Healthy Aging at Work

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Abstract

In Germany as well as in most Western industrialized countries, the work-force is rapidly "aging". Modern companies therefore increasingly need to abandon established approaches to occupational safety and pursue preventive strategies to protect and restore well-being, work ability, and good health across the entire lifespan. Hence, effective occupational health management needs to encompass strategic work and career designs. In response to these challenges, an interdisciplinary group of researchers at the Jacobs Center on Lifelong Learning and Institutional Development of the Jacobs University Bremen has zoomed in on two concepts that have so far received little attention in research on occupational health management; namely, person–environment fit and work–task mobility. *Person–environment fit* refers to the fit between individuals (e.g., abilities, behaviors, goals, attitudes) and their work environments (e.g., job profile, demands, support structures, culture). *Work–task mobility* refers to careers involving repeated intra-organizational changes of work tasks at the same

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level of job complexity (no promotion or demotion). This chapter reports on two research projects, *Demopass* and *Mobilis*, that aim to investigate *person–environment fit* and *work–task mobility*, respectively, as two important tools for systemic and dynamic occupational health management in times of demographic change.

1 Healthy Aging at Work

Modern occupational health psychology, whether in the field of research or professional practice, aims to create "healthy workplaces in which people may produce, serve, grow, and be valued" (Quick et al. 1997, p 3). Rather than targeting only selected domains of health, such as, for instance, focusing on the prevention of coronary heart diseases or various chronic conditions, effective health promotion in the work-place means targeting working individuals as whole persons, including their: (1) work–life balance; (2) growth and development; (3) health and safety; (4) recognition; and (5) involvement. Because health results from the interplay of multiple interconnected factors (Adkins et al. 2000), it requires ongoing constant attention and regeneration, including after the achievement of optimal health (Grawitch et al. 2006).

Against this background, it is surprising to note that the terms "age" or "aging", which have strong associations with physical and psychological health (see Baltes et al. 2006; Dekkers-Sánchez et al. 2008; Lidwall et al. 2009; Schaie 2005), have thus far received only scant attention in organizational health research. More often than not, chronological age has merely been used as a covariate or confound (De Lange et al. 2006; Schalk et al. 2010). Given the aging of the work-force, this is an oversight with serious consequences that therefore warrants remedy. In 2013, the employment rate in Germany was at its highest level since the reunification of Germany in 1989 (Statistisches Bundesamt [Federal Statistics Office] 2014). This positive trend has been largely based on a steady increase in the employment rate of older age groups. Within the last decades, the employment rate of the work population between 50 and 64 years of age has stepped up by approximately 20 % whereas the share of working individuals between 30 and 49 years of age decreased by approximately 15–20 % (Fuchs et al. 2011). In 2012, 77 % of the 55–59-year-olds and 48 % of the 60–64-year-olds were economically active (Statistisches Bundesamt 2014). Additionally, Fuchs et al. (2011) have projected that labor participation of older men and women is still growing and will continue to do so.

The "aging" of the German work-force is a positive development that has important consequences (Leber et al. 2013) and is mainly attributable to changes in employment behavior, which in turn are attributable to a number of factors (Mümken and Brussig 2012). One such factor is an increasing shortage of qualified younger adults seeking work. Another is policy changes. Over the past few years, politicians have closed existing paths to early retirement or made these paths unattractive by imposing financial penalties on employees who retire early. Therefore, employees stay with their companies and on the labor market for longer. Thus,

even more measures are required to promote the employability of older workers and to assure them a prolonged and healthy working life (Buchholz et al. 2013).

In Germany, the proportion of older employees in mentally and physically challenging work environments such as industrial assembly-lines and rotating shift work is also increasing (European Commission 2014; Statistisches Bundesamt 2013). In many cases, such work environments involve a combination of repetitive tasks with little autonomy and high time pressure and performance demands. At the same time, industrial environments offer high job security and attractive salary arrangements. Therefore, many employees remain in these jobs and expose themselves to the challenging conditions of highly productive industrial work for most of their lives, very often for 20, 30 years or more.

