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### Moving European research on work and ageing forward: Overview and agenda

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## Moving European research on work and ageing forward: Overview and agenda

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This paper summarizes the state of affairs of European research on ageing and work. After a close inspection of the age construct, an overview is presented of research in four areas: the relationship between age and HR-policies, early retirement, age and performance/employability, age and health/well-being. The overview results in a research agenda on work and ageing and in recommendations for practice.

**Keywords:** Ageing and work; Europe; Older employees; Review.

This position paper is the result of a small group meeting on “Aging and Work” that took place at Tilburg University in January 2007. This meeting was sponsored by EAWOP, WAOP, and the departments of Human Resource Studies and Organisation Studies of Tilburg University.<sup>1</sup> Many countries are facing unprecedented demographic changes, which have consequences for the composition of the working population and the workforce of organizations. In the European Union, the number of young adults (25–39 years old) has started to decrease from 2005 and this trend is expected to accelerate significantly after 2010 (Commission of the European Communities, 2005). In contrast, the number of people aged 55 and over is expected to grow by almost 10% between 2005 and 2010, and by more than 15% between 2010 and 2030 in the EU as a whole. At the same time, the prognoses for the future show that in the European Union, the total working population (15–64 years) is expected to decrease by 20.8 million between 2005 and 2030 (Commission of the European Communities, 2005). Companies will therefore have to rely increasingly on the knowledge, skills, and experience of older workers while the available workforce is shrinking considerably.

Since working life as well as the context of work is changing, as is the age composition of the workforce, this raises several issues as to the work capacity and participation of the older age groups in the workforce. First, the quality of jobs and of the working environment need to be considered, because this can make a significant contribution to keeping people at work (Villosio, 2008). Reducing the risk of occupational accidents, and reducing physical and mental stress, can improve the health condition of employees, which may be particularly beneficial for the health of the oldest workers.

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<sup>1</sup>Carlos Alcover de la Hera, Nikos Bozionelos, Marco Depolo, Josje Dijkers, Olga Epitropaki, Franco Fraccaroli, Mathieu Gaillard, Dina Guglielmi, Guido Hertel, Mieke Heymans, Irene Houtman, Paul Jansen, Piotr Jędrzejowicz, Peter Knauth, Michiel Kompier, David Martínez-Iñigo, Izabela Marzec, Aslaug Mikkelsen, Guy Notelaers, José-Maria Peiró, K. Potocnik, Guido Sarchielli, Dora Scholarios, Peter Smulders, Toon Taris, Claudia van der Heijden, and Mandy van der Velde were authors of papers presented at the small group meeting.

Second, when employees have to stay at work for a longer period of time, anticipating changes that occur with age might help to manage the working life cycle better. Finally, the attitude of managers towards older workers is an issue. This makes ageing and work an important topic that urgently needs to be addressed. Although the topic of work and ageing was addressed in the past in European work and organizational psychology, mainly in Peter Warr's seminal contributions (see, for example, Warr, 1994, 2001; Warr, Butcher, & Robertson, 2004; Warr, Butcher, Robertson, & Callinan, 2004), a further positioning of the field is necessary. To this end a small group meeting was organized to bring together European researchers with expertise on the topic of work and ageing.

In this position paper, research in the field of work and organizational psychology on work and ageing is summarized, focusing especially on the European contribution. This paper deals with five key issues. First, the definition and the meaning of the age construct is discussed. Next, four central issues in the discussions on older workers will be highlighted. For each theme briefly the status quo in terms of research-based knowledge will be summarized. The first theme is HR policy. Central questions here are how to take into account the specific needs of each age group in organizations, and how to enable older people to stay employed. The second issue is early retirement. Which problems are related to the transition out of work, and how can this transition be facilitated? How can the moment of retirement be delayed? Next and third, it will be discussed whether there are differences between younger and older employees with respect to performance and employability. The fourth issue is health and well being in older workers. The evidence for age differences in occupational health and well-being is summarized. A research agenda concludes the overview: general issues that require additional attention to make progress in this field. Finally, messages for practice are put to the fore. These concern the importance of a positive approach towards the contribution of older employees, one that takes individual differences into account; the pivotal role of HRM; and the necessity of a shared responsibility among employers, employees, and societal institutions as to the work capacity and participation of older workers.

## DIFFERENT CONCEPTUALIZATIONS OF AGE

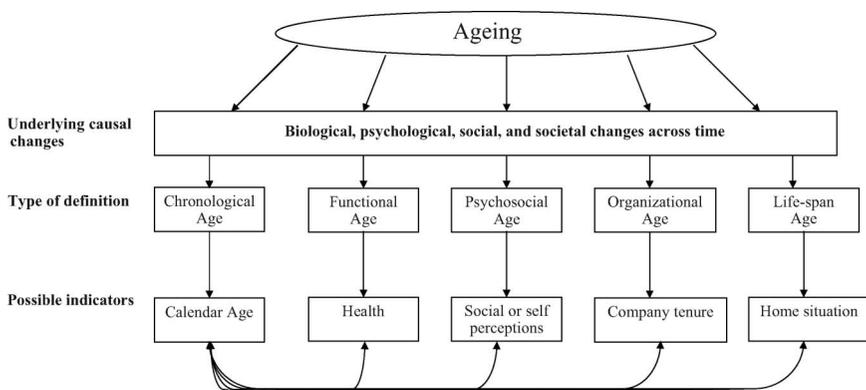
Although age seems at first glance to be a simple concept, closer scrutiny reveals that age can be conceptualized in many different ways. Ageing refers to a multidimensional process that encompasses changes in functioning over time (Birren & Birren, 1990; Kanfer & Ackerman, 2004; Sterns & Miklos, 1995). These changes include biological, psychological, as well as social processes. Therefore, there are different approaches to conceptualize and

