

Expected loss of work functions upon retirement

Do they shape post-retirement work plans?

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Paid employment not only serves an important financial function for individuals, but it also serves significant non-financial functions, such as providing structure for one's day and interpersonal interactions with colleagues. However, when one transitions into retirement, older individuals need to adjust to the loss of these functions of work (Damman, Henkens, & Kalmijn, 2015). It has been suggested in the literature that post-retirement work may result in positive outcomes for older individuals, because it can provide retirees access to the functions of employment that were lost upon leaving their primary career job (Beehr & Bennett, 2015). It is still largely unknown, however, to what extent the anticipated loss of functions of work upon retirement motivates older employees to make plans for post-retirement work. Therefore, the central research question that guides this study is: To what extent do older workers expect to miss extrinsic and intrinsic functions of work upon retirement, and how does that relate to their plans to engage in paid and volunteer work once they leave their primary career job?

Retirement is an important life transition, which implies major life changes. Years prior to retirement, the question "What will I do?" becomes one of the central questions when it comes to retirement planning (Adams & Rau, 2011; Topa, Moriano, Depolo, Alcover, & Morales, 2009). Historically, volunteering has been one of the few "formal roles" accessible to retired individuals (Morrow-Howell, 2010, p.461). Increasingly, however, a considerable share of retirees engage in some form of formal paid work while receiving a pension income (e.g., Dingemans, Henkens, & Van Solinge, 2017), frequently in the form of more flexible or part-time work. Both paid and volunteer work are therefore activities that older workers may plan to do after retirement. Previous research on individual-level antecedents of post-retirement paid and volunteer work has mainly focused on structural factors, such as socio-

demographic characteristics and individual resources (see for reviews: Beehr & Bennett, 2015; Cahill, Giandrea, & Quinn, 2013; Morrow-Howell, 2010). Research focusing on functions of work as antecedents of post-retirement employment is still a relatively small area of inquiry.

Previous literature in this area of inquiry can broadly be categorized into two types of studies. On the one hand, there are studies conducted among retirees that examine how the post-retirement perceived meaning of work relates to engagement in post-retirement paid or volunteer work (Fasbender, Wang, Voltmer, & Deller, 2016; Zhan, Wang, & Shi, 2015), and to attitudes of bridge employees (Dendinger, Adams, & Jacobson, 2005). These studies highlight the importance of meanings of work for post-retirement employment, but do not provide information about whether individuals had already foreseen this and planned for it during their preretirement years. On the other hand, there are studies that have been conducted on the pre-retirement phase, which focus on the way in which outcome expectations regarding post-retirement employment (whether older workers expect working for pay in retirement will allow them to “have contact with other people,” “gain appreciation and recognition,” etc.), relate to planning for post-retirement paid work (Wöhrmann, Deller, & Wang, 2013, 2014). These outcome expectations appeared to be important antecedents of post-retirement paid work planning, but are specifically focused on entering post-retirement paid work and therefore cannot be studied as antecedents of post-retirement volunteering.

This study contributes to the literature on functions of work and planning for post-retirement employment in three ways. First, we will focus on outcome expectations regarding exiting – instead of entering – paid work (i.e., on the older worker’s *expected loss* of functions of work upon retirement). In line with the suggestion by Beehr and Bennett (2015), to incorporate the functions of employment (as described by Jahoda, 1981, 1982, 1997) into bridge employment research, we distinguish between the extrinsic/manifest functions of work

(i.e., finances), and the intrinsic/latent functions of work (i.e., time structure, social contact, collective sense of purpose, being active, and identity/status). Thus, we asked older workers about the extent to which they expect to miss these intrinsic and extrinsic functions once they stop working.

Second, instead of examining post-retirement plans for paid work and volunteering separately, we will follow the approach used by Griffin and Hesketh (2008) and analyze these two possible post-retirement states in combination. More specifically, we distinguish between those who plan to (a) not work at all, (b) engage only in volunteer work, (c) engage only in paid work, and (d) engage in both volunteer and paid work. This approach will enable us to test whether expectations of missing the functions of work upon retirement predict plans for engagement in different types of post-retirement work (i.e., volunteer work, paid work, or both) in similar or different ways.