Production companies of the twenty-first century face the challenge of preparing their aging work-forces for the ever-increasing pressures of economization and innovation. Industrial workers are increasingly confronted with repeated changes in their operational sequences because of advances in digitization (Kagermann et al. 2012) as well as new tools, machines, and materials. Additionally, modern organizations are very often subject to change themselves, for instance as a consequence of repeated reorganizations and constant change management (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin [BauA; Federal Institute for Occupational Safety and Health] 2013). More than ever, modern companies (and in particular their human resources [HR] departments and production planners) need to abandon established approaches to occupational safety and instead pursue preventive strategies to protect and restore the "work ability" (Tuomi et al. 2006) of their aging work-forces (Buss and Kuhlmann 2013). Sustainable HR policies and modern production work must allow for longer career paths, in some cases for the whole of an individual's working life (Staudinger and Kocka 2010). To maximize the potential of experienced work-forces, preventive measures and career designs must be core elements in setting up production lines, when developing new products, and discussing individual career paths (Sonntag 2014; Staudinger and Bowen 2011). To maintain and protect health, proficiency and motivation across a person's entire working life is a responsibility for all managerial decision makers and asks for a holistic approach to prevention (BAuA 2013).

In response to these challenges, an interdisciplinary group of researchers at the Jacobs Center on Lifelong Learning and Institutional Development of the Jacobs University Bremen (Germany) has focused on two concepts that so far have received little attention in research on occupational health management; namely, person–environment fit and work–task mobility.

2 Person–Environment Fit and Work–Task Mobility

Person–environment fit describes the fit between individuals—that is, their abilities, behaviors, goals, or attitudes—and their work environments—that is, job profile, demands, support structures, and culture (Staudinger et al. 2011). Health promotion in the twenty-first century needs to focus on both individuals and their health

behaviors, as well as on work settings, for example the characteristics of work tasks or supervisor(s). Achieving and maintaining fits between these three levels (employee, work group/supervisor, work characteristics) seem to be crucial elements in effective occupational health management. This was one of the central tenets to be tested by the *Demopass* project (funded by the Bundesministerium für Bildung und Forschung [Federal Ministry of Education and Research] and European Social Fund), which was carried out between 2007 and 2010 at the Jacobs Center on Lifelong Learning and Institutional Development.

A second concept relates to work–task mobility; that is, intra-organizational changes in work tasks at the same level of job complexity (no promotion or demotion). Each work-task change implies learning new skills or material. Large-scale longitudinal studies have provided sound evidence that highly complex work (work that requires thought and independent judgment) positively affects brain and cognitive aging (e.g., Schooler et al. 1999; Suo et al. 2012). Conversely, low job complexity is reportedly associated with a negative impact on cognition and brain aging (Gajewski et al. 2010; Marquie et al. 2014). However, because highly complex work is by definition linked with high levels of education, not everyone has access to such jobs. Extant research has not yet studied ways of designing low-complexity jobs to counteract their detrimental effects on the aging of the brain and cognition. This was the central aim of the *Mobilis* project (funded by the Volkswagen Foundation). In particular, *Mobilis* investigated work–task mobility as a dynamic characteristic of the work setting that may buffer the long-term negative effects of low-complexity work.

The results of both research projects, *Demopass* and *Mobilis*, indicated that *person–environment fit* and *work–task mobility* are both important tools for modern occupational health efforts in these times of demographic change. Therefore, we will devote the remainder of this chapter to describing these two projects and their findings in greater detail.

