain "tipping point" (Wang, Johnson, Nguyen, Goodwin, & Groth, 2020). Second, the studies highlight the contexts in which such negative effects of job resources may exist. Job resources may in fact exacerbate some of those personal characteristics likely to impair people's well-being. For example, Tong, Chong, Chen, Johnson, & Ren (2020) showed that employees are more likely to show cynicism and counterproductive behaviors when they do not identify strongly with their job. Thus, in certain circumstances, workers may not necessarily benefit from job resources. This research can be considered as the counterpart of earlier work showing that job resources may enable people to activate their personal characteristics to enhance well-being (Van den Broeck et al., 2015). Furthermore, the studies in this special issue show that the availability of (matching) job resources may help employees offset the negative implications of job demands (i.e., buffering effect; Balk, De Jonge, Oerlemans, & Geurts, 2020) or fire up employees to use their job resources to make the most of a demanding situation (i.e., boosting effect; Balk, De Jonge, Oerlemans, & Geurts, 2020; Madrid & Patterson, 2020). Finally, this set of studies also indicate that some environmental circumstances such as leadership support or national culture may alleviate or intensify the effects of job resources (Molina & O'Shea, 2020; Rattrie, Kittler, & Paul, 2020).

All in all, the set of studies in this special issue indicate that job resources may or may not be beneficial for employee well-being or performance depending on whether they are or

are not put to use and how such resources are used. If employees do not need or are unable to apply their resources in a consistent manner, these job resources may not generate their intended effects or may even lead to detrimental consequences for employee well-being and performance. We hope that the special issue encourages researchers to expand our understanding on when and why job resources are beneficial for whom.

For practitioners, the important message of this special issue is that although on the one hand job resources are often or even most of the time beneficial, it is important to be aware that this does not mean that such beneficial effects are universal or always linear. Being a practitioner in the area of the applied psychology of job design and/or occupational health psychology implies that it is always important to have a keen eye for contexts, contingency factors, and process stages where providing more job resources is not increasing further gain, or where providing more job resources might even create risks for well-being and performance.

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Table 1: Overview of existing job design/resources theories and models

Job resources theory/model	Conceptual focus	Main job resources	Main effects postulated	Interactive effects specified?
Scientific Management theory (Taylor, 1911)	Focuses on the analysis, synthesis, and efficiency of work processes. The main objective is to drive economic performance through highly specialized workflows, close supervision, and exploiting workers' skills.	Contingent pay, task specialization and simplification, adequate working conditions.	Main effects on work efficiency, economic performance, labor productivity.	
Two-factor theory (Herzberg, 1966)	Jobs should be intrinsically motivating. Different job resources lead to (the absence of) dissatisfaction and satisfaction.	Hygiene factors (e.g., job security, salary, social support), Motivation factors (e.g., recognition, responsibility, participation).	Main effects on (dis)satisfaction.	
Job Characteristics Theory (Hackman & Oldham, 1976)	Five core job resources predict employee and organizational outcomes through critical psychological states (perceived meaningfulness, felt responsibility, knowledge of results).	Skill variety, task identity, task significance, feedback, and autonomy.	Main effects on motivation, high-quality performance, personnel turnover, absenteeism.	
Job Demand-Control Model (Karasek, 1979)	Job demands and job control combine into four different types of job (active, passive, low strain and high strain) with different implications for employee growth and stress.	Job control including task autonomy, skill use and variety.	Main effects on strain and learning/personal growth.	Interaction effects with job demands. Job control buffers the relationship between job demands and stress; growth is boosted under circumstances of high job demands and high job control.
Michigan model (French, Caplan, & van Harrison, 1982)	The objective environment is interpreted by individual employees. This interpretation then influences how people feel and behave at work. Personal	Social context and social roles, income, utilization of abilities.		Social support buffers the relationship between stressors and experienced stress.

	characteristics and the social context may influence how the perceived stressor associates with stress and subsequent health outcomes.			
Vitamin model (Warr, 1987)	After the initial upward trend, the nine categories of job characteristics relate to employee well-being such that the effect stabilizes (i.e., Constant Effect - CE) or decreases (i.e. additional decrement - AD); such that increasing amounts of job characteristics don't add to or even decrease employee well-being.	CE: valued social position, availability of money, physical security. AD: Opportunity for control, opportunity for skills, externally generated goals, variety, environmental clarity, opportunity for interpersonal contact.		Job resources interact with their level. E.g. dependent on the level and the type of the job resource, the job resource influences employee well-being positively, negatively or not at all. There can be too much of a good thing; or there can be a plateau after which further increase of the job resource has no further effect on the outcome.
Job Demands-Resources theory (Demerouti et al., 2001; Bakker & Demerouti, 2017)	Different job demands and job resources predict job strain and motivation.	JD-R theory is flexible and can accommodate various job resources, ranging from the task (e.g., task autonomy) to the organizational level (e.g., organizational support).	Job resources associate positively with motivation (e.g., work engagement), and indirectly predict job performance.	Job resources buffer the association between job demands and job strain (e.g., burnout). The combination of high job demands and high job resources is associated with increased motivation (e.g., work engagement).

Table 2: Towards a more nuanced perspective of job resources

The effect of a job resource is dependent upon:	Paper in current special issue	Inspirational references
Nature and amount of the job resource, as well as the way the job resource is valued by the individual employee as regards the goal(s) under consideration.	Wang, Johnson, Nguyen, Goodwin, & Groth, 2020.	Warr, 1987; Hobfoll, 1989; Pierce & Aguinis, 2013; Schaufeli & Taris, 2014.
The individual context, e.g. personal resources and proactive behavior by the employee (e.g. job crafting).	Tong, Chong, Chen, Johnson, & Ren, 2020.	Xanthopoulou et al., 2007; Tims & Bakker, 2010; Van den Broeck et al., 2015; Gordon et al., 2018.
The micro-context, e.g. level and nature of job demands, or of other job resources.	Madrid & Patterson, 2020. Balk, De Jonge, Oerlemans, & Geurts, 2020.	De Jonge & Dormann, 2004; Van Veldhoven & Peccei, 2014; Tavares et al., 2016.
The meso-context (supervisor, team, department, organization, business unit, type of occupation and technology used, participation in decision-making, employment practices, high-performance work system).	Molina & O'Shea, 2020.	Cherns, 1987; Clegg, 2000; Dollard & Bakker, 2010; Van de Voorde & Boxall, 2014; Ogbonnaya et al., 2017.
The macro-context (country, culture).	Rattrie, Kittler, & Paul, 2020.	Daniels, Tregaskis, & Seaton, 2007; Holman, 2013.