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3

Human Resource Management and Sustainability at Work Across the Lifespan: An Integrative Perspective

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We need to defend the interests of those whom we've never met and never will.

Sachs (2012)

BACKGROUND

The global market has witnessed important changes in the nature of work, as well as in the composition of its workforce (see, for example, Chapter 1, pages 000–000 in this book). These developments have, for example, made the contents of our work more knowledge-intensive, resulted in more flexible workplaces and time schedules, and resulted in a more diverse workforce that has to deal with continuously changing work-related requirements due to constant innovations (Gratton, 2011; Truxillo & Fraccaroli, 2013). One of the most important societal trends affecting our workplace and workforce is the aging of the Western population (Hertel, van der Heijden, de Lange, & Deller, 2013; Truxillo, Cadiz, Rinner, Zaniboni, & Fraccaroli, 2012). The combination of a smaller number of younger workers relative to their older counterparts, and the current “early exit” culture in Europe (Hertel et al., 2013) has resulted in a stronger (financial) need among employers to find ways to enable or “sustain” aging workers into a prolonged working life. In addition, from a management perspective, there is accumulating (research) attention on the question

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Human Resource Management • 51

of how we can develop and maintain a *sustainable* ageing workforce (Hertel et al., 2013; Shultz & Wang, 2011) aimed at optimizing the person-environment fit (PE fit) between the (changing) worker and his or her (changing) work across time (Edwards, Cable, Williamson, Lambert, & Shipp, 2006; Rudolph, de Lange, & van der Heijden, 2014).

Although the number of studies focusing on the topic “sustainability” has been growing, a critical discussion is needed on human resource management (HRM) conceptualizations of “sustainability at work” (see Ehnert & Harry, 2012; Jackson & Seo, 2010; Jackson, Renwick, Jabbour, & Muller-Camen, 2011 for important reflections on previous definitions and conceptualizations of sustainable HRM). The purpose of this chapter is not to provide an extensive or complete overview on this topic (cf., relevant work of Docherty, Kira, & Shani, 2009 on sustainable work systems), but rather to introduce relevant definitions and new lines of theoretical reasoning directed toward linking sustainability at work and HRM theory and research. More specifically, we aim to extend the current literature on sustainability at work by: (a) discussing what we actually mean by the concept of sustainability at work; (b) discussing the important role that meaningful bundles of human resource (HR) practices can play in developing sustainability at work; and (c) addressing the importance of using an integrated strategic perspective in research, as well as in HRM practice, to facilitate sustainability at work. We will start with a thorough discussion of the concept of sustainability at work.

Sustainability at Work: Concepts and Definitions

We begin with a brief historical overview of the word “sustainability” and its relevant components. In 1972, an important definition of sustainability was introduced by the United Nations (UN) during a conference on the human environment. The UN defined sustainability as “a general world-view according to which people should strive to fulfill their needs in a manner such that the ability of future generations to fulfill their needs is not endangered” (Docherty et al., 2009, p. 3). During the 1980s, we subsequently witnessed a paradigm shift from a focus on the concept of development toward the concept of “sustainable development,” defined as “development that meets the needs of the present without compromising the ability of the future generations to meet their own needs” (United Nations Conference on Environment and Development, 1992; Wilkinson, Hill, & Gollan, 2001; World Commission on Environment and Development, 1987).

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52 • *Annet H. de Lange et al.*

The notion of human (also labeled as social) sustainability comprises a recent addition to the sustainability debate (Garavan & McGuire, 2010, p. 491). Specifically, Pfeffer (2010, p. 35) referred to human sustainability in the following way: “Just as physical sustainability considers the consequences of organisational activity for material, physical resources: social sustainability might consider how organizational activities affect people’s physical and mental health and well-being—the stress of work practices on the human system . . .” (cf., Table 3.1 for a summary of all relevant definitions). A relevant example definition in this regard was provided by Carl Holling (2001, p. 390), who defined human sustainability as “the capacity to create, test and maintain adaptive capability.” Holling’s definition suggests an important responsibility of the worker (or individual employee) in creating, testing and maintaining his or her own work capacity or ability. Oldham and Hackman (2010), in their discussion of future job design research, signaled a similar trend and stressed the increased importance of personal initiative or responsibility of workers to successfully progress or adjust one’s work capacity or ability across time by shaping or customizing their jobs into more sustainable work (e.g., job crafting) (Wrzesniewski & Dutton, 2001).

Obviously, the sustainability concept is highly complex and, as a result, is difficult to capture or operationalize using one specific scale. Nonetheless, Constanza and Patten (1995) suggest that there are three basic questions researchers should tackle when examining sustainability (at work), namely: (1) Which (sub)systems are involved and which parts of these systems need to persist or survive across time (e.g., which included groups of workers do we want to monitor across time, what kind of work will they conduct now and in the future, who are their HR managers and supervisors, and what can we say about the organizations or broader context in which these workers are active)? (2) For how long should they persist or survive (for example, do we want our subgroup of workers to continue working; for a short time frame (e.g., one year), until retirement, or until death)? (3) When do we measure or determine sustainability (depending on the outcomes of questions 1–2)?

The aforementioned definitions, presented in Table 3.1, suggest that the objective of a safe and healthy work environment has become an integrative part of the concept of sustainable development, and both environmental aspects are regarded as important facilitators in making development sustainable, equitable, and sound from an economic, human, social, and even from an ethical point of view (Barling & Griffiths, 2011; Levi, 2011).