operationalize age (cf. De Lange et al., 2006). An example is the division between chronological, physiological, and social age (e.g., Arber & Ginn, 1995). In the same vein, Sterns and Doverspike (1989) distinguished chronological age, performance-based or functional age, psychosocial age, organizational age, and life-span age. Figure 1 depicts these different conceptualizations of work-related ageing (cf. De Lange et al., 2006; Kooij, De Lange, Jansen, & Dijkers, 2008).

An underlying continuum in these different conceptualizations of age is on the one hand age as an individual characteristic, and on the other hand age as a characteristic of the environment. Other positions on the continuum conceptualize age as a characteristic of the person–environment interaction. Chronological age is a clear example of a person characteristic. Age conceptualized as years in a certain organization, or years in a certain job, is related to the person–environment interaction. Social age, based on stereotypes and ageism, is primarily determined by context characteristics.

The first and primary conception of age is chronological age, which refers to the number of lived years: age as “the number of years someone has lived or something has existed” (*Longman Dictionary*, 2003, p. 8). Chronological age has implications because it delimits the identification of age groups. Statutory regulations, for example, create age barriers and identify who has become an “older employee”. The “older employee” may be entitled to receive additional holidays, special provisions could be made available to specific age groups, and the retirement age can be regulated.

Physiological age, performance age, or functional age is a medical construct. It is based on the variation in health and physical decline. Rather than the actual number of lived years, people’s state of health/performance



**Figure 1.** Representation of possible definitions of the concept “Ageing” and indicators (adapted from De Lange et al., 2006).

capacity is considered to be the most important determinant for being considered as “old”. Organizational or job age refers to the confounding of age and company or job tenure. Life-span age emphasizes the influence of family life and economic constraints on behavioural changes in the life cycle (Sterns & Doverspike, 1989; Sterns & Miklos, 1995). Social age refers to the attitudes, expectations, and norms about appropriate behaviour, lifestyles, and characteristics for people at different ages. Psychosocial age includes the social and self-perceptions of the “older worker” (Sterns & Doverspike, 1989).

It has been argued that the socially and economically constructed aspects of ageing are far more influential on older people’s lives than chronological or physiological age (Pain, 1999). Age is socially constituted (Bytheway, 1995; Featherstone & Wernick, 1995), a social marker. There are culturally prescribed norms concerning appropriate behaviour at certain stages in the life course (Pain et al., 2001).

This is also the case in organizations. According to Lawrence (1984), the age distribution within an organization forms an implicit career timetable. People use their perceptions of this timetable to determine whether their careers are on or off schedule. In addition, Lawrence (1988) showed that socially generated age effects resulted from age norms that evolved, in part, from the actual age distribution within an organization. Age distributions appear distinct from, but related to, age norms. Deviation from the age norms is associated with performance ratings. This shows that managers respond to shared beliefs about age rather than to actual ages. Age norms produce age effects, which has been known for more than 60 years (e.g., Linton, 1942; Parsons, 1942).

In addition, it should be noted that there is often a difference between the objective assessment of age, and the subjective experience. Among people of the same chronological age level, there is a great variety in the age category in which they place themselves. At age 55, for example, some consider themselves as young, some as middle-aged, others as old (Logan, Ward, & Spitze, 1992). This also occurs in the workplace. Workers generally report that they feel, look, act, and prefer to be younger than their chronological age. Those employees feeling old relative to the chronological age experience more job-related strain (Barnes-Farrell, Rumery, & Swody, 2002).

The conceptual definition of age is the basis for the study of ageing and work, and thus of importance for every particular subtopic. Rather than focusing on calendar age alone, the next four sections will discuss specific subareas of study, which are differently related to the conceptualization of age. The relationship between age and HR policies reflects (psycho)social age; early retirement is mainly related to chronological, organizational, and life-span age. The topics of age and performance/employability, and age and health are most closely linked to functional and organizational age.

Together, these four topics highlight, in our view, the most prominent issues in the area of ageing and work. The four topics will be discussed one by one.

## AGE AND HR POLICIES

Age policy in general has an influence on the way people of different ages behave in organizations. In particular human resource policies and practices have an influence on the way employees operate in organizations. Therefore, how older employees are considered in society in general and by managers and HR departments in particular will have an important impact on the treatment of this category of workers in an organization. Moreover, whether or not HR is “age appropriate” might affect employee well-being, performance, and health. Not much is known, however, on the question whether and how HR policies and practices influence attitudes and behaviours of older employees. In addition, organizations are often not aware of demographic change as a challenge for their further development (see, for example with respect to Germany, Iller & Rathgeb, 2006).

