



## Dominant achievement goals of older workers and their relationship with motivation-related outcomes

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### ABSTRACT

The aim of this study was to increase our insight into older employees' achievement motivation by examining the prevalence of dominant achievement goals among a "unique" group of 172 Dutch workers who remained active after their post-statutory retirement age. Moreover, we investigated how their dominant achievement goals were linked to motivation-related outcomes (i.e., work engagement and meaning of work). Our results showed that, relative to younger workers, a significantly higher amount of older workers endorsed dominant mastery-avoidance goals. In addition, as expected, older workers with dominant mastery-approach goals scored highest, while the workers with dominant mastery-avoidance goals scored lowest in work engagement, social and personal meaning of work. Theoretical as well as practical implications of these results are discussed.

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In view of the world-wide graying of the workforce (Gobeski & Beehr, 2009; Waite, 2004), it is important to examine the achievement motivation of aging workers. Demographic transitions, i.e., aging and dejuvenization of the working population has already occurred in most developed countries, and is rapidly underway in many developing nations as well (Alley & Crimmins, 2007). Consequently, the composition and supply of the workforce is diverging: the proportion of older workers is growing, while the number of available younger workers is contracting. This scenario presents critical challenges for numerous stakeholders (e.g., politicians, managers, career counselors, and employees) across industries and countries (Alley & Crimmins, 2007; Burkhauser & Quinn, 1997). One of the challenges is that companies will have to rely increasingly on the contribution of older employees. Although this group of workers has attracted considerable research interest during the past decade, age-related HRM policies still have not resulted in sound career development investigations and practices aimed to respond to the needs of the labor market. Moreover, there is a serious lack of studies including workers aged 60 or above (Bal, De Lange, Jansen, & Van der Velde, 2008; Stroh & Greller, 1995; Warr, 2008).

The objective of this study was therefore to improve our understanding of the achievement motivation of workers who remain active after their post-statutory retirement age, by examining the prevalence of their dominant achievement goals, and their impact upon motivation-related outcomes. Before addressing the specific hypotheses of this study, we will first discuss some relevant concepts, theories, and available research related to aging and achievement motivation.

### Achievement Motivation

The goal approach to achievement motivation has emerged as a highly influential theoretical framework for understanding how people define, experience, and respond to competence-relevant situations, including the workplace (Elliot, 2005). Originally,

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achievement goals were examined in terms of two major types, namely mastery and performance goals (e.g., Dweck, 1986; Nicholls, 1984). *Mastery* goals focus on task-based and *intrapersonal* standards of competence, while *performance* goals focus on *interpersonal* standards of competence. The most sophisticated achievement goal model is the 2×2 model developed by Elliot (e.g., Elliot, 1999). In this model, the distinction between *approach* (focusing on obtaining positive or desirable events) versus *avoidance* (focusing on avoiding negative or undesirable events) are incorporated into the conceptualizations of achievement goals. Accordingly, it comprises four types of goals: *mastery-approach* goals (focusing on the attainment of task-based or *intrapersonal* standards of competence), *performance-approach* goals (focusing on the attainment of *interpersonal* standards of competence), *mastery-avoidance* goals (focusing on the avoidance of task-based or *intrapersonal* standards of incompetence), and *performance-avoidance* goals (focusing on the avoidance of *interpersonal* standards of incompetence).

Relying on the dominant achievement goal approach (Van Yperen, 2003, 2006), there is increasing empirical evidence that mastery-avoidance goals are highly prevalent, which may be especially true among older workers. For example, Elliot and McGregor (2001) suspected that particularly “elderly people ... begin to focus on not performing worse than before, not stagnating, or not losing their skills, abilities or memory” (p. 502). Nonetheless, to the best of our knowledge, to date, no empirical study has explicitly examined the prevalence and effects of achievement goals among older workers. Therefore, life span developmental theory is applied to postulate theory-based expectations on the prevalence of mastery-avoidance goals among older workers, and on its impact upon motivation-related outcomes.