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TABLE 3.1
DIFFERENT EXAMPLES OF DEFINITIONS FOR THE CONCEPT OF SUSTAINABILITY

<i>Example Sustainability Definition</i>	<i>Relevant Elements Related to the Four Key Dimensions of Sustainability*</i>	<i>Source</i>
1. <i>A general worldview according to which people should strive to fulfill their needs in a manner such that the ability of future generations to fulfill their needs is not endangered.</i>	<ul style="list-style-type: none"> • Global perspective • Interconnectedness of different generations • Equal or fair distribution of resources across workers • Current level and future level of work-related requirements 	Docherty, Kira, and Shami (2009, p. 3)
2. <i>“Sustainable development,” development that meets the needs of the present without compromising the ability of the future generations to meet their own needs.</i>	<ul style="list-style-type: none"> • Equal or fair distribution of resources across workers • Current level and future level of work-related needs 	Wilkinson, Hill, and Gollan (2001)
3. <i>Social sustainability might consider how organizational activities affect people’s physical and mental health and well-being—the stress of work practices on the human system.</i>	<ul style="list-style-type: none"> • Organizational perspective • Relations between organizational practices and individual worker outcomes 	Pfeffer (2010, p. 35)
4. <i>The capacity to create, test and maintain adaptive capability.</i>	<ul style="list-style-type: none"> • Stability as well as progress • Adaptive behavior in times of change • Resource view: capability 	Carl Holling (2001, p. 390)

* Four key dimensions: resource preservation and regeneration, priority and fairness, progress and stability, and system-based perspective

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54 • Annet H. de Lange et al.

Similarly, the International Labour Organization (ILO, 2013, p. 6) defined sustainability at work as decent work that:

involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men.

Another related concept in this regard is “Healthy Work.” A joint definition put forward by the ILO and the World Health Organization Committee on Occupational Health defines Healthy Work as “the placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological capabilities; and, to summarize, the adaptation of work to man and of each man to his job.”

Four Key Dimensions of Sustainability at Work

Based on earlier work of Docherty et al. (2009), and in accordance with the relevant components of the aforementioned sustainability definitions as summarized in Table 3.1, we argue that the sustainability concept incorporates four key dimensions that can be used in future research to operationalize the concept of sustainability at work into more concrete measurable variables. We describe the first dimension as a *resource-based dimension*. This dimension focuses on sustainability as a process of preservation, as well as regeneration of resources, stating that no generation (e.g., the group of older workers) be allowed to consume all (e.g., job-related) resources at the cost of other generations (e.g., younger workers). The second dimension highlights *priority and fairness*, and emphasizes protecting the needs of all people, now and in the future, instead of satisfying total needs of privileged people, as is the case in the present. This second dimension suggests that the sustainability concept is conceptualized using so-called value-based definitions (i.e., everyone has the right to be engaged in decent work) (Docherty et al., 2009).¹ In other words, this means fairness and equal priority for all and not a privileged few. For example, job-related development as an HR practice is important for all aging workers to sustain a PE fit, but earlier research has shown that contemporary organizational HR practices (e.g., training, etc.) are particularly tailored to the promotion needs of younger workers and less attractive for older workers (Kooij, Jansen, Dijkers, & de Lange, 2014).

1ST PROOFS: NOT FOR DISTRIBUTION

Human Resource Management • 55

The third dimension emphasizes *progress* and refers to the importance of social and technological innovations in relation to the content and type of work (e.g., flexible work), as well as in skills and personal resources of workers (e.g., changing digital skills and level of available knowledge, and future work-related requirements) across time. That is to say, the required innovations make long-term views and proactive investigations regarding the need to focus on stability versus change across time necessary to capture the sustainability part of the (continuously changing) work environment and its included workers. Moreover, *stability in itself*, being an indicator of maintenance (e.g., stable safe work, stable mental health of workers), has become an important new topic or process in the search for sustainability across time, and should therefore be investigated separately instead of controlled for (see future research agenda later in this chapter). Thus, as an example, organizations and aging workers themselves should not only combat skill obsolescence, but should also adapt to future work by developing new necessary skills and knowledge.

The fourth sustainability dimension embedded in previously discussed definitions concerns *system-based aspects that highlight the role and interconnectedness of multiple actors* (i.e., individual workers, employers, organization, and other stakeholders, as well as the role and interconnectedness with the macro-context; cf., Docherty et al., 2009), in relation to the experienced fit between work and individual workers (Edwards et al., 2006; Karasek & Theorell, 1990). The organization is not the only actor responsible for sustainable work; aging workers themselves are responsible as well, and can, for example, craft their job to make sure it continuously fits their (changing) motives and abilities (e.g., Kooij, Tims, & Kanfer, 2015).

The question remains whether the operationalizations used in earlier empirical research meet the aforementioned framework of four key dimensions of sustainability at work. We therefore conducted a literature search using the key term “sustainable work” in the abstract to examine the included concepts and their operationalizations. This literature search resulted in 12 empirical studies, of which six records were excluded after carefully screening the abstract (one dissertation abstract, three abstracts were not based on worker populations, and two abstracts did not include a relevant reference to sustainable work). Table 3.2 presents the results of our review and reveals that sustainability at work has been operationalized in a diverse way using variables that tap the design of work, as well as worker outcomes (e.g., vitality, work ability, lifelong learning; cf., Table 3.2), and even aspects of leadership and HRM. Moreover, from

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56 • Annet H. de Lange et al.

the review of the scholarly literature, it appears that researchers, when examining sustainability at work, refer to a variety of theories, namely:

- leadership and management theory that includes participation of workers (Dellve, Skagert, & Eklöf, 2008);
- job design theory (e.g., Karasek & Theorell, 1990);
- socio-technical system (e.g., Huczynski & Buchanan, 2007);
- chaordic systems theory (e.g., Hock, 1999; van Eijnatten, 2004);
- multidimensional critical human resource management theory (Jabbour & Santos, 2008);
- social exchange theory (Blau, 1964);
- work ability theory (Ilmarinen, 2001);
- conservation of resources theory (Hobfoll, 2001);
- learning theory (Edwards, 2005);
- (lifespan) motivation theory (Deci, Ryan, & Guay, 2013; Heckhausen, Wrosch, & Schulz, 2010; Kanfer & Ackerman, 2004); and
- job crafting theory (Wrzesniewski & Dutton, 2001).