Direct effects of HR can be assessed by evaluating the effects of specific HR practices on certain age groups. For example, do additional holidays for older employees, or opportunities to work shorter hours, or to work flexible hours, have a positive influence on older employees? Is demotion effective in successfully reintegrating employees at work after experiencing a burnout? Evaluation of these measures, which would enable us to create evidence based HR practices, is more the exception than the norm (for a rare example of such an evaluation study, see Josten & Schalk, 2005).

Although a strong base of evidence is still lacking, we can best characterize the status quo of research in this area by discussing several avenues researchers have taken to start building evidence. A first approach takes as a starting point that the way employees are treated in organizations in relation to their age is likely to be determined by certain underlying general conceptualizations of ageing. For example, it will make a difference whether a conservation model (employees are long-lasting organizational assets worthy of investment) is employed versus a depreciation model (workers' value to the organization declines with age) (Greller & Stroh, 2004; Peterson & Spiker, 2005; Yeats, Folts, & Knapp, 2000). The basic management strategy on how to use human resources and human capital is thus supposed to influence the position and the prospects of older employees.

Underlying these general conceptualizations are age stereotypes. The most important source of counteractive HR policies and managerial decisions with respect to older employees is the existence of age stereotypes (e.g., Boerlijst, 1994). That age stereotypes do exist was already shown by Rosen and Jerdee (1976). Rosen and Jerdee described the results of an in-basket exercise covering managerial problems that was administered to a

sample of 142 undergraduate business students. By varying the ages of people involved in these simulated managerial decisions they showed that age stereotypes did lead to discrimination against older workers. An example of a more recent study is a survey of older workers who were union members and employers in New Zealand (McGregor & Gray, 2002). Union members as well as employers showed stereotypes about older workers, negative as well as positive. The negative stereotypes included factors such as resistance to change and problems with technology, particularly computer technology. Positive stereotypes were mainly related to reliability, loyalty, and job commitment.

Age stereotypes are thus a general phenomenon. An interesting study of Hassell and Perrewé (1995) showed that although older workers hold more positive beliefs about older workers than younger workers do, even younger workers tended to have generally positive beliefs. In addition, they found that older supervisors did hold more negative beliefs about older workers than younger supervisors. McMullin and Marshall (2001) found that in the garment industry in a Canadian city managers wanted to get rid of older workers because they commanded higher wages than younger workers. The main reason for this was said to be cost reduction, but this implicated age as well. Brook and Taylor (2005) analysed the internal labour markets in four Australian and United Kingdom public and private sector organizations to elucidate the challenges and barriers to the employment of older workers. In each of the organizations, age-related assumptions affected the management of knowledge and skills and the way in which older and younger workers were employed.

Recently, identity theory and relative deprivation have been related to age stereotypes to better understand the mechanisms behind age stereotypes (see, for example, Desmette & Gaillard, 2008; Tougas, Lagacé, de la Sablonnière, & Kocum, 2004). The more individuals categorize their own identity as that of an older worker, the more they experience personal deprivation as compared to younger employees.

There is much evidence that age stereotypes are often not justified. Lange, Taris, Jansen, Kompier, & Houtman (2005) showed, for example, that older employees are not less motivated than their younger colleagues to acquire new skills. Challenging work environments are considered equally important by employees from all age categories. Older employees' needs in the area of HR practices are as high as those of younger employees. As McCracken and Winterton (2006) note, development of employees, such as by means of management development and learning-on-the-job, remains a priority, regardless of age. Personnel policies should be aligned to differentiated age-related needs. For example, respect, dignity, and recognition should be maintained when employees receive lower wages because of a demotion. More flexibility is needed from employers, for example by facilitating

opportunities for age-related part-time work (bridge employment; see, for example, Davis, 2003).

In research in the area of age and HR policy progress can be made by adopting a life span approach (van der Heijden, Schalk, & van Veldhoven, 2008). Most of the time, in research, persons are considered “out of context” and “at one specific point in time”. A life-span approach acknowledges that people have past experiences that they carry with them, and expectations about the future that have an influence on their behaviour and attitudes. Moreover, the context of family life, social network, and institutional organization frames their opinions, attitudes, and behaviours. Taking this into account improves our understanding of behaviour at work. Han and Moen (1999), for example, indicate that given the fundamental changes in the institutions of both work and family, there is a greater need to focus on the work–family interface based on a life-span perspective in a longitudinal way. Most studies, however, examine this interface in terms of individuals and at only one point in time. In the life-span perspective, institutionalized transitions in the life course, such as the transition from school to work, and the transition from work to retirement, can be taken into account.

The three main phases in life are the period of childhood and youth as a time for learning and preparation for adulthood, adulthood as a period of employment and focus on the family, and third, retirement as the phase of older age. This structure frames individual life courses through collective institutions, such as schooling and initial vocational education, in-company vocational education and training, and the opportunities for engaging in learning activities of the older population. At the end of the working life cycle and bridging into the later part of life in general is the transition from work to retirement. This area has attracted a lot of specific research attention, and is therefore discussed separately in the next section.