3 Demopass: Healthy Aging at Work: A Matter of Fit

In its most general sense, person–environment fit relates to fits between attributes of individuals and the characteristics of their (work) settings. However, industrial and organizational psychological research has elaborated the concept of fit in recent years. For example, fits between the skills and abilities of employees and their job-specific tasks and duties are referred to as person–job fits (Edwards 1991; O'Reilly 1977). Fits between the attitudes of employees and those of their colleagues are referred to as person–group fits (Adkins et al. 1996; Kristof-Brown and Stevens 2001). Person–organization fits refer to when employees share the value system and goals of their companies (Chatman 1989; Kristof 1996).

To investigate fits between employees, supervisor/work groups, and work characteristics, the *Demopass* project conducted a survey of more than 1000 employees from five German companies from various industries. A special feature of the *Demopass* project was that although all three levels (employee, supervisor/

work group, work characteristics) were considered individually, their effects on each other were also examined (Staudinger and Kocka 2010). Work group membership was recorded anonymously and the corresponding supervisors were also interviewed to enable comparisons between statements of managers and those of their employees. The sample included 1032 employees with 119 work groups and their 119 supervisors. The ages of the respondents ranged from 21 to 62 years; 177 (17 %) were younger than 29 years old, 547 (53 %) were between 30 and 45 years, and 282 (27 %) were older than 45 years (3 % did not indicate their age). The sample covered a great variety of educational levels, industrial sectors and business divisions (e.g., production, human resources, financial services, and research and development).

Numerous studies have provided indications that the organizational climate—the psychological environment or atmosphere of an organization—can have a major impact on work-related attitudes and productivity (e.g., Bowen et al. 2010; Nerdinger et al. 2008; Staudinger 2015a). Older workers often have to contend with negative stereotypes. For instance, older employees are often assumed to be less flexible, less willing to learn, less open to change and more expensive than their younger colleagues (Bellmann 2002; Posthuma and Campion 2009; Staudinger and Noack 2009). Use and perception (conscious or unconscious) of such stereotypes can contribute to the emergence of a negative psychological old age climate. Therefore, the goals of the *Demopass* project were to: (1) explore how people who differ in characteristics such as age, gender, and education perceive the age climate of their organization; and (2) assess the associations between age climate, job satisfaction, and work motivation. As to the first question, the *Demopass* study identified no differences in perception of the age climate according to age, gender, level of education, length of employment, or type of job-task. However, regardless of age, employees reportedly stated they were less likely to change their jobs when they perceived their organizations' age climates as positive (irrespective of their current job satisfaction, educational level, length of employment or gender; Bowen and Staudinger 2011). Similarly, turnover intentions seemed to be linked with fits between employees' and supervisors' self-perceptions of their own aging processes. That is, the employees who expressed the strongest turnover intentions were those whose supervisors had negative self-perceptions of aging while the employees had more positive self-perceptions. Employees who themselves reported negative self-perceptions (and whose supervisors also did) expressed significantly fewer turnover intentions. However, this association was only true when supervisors exhibited negative self-perceptions of aging. In other words, turnover intentions are unaffected by self-perceptions of aging when supervisors have positive self-perceptions of their own aging processes.

Similarly, in the *Demopass* project we found that an employee's "promotion orientation" may depend on characteristics of the age climate (Bowen and Staudinger 2013). In this study, there was an age-related difference in promotion orientation only when employees' work groups perceived the age climate as negative. In such cases, promotion orientation was negatively related to age. However, age was not related to promotion orientation in employees whose work

groups had predominantly positive age climates. That is, employees who perceived the psychological age climate in their organizations as positive strove for improvements as much as their younger colleagues. In sum, these findings suggest that a positive psychological age climate can support employees' job satisfaction as well as their positive development (and with that their mental health).