Finally, a perusal of the studies shown in Table 3.2 suggests that sustainability at work is most often defined as work ability (three of the six included studies refer to work ability theory) (Ilmarinen, 2001).

Nonetheless, our review of the nascent empirical literature to date shows that no study includes definitions and operationalizations that fully tap the concept of sustainability at work as shown in Table 15.1, or include the associated four key dimensions: resource preservation and regeneration, priority and fairness, progress and stability, and system-based perspective. For example, studies that build upon work ability theory typically operationalize the sustainability concept using a measure of absence from work instead of the relevant, broader work ability index developed by the Finnish Institute of Occupational Health in the early 1980s of the previous century (Tuomi, Ilmarinen, Jahkola, Katajarinne, & Tulkki, 1998).

Work ability (see also Chapter 6 of this book) expresses the extent to which an employee is capable of working in the present and in the near future, taking his or her own physical and mental resources, as well as the requested level of work demands, into account (Ilmarinen, 2001; Ilmarinen & Tuomi, 1992). The concept of work ability (Ilmarinen, 2001, 2006) includes questions measuring one's abilities and motivation to work, but also includes an assessment of the psychosocial nature of work. According to Ilmarinen (2006), the work ability of employees is assumed to be influenced by micro-, meso-, and macro-level factors (indicating a system

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Human Resource Management • 57

approach). At the micro-level, the work ability of workers may be influenced by variables such as general health and individual characteristics (e.g., lifestyle behavior and functional capacities). In contrast, at the meso-level, variables that affect work ability pertain mostly to the work environment (e.g., ergonomics and physical load) and organizational leadership, and in particular to transformational leadership styles aimed at optimizing the fit between the skills, health, motivation of a worker, and his or her changing work environment across time. At the macro-level, network and societal context (i.e., social support, rules, and regulations) are the variables that are posited to most powerfully affect an individual's work ability. Although earlier research has presented criticism concerning the psychometric quality and factor structure of the scale (Radkiewicz & Widerszal-Bazyl, 2005), the systematic and multilevel approach to work ability by Ilmarinen (2009) is consistent with the proposed multidimensional (four) concept of sustainability at work, and we therefore recommend that researchers include measures such as the validated work ability index when seeking to assess sustainability at work.

In addition, Rudolph and colleagues (2014) recently suggested that besides the work ability index, researchers can also examine stability and change in adjustment processes at work through objective and subjective *indices of sustained skills to work and work performance* (e.g., active work participation, job performance), and *work engagement or motivation* as indicators of positive adaptation. As such, Rudolph and colleagues (2014) argue that continued employment participation might be the ultimate criterion for successful psychological adjustment to employment. Second, Rudolph and colleagues (2014) state that more general forms of *subjective success criteria* (e.g., psychological success) may also be considered as indicators of positive adaptation (see van Solinge & Henkens, 2008) (e.g., considerations of subjective well-being and life satisfaction). Furthermore, if we assume that successful adjustment is an objective phenomenon, we could also consider one's perceived success in the adjustment process by measuring factors such as career success and employability (de Lange & van der Heijden, 2013).

In line with the work ability theory and elaborating on the notion of PE fit (Edwards et al., 2006), we assume that worker attitudes and behaviors are sustainable if their (future) needs, abilities, and interests are congruent with aspects and (future) requirements of their current and future work environment. More specifically, we posit that sustainability at work involves a parallel accomplishment of three different objectives, namely: (a) the maintenance of workers' health, motivation, and working capacity or their

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TABLE 3.2
Results of Empirical (Peer) Reviewed Studies Focusing on “Sustainable Work”

<i>Studies</i>	<i>Concept(s)</i>	<i>Definitions</i>	<i>Measurement Instrument</i>	<i>Theories</i>	<i>Design or type of paper</i>
1. Dellve, Skagert, and Eklöf (2008)	Sustainable work ability	Sustainable work ability: Long-term work attendance (cf., Dellve, Eriksson, & Vilhelmsson, 2007).	Measured as mean municipal prevalence of long-term work attendance (i.e., no single spell of sick leave exceeding 13 days per year). Proxy measure, including sick leave and presence at work.	Work ability and management theory	Register-based data analyses
2. Hägglund, Helsing, and Sandmark (2010)	Sustainable work ability: Concept can be described as related to high presence at work and no sickness absence. Socially sustainable work organizations	Sustainable work ability: Referring to <i>capacity</i> instead of work, and no definition has been provided of the concept sustainable. Socially sustainable work organizations: Have a dynamic ability to function both by repeating accustomed and by devising innovative solutions, and they maintain this operational viability by promoting the functional capabilities of their stakeholders. The functional capability of a		Work ability theory (Ilmarinen, 2001)	Cross-sectional research
3. Kira and van Eijnatten (2008)			Not included	Socio-technical system theory	Theoretical paper theory

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<p>sustainable work organization builds on the functional capabilities of its stakeholders, while the stakeholder functional capability is connected to the functional capability of a work organization. On an individual level, sustainability can be defined as the dynamic, sustained capability for 'interior' and 'exterior' functioning. Interior encompasses cognitive (e.g., learning) and affective (e.g., vitality) (cf., Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005) functioning, while exterior covers psychophysical or "empirically measurable" functioning.</p> <p>Sustainable work abilities: Long-term adaptive and proactive abilities to work, fare well at work, and contribute through working</p>	<p>Chaordic systems</p>	<p>Conceptual paper with focus on personal crafting and collaborative work crafting affecting both worker and its work.</p> <p>Job design literature (Hackman and Oldham, 1975; Karasek & Theorell, 1990), resourced-based theories (conservation of resources theory; Hobfoll, 2001)</p>
<p>Individual sustainability</p>	<p>Not included</p>	<p>4. Kira, van Eijnatten, and Balkin (2010)</p>

continued . . .