### Aging, Achievement Motivation, and Work Outcomes

According to Maehr and Kleiber (1981), with an increase in age, achievement motivation may shift from a more extrinsic, competitive pattern of achievement to a more intrinsic, mastery-related pattern. In general, older people are characterized by conservatism, cautiousness, and affiliation, rather than by competition, and may become more focused on short-term than long-term goals (cf. Botwinick, 1966). Generativity (i.e., focusing on developing or coaching others) tends to become more important among older workers who have already established success in their midlife age period (Erikson, 1963; Neugarten, 1977).

In a study of Holahan (1988), among 814 older working adults (mean age was 70.2 years; with ages ranging from 65 to 75 years), it was found that achievement motivation, operationalized as approach motivation only, without distinguishing between mastery and performance goals, was positively related to health as well as psychological well-being. Another study by Caldwell, Herold, and Fedor (2004) found that, particularly, mastery goals become more prevalent among older workers. Summarizing, the scarce available research presents some evidence that older workers can be characterized by a stronger focus on standards of competence that are intrinsically, rather than extrinsically, defined, and emerge to a greater extent out of the activities themselves (i.e., mastery) than out of interpersonal or other-referenced standards (i.e., performance; Kanfer & Ackerman, 2000; Maehr & Kleiber, 1981). However, to date, there are no studies that provide information on the valence (avoidance versus approach) of mastery and performance goals among older workers (>60 years).

### Life Span Developmental Theory

According to the *Socioemotional Selectivity* theory of Carstensen (1995), individuals will select goals in accordance with their perceptions of the future as being limited or open-ended (Lang & Carstensen, 2002). Older generations are assumed to perceive time as more constraint, holding a “time till death” perspective, and will be more motivated by achieving short-term and avoidance-related goals, such as deepening one's existing relations. Similarly, the *Selection Optimization with Compensation* (SOC) model of Baltes, Staudinger, and Lindenberger (1999), states that, due to the loss of biological, mental, and social reserves across the life span, the allocation of resources for so-called maintenance and regulation of “loss or prevention” goals will increase with age. Indeed, several researchers (Ebner, Freund, & Baltes, 2006; Freund, 2006; Heckhausen, 1997) have demonstrated that a person's goal orientation changes across the life span, revealing evidence for a stronger orientation on maintenance and loss prevention among older compared to younger people. The gradual diminution of physical and mental skills and abilities during the aging process may therefore strengthen one's tendency to adopt avoidance goals (Kanfer & Ackerman, 2004; Maehr & Kleiber, 1981). To conclude, based on the aforementioned work on achievement motivation and age (e.g., Maehr & Kleiber, 1981), the *Socioemotional Selectivity* theory (Carstensen, 1995), and the SOC model (Baltes et al., 1999), we formulated the following hypotheses:

**Hypothesis 1a.** Relative to younger workers, a higher number of older workers will hold dominant mastery-avoidance goals.

**Hypothesis 1b.** Among older workers, dominant mastery-avoidance goals will be more prevalent than the others goals from the 2×2 achievement goal framework.

### Links between Achievement Goals and Motivation-Related Outcomes among Older Workers

Besides our interest in the prevalence of dominant achievement goals among older workers, we aimed at a better understanding of the associations between their achievement goals and motivation-related outcomes (i.e., work engagement and meaning of work), an issue which has been largely neglected to date (Barness-Farrell & Matthews, 2007; Kanfer & Ackerman, 2004; Kooij, De Lange, Jansen, Kanfer, & Dikkers, in press). Work engagement (defined as a positive affective-motivational state of

mind) and meaning of work (i.e., personal, social, financial, and generativity meaning of work) are crucial factors in sustaining well-being and productivity of workers, and have been linked to performance, creativity, health, as well as to actual turnover (Bakker, 2008; De Lange, De Witte, & Notelaers, 2008; Mor-Barak, 1995). There is strong evidence that mastery-approach goals are related to positive work outcomes such as intrinsic motivation, task interest, and job satisfaction (cf. Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Janssen & Van Yperen, 2004; Rawsthorne & Elliot, 1999). Mastery-approach goals are generally considered to be the optimal form of competence-based regulation (e.g., Colquitt & Simmering, 1998; Ford, Smith, Weissbein, Gully, & Salas, 1998; VandeWalle, Cron, & Slocum, 2001). They afford a clear, positive, intrapsychic comparison process that should facilitate task absorption and enhance performance (for a review, see Elliot, 2005).