### AGE AND (EARLY) RETIREMENT

During the last decades, many organizations have been implementing retirement practices as a strategy to cope with the contingencies of the labour market. Those practices have stimulated the exit of members of the workforce before reaching the established retirement age and have had a significant impact on European societies at different levels (Von Nordheim, 2003). Although retirement has been studied extensively, research about early retirement in the area of work and organizational psychology is still scarce.

The main issues in this field of study can be illustrated as follows. First, there is a lack of a common theoretical definition of (early) retirement, and as a consequence a wide range of heterogeneous situations are comprised under this label. For instance, retirement has been studied from a role theory perspective as the exit from the work role (Adams, Prescher, Beehr, &

Lepisto, 2002), from social identity theory as the exit from the identity of worker (Perry, Kulik, & Bourhis, 1996), and as a violation or rupture of the psychological contract in case of involuntary early retirement (Isaksson & Johansson, 2000; Schultz, Morton, & Weckerle, 1998; Turnley & Feldman, 1999).

Furthermore, previous research has considered different variables and models to predict retirement or early retirement and retirement adjustment. For instance, some studies used Beehr's (1986) retirement behaviour model, suggesting personal and environmental factors to predict the retirement decision (Taylor & Shore, 1995). Moreover, role theory and continuity theory were applied to study transition and adjustment to retirement (Atchley, 1989; Quick & Moen, 1998). Finally, motivation theories have been suggested to study what motivates older workers to remain active in the workforce (Kanfer & Ackerman, 2004). Although these studies applied different conceptual frameworks to study retirement-related issues, they focus mainly on the antecedents of early retirement intentions and/or behaviours, such as planned and expected retirement age, and, to a lesser extent, on its consequences.

Second, with regard to the antecedents, research has mainly considered early retirement as an individual variable with a focus on push factors that stimulate employees to leave the organization, and pull factors that make retirement a desirable choice. Antecedents of early retirement are multidimensional and fall into two major categories: individual factors and contextual factors (Barnes-Farrell, 2003; Feldman, 1994; Hansez, Bertrand, de Keyser, & Pérée, 2005). Individual factors that are most frequently related to early retirement decisions are: health (Kim & Feldman, 1998; Steffick, 2003), economic status (Schultz et al., 1998), age (Adams et al., 2002; Schultz & Taylor, 2001), gender (Talaga & Beehr, 1995), the prospect of looking after children or enjoying leisure activities full time (Hardy & Hazelrigg 1999; Schultz et al., 1998; Szinovacz & de Viney 2000), and several personal traits, such as self-esteem and self-concept (Henkens, 1999), work centrality (Alcover & Crego, 2005), and attitudes towards work and retirement (Henkens & Tazelaar, 1994; Huuhtanen, 1994). Overall, it can be concluded that individuals with poor health and high financial security are more likely to retire early than those with good health or a low economic status. In addition, engagement in leisure activities, hobbies, or voluntary work seem to influence retirement decisions (Schultz et al., 1998), although the results of studies are somewhat inconclusive in this respect (see, for example, Talaga & Beehr, 1995).

With respect to contextual antecedents, different organizational and interpersonal variables were related to early retirement decisions. In a recent study, high job demands and low job control were related to intentions to

retire early in social and healthcare workers (Elovainio et al., 2005). Low task autonomy was related to actual retirement ages in a large Norwegian sample of 270 occupations (Blekesaune & Solem, 2005). Low organizational commitment was associated with a greater intention to retire (Adams et al., 2002), and low career commitment was related to earlier timing of earlier retirement of US employees older than 45 years. The organizational context (stressful events such as reorganization and lack of challenge at work) was also found to be related to retirement decisions (Henkens & Tazelaar, 1997; Mein et al., 2000). Group cohesion and supervisory attitudes towards early retirement of the subordinates (Henkens, 2000), co-workers' group norms towards retirement (Potočnik, Tordera, & Peiró, in press), as well as factors in personal life, such as the family situation or the influence of the social network (partner, peer group: see Hansson, Dekoekkoek, Neece, & Patterson, 1997; Henkens, 1999; Henkens & Tazelaar, 1997; Henkens & van Solinge, 2002; Hwalek, Firestone, & Hoffmann, 1982) had an effect on retirement decisions. In short, decisions concerning withdrawal are usually complex, and workers take multiple reasons into consideration, push as well as pull factors (Schultz et al., 1998).

Third, we turn to the personal and interpersonal consequences of early retirement. The outcomes of the withdrawal process are ambivalent. Although some studies have pointed to a positive assessment of post-working life among retirees (Gómez & Martí, 2003; Isaksson & Johansson, 2000; Martínez, Flórez Lozano, Ancizu, Valdes, & Candenias, 2003; Williamson, Rinehart, & Blank, 1992), other research has identified important challenges involved in early retirement, such as rebuilding personal identity, reorganizing time, activity, and social life, as well as redefining family roles. Studies have indicated the possible negative outcomes for retirees in case of a lack of coping skills, such as negative effects on mental and physical health (Choi, 2003; Isaksson & Johansson, 2000), well-being (Isaksson & Johansson, 2000), retirement satisfaction and general satisfaction (Schultz et al., 1998), scheduling and activity planning, family climate (Gómez & Martí, 2003), as well as interpersonal relations (Martínez et al., 2003). This leads to the conclusion that retirement can be considered a positive experience for most people, although factors such as the voluntariness of the decision to retire play an important role in the experience of satisfaction and well-being after retirement (Isaksson & Johansson, 2000; Schultz et al., 1998).