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TABLE 3.2
Continued

<i>Studies</i>	<i>Concept(s)</i>	<i>Definitions</i>	<i>Measurement Instrument</i>	<i>Theories</i>	<i>Design or type of paper</i>
	Versus sustainable work	Sustainable work: Work that promotes the development in personal resources leading to work ability		Crafting theory (Wrzesniewski & Dutton, 2001); job crafting versus collaborative crafting (emphasizing interconnectedness of workers, employees, and other stakeholders) Self-determination theory (Deci & Ryan, 2000) Learning theory (Edwards, 2005) Work ability theory (Ilmarinen, 2001) Lifespan theory (Kanfer & Ackerman, 2004)	
5. Tjullin, MacEhen, and Ekberg (2010)	Sustainable recovery and work ability	Successful return-to-work/post-return phase	Interviewing experiences in post-return-to-work phase. Respondents reported the question of who was responsible for the sustainability in work ability was not formally addressed in policy or even informally acknowledged among all of the workplace actors.	Occupational health theory	Open-ended interview study

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6. Vickers (2010)	Sustainability	Not included	Multidimensional critical human resource management theory (Jabbour & Santos, 2008)	Introduction of editor
Sustainability	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Wilkinson et al., 2001)	Sustainable workplaces	Sustainable workplaces that enable workers to keep working, especially those who find themselves working on and around the fringes, with relevant required sustainable work skills: (i) creativity; (ii) long-term focus; cooperative and interdependent behavior; and (iv) high tolerance for ambiguity and unpredictability (Jabbour & Santos, 2008)	Sustainable human resource management: Practices that stimulate workers to think, create, and reflect in original ways about their workplaces and how things are done (fostering innovation).
Sustainable workplaces	Sustainable workplaces	Sustainable workplaces that enable workers to keep working, especially those who find themselves working on and around the fringes, with relevant required sustainable work skills: (i) creativity; (ii) long-term focus; cooperative and interdependent behavior; and (iv) high tolerance for ambiguity and unpredictability (Jabbour & Santos, 2008)	Sustainable human resource management: Practices that stimulate workers to think, create, and reflect in original ways about their workplaces and how things are done (fostering innovation).	Sustainable human resource management: Practices that stimulate workers to think, create, and reflect in original ways about their workplaces and how things are done (fostering innovation).
Sustainable human resource development	Sustainable human resource development	Sustainable human resource development	Sustainable human resource development	Sustainable human resource development

1ST PROOFS: NOT FOR DISTRIBUTION

62 • Annet H. de Lange et al.

ability to work within their current or other organization, now and in the future (see also van der Heijde & van der Heijden, 2006); (b) the improvement of the working environment to create work settings that are conducive to health, development, motivation, and internal or external mobility of workers; and (c) the development of work organizations and working cultures (i.e., management systems, personnel policy) in a direction that supports worker health, motivation, development, mobility, and safety at work, and in doing so promotes a sound social climate that positively influences organizational performance (de Lange & van der Heijden, 2013). The scholarly discipline and practice of HRM is aimed at understanding how to reach and actually achieve these three objectives.

HUMAN RESOURCE MANAGEMENT

Human resource management refers to all activities associated with the management of work and people within organizations (Boxall & Purcell, 2011). These activities are performed by different actors at different levels (Wright & Nishii, 2013). At the organizational level, the firm's decision-makers (e.g., the board of directors, the HR director) develop *intended HR practices*, which are the result of the development of an HR strategy that is assumed to effectively elicit certain employee outcomes. These intended HR practices are subsequently implemented by line managers, recruiters, and others, and are referred to as *actual HR practices*. Next, at the individual level, these *objective* actual HR practices are perceived and interpreted *subjectively* by employees, and are referred to as *perceived HR practices*. Not surprisingly, earlier research has shown that intended, actual, and perceived HR practices may differ significantly (Khilji & Wang, 2006).

In addition, social exchange (Blau, 1964) and signaling theories (Ostroff & Bowen, 2000) indicate that perceived HR practices will, in turn, influence worker attitudes and behaviors. These theories posit that HR practices have a positive effect on employees by supporting them, or by functioning as "signals" of the organization's good intentions toward them. In this line of reasoning, the general assumption is that individual workers view HR practices as a personalized commitment toward them, as an investment in them, and as a recognition of their contribution, which they will then reciprocate through corresponding positive attitudes and behavior toward the organization (Hannah & Iverson, 2004; Shore & Shore, 1995). In this chapter, we focus on HR practices as *perceived* and *used* by especially older employees.

1ST PROOFS: NOT FOR DISTRIBUTION

Human Resource Management • 63

HR practices for aging workers

Since sustainability at work is associated with workers' ability, health, and motivation to work longer, we briefly review the literature on HR practices for aging workers. There is a large scholarly literature describing many HR practices that have been suggested to be beneficial for especially older workers' motivation and retention (Kooij et al., 2014). These HR practices include, for example, part-time work or retirement, flexible work hours, training programs for older workers, reduced workload, and exemption from shift work and working overtime (Armstrong-Stassen, 2008; Paul & Townsend, 1993; Rau & Adams, 2005; Remery, Henkens, Schippers, & Ekamper, 2003; Saba & Guerin, 2005). However, few studies offer a theoretical explanation for why these HR practices are beneficial for older workers, neither have they examined the influence of these HR practices on older workers' motivation and retention, or their interrelatedness with actual job design (Veth, Emans, van der Heijden, de Lange, & Korzilius, 2011).