The very few studies that have examined the effects of mastery-avoidance goals in relation to relevant outcomes, revealed neutral and more negative effects in terms of well-being, motivation, and performance (e.g., Elliot & McGregor, 2001; Sideridis, 2008; Van Yperen, Elliot, & Anseel, 2009). Mastery-avoidance goals include a negative outcome as anchor for self-regulation (i.e., to do worse than one has done before), for instance, in achievement contexts such as the workplace. This intrapersonal standard is both clear and appropriate, particularly in evaluative, achievement contexts such as the workplace. As workers age and face more physical and psychological constraints, this negative intrapersonal standard may become more dominant during goal pursuit, and is highly diagnostic, as both the *dimensions* of comparison (the job itself, the working conditions, etc.) and the subject of comparison (the self) are quite specific, clear, and unambiguous. Accordingly, not improving, or performing worse than one did before in the same job under identical conditions may yield unequivocal negative feedback. Furthermore, in contrast to interpersonal comparisons where failure may be more easily attributed to external factors, such as others' high efforts and better working conditions for comparison others, possible undesired outcomes of intrapersonal comparisons are more difficult to distort in a self-enhancing manner. In the latter case, the specific, clear, and unambiguous negative feedback may subsequently lead to more negative work outcomes, including low work engagement (cf., Van Yperen et al., 2009).

Performance-avoidance goals focus on the possibility of failure relative to others, evoke threat appraisal and low competence expectancies, disrupt concentration, and elicit anxiety (Elliot, 2005). Therefore, individuals with performance-avoidance goals are typically low in intrinsic work motivation and task interest, and their performance levels are relatively low (e.g., Elliot & Moller, 2003; Porath & Bateman, 2006; Van Yperen, 2006). In contrast, performance-approach goals represent valuable, yet vulnerable forms of regulation (Elliot & Moller, 2003). Hence, mixed results have been found with regard to outcome variables such as performance attainment, motivation, and job dissatisfaction (e.g., Elliot, 2005; Harackiewicz, et al., 2002; Van Yperen, 2006). Accordingly, **Hypothesis 2** states that mastery-approach goal workers are highest, and avoidance goal workers (either mastery or performance) are lowest in motivation-related outcomes (i.e., work engagement and meaning of work).

## Methods

### Sample and Procedures

A total of 450 Dutch employees, working for a temporary employment agency for workers over 65, were invited to participate in the study. They were sent an e-mail in which the objective of the study was explained, and were asked to fill out an on-line questionnaire, which could be accessed through a hyperlink. Of the total sample, 172 older workers responded (response rate 38%), of whom 76% was male. Of the older workers, the largest percentage (41.6%) received higher secondary education or university degree. The mean age of the respondents was 69 years, and they worked, on average, 3 years for the employment agency. On average, the respondents worked three days a week and conducted various jobs, ranging from teaching to interim management. Analyses comparing the respondents with the total population working for the employment agency revealed that our sample did not differ significantly from the total population in terms of mean age, gender, educational level, tenure with the agency, and average amount of working hours per week.

### Reference Group

The reference group consisted of 278 Dutch blue- as well as white-collar workers, of which 52.3% was female, 75.2% had a fixed position, and 56% received a higher vocational education or university degree. The age range was 18–61 years (Mean age was 36.82; *SD* = 11.59). Compared to the Dutch working population and the aforementioned older subsample of workers, this reference group included a larger amount of higher educated and female workers (Statistics Netherlands, 2009).

### Measures

*The Individual's Dominant Achievement Goal* was assessed by the validated six-item round robin measure developed by Van Yperen (2006; for more detailed information on the measure). In this forced-choice measure, each achievement goal from Elliot and McGregor's (2001) 2 × 2 framework contrasted in a pair-wise fashion with the other three achievement goals. In this study, the wordings of the four goals were: "In my work, I find it more important ... (1) ... to do better than others, (2) ... not to do worse than others, (3)...to do better than I did before, (4)...not to do worse than I did before. If a particular type of goal is consistently chosen, it is considered to be the individual's dominant achievement goal. In this sample of post-statutory retirement age workers, 79.7% (*N* = 137) appeared to have a dominant achievement goal.