A special form of person–job fit relates to the fit between the demands of an organization and the skills and abilities of an individual (Edwards 1991; O'Reilly 1977; also see Muchinsky and Monahan 1987). Demands–abilities fit plays an important role in personnel selection and has accordingly received attention in occupational stress research (e.g., McGrath 1976). A high demands–abilities fit can be crucial in preventing age-related cognitive deficits (Feuerhahn et al. 2011). However, it is important to note that both demands that are too high and those that are too low are negatively associated with good health. Conversely, early detection and prevention of misfits can help to maintain and improve work performance, especially in older employees. *Demopass* investigated how concepts such as work ability (Tuomi et al. 2006), self-efficacy (Stajkovic and Luthans 1998), and job satisfaction are affected by high versus low demands–abilities fits (Warr et al. 1979). Analyses showed that, for instance, a good fit between the self-rated motor control skills of older industrial workers and their actual job demands was associated with greater perceived self-efficacy. That is, self-efficacy was high when self-rated abilities (high/low) corresponded with the actual work demands (high/low). When motor skills did not match actual work demands, there was a negative correlation between self-efficacy and self-rated motor control skills (also see Trautmann et al. 2011).

Additionally, high versus low demands–abilities fits between self- and supervisor ratings of abilities may be able to predict ability to work and job satisfaction (Trautmann et al. 2011). In the *Demopass* project, we found that and employee's work ability is positively influenced by a fit between self- and supervisor ratings of, for instance, the ability to learn, regardless of whether the conclusion is that the ability to learn is high or low. That is, with regard to work ability, the rating itself is not crucial, but rather the fit with the supervisor rating. This was especially true for workers in the middle-aged (30–45 years) and older (46–66 years) age groups, and less so for younger workers. In terms of the ability to handle complex tasks, the fit between self- and supervisor ratings affected job satisfaction (although predominantly in older employees and clerical staff). However, unlike in the previous example, the fit between self- and supervisor rating of the ability to handle complex tasks was only important when the supervisor rating was high. Rating of ability as high by both supervisor and employee was associated with greater job satisfaction. In contrast, high supervisor ratings were associated with less job satisfaction if the employee did not allocate the same rating. When supervisors rated their employees' abilities to handle complex tasks as low, the fit between self- and supervisor rating seemed to be irrelevant.

The *Demopass* project also tapped special training opportunities for older employees. Job-related trainings and further education are important factors in maintaining performance and productivity at all ages (Noethen and Voelpel

2011). Nevertheless, the results of the *Demopass* study clearly showed that employees aged over 55 years participated in vocational training programs less often than their younger colleagues (also see Ng and Feldman 2008). There may be several reasons for this. First, analyses of the *Demopass* data revealed that employees assign lower ratings to the importance of training programs when they expect few benefits from those programs. This relationship appeared to become stronger with age. Additionally, we found that older workers were more afraid of failure than their younger colleagues, probably because their last learning experiences had often occurred several years previously and they underestimated their learning ability. However, self-confidence in learning ability can be significantly influenced by supervisors. The *Demopass* data suggest that, especially for older and less-qualified employees, self-confidence concerning learning can benefit from supervisor support (e.g., through identification of training needs, motivating their team members, or acting as mentors). Unfortunately, the data also indicate that older and less-qualified employees were much less likely to be classified by their supervisors as "willing" to take part in trainings and further education. On average, younger employees were much more often rated as willing to take part in trainings and further education. Additionally, the probability of a positive fit between self- and supervisor ratings of training willingness decreased monotonously with each additional year.

Finally, key concepts of psychological stress research can also be interpreted as matters of fit. Perceptions by individuals that the relationship between their efforts (psychological, physical, and temporal) and their rewards (in the form of salary, career opportunities, job security, and personal recognition) is out of balance may indicate poor "effort–reward fits". Such poor fits are associated with psychological stress, burnout, and job dissatisfaction (Siegrist 2002; Tsutsumi and Kawakami 2004). In contrast, numerous studies have consistently shown that a strong effort–reward fit is associated with greater job satisfaction, better performance, and reduced perceptions of stress (e.g., Kristof-Brown et al. 2005; Verquer et al. 2003). In line with these findings, the results of the *Demopass* project indicate very clearly that effort–reward imbalances characterized by high levels of effort and low levels of reward are negatively associated with health and health-related variables. In particular, we found that a strong fit between effort and reward correlates with positive mood, greater job satisfaction, and better overall health. In contrast, a poor fit between effort and reward is correlated with negative mood and increased intention to change jobs, as well as with burnout and concentration deficits (Feuerhahn et al. 2011).