One exception comprises Armstrong-Stassen and Ursel's (2009) study on older professionals and nurses, wherein they distinguished between training and development HR practices (e.g., targeting older workers to accommodate their needs and to update their skills) and flexible HR practices (e.g., flexible or reduced work hours, job sharing, and phased retirement). Building upon social exchange theory (Blau, 1964), Armstrong-Stassen and Ursel (2009) hypothesized that these HR practices as perceived by employees would have a positive influence on older workers' intention to remain working, through their mediating effects on perceived organizational support. In line with their expectations, they found that perceived *training and development* HR practices did indeed influence intention to remain working, partly through perceived organizational support, but that perceived *flexible* HR practices did neither affect perceived organizational support nor intention to remain.

Besides these types of HR practices specifically targeting older workers, organizations also offer more *general* HR practices, such as training, career management, and rewards, to their total pool of employees. However, it might be that these general HR practices are less appropriate to motivate and retain older workers (Conway, 2004). Finegold, Mohrman, and Spreitzer (2002) found, for example, that for older workers, job security was more important, while opportunities to develop technical skills were perceived to be less important by this category of workers. In line with these findings, we argue that the influence of these general HR practices on

1ST PROOFS: NOT FOR DISTRIBUTION

64 • Annet H. de Lange et al.

worker outcomes changes with age. More specifically, according to the selection optimization and compensation (SOC) model (Baltes & Baltes, 1990), as losses start to outnumber gains in old age, older people will allocate their resources, such as time, energy, and effort, differently in comparison with younger people.

Evidence on age-related changes in work-related goals and motives provides support for the notion of differences in allocation of resources across the lifespan. Kooij, de Lange, Jansen, Kanfer, and Dikkers (2011), for example, found that work motives pertaining to challenging work, career advancement, working with people, recognition, and compensation (so-called growth and extrinsic motives) were lower among older workers than younger workers, while motives pertaining to interesting work and use of skills, accomplishment, autonomy, helping others, and job security (so-called intrinsic and security motives) were higher among older workers in comparison with their younger counterparts. In other words, intrinsic and security motives appear to increase in strength with age, while growth and extrinsic motives appear to decrease in strength with age. Because motives change, the *utility or value* that particular HR practices have for employees will also change as a function of the worker's age. According to social exchange theory (Blau, 1964), the utility or value of specific HR practices determines to what extent employees repay the organization, in terms of work attitudes and behaviors, for offering them these practices. Therefore, the *influence* of HR practices on employee attitudes and behaviors can be expected to change as a function of age as well.

To further explain how the utility (value) and the influence of HR practices may have different effects on workers of different ages, we argue that it is helpful to categorize HR practices into theoretically meaningful HR bundles, according to their goals (Toh, Morgeson, & Campion, 2008; see also Table 3.3, based on Kooij, 2010). We have used the SOC model (Baltes & Baltes, 1990) to bundle HR practices (see also Kooij, Jansen, Dikkers, & de Lange, 2010, 2014).

The SOC model distinguishes four life goals to which individuals can allocate their resources: (1) growth, which refers to reaching higher levels of functioning; (2) maintenance, which refers to maintaining current levels of functioning in the face of new challenges; (3) recovery, which refers to recovering to previous levels of functioning after a loss; and (4) regulation of loss, which refers to functioning adequately at lower levels. Using the SOC life goals as an organizing scheme, we posit four broad bundles of HR practices for aging workers, of which the influence on worker outcomes changes with age (see Table 3.3):

1ST PROOFS: NOT FOR DISTRIBUTION

Human Resource Management • 65

1. development HR practices, such as training and development on the job, which may help workers to reach higher levels of functioning (growth);
2. maintenance HR practices, such as job security and flexible work hours, which may help workers to maintain current levels of functioning in the face of new challenges (maintenance);
3. utilization HR practices, such as horizontal job movement, task enrichment, and participation in decision-making, which may help workers to *utilize* and broaden relevant existing skills and personal resources; and
4. accommodative HR practices, such as reduced workload and working part-time, which may help workers to function adequately at lower levels when maintenance and recovery are no longer possible by protecting or sparing them.

SOC theory (Baltes & Baltes, 1990) further proposed that losses in old age result in a corresponding shift in one's allocation of resources away from growth and toward maintenance, recovery, and regulation of loss (Hobfoll, 2011). Accordingly, we suggest that, with age, the utility of *development* HR practices will decrease, and the utility of *utilization, maintenance, and accommodative* HR practices will increase. The influence of these HR practices on worker outcomes will therefore also change; specifically, the influence of development HR practices will decrease, and the influence of maintenance, utilization, and accommodative HR practices will increase with age.

In line with this reasoning, results of a meta-analytical approach by Kooij and colleagues (2010) found that the association between the maintenance

TABLE 3.3

Meaningful HR Bundles and Specific Example Practices to Facilitate Sustainability at Work (cf., Kooij et al., 2014)

<i>Development</i>	<i>Maintenance</i>	<i>Utilization</i>	<i>Accommodative</i>
Career planning	Flexible benefits	Participation	Additional leave
Continuous on-the-job development	Ergonomic adjustment	Task enrichment (knowledge transfer)	Long career break; early retirement
Regular training	Performance pay		Demotion
Promotion	Compressed working week		Exemption from overtime working
	Health promotion		

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66 • Annet H. de Lange et al.

HR practices rewards, information sharing, working in teams, and flexible work hours, on the one hand, and satisfaction and commitment, on the other hand, increased with age, and that the association between the development of HR practice promotion and commitment decreased with age. Another study demonstrated that the association between accommodative HR practices and satisfaction and commitment increased with age, among higher-educated and male workers, but not among lower-educated and female workers (Kooij, 2010). In sum, results of empirical work to date suggest that the impact of *development and utilization* HR practices on worker attitudes changes relatively little as a function of age, but that the impact of *maintenance* HR practices increases with age, while the impact of *accommodative* HR practices increases with age among certain groups of employees. Nevertheless, van Dalen, Henkens, and Schippers (2007) found that organizations in the Netherlands and United Kingdom mainly use accommodative HR practices (e.g., additional leave, reduced workload, and part-time retirement) to try to retain their older workers, and hardly invest in the highly important utilization practices and in tailoring development HR practices to older workers. Although lifespan theories (e.g., SOC model) predict that growth and thus development HR practices are less important for older worker motivation, earlier studies found that development HR practices *tailored to older workers* are important for older worker motivation (Armstrong-Stassen & Ursel, 2009) and that general development HR practices are even more important for older worker *performance* compared to younger worker performance, because these practices combat skill obsolescence (Kooij et al., 2013).