Third, in reviews of post-retirement work, the importance of paying more attention to gender interactions has been emphasized (Alcover, 2017; Beehr & Bennett, 2015). Whereas earlier studies have focused on gender interactions with structural antecedents such as marital status (Dingemans et al., 2017; Pleau, 2010; Settels & McMullin, 2017), still little is known about whether the impact of psychological antecedents – such as the perceived loss of the functions of work – on post-retirement work plans differ between men and women. A notable exception, however, is the study by Zhan, Wang, and Shi (2015). Given the scarcity of research on this topic, this study takes an exploratory approach to study whether the effects of expectations of missing work functions on post-retirement employment plans differ as a function of gender.

The present study is based on a large-scale, interdisciplinary data collection effort of over 6,000 older workers in the Netherlands. These data offer the possibility to examine the psychological functions of work as antecedents of post-retirement work plans, above and

beyond a broad range of demographic and structural factors commonly studied in the economic and sociological literatures on post-retirement paid and unpaid work (see reviews: Beehr & Bennett, 2015; Morrow-Howell, 2010). More specifically, in addition to examining the functions of work, we take into account demographic characteristics (i.e., gender, partner status) and indicators of the older worker's opportunity structure (i.e., education, health, wealth, sector, managerial position, working hours, and pre-retirement volunteering).

Theoretical background

In developing the theoretical foundation for this investigation, we drew upon two separate lines of work. The first is image theory, which is a psychomotivational theory of human decision making advanced by Beach and his colleagues (Beach, 1998; Beach & Mitchell, 1987; Connolly & Beach, 1998). The second theoretical foundation stems from theories of work motivation, which specify different functions associated with employment. Each is described separately, below.

Image Theory

Image theory has been extensively used in the context of studying retirement decisions (Feldman & Beehr, 2011), because it provides a comprehensive framework for understanding the multifaceted set of influences that shape goal striving behaviours linked to life planning. Notable retirement decisions that have been examined from an image theory perspective include: the timing of one's departure from the workforce (Brougham & Walsh, 2007; Prothero & Beach, 1984), the nature and extent of one's financial preparation for retirement (França & Hershey, 2018; Hershey, Henkens, & Van Dalen, 2007), and the employment choices one makes in anticipation of and following the transition into retirement (Griffin & Hesketh, 2008).

Image theory posits the existence of two different types of decisions individuals face: adoption decisions and progress decisions (Beach, 1998). An adoption decision occurs in cases where one considers adopting a new course of action. For example, for a recent retiree, the decision to begin volunteering at a local thrift shop (something she has not done before) would represent an adoption decision. A progress decision, in contrast, is one in which a person considers whether his or her present course of action is profitable or appropriate, and should therefore be continued. So for example, a progress decision for a retiree working at a part-time job might involve deciding whether that employment still suits her—that is, whether the job allows her to progress toward meeting her retirement goals. In the present investigation, we examine individuals' (prospective) plans for work engagement once they leave the workforce. The retirement event—which is sometimes abrupt and other times gradual (Calvo, Haverstick, & Sass, 2009; De Vaus, Wells, Kendig, & Quine, 2007)—represents a new beginning for working adults, in which there is a fundamental shift in responsibilities, time commitments, and opportunities (Tavener, Vo, & Byles, 2015). In essence, one significant life context comes to a close and a new one begins. That being the case, from an image theory perspective, the focus of the life planning decision we will examine in this study can be considered a prospective *adoption decision*.

At its core, image theory specifies the existence of three different psychological schemata—referred to as “images”—that are involved in the decision-making process. These schemata are long-term memory representations that characterize an individual's long-range goals (i.e., the trajectory image), one's sense of morals, ethics, and beliefs (i.e., the value image), and a set of plans, tactics, and forecasts that will (ideally) allow one to achieve his or her long-range goals (i.e., the strategic image; sometimes referred to as an “action image”). In the present study of post-retirement work, we focus on measuring constructs related to the trajectory and value images, which we discuss further, below.