Research on (early) retirement can be improved in several ways. The samples used in the studies just mentioned were mainly composed of older employees. To a much lesser extent, antecedents of early retirement have been examined retrospectively among samples of retirees, who actually have undergone the transition to retirement (Talaga & Beehr, 1995; Schultz et al., 1998). Both types of samples provide complementary information about factors related to retirement (Isaksson & Johansson, 2000).

Furthermore, the conceptualization of early retirement and the relationships with other decisions, such as the decision to accept bridge employment (Feldman, 1994), need more attention. In previous studies, early retirement was mainly measured as preferred retirement age, planned retirement age, or expected retirement age. Although measures of retirement intentions and preferences were found to be highly predictive of actual retirement behaviour (Taylor & Shore, 1995), actual retirement behaviour should also be considered (Anderson, Burkhauser, & Quinn, 1986). Another limitation of the reviewed studies, with some exceptions (e.g., Isaksson & Johansson, 2000), is the use of cross-sectional designs. This is a real limitation in studying a time-related topic like ageing since this type of studies does not allow testing causal inferences, nor does it enable researchers to examine transitions from employment to retirement. Longitudinal designs are needed to explore retirement transitions and to assess adaptation to retirement over time. Future research should also examine the different mechanisms in the transition from employment to early retirement and the retirement decision process itself. In the same way more research is needed on possible intervening variables (either mediator or moderator) in the process of retirement adjustment in order to identify different adjustment patterns (Crego & Alcover, 2004).

Another improvement would be that differences in terms of gender, occupation, hierarchical position, economic sector, etc. would be explored in order to obtain more conclusive results regarding early retirement experiences of different groups. Some studies have examined the impact of predictors on the retirement decision in specific economic sectors (Hardy & Quadagno, 1995; Henkens & Tazelaar, 1997). However, a more systematic comparison among employees in different sectors and with different occupational roles is needed to shed more light on the influence that differential economic and social developments have on workers. Moreover, the retirement process and retirement choices are influenced by the rapidly changing normative and financial laws. Thus, research needs to incorporate those factors into the study of cognitive evaluations, perceptions, and representations of employees.

Finally, due to the increasing tendency of the greying of the workforce, most European countries are developing different strategies to keep older employees at work (von Nordheim, 2003). In this respect, recent research has examined what older workers consider as the “usual” retirement age (Brown, 2006), or the difference between the expected and the preferred exit age (Esser, 2005). These studies confirm a widespread “early exit culture” (Esser, 2005). Overall, this suggests a new challenge for work and organizational psychologists to shift the focus of attention to the conditions and factors that motivate older employees to stay on the labour market. This approach, together with the development of human

resources policies and practices that take into account the special needs of older workers, is opening the way towards the examination of factors that may promote a “delayed exit culture”. An issue that is central to initiatives directed at retention of older workers on the labour market is whether this category of workers is able to maintain high levels of performance in work contexts that are constantly changing, and thus remain employable. This is the next topic.

## AGE, PERFORMANCE, AND EMPLOYABILITY

The relationship between age on the one hand, and performance and employability on the other hand, is a complex issue. Both performance and employability are umbrella constructs with multiple relevant subdimensions (Sonnentag & Frese, 2002; van der Heijde & van der Heijden, 2006). In addition, both concepts can be analysed on different levels, such as organizations, teams, and individual employees (Klein & Kozlowski, 2000).

A considerable body of literature is available on the relation between age and individual performance. With respect to overall job performance, a distinction can be made between task, citizenship, and counterproductive performance (Rotundo & Sackett, 2002), which may all be differentially affected by age (Warr, 2001). Reviews of psychological studies on the relationship between overall job performance and age found mixed results (for example, Rhodes, 1983) or contradictory results. Waldman and Avolio (1986) suggested performance increments with age, whereas McEvoy and Cascio (1989) found an insignificant average correlation of .06. Literature suggests that personality and psychological characteristics might play a role in this respect (e.g., van Scotter & Motowidlo, 1996).

On balance, physical work capacity decreases with age, but individual differences are large among ageing workers, especially depending on the amount of physical exercise by these workers (Ilmarinen, 2006). As to cognitive functional capacity, a different picture emerges from the literature. Whereas information processing capabilities tend to diminish with later age, especially processing speed (Salthouse, 1996; Verhaegen & Salthouse, 1997) the actual overall functioning of information processing changes very little in the course of one’s career (Ilmarinen, 2006). More importantly, some more complex mental capacities seem to improve with age, like wisdom (Baltes & Smith, 1990; Schaie, 1994). All in all, cognitive work performance is therefore usually rather unaffected by age during one’s career because there is an interplay between several diminishing/increasing mental subcapacities. Work experience plays a large role in compensating for diminishing capacities (Ilmarinen, 2006; Spirduso, 1995).