In conclusion, the empirical literature on the effects of HR practices among older workers is limited. Although many HR practices have been suggested to be beneficial for older workers' motivation and retention, up to now we lack theoretical ideas underpinning why these HR practices are beneficial for older workers, and, besides, few studies have examined whether these HR practices are indeed beneficial for older workers. Furthermore, organizations already offer their total pool of employees a range of HR practices, but we have little knowledge on whether these HR practices are also suitable for older workers, and how the influence of these HR practices might change with age. Therefore, we need more theoretically and empirically sound scholarly work structuring the literature on HR practices for older workers, and examining the influence of HR practices on older worker outcomes, or on how the influence of HR practices changes with age. We feel that the four HR bundles approach, based on the SOC model that we have proposed in this chapter, can be a fruitful starting point

1ST PROOFS: NOT FOR DISTRIBUTION

Human Resource Management • 67

for future research in this field. These four HR bundles also differently influence sustainability at work, or the fit between the changing worker and his or her changing work requirements across the lifespan.

Functions of bundles of HR practices and sustainability at work

Up to now, few studies have focused on HRM in relation to sustainability at work. Recently, Taylor, Osland, and Egri (2012) composed a special issue on HRM's role in sustainability. According to Taylor and colleagues (2012), HRM can be both a means and an end to realizing sustainability at work. Specifically, as a means, HR practices may help directing employee mindsets and behaviors toward achieving the sustainability goals of the organization. As an end, sustainability principles can be embodied in HR practices that are aimed to result in the long-term physical, social, and economic well-being of employees.

There are only a few studies that examine the influence of HR practices on the work ability of older workers. For example, Alavinia, de Boer, Duivenbooden, Frings-Dresen, and Burdorf (2009) examined the work ability of older construction workers. They found that negative physical work-related factors, such as awkward and static back postures, and negative psychosocial work-related factors, such as low job control and high work demands, have a negative influence on their work ability. Moreover, based on SOC theory, Müller, Weigl, Heiden, Glaser, and Angerer (2012) examined interventions aimed at selection (i.e., goal setting and prioritization), optimization (i.e., permanent obtainment, improved and coordinated use of individual means to pursue selected goals), and compensation (i.e., the acquisition and application of alternative individual means or use of external or technological aid to substitute lost means, and the maintenance of a desirable level of functioning in goal attainment). They found that using SOC strategies is positively associated with the work ability of older workers, and that the positive influence of autonomy on work ability is mediated by these SOC strategies.

In sum, the literature on the influence of HR practices on indicators of sustainability at work is scarce. A fruitful avenue for future research is to link the strategic functions of the four HR bundles (see Table 3.3) to different indicators of sustainability at work (e.g., work ability, employability, etc.). Traditionally, HR policies for older workers include measures for distressed or ill workers (curing) or for workers that may suffer from complaints in the near future (prevention). Unlike curing and prevention,

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68 • Annet H. de Lange et al.

HR practices can also enhance worker skills and health. This so-called “amplification” is not aimed at ameliorating negative worker outcomes, but at enhancing positive worker outcomes (Ouweneel, Schaufeli, & Le Blanc, 2009).

In this regard, and as illustrated in Figure 3.1, we hypothesize that *maintenance* HR practices can stabilize PE fit (or *function as prevention*) by realizing, for example, flexibility in terms of a compressed work week, but can also reflect a lifestyle improvement through participating in a health program. Furthermore, we argue that *accommodative* HR practices can restore a possible PE misfit by making adjustments to the job (e.g., reduce workload, remove shift work, ergonomic adjustments to the workplace; or *function as “curation”*). These HR practices can help aging employees who are experiencing a PE misfit due, for example, to a serious declining health, by offering means to adjust the work situation in line with the health problems or by offering early or part-time retirement to better recover from work. *Development and Utilization* HR practices, on the other hand, could further improve or realize a new PE fit by changing job tasks or increasing personal resources (e.g., through training) necessary for current or future work roles. These HR practices develop employees, but also utilize existing skills and knowledge of employees (or *function as amplification*).

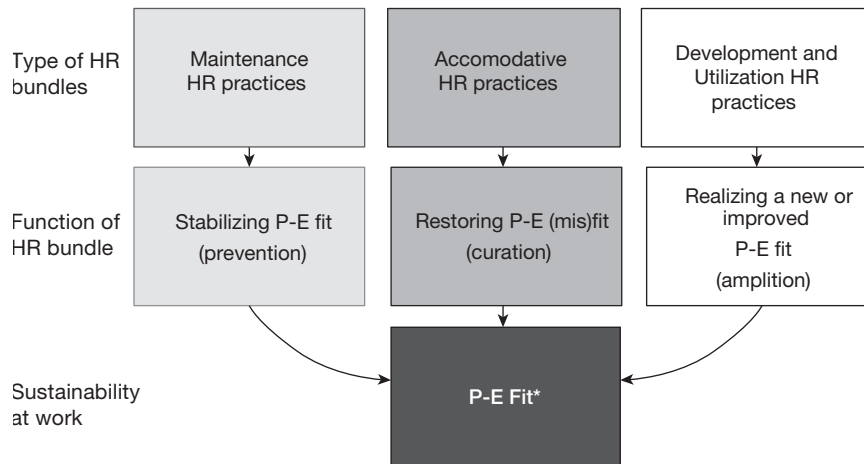
Obviously, we need multiple studies to examine this proposed framework. For example, new longitudinal survey studies are needed that examine the cross-lagged relations and underlying strategic functions of perceived and actual use of HR bundles of practices in relation to indicators of sustainability at work (e.g., work ability, employability, sustained performance, etc.).