*Work Engagement* was measured with the validated nine-item Utrecht Work Engagement scale (Schaufeli & Bakker, 2003), and consisted of three dimensions (three items for each one): (1) *vigor* (e.g., “At my work, I feel bursting with energy”), (2) *dedication* (e.g., “My job inspires me”), and (3) *absorption* (e.g., “I am immersed in my work”). Response categories varied from 1 (*never*) to 7 (*always or every day*). Factor analysis revealed that the nine items loaded on a single factor. Cronbach's alpha for work engagement was .88.

*Meaning of Work* was measured by means of the 16-item Dutch version of the Meaning of Work scale (Mor-Barak, 1995). This scale consisted of four dimensions being *financial* (three items; e.g., “For me paid work provides me with enough money to live”), *personal* (four items; e.g., “For me paid work gives me personal satisfaction”), *social* (five items; e.g., “For me paid work pleases relatives or friends who expect me to work”), and *generativity* (four items; e.g., “For me paid work gives me an opportunity to share my skills with younger people”) motives. The respondents indicated on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) whether paid work provided them with the specified motives. Factor analysis produced the four hypothesized dimensions with Cronbach's alpha's being .67 (financial), .89 (personal), .84 (social), and .91 (generativity).

### Covariates

Based upon earlier research (Elliot & McGregor's, 2001) and some preliminary analyses, we controlled for gender, educational level, and health. Health was measured with a 12-item version of the General Health Questionnaire (GHQ, Goldberg, 1992) (i.e., “Have you been unhappy and miserable the last time?”); scale anchors ranged from 1 = *absolutely not* to 4 = *much more than normal*). Cronbach's alpha for the GHQ was .78.

### Results

*Hypothesis 1a* stated that relative to younger workers, a higher number of older workers will hold dominant mastery-avoidance goals. Table 1 presents the frequencies and Chi-square for the goodness of fit test comparing the results of our older workers with the reference group. A great majority of both the older and younger workers indicated that they had a dominant achievement goal (79.7% and 80.2%, respectively). The Chi-square test ( $\chi^2 = 18.21$ ,  $df = 3$ ,  $p < .01$ ) revealed that the distribution of the achievement goals differed significantly among the age groups. As expected, relative to their younger counterparts (28.4%), a higher number of older workers (38.7%) held dominant mastery-avoidance goals, which supported Hypothesis 1a. Note that, relative to the younger workers, the older ones also reported a lower number of dominant mastery-approach goals, and a higher number of performance-approach goals.

*Hypothesis 1b* stated that among the older workers, dominant mastery-avoidance goals will be more prevalent than the others goals from the 2 × 2 achievement goal framework. Comparing our results with an equal distribution of employees over the four achievement goals, the Chi-square test indicated that the obtained frequencies differed significantly from those that could be expected if all cell frequencies would be equal ( $\chi^2 = 15.26$ ,  $df = 3$ ,  $p < .01$ ). As expected, dominant mastery-avoidance goals (38.7%) were most prevalent among older workers, herewith supporting Hypothesis 1b.

As Table 2 shows, age was significantly and positively related to older workers' organizational tenure ( $r = .72$ ;  $p < .01$ ), and health ( $r = .18$ ;  $p < .05$ ). Moreover, work engagement appeared to be positively related to all four meaning of work scales (ranging from .20 to .53,  $p < .01$ ).

*Hypothesis 2* stated that mastery-approach goal workers score highest, and avoidance goal workers (either mastery or performance) score lowest in motivation-related outcomes (i.e., work engagement and meaning of work). A 2 (Definition: performance versus mastery) × 2 (Valence: approach versus avoidance) MANCOVA test was carried out to examine the extent to which categories of older workers with dissimilar dominant achievement goals differed significantly with respect to the distinguished motivation-related outcomes. Significant main effects of Valence (multivariate  $F(6,128) = 4.66$ ,  $p < .01$ ) were found for almost all motivation-related outcomes (except for *social* meaning of work; univariate  $F(1,133) = .92$ ,  $p > .05$ ). As expected, individuals with dominant *avoidance* goals reported a significantly lower level of work engagement ( $M_{app} = 6.34$  versus  $M_{avoid} = 5.81$ ), lower personal ( $M_{app} = 5.90$  versus  $M_{avoid} = 5.17$ ), financial ( $M_{app} = 3.55$  versus  $M_{avoid} = 2.69$ ), and generativity ( $M_{app} = 5.04$  versus  $M_{avoid} = 4.26$ ) meaning of work scores compared to the individuals with dominant *approach* goals.