A performance aspect that is of increasing importance in the context of the ever-changing world of work and organization, is the way workers can

deal flexibly with change (Sonnentag & Frese, 2002). This also relates to the employability of the worker (van Dam, 2004; van der Heijde & van der Heijden, 2006). With ageing, the opportunities for development offered by organizations diminish (Birdi, Allan, & Warr, 1997). Also, older workers' preparedness to develop might be lower than in younger employees (Warr & Fay, 2001). These situational and personal factors combine in such a way that flexibility and employability in older workers are lower (Maurer, Weiss, & Barbeite, 2003; van Dam, 2004). The explanation for this effect is sought in a self-fulfilling prophecy. According to van der Heijden (2005), it is conceivable that as most supervisors have a rather negative view of older employees, it is these negative evaluations made by supervisors that may produce a negative spin-off. When supervisors send out signals of doubts as to whether investments in career activities can be recuperated with a certain profit, given the time remaining up to retirement age, the employee him- or herself may also begin to question the value of these investments (van der Heijden, 2005; see also Becker, 1993; Schultz, 1971).

With respect to the different levels on which performance can be assessed, the team level deserves specific attention in relation to age. The average age, as well as the age composition of teams is important in this respect. Research on age diversity in teams shows that team processes (such as mutual learning, feedback, and decision making), and team performance (such as product quality, sick days, burnout, involvement, and satisfaction) are likely to be positively influenced by the age diversity of the team (Molleman & Slomp, 2006; Pelled, 1996). The relationship between supervisors and subordinates on the team level is likely to play an important role in this relationship.

Although the evidence on relations between age and performance and employability is already considerable, this area of research might be improved in several ways. First, much research on performance is practice driven. Better theoretical explanations for the findings and the specificity of the relationships between age and different dimensions of performance are needed. Second, the influence of moderators such as job type and industry, that are likely to play an important role, has to be assessed more routinely. Third, more research is needed on the role of "soft" factors (e.g., values, norms, work centrality), as compared to "hard" factors (e.g., cognitive and physical capacities, stable personality traits). Personality, in this context, is often thought of as stable, although recent studies show that considerable development and change does seem to take place in people's personalities (e.g., Staudinger & Kunzmann, 2004). Also, age-related changes in work motivation (what work motives do workers have and at what stage in their career/life span?) and theoretical explanations of these changes (why do we find changes in work motives over time?) can help to substantiate predictions about work behaviour of older employees. And finally, an area of increasing importance is whether there are

changes in initiative towards work and initiative towards learning with age. Active rather than passive performance concepts are thought to be important in the context of modern work and organizations (Sonnetag & Frese, 2002; Unsworth & Parker, 2003), and the stereotype is that ageing workers are low on such personal initiative/proactive behaviours (van Veldhoven & Dorenbosch, 2008; Warr & Fay, 2001). Can older workers live with the demands for flexibility by modern organizations and by modern work tasks? The way this question is phrased already seems to put the blame on the older worker. The answer to this question is not only dependent on individual proactivity and capacities, however. Finnish studies have shown that societal and organizational initiatives—centred on the concept of work ability—can greatly enhance the employability of older workers (Ilmarinen & Rantanen, 1999). Apart from considering individual motivational and attitudinal processes, in the work ability approach the health and well-being of ageing employees is also an important point of consideration. This issue is the focus of last of the subtopics.

### AGE AND OCCUPATIONAL HEALTH/WELL-BEING

There is accumulating evidence on the link between age, (work-related) mental health, and well-being. Since it is impossible to give a short, comprehensive review of relevant studies published, only some exemplary studies will be described here.

In a recent overview of the influence of individual characteristics on well-being, Cunningham, de la Rosa, and Jex (2008) suggest that the relationship between age and well-being is curvilinear, with higher levels of well-being for the young (around 20 years old) and the older workers. Warr (1992, 1997) found evidence for similar U-shaped curvilinear relations between age and occupational well-being. He discusses a similar relationship with age regarding life satisfaction and general well-being in his recent overview of the relationship between work and happiness (Warr, 2007, pp. 306–308). With respect to subjective well-being, Warr makes a distinction between three axes, which provides a more differentiated view on this issue (Warr, 2007). The first axis opposes job satisfaction to job dissatisfaction, and relates to an overall evaluation of work. The second axis distinguishes anxiety (of “strains”) from comfort, and the third opposes depression (or burnout; Maslach, 1982) to enthusiasm (or work engagement; Schaufeli & Bakker, 2004).

Many studies have shown that older workers report more job satisfaction compared to their younger colleagues (Clark, Oswald, & Warr, 1996; Rhodes, 1983; Warr, 1992). This association is generally not very high, with correlations in the range of +.10 to +.20 (Warr, 2007, p. 309). The relationship of job satisfaction with age remains significant after controlling

for demographical and work related variables, and tends to take the shape of a J-curve rather than a U-shape, with higher levels of satisfaction at older ages (Clark et al., 1996). Interestingly, intrinsic job satisfaction seems to be more strongly related to age than extrinsic satisfaction (Schwab & Heneman, 1977).