TO WRAP IT UP: AN INTEGRATIVE STRATEGIC HRM PERSPECTIVE IN RESEARCH AS WELL AS PRACTICE

In this chapter, we have discussed the concept of sustainability at work in greater detail and have paid attention to the important underlying strategic functions of different HR bundles in facilitating sustainability at work. Nonetheless, our review has indicated that an overarching HRM theory to explain sustainability at work is still missing. We would therefore like to suggest a new integrative strategic HRM perspective (cf., Figure 3.2) that may trigger further theoretical development, and subsequently empirical

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Human Resource Management • 69



* P-E fit = (future) needs, abilities or skills and interests of worker are congruent with aspects and (future) requirements of their current and future work environment.

FIGURE 3.1
Functions of HR bundles of practices in relation to sustainability at work

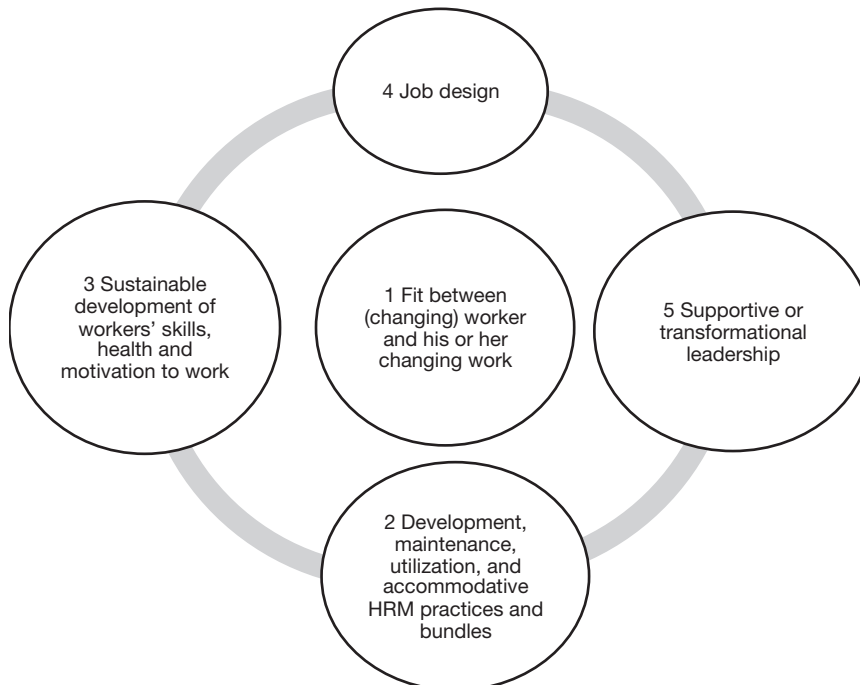


FIGURE 3.2
An integrative perspective on sustainability at work across the lifespan

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70 • *Annet H. de Lange et al.*

scholarly work, in this area. More specifically, we argue that both employers' as well as employees' work-related objectives concerning current and future work should be carefully aligned to facilitate sustainability at work (see Figure 3.2, and Dimension 5). We think that to achieve this fit across time, a lifespan-aware and diversity-friendly HRM perspective is important to diagnose reliably what workers need, in terms of specific HR practices and at which stages in their career, as well as their life to grow old successfully or to sustain a PE fit at work (Baltes & Baltes, 1990) (see Chapter 1 of this volume; de Lange et al., 2006; Kooij, de Lange, Jansen, & Dikkers, 2008 for elaborate conceptualizations of meaningful age-related individual changes at work).

More concretely, in line with lifespan theories of control (Heckhausen et al., 2010), the use of SOC strategies may be perceived as a promising strategy to exert control over one's environment, as well as of aligning oneself with it (Heckhausen et al., 2010) (see also Weigl, Müller, Hornung, Zacher, & Angerer, 2013). As humans' capability for control decreases with age, older workers in particular might compensate through using job crafting as an SOC strategy at work. Job crafting in this context is a specific form of proactive work behavior defined as the self-initiated changes individuals make in their tasks or relational boundaries of their work aimed at improving person-job fit (Tims, Bakker, & Derks, 2012; Wrzesniewski & Dutton, 2001). Job crafting thus offers workers a means to continuously adjust their job to intrapersonal changes that are part of their aging process, thereby increasing their sustainability at work by optimizing the fit between the changing worker and his or her changing environment (Kooij et al., 2015). In addition, as there is great diversity in individual characteristics and in the lifespan trajectories of workers, as well as in the (changing) content of their work, we argue that HRM departments and research on these topics should critically examine worker inclusiveness and invest in prevention, curation, and amplification types of HR practices to foster and enhance the work ability of all categories of workers across the lifespan (see Dimensions 2 and 3 of Figure 3.2), and to design sustainable work (Dimension 4).

Besides the effects of HRM, transformational leadership appears to have a positive impact on both followers' development and performance, and on the accomplishment of organizational goals (Bass, Avolio, Jung, & Bernson, 2003; Dvir, Eden, Avolio, & Shamir, 2002) (see also Caldwell, Truong, Linh, & Tuan, 2010), and is herewith hypothesized to be facilitative in sustaining and optimizing a PE fit across time. We would therefore like to stress that transformational leadership styles are needed that are

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Human Resource Management • 71

characterized by combining a commitment to helping both individuals and organizations to achieve excellence and sustainability at work (being the fourth dimension of the integrative approach we call for) (Küpers & Weibler, 2006). Only in case management actively engages in human capital management, and is supportive to their employees across their entire careers, alongside more short-term-oriented instrumental leadership, is sustainability enhancement of workers truly stimulated (van der Heijden, 2005). More research is needed to examine the precise role of supervisors, line managers, and leaders in effectively communicating and implementing the different underlying functions of HRM bundles of practices and to actually facilitate stability or positive change among subordinates (in terms of, for example, work ability, employability, performance, or successful adaptation across time).