To understand the significant interaction effects found between Valence and Definition (multivariate  $F(6,128) = 3.32$ ,  $p < .01$ ), Post-hoc Least Square Difference (LSD) tests were conducted. As expected, the pattern of results (see Table 3) indicates that older workers with dominant mastery-approach goals scored highest, and their counterparts holding dominant mastery-avoidance

**Table 1**  
Frequencies achievement goals for older versus younger reference group.

Dominant achievement goal:	Older workers >65 years	Reference group 18–61 years
Performance-approach	24.8%	14.7%
Performance-avoidance	18.2%	19.4%
Mastery-approach	18.2%	37.5%
Mastery-avoidance	38.7%	28.4%
Total N	137	232

Note. 20.3% of the 172 workers reported no dominant goal, compared to 19.2% of the 287 younger workers.

**Table 2**Means, standard deviations, and correlations of the study variables ( $N = 172$ ).

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1 Age	68.99	3.16	–									
2 Gender	1.76	.43	.05	–								
3 Education	3.80	1.64	.12	.08	–							
4 Organizational Tenure	2.97	2.56	.72**	.06	–.01	–						
5 Health	1.63	.26	.18*	–.03	.19*	.10	–					
6 Work Engagement	6.00	1.06	.02	–.01	–.10	.01	–.03	–				
7 Meaning of Work: Social	3.96	1.74	.04	–.09	–.14	.10	.13	.36**	–			
8 Meaning of Work: Personal	5.46	1.49	.01	–.04	–.18*	.05	.07	.53**	.56**	–		
9 Meaning of Work: Financial	3.10	1.54	–.05	–.19*	–.22**	–.08	.04	.20**	.40**	.31**	–	
10 Meaning of Work: Generativity	4.69	1.76	–.02	–.02	–.04	.02	.09	.44**	.39**	.59**	.25**	–

Note. \* are significant at the .05 level; \*\* are significant at the .01 level; Both age and tenure have been measured in years; Gender: 1 = female; 2 = male; Education: 1 = primary education, 2 = lower level of secondary education; 3 = college degree, 4 = middle vocational education, 5 = higher secondary education, 6 = higher vocational education, 7 = University degree or higher.

goals scored lowest in work engagement, social and personal meaning of work. Older performance-avoidance as well as performance-approach goal workers typically yielded intermediate scores. The post-hoc LSD test also revealed intermediate effects for workers with “no dominant achievement goal. Thus, partial support was obtained for Hypothesis 2: only on work engagement, and social and personal meaning of work dimensions, older mastery-approach goal workers scored highest, and older mastery-avoidance goal workers scored lowest.

## Discussion

This study is the first to examine the prevalence and motivation-related effects of the four achievement goals distinguished in the  $2 \times 2$  model developed by Elliot (e.g., Elliot, 1999) among older workers. As predicted, our results showed that relative to younger workers, a significantly higher number of older workers endorsed dominant mastery-avoidance goals. Moreover, we found that the profiles of older workers with dominant mastery-approach goals and dominant mastery-avoidance goals were predominantly positive and negative, respectively (cf., Van Yperen, 2006). These findings underline the importance of incorporating mastery-avoidance goals in achievement goal research, and examining these types of goals in a work setting among aging workers (cf. Van Yperen et al., 2009). More specifically, the results show that mastery-avoidance goals can indeed be regarded as prototypical for elderly people who begin to focus on not performing worse than before, or not losing their skills and abilities (Elliot, 2005, p. 61; Elliot & McGregor's, 2001, p. 502). This finding implies that with increasing age, achievement motivation may shift from a more extrinsic, competitive pattern to a more intrinsic, mastery-related pattern, and is in line with assumptions of life span theories like the Selection Optimization with Compensation (SOC) theory (Baltes et al., 1999), and the Socio-emotional Selectivity theory (Carstensen, 1998) that suggest more “avoidance” orientations among older workers.