The two other axes suggested by Warr seem to exhibit a U-shape form in relation to age (Warr, 2007, pp. 310–311). Several studies found job anxiety to be highest in the middle years (e.g. Warr, 1992), whereas a similar curvilinear relationship is found for depression, with middle-aged employees reporting more depression (Warr, 1992). Other studies, however, suggest consistent negative relations between burnout and age (Schaufeli & Enzmann, 1998). Burnout is more often observed among younger employees at the beginning of their careers, suggesting that experience may be an important buffer against the development of burnout. Engagement, on the other hand, seems to be positively associated with age, with older employees exhibiting higher scores (Schaufeli & Bakker, 2003). It is noteworthy, however, that earlier research suggests that the physical as well as mental resiliency of older workers is lower compared to younger workers (Alkjaer, Pilegaard, Bakke, & Jensen, 2005).

It can be concluded from these exemplary studies that chronological age is significantly associated with indicators of work-related well-being and mental health. These studies do not, however, provide information about the specific dynamics between age, work, and mental health.

Next, it is described in which ways research on age in relation to health/well-being might be improved. Previously, the different conceptualizations of age were discussed. Because the conceptual issue has not yet been elaborated upon enough, much of the data on age and occupational (mental) health are rather superficial. In the occupational health literature the factor “age” has mostly played the role of covariate or confounder in examining the effects of psychosocial work factors on mental health. As most publications do not present scores for different age groups (Griffiths, 1997; Warr, 1992), information is lacking about the precise influence of this factor in the relation between work and mental health. Moreover, there are few theoretical frameworks for the study of ageing, and researchers often seem to rely on overly simplistic ideas or models (Schaie, 1993). As a consequence, occupational health researchers often control for age as an independent causal factor in their analyses, whereas age differences can be explained by other variables, and should not be interpreted as a “causal” variable (Schaie, 1993).

Reviews of the relation between age and organizationally relevant outcomes (e.g., Sterns & Miklos, 1995; Warr, 2001) have also suggested that chronological or calendar age often serves as a proxy measure for many age-related processes that may influence work outcomes directly or indirectly

(Kanfer & Ackerman, 2004). Unfortunately, few occupational health researchers have paid attention to possible underlying variables or aetiological processes that may help us understand and predict age-related differences in work outcomes (cf. Warr, 1992).

The relevance of these comments is illustrated by a recent study by De Lange et al. (2006). These authors found that the relations between psychosocial work characteristics (i.e., job demands, job complexity, job control, and social support) and indicators of mental health (i.e., emotional exhaustion and company satisfaction) differed as a function of age, even though no consistent age-related effects were found. Occupational health research should also examine different operationalizations of age, and should pay more attention to their conceptual development and measurement (Kooij, de Lange, Jansen, & Dijkers, 2008). Including other age-related variables as occupational preferences, social- and self-perceptions or objective performance may be helpful in explaining the differences found across age groups. Moreover, more meta-analyses of earlier studies examining the influence of age in relation to well-being at work should be conducted to determine the actual effect sizes of age in earlier occupational health research (for a recent example, see Bal, De Lange, Jansen, & van der Velde, 2008). Finally, the problem of selection effects that is overarching in many studies on age and health/well-being should be tackled. Many of current studies available on ageing and work have concentrated on those surviving employed work for a substantial part of their lives until they reach membership of the older age class. Epidemiological work (for instance on the “healthy worker” effect) shows that the survivors are by no means representative of the original cohort entering the labour market (Kasl & Jones, 2003). Future research should remedy this shortcoming, although this is not an easy research design problem to tackle.

## GENERAL ISSUES

In addition to the four specific areas of research discussed earlier, several other, more general research issues to further improve psychological research on work and ageing can be put to the fore:

1. It is important to see ageing as a multidimensional development that has positive as well as negative implications. The focus should not solely be put on diminishing cognitive as well as physical capacities. The lower maximum capacities with age are becoming less and less important because of automation in physical work and computerization of cognitive work, especially of memory and computation-related tasks. It is therefore important to take into account how motives, personal preferences, attitudes, and wisdom

change and further develop over time, and how these changes impact on work in a way that compensates for potential decreases in performance capacity and employability. In addition a growing awareness of the changes in the workforce and potential consequences is needed. Companies need to be aware that there is a demographic change that they have to take into account in their HR policies and practices. The advantages and positive age stereotypes of older employees should be promoted. Increasing attention is needed for the potential of older workers. There is a need for more provision of training to older employees that matches their needs since older workers receive less training than younger workers (Villosio, 2008).

2. It is important to take into account the relationship between the different generations in an organization and the differences in interest between these generations. Older and younger employees have different positions in organizations, which are related to differences in several aspects, such as power, prospects, and social networks. An example is the use of “senior power”,<sup>2</sup> which is often referred to as a positive situation, whereas in some instances the power of older employees might be seen as problematic by younger employees.
3. Research shows that the changes that people experience when they become older cannot be characterized as a fixed process, because the individual differences are very large, and differences increase with age. Therefore, there is a need for an idiosyncratic approach: a greater focus on individual differences, and not on the stereotypical views about different age groups.
4. There is a low employment rate among the elderly workforce. That raises the question as to what kind of activities the nonworking older people perform? And, from the life-span perspective, what are the consequences of long-term unemployment for well-being and health at older ages? What are the factors that make it difficult to (re)enter paid employment?
5. Finally, the influence of a changing context should be acknowledged. In research, the prospects for the future should be considered. An important question is whether what we study now is still relevant for the workforce of let’s say 2020? Changes in work, work organization, and the composition of the workforce will all have an influence.