4 Mobilis: Healthy Aging at Work: A Matter of Mobility

In the *Mobilis* project, the research focus was on cognitive health (i.e., the preservation and improvement of good cognitive functioning). In particular, we were interested in finding a feasible way of promoting cognitive functioning in middle-aged production workers, an occupational group that has been associated with

poorer cognitive performance as well as with an increased risk of cognitive impairment and dementia.

"Cognitive aging" describes the fact that the cognitive system changes with age. On a behavioral level, many cognitive abilities, including memory, executive functions, and processing speed, demonstrate a monotonic and linear decline after a peak in early adulthood (Baltes et al. 2006). On a neurophysiological level, cognitive aging denotes fundamental transformations in the structure of the brain; these include gray matter volume loss through cell shrinkage, synapse loss, and dendritic regression (e.g., Grady 2012; Raz et al. 2005). Notwithstanding these age-related changes, the human brain has enormous potential for plasticity; that is, for structural and functional modifications in response to cognitive challenges and environmental demands (e.g., Draganski and May 2008; Greenwood 2007). There is ample research evidence that, for example, a cognitively stimulating lifestyle is positively associated with cognitive performance (for recent reviews see Hertzog et al. 2009; Jopp and Hertzog 2007; Voelcker-Rehage et al. 2010, 2011) as well as with greater maintenance of gray matter volume in the frontal, parietal, and temporal regions (Bartrés-Faz et al. 2009; Valenzuela et al. 2008; Voelcker-Rehage and Niemann 2013).

Because work is an important part of everyday life, working conditions and cognitive work demands may have strong influences on brain and cognition. Schooler and colleagues (Kohn and Schooler 1978) were among the first to focus on working conditions and their cumulative effect on cognitive performance. These authors established a positive relationship between job complexity (work that requires thought and independent judgment) and intellectual flexibility (Schooler et al. 1999). Irrespective of age and level of education, exposure to greater complexity at work for 30 years was associated with better cognitive functioning than in those with exposure to less complexity. Subsequent studies (mainly epidemiological) have corroborated Schooler et al.'s findings. For instance, greater job complexity is reportedly associated with a lower risk of cognitive impairment (Bosma et al. 2003) as well as of dementia and Alzheimer disease (Andel et al. 2005; Potter et al. 2007). High job complexity has similar positive effects on a neurophysiological level; however, published reports concerning this are scarce. Preliminary evidence suggests that high job complexity (supervisory experience) is positively associated with less loss of brain volume in older persons (Suo et al. 2012).

Conversely, low job complexity seems to be associated with poorer cognitive functioning and reduced brain activity (as shown, for example, in task-switching tests). Gajewski et al. (2010) compared the performances of various age groups of assembly-line workers with those of industry workers in more flexible and self-determined working conditions (e.g., quality control) on a task-switching task. They found that assembly-line work had a weak detrimental effect on performance in the two younger groups of workers (18–30 years of age) but a more severe effect in older subjects (48–66 years of age). Older assembly-line workers performed more poorly and had less working memory capacity and worse error monitoring than the same age group in the control group. Another study found that prolonged

exposure to rotating shift work (e.g., for 5 or 10 years) negatively affected cognitive performance (Marquie et al. 2014).