An unexpected observation was that a relatively high number of older workers reported a performance-approach goal as their dominant achievement goal. Possibly, performance-approach goals are realistic and attainable only for the great performers (Van Yperen & Renkema, 2008), a qualification that is highly suitable for workers who remain active after their post-statutory retirement age, relative to retired non-workers of similar age who face comparable or more losses in terms of skills and abilities (Suls & Wheeler, 2008).

When examining the relations between achievement goals and motivation-related outcomes, our results revealed that older workers with dominant mastery-approach goals scored highest, and mastery-avoidance goal workers scored lowest in work engagement, social and personal meaning of work. In contrast to the pattern observed in some previous studies (Elliot & McGregor, 2001; Van Yperen, 2006), but in line with others (e.g., Sideridis, 2008; Van Yperen et al., 2009), our findings suggest that, among older workers, the profile associated with dominant mastery-avoidance goals is quite negative (revealing a negative

**Table 3**

Adjusted means of the outcome variables as a function of valence and definition (standard deviation in between brackets).

Variables	Individuals' dominant achievement goals				No
	Mastery		Performance		
	Approach	Avoidance	Approach	Avoidance	
Work engagement	6.66 (.37) <sub>a</sub>	5.53 (1.28) <sub>b</sub>	6.03 (.92) <sub>c</sub>	6.08 (.95) <sub>c</sub>	6.13 (.94) <sub>c</sub>
Meaning of work: social	4.38 (1.87) <sub>a</sub>	3.48 (1.63) <sub>b</sub>	4.02 (1.63) <sub>ab</sub>	4.34 (1.68) <sub>a</sub>	4.07 (1.86) <sub>ab</sub>
Meaning of work: personal	6.29 (1.28) <sub>a</sub>	4.89 (1.50) <sub>b</sub>	5.51 (1.35) <sub>b</sub>	5.45 (1.72) <sub>b</sub>	5.69 (1.28) <sub>b</sub>
Meaning of work: financial	3.51 (1.78) <sub>a</sub>	2.73 (1.30) <sub>b</sub>	3.59 (1.60) <sub>a</sub>	2.64 (1.30) <sub>b</sub>	3.23 (1.66) <sub>ab</sub>
Meaning of work: generativity	5.15 (1.91) <sub>a</sub>	4.06 (1.88) <sub>b</sub>	4.93 (1.49) <sub>a</sub>	4.47 (1.57) <sub>ab</sub>	5.24 (1.61) <sub>a</sub>

Note. Within each row, means with different subscripts differed at  $p < .05$  minimally (based on LSD post-hoc tests).

adjustment or motivational self-regulatory process to meet developmental goals; Heckhausen, 1986). However, in line with the extant literature, also among older workers, mastery-approach goals seem to be the ideal form of competence-based regulation (Elliot, 2005).

In line with previous findings (e.g., Elliot & Moller, 2003; Van Yperen, 2006), for older performance-approach goal employees, mixed and intermediate scores were observed. Unexpectedly, however, we found intermediate (work engagement) and more positive scores (social meaning attached to work) for the older, performance-avoidance goal workers. This may be explained by the fact that the performance-avoidance goal can be regarded as a “metaregulatory” optimization strategy of older workers to cope with their age-related losses in a performance culture at work (Heckhausen, 2005). That is, among older workers, performance-avoidance goals may have positive effects, because pursuing these may imply engagement in inspiring, upward social comparisons with younger coworkers who face no or less age-related losses (Festinger, 1954). In other words, to create more social meaning in their work and retain their self-image, the present performance-avoidance goal workers may have focused on not performing worse than superior younger coworkers. Future research may therefore focus on the subjects for comparison that are selected by older workers for evaluating their performance goals.