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<sup>2</sup>An example is the campaign to promote a positive image of older employees by the Dutch government, which is labelled “senior power” (see: <http://www.senior-power.nl/>).

## FUTURE RESEARCH PERSPECTIVES SPECIFIC FOR EUROPE

The research issues for the future that have been discussed so far, are not necessarily only “European” in nature. In this paragraph we go into perspectives and research gaps that are especially relevant for research on ageing and work in the European context.

A first research issue concerns differences between European countries. Although population ageing is a generalised process and the population is projected to become older all over Europe, there are large differences in the expected increases of the median age between countries (from more than 15 years to less than 5 years). Moreover, there are large differences between countries in terms of expected growth (+60% in some countries) or decline (–30% in some countries) of the population (Giannakouris, 2008). This implies that age-related problems in society will start to occur at different points in time and that countries will be affected in different degrees.

There are two ways in which research can contribute in this area. First, by examining the processes that are taking place in countries that have to cope with ageing early, lessons can be learned that can help countries that face problems at a later point in time. It can be studied how effective the key actors, such as government, employers, employees, and representative bodies, act and interact in dealing with ageing. In the second place, studying the influence of cross-cultural and economic factors on the effectiveness of coping with ageing can provide insight in the interaction between ageing and country-specific circumstances. Studies that examine cross-national differences are much needed. With respect to early retirement, for example, the situation in Spain, Belgium, and Italy can be compared by looking at Crego, Alcover de la Hera, and Martínez-Iñigo (2008, for Spain), Desmette and Gaillard (2008, for Belgium), and Zappalà, Depolo, Fraccaroli, Guglielmi, and Sarchielli (2008, for Italy).

A second research issue concerns the role of changes in ageing and work in the light of the European aim to “become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion” (strategic goal for 2010 set by the European council in 2000). This requires “the modernization of work organization, the definition of lifelong learning strategies, the quality of the working environment and ‘active ageing’, in particular raising the retirement age” (Commission of the European Communities, 2005, p. 17). Work and organizational theories and concepts (for instance, the psychological contract, job proactivity, flexicurity) can be used to formulate research questions that fit that aim and can provide the practical answers necessary to achieve those goals.

There is a need for research to support the employment of more older workers in the modern European knowledge economy. Warr (2007) recently suggested that it is urgently needed to know more about the changes in how people evaluate and value job characteristics as they grow older. Workers can stay active and engaged when we know what motivates them, and when managers take that into account. The interaction between the demands and offers of both employer and employee towards each other is an important issue. The expectations on the employment relationship, as laid down in the psychological contract, fluctuate dynamically over time because the demands and offers change when circumstances alter (Schalk, 2004). The European economy and social security system require specific forms of “new employment relationships” that are probably different from the US or Chinese standards for employment relationships. These issues call for specific European research.

### WHAT IS NEEDED IN PRACTICE?

This position paper has primarily focused on research, in terms of evidence base, lessons learned, and implications for future studies in this field. Several points have been made, however, that should have clear implications for policy and practice concerning work and ageing in Europe. In our opinion, researchers will acquire a stronger position when they limit themselves to three main points that are priority messages for policy and practice.

1. In most of the studies on work and ageing only limited differences are found between age groups in terms of health, well-being, overall performance, personal initiative, etc. Also, differences between age groups on these variables are usually much smaller than differences between individuals belonging to the age groups concerned. These findings are in sharp contrast with the phenomenon of age discrimination/stereotyping that appears to be abundant in practice. An active promotion of a positive attitude towards older workers is necessary to change this incorrect stereotype and concomitant discrimination. At the very least it would be necessary to advocate a “similar until proven different” approach in European employment relationships. It should be noted that the balance between costs and profits (productivity) of younger and older employees is in general about the same: There is no clear relationship between age and productivity related to salary.
2. The shirking of ownership of the age-problem issue by politicians, employers, unions, and employees to other parties has to be abandoned. Employers, managers, and HR professionals also

“own” the problem of the older worker. Multiple stakeholders should be actively involved in the age issue, and ways have to be found to ensure that stakeholders that until now seem to be avoiding the issue will actively adopt it. If Europe does not succeed in changing this distribution pattern of social responsibility, chances are that employers and (HR) managers will ultimately be forced to employ and engage older workers because of labour shortages and circumstance. It might be necessary to devise social policy measures that stimulate these stakeholders to take earlier action.

3. HR instruments need to be designed and implemented that take the life-span perspective of employees as a starting point. It will be hard to solve the “older worker” issue when the necessary elements for intervention are not already planted in employees. The human life span introduces an important element of diversity to the ageing issue, but additionally so do individual workers’ life and career choices: These are also widely divergent. The individual diversity in the group of older employees should be accepted and acknowledged in trying to find ways to keep older employees employed as well as engaged in their work.

## A FINAL WORD

Psychological research on work and ageing is a field of study that is highly relevant to society. We hope to have shown that, although many future research questions remain, it is a lively area of research where much has already been achieved and where researchers linked to EAWOP are making a valuable contribution. We hope that this position paper will encourage researchers to investigate this topic more profoundly, and that ageing research will move forward within the next couple of years.

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