The trajectory image in this investigation is operationalized as an individual's stated intention to engage in either paid or volunteer work (or both), or no work at all during retirement. In that sense, the intention represents a proxy for what the individual hopes he or she will become or achieve. The value image, in contrast, is operationalized as an individual's self-report of the various functions of work he or she is likely to miss upon entering retirement, which will be discussed further below. We envisage that the unique functions of work that will be missed for any one individual (i.e., based on beliefs that are part of one's value image) will be predictive of one's specific post-retirement work plans (as specified by one's trajectory image). Furthermore, by pursuing an employment agenda during retirement that carries forward the values and beliefs established during one's working years, it is likely that an individual will be able to maintain a consistent identity and sense of self (Mitchell, Rediker, & Beach, 1986).

Extrinsic Versus Intrinsic Motives for Post-Retirement Work

The second theoretical touchstone for this investigation draws heavily upon the literature on human motivation. Indeed, motivation—in its myriad forms—has been shown to be an indispensable construct when it comes to understanding individual differences in goals linked to work and employment (Kanfer, Frese, & Johnson, 2017).

Why do people work? That is, what function or functions does work serve? According to Beehr and Bennett (2015), there are two common sets of reasons why people work, and those same reasons (i.e., motives) presumably apply to why people engage in post-retirement work after they retire. One reason individuals work stems from an inherently extrinsic motive; that is, people work in order to earn money. Beehr and Bennett (2015) referred to this as a “manifest” function of employment. Other “latent” functions of work tend to be related to one's intrinsic enjoyment, inasmuch as latent work functions provide certain psychological

or sociological benefits to the individual. Jahoda (1981, 1982, 1997) specified five different latent (intrinsic) work functions, which include: (i) a daily routine that structures one's sense of time, (ii) social contact and a desire to enlarge one's social horizon, (iii) a collective sense of purpose that leads one to feel useful, (iv) the need to be active, and (v) a sense of work-related identity and/or status. In the present investigation, the importance of these six work functions (one extrinsic/manifest, five intrinsic/latent) was assessed by asking participants to what extent each would be missed following their departure from the workforce.

Hypotheses

In light of the critical role an adequate income plays in ensuring financial security and a high quality of life for older retirees, Hypothesis One was formulated:

H1: Respondents who perceive a greater expected loss of the extrinsic function of work (i.e., money/income) will be more likely to report having plans for post-retirement paid work, compared to having either no post-retirement work plans, or plans for volunteering.

Furthermore, based on the notion that volunteering is a socially accepted productive role for retirees that fulfils many of the intrinsic functions of work (e.g., social engagement; feelings of productivity; staying active), Hypothesis Two was formulated:

H2a: Respondents with a greater expected loss of the intrinsic functions of work will be more inclined to have plans for post-retirement work in general (either paid or unpaid), compared to having no post-retirement work plans.

Moreover, because engagement in both paid and unpaid work can be seen to fulfil the intrinsic functions associated with employment, a corollary to the second hypothesis (H2b) was formulated:

H2b: *The impact of the intrinsic functions of work on post-retirement work plans will not differ between plans for volunteering and plans for engaging in paid employment.*

Research has shown that women's careers follow different paths than men's due to the differential impact of family and domestic responsibilities (Loretto & Vickerstaff, 2013), and that women's career decisions are much more often made in relation to the needs of others (Hakim, 2011). Scholars (Price, 2003; Van Solinge, 2013; Zhan et al., 2015) have argued that there might be systematic gender differences in the way work histories shape preferences for and access to post-retirement activities. For example, Zhan et al. (2015) have shown that status striving predicts bridge employment among Chinese male retirees, but not among their female counterparts. Given the scarcity of research on gender differences in psychological antecedents of post-retirement activities, we take an exploratory approach with regard to the moderating role of gender. Therefore, we formulated the following research question:

Exploratory research question 1: *Is the relationship between the expected loss of work functions upon retirement and post-retirement work plans different for men than for women?*

Method

Participants and data

This article is based on the first wave of the Netherlands Interdisciplinary Demographic Institute (NIDI) Pension Panel. This is a prospective cohort study among older wage earners (60-65 years at baseline), who were enrolled in three of the larger pension funds in the Netherlands (ABP, PfZW, and BpBouw). The funds represent the following sectors: civil servants, education, health and home care, welfare, and construction. Together, these

three pension funds represent approximately 48 per cent of wage employed workers in the Netherlands (De Nederlandsche Bank, 2015). Data for the first wave of the pension panel were collected during the period from May through November, 2015. The study used a stratified data collection approach. In the first step, a sample was drawn from various organizations covered by the three pension funds. In a second step, within the selected organizations, a random sample was drawn from the population of older workers aged 60 years and over (i.e., birth cohorts 1950-1955) who were working at least 12 hours per week.