### *Practical Implications*

A practical implication is that managers are urged to facilitate mastery-approach goals (Elliot, 2005). According to Ames (1992), a mastery orientation can be facilitated by emphasizing evaluation in terms of progress and improvement, and by accepting errors or mistakes as part of the learning process in work or in training programs. Furthermore, managers can also use more distant-future perspectives in the description of task-related goals (i.e., next year I will have completed this training and learned new skills) to encourage the adoption of approach goals (Hamamura & Heine, 2008; Pennington & Roese, 2003). Regardless of age, employees need to be enabled and to invest time and energy to learn new skills aimed at a broader functioning instead of focusing upon routine performance. Only in case of both an enriching job as well as a constructive mastery-approach facilitating managerial style, can employees flourish, and is their motivation taken care of (de Lange et al., *in press*).

### *Limitations*

Firstly, the dominant achievement goal measure developed by Van Yperen (2006) does not tap the intensity of goal striving, and does not include the possibility of examining goal combinations (Barron & Harackiewicz, 2001; Elliot, 2005). Secondly, the current study is based on a cross-sectional design. With longitudinal data, the stability of the current achievement measure can be studied, by examining differential continuity (i.e., rank-order consistency of concepts across time), mean-level change (i.e., average amount of construct change over time within sample), as well as ipsative continuity (i.e., stability and change in an individual's configuration of constructs over time (Fryer & Elliot, 2007; Hertzog & Nesselrode, 2003)).

Moreover, it is difficult to disentangle the age effects found in this study from so-called cohort effects. We cannot exclude that historical differences in experiences account for differences among the older workers versus our reference group of younger, more female, and higher educated cohorts of workers (Folkman, Lazarus, Pimley, & Novacek, 1987). Moreover, as the Dutch funded pension programs (in the late 1990s) and protected retirement programs may have contributed to the effects found, we cannot directly generalize the findings to other national contexts. For example, in the US, retirement-aged workers face increasing uncertainty about the future of their social security benefits. Thus, in this case the incentives for obtaining a mastery-approach orientation may be much stronger than in countries having liberal pension programs.

### *Research Agenda*

Despite its limitations, we believe that our findings have important implications for future research, and call for further examination of age-related processes. Reviews of the relationships between age and organizationally relevant outcomes (e.g., Kooij, De Lange, Jansen, & Dikkers, 2008; Sterns & Miklos, 1995) have suggested that chronological or calendar age serves as a proxy measure for many age-related processes (Kanfer & Ackerman, 2004). Elliot and Reis (2003) pointed to adult attachment style as a possible relevant age-related factor that needs further examination in relation to achievement goals of aging workers.

Moreover, we think it is important to better understand the dynamics between achievement goals, retirement as well as type of bridge employment (i.e., type of employment after job; Gobeski & Beehr, 2009) across time. There are reasons to expect both stability as well as change in achievement goals across time (Fryer & Elliot, 2007). For example, a reason for stability is that achievement goals represent aims that emerge from relatively stable personality characteristics, like achievement motives (Elliot & Church, 1997). On the other hand, goals represent a form of self-regulation that is influenced by the experience of goal pursuit, its progress, and the need for goal revision. According to Fryer and Elliot (2007), life events beyond the achievement context (such as one's retirement) can result in necessary adaptive shifts in goal intensification or pursued type of goal. In order to examine these possible age-related intra-individual changes in dominant achievement goals, it is important to longitudinally examine questions like: (i) does retirement (being a stressful life event) result in goal revision (e.g., from a mastery-approach goal to a mastery-avoidance goal)? (ii) Is the type of bridge employment (i.e., type of job after retirement) a predictor of goal revision? (iii) Do we find, in line with the continuity theory of retirement (Atchley, 1989), more stable results across time; such that the retirees hold the same achievement goals in their pre-retirement job as well as in their bridge job (Topa, Moriano, Depolo, Alcover, & Morales, 2009; Wang, Zhan, Liu, & Shultz, 2008)?

In conclusion, this study has shown that mastery-avoidance goals are most dominant among post-statutory retirement age workers, and can be detrimental for their work engagement, personal and social meaning of work. Organizations should therefore pay attention to strengthen older (as well as younger) workers' mastery-approach goals to retain and increase their work motivation.

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