In this context, we think the following four stages of the HR implementation process suggested by Guest and Bos-Nehles (2013) are important to include in new research examining the role of perceived and used HR practices in relation to sustainability at work. According to Guest and Bos-Nehles (2013), the implementation of HR practices begins with the decision to adopt a particular HR practice; for example, the decision to use a health promotion program to improve the work ability of aging workers who are at risk of developing serious health problems. In the second step, the HR department examines available tests of possible health promotion programs and examines the return on investment of these programs. The third stage involves the decision and selection of using a particular health promotion program. The fourth and final stage concerns the quality of the implementation of the selected health promotion program. The quality of HR implementation is related to factors such as communication and logistics, but also diversity of workers who will use the HR practices. For example, there may not be enough budget to tailor the health promotion program to the needs of different groups of workers (e.g., younger versus older workers, workers with different health problems or educational backgrounds, etc.) or communicate the benefits of using the HR practices to all stakeholders in an organization. We will end this chapter with a short outline of a future research agenda.

Future Research Agenda

Based on our discussion, we conclude that the available research to date has been limited, and we therefore call for the following new types of studies:

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72 • *Annet H. de Lange et al.*

1. Studies that include more meaningful measures to tap sustainability at work (see Figure 3.2), and empirically test their psychometric qualities (i.e., their reliability and validity). We recommend taking a broader approach to sustainability at work, incorporating ingredients from the four distinguished key dimensions (see Table 3.1), and taking into account important determinants of sustainability at work, such as individual, job-related, and organizational factors that may enhance or hinder the work ability and successful adaptation of workers across the lifespan. As regards the individual factors, human capital factors, training and development activities, work-home interference, and career involvement may be key. As far as job-related factors are concerned, future work may include the impact of job factors, such as career history and learning value of one's job. Important organizational factors may be the learning climate in one's working organization, leader-member exchange, mentoring and networking opportunities, and age-related HRM policies (van der Heijden, 2005). Only in case an integrative strategic HRM approach is adopted, both employee and organization optimize chances for sustainability at work across the lifespan.
2. More research is needed to empirically distinguish and examine the (strategic) underlying functions of HR bundles in explaining stability versus change in PE (mis)fit across time. More specifically, we should develop more longitudinal field and experimental research to tap processes such as stability and change in the fit between a worker and his or her work environment, and the role different bundles of HRM practices may play in predicting stability or change in PE fit across time. For example, can development HR practices (cf., Table 3.3) such as education and training predict an improved PE fit (amplification), or do these HR practices predict stability in PE fit (operate as a form of prevention)? And further, can development HR practices predict change as well as stability in PE fit among different groups of workers (for example, low-skilled versus high-skilled workers) or from a life course perspective for individual workers at different career stages in their life (junior versus senior career stage)?
3. Studies that provide an overarching HRM theory to explain how to improve sustainability at work, using, for example, our integrative perspective (cf., Figure 3.2) to further develop relevant theoretical argumentation for the relations between perceptions and actual use, or individual needs of HR practices in relation to PE fit across the lifespan.

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Human Resource Management • 73

Which intrapersonal (i.e., age-related psychological, physiological changes or life events) (de Lange et al., 2006), interpersonal (i.e., leadership processes, group processes, etc.), job design-related (i.e., job demands, job resources), or socio-technical explanations (e.g., supportive climate or climate for inclusion) (Nishii, 2009) can be provided and tested in new research to further explain effects of (bundles of) HR practices on sustainability at work across time?

4. Studies that examine whether HR practices can elicit job-crafting behavior among employees. As they are ageing, workers can also actively shape their own work to adjust it in line with their changing motives or lifespan needs across time (see also Kira, van Eijnatten, & Balkin, 2010; Kooij et al., 2015). Concrete HR practices, such as extensive training, decentralized decision-making, and information sharing might result in psychological empowerment or new personal resources (Messersmith, Patel, & Lepak, 2011), and thus in increased enhancement of job-crafting behavior. Furthermore, future empirical research, following up on the exemplary work by Weigl and colleagues (2013), may investigate whether organizations providing contextual resources that are conducive for enhanced job control (Heckhausen et al., 2010) are indeed positive in the light of increased sustainability across the lifespan, and whether they facilitate successful aging at work. In sum, future research should not only focus on the direct effects of HR practices (including job design) on sustainability at work, but also on the indirect effect of HR practices via individual characteristics such as job-crafting behavior (being a possible mediator in this regard) (Berg, Wrzesniewski, & Dutton, 2010).
5. So-called HR analytic studies are needed to further examine the cost-effectiveness or the return on investment of bundles of HR practices in terms of prevention, curation, and amplification among aging workers (e.g., de Lange et al., 2006; Kooij et al., 2008). For example, an important question would be whether the bundles of HR practices significantly affect sustainability at work of all workers (and thus result in inclusiveness) or, instead, only affect an exclusive group of workers.
6. Finally, more research in this area can examine the influence of contextual factors (e.g., company size, culture) and the role of leadership style in facilitating effective HR implementation and HR usage among workers (Guest & Bos-Nehles, 2013).

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74 • Annet H. de Lange et al.

NOTE

1. Obviously, researchers should critically evaluate whether the chosen operationalizations do not result in potential biased interpretations across contexts and cultures (comprising different values and norms).

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76 • Annet H. de Lange et al.

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