However, it is noteworthy that high job complexity is necessarily linked with high levels of education; thus, not everyone has access to high-complexity jobs. It has not yet been determined how to design low-complexity jobs to counteract their detrimental effects on brain and cognition. Laboratory studies suggest that positive changes in the brain and cognition are triggered specifically by novel experiences and learning new skills, such as learning to juggle or to decipher Morse code (Boyke et al. 2008; Hultsch et al. 1999; Park et al. 2014; Schmidt-Wilcke et al. 2010; also see Bowen et al. 2010). Therefore, the *Mobilis* project investigated the effects of repeated novel experiences on workers in long-term low-complexity work. The research question was whether repeated confrontation with novel work situations (versus prolonged routine work tasks) helps to maintain brain matter and cognition, even in middle-aged subjects with less complex jobs.

With this aim, we performed a case-control quasi-experimental field study in which we compared the performance on a number of psychological and neurophysiological performance tests of middle-aged male production workers in a globally acting industrial company in north Germany. All participants had worked on the assembly line of this company or in similar monotonous work-places without interruption for at least 17 years. To control for selection biases, we diligently applied a matching procedure to a large number of baseline variables thought to affect the outcome measure (Holland and Rubin 1988; Rubin 1974). Baseline variables we considered important matching variables included cognitive functioning, leisure time activities (current and at baseline), and openness to experience. With the consent of the works council, the HR department of the company pre-selected more than 3000 production workers who had been continuously employed full-time in jobs of low complexity (no promotion or demotion) during the phase of 17 years under investigation. We matched participants on all relevant covariates on the basis of a screening questionnaire. In subsequent semi-structured telephone interviews, we constructed individual work biographies to determine the number of work-task changes (WTCs). We classified all participants with zero or one WTC in 17 years as relatively non-mobile and all those with two or more WTCs in 17 years as highly mobile. On the basis of this matching procedure we identified 19 pairs of relatively non- and highly mobile participants ($N = 38$). These 38 participants were then invited to take part in the *Mobilis* study.

To assess the effect of repeated versus rare WTCs on cognitive functioning, we tested processing speed and working memory. Additionally, participants underwent brain magnetic resonance imaging to enable comparison of gray matter volumes between participants with high and low WTCs. All analyses (behavioral and neurophysiological) were controlled for cognitively stimulating leisure time activities.

We found that repeated lateral and intra-organizational WTCs had beneficial effects on the brains and cognition of middle-aged production workers. On a behavioral level, highly mobile individuals performed better on processing speed and working memory than relatively non-mobile individuals. On a

neurophysiological level, these differences were accompanied by greater gray matter volumes in important brain regions. In particular, WTCs may positively affect gray matter volume in the striatal, frontal, and insular regions. According to longitudinal neurophysiological research, these regions are particularly prone to the processes of cognitive decline (Raz et al. 2005) and have been shown to be critically involved in skill acquisition, learning processes, and cognitive functioning (Doyon and Benali 2005; Seidler 2010; Shohamy and Wimmer 2013). Additionally, we found that brain volumes in these regions were positively correlated with processing speed performance.

Mobilis is not only one of the first projects to relate working conditions to brain structure and cognitive performance, but is also the first study to find a feasible way (independent of cognitively stimulating leisure time behavior) of diminishing the cumulative long-term effects of low job complexity on cognition. By providing cognitive stimulation through repeated lateral and intra-organizational changes of work tasks, WTC offers a way of fostering both cognitive functioning and gray matter volume at work not only for workers in highly complex occupations but also for those in relatively non-complex occupations. Therefore, WTC offers a means of counteracting the detrimental effects of low-complexity occupations.

5 Discussion

Production companies increasingly need to pursue preventive strategies for protecting and restoring the work ability of their aging work-force. Sustainable occupational health management must encompass preventive work and career designs. The maintenance and protection of health and motivation across a person's entire working life should be core elements of all HR managerial decisions. The evidence provided concerning the importance of person–environment fit and changing work tasks suggests that occupational health approaches in the twenty-first century need to be systemic and dynamic (see also Staudinger 2015b; Staudinger and Bowen 2011).

Systemic refers to the practice of considering employees' health in the context of work tasks, colleagues, supervisors, and organizational characteristics. In this framework, the *Demopass* study showed that several types of fit or misfit (e.g., effort–reward imbalance, demands–abilities, perceptions of aging–training willingness) between individuals and their work groups or supervisors can severely affect health and health-related variables such as job satisfaction, mood, intentions to change jobs, promotion orientation, self-efficacy, participation in training, work ability, burnout risk, and concentration deficits.

Dynamic occupational health management refers to work careers unfolding across time and having a cumulative impact on employees' health. Rather than waiting until constraints in work capacity occur or the number of sick leave days increases, it seems worthwhile in terms of both productivity and health to compose careers that are characterized by in-time work-task changes. The *Mobilis* project's findings indicate that repeated lateral and intra-organizational WTCs have

cumulative beneficial effects on the cognitive systems of middle-aged production workers and offer a means (that is independent of cognitively stimulating leisure time behavior) of counteracting the detrimental effects of relatively non-complex occupations. Effective prevention must pursue long-term strategies and address both job and career design as well as further training and qualification (BAuA/Initiative Neue Qualität der Arbeit [New Initiative on Quality of Work] 2013).

Preserving well-being, work ability, and good productivity are on many managers' agendas. Although it is generally accepted that the aging of the workforce requires systematic management of health, skills, and motivation (Naegele and Walker 2006), in many cases the measures taken are poorly integrated and coordinated. The foundations for employees to stay fit and healthy until retirement age have yet to be laid, particularly in production industries (manufacturing, assembling) (Sonntag 2014).

Preventive occupational health management faces the challenge that many detrimental changes, especially age-related processes, develop slowly over time. For instance, the risk of chronic diseases increases with age. Working conditions that impose heavy physical or mental demands or both, for instance heavy lifting or carrying, loud noise, excessive heat and cold, monotony, strong time pressure, and shift work, can aggravate these processes. Similarly, many older employees are subject to unintended but prolonged deskilling and downgrading processes (e.g., through adapted work-places and fewer training opportunities). As a consequence, older employees often suffer from profound qualification and competence deficits.

Against the background of these challenges, the two concepts *fit* and work-task *mobility* provide valuable instruments for helping strategic occupational health managers and HR departments to set up preventive strategies designed to protect and restore the work ability of their aging work-forces. With the concept of fit, modern companies gain a crucial *systemic* variable for describing, measuring, and designing the interplay of individual and organizational factors that affect the long-term maintenance of work ability and may therefore help to protect and develop individual resources. To enable practitioners to establish feasible in-house solutions on the basis of the fit concept, we developed a comprehensive toolbox within the *Demopass* project that aims to provide both precise diagnostic instruments and concrete policy recommendations for mastering the challenges of an "aging" workforce and demographic changes (see Staudinger et al. 2011). In a similar vein, work-task mobility can serve as a strategy for *dynamically* preserving cognitive health and employability. The *Mobilis* project has provided a useful avenue (independent of cognitively stimulating leisure time behavior) for counteracting the cumulative long-term effects of relatively non-complex jobs on cognitive aging. This study therefore provides an important indication of how future personnel and career development could and should look like in industrial work-places.

In this chapter we aimed to emphasize that effective occupational health management cannot merely focus on older workers who have already experienced detrimental age-related changes in cognitive functioning and mental flexibility. Rather, it is crucial to promote lifelong learning and employability right from the start of a person's working life (Staudinger and Bowen 2011; Staudinger and Kocka

2010). This requires a comprehensive approach that also includes younger workers (Grabbe and Richter 2014). Because working life is like a long-distance run (Höpflinger 2008), success is not achieved just before the finish line, but results from the initial strategy. Demographic change requires a paradigm shift. The primacy of short-term success must be replaced by a more differentiated and sustainable culture of learning in and through work.

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