Selected older workers received a mailing from their pension fund at their home address. The mailing included a questionnaire, which was accompanied by a letter from a representative of the pension fund, as well as a cover letter from the researchers. Respondents were offered the choice to use either the written questionnaire contained in the mailing, or to complete an online version of the questionnaire. Of the 15,496 questionnaires that were mailed out, 6,800 questionnaires were returned (net response rate of 44%). Item non-response on the independent variables was low (on average, less than 3%). Under these circumstances, less rigorous missing data procedures than multiple imputation (MI) are generally acceptable (Little, Jorgensen, Lang, & Moore, 2014). We therefore dealt with missing data on the explanatory variables by single stochastic regression imputation (Enders, 2010). Cases with missing data on the dependent or the main independent variables were excluded from the analysis. As a result, the sample for the analyses consisted of 5,972 workers.

Measures

Post-retirement work plans. Our dependent variable was designed to tap older worker's plans for post-retirement paid and volunteer work (see also: Griffin & Hesketh, 2008). Participants' responses to the questionnaire were used to create a categorical variable containing four possible outcomes: 'no plans for post-retirement (paid or volunteer) work,'

‘plans for post-retirement volunteer work,’ ‘plans for post-retirement paid work,’ and ‘plans for both paid and volunteer work.’

Functions of work. To evaluate the perceived importance of various functions of work, respondents were asked to make independent ratings along six different dimensions. Specifically, each individual was asked “*To what extent do you expect to miss each of the following aspects of your job when you retire?*”: (1) money/income, (2) social contacts via work, (3) a clear daily schedule, (4) feeling productive, (5) social prestige and (6) meaning something to others/society. Rating were made using a 5-point Likert-type scale to indicate the degree to which they would miss each of the six functions (1 = *very much*; 5 = *not at all*, reverse coded 0-4). The extrinsic function of work was measured with one item (missing money/income), whereas the intrinsic function of work was measured with the remaining five items. Cronbach’s alpha for the 5-item intrinsic scale was 0.87.

Demographic and structural variables. Gender was represented by a dummy variable (female = 1). Partner status was also dummy coded, which indicated whether the respondent had a partner or not (partner = 1). Educational attainment was rated from 1 (primary school) to 7 (university degree). This variable has been transformed into an ordinal variable with the following categories: lower education (levels 1 and 2), moderate (levels 3, 4 and 5) and higher education (levels 6 and 7). Wealth was a variable that indicates each respondent’s total accumulated wealth (housing, assets and bank balances, and cash) in seven categorical levels, ranging from 1 (less than 5K euros) to 7 (more than 500K euros). Managerial position was a dummy variable coded with a value of 1 if the worker held a supervisory position. Working hours was based on the typical number of hours worked per week in the respondent’s main job: working full-time (more than 36 hours a week), large part-time job (20-35 hours per week) and small part-time job (12-19 hours per week). Note that the Netherlands has traditionally a large share of workers (particularly women) who are in part-time employment

for most of their career. Volunteering was a dummy variable coded as 1 if the worker had been involved in pre-retirement volunteer work. Sector indicates the type of work sector in which the respondent was employed. Five sectors were categorized on the basis of information reported from the pension funds: civil servant, education, construction, health and home care, and social work.

Analytical approach

In terms of an analysis plan, first descriptive statistics will be provided, which is followed by a multivariate analysis. Multinomial logistic regression analysis (MNL) will be used to examine the antecedents of post-retirement work plans. This analytic method (MNL) was selected because traditional methods used for prediction, such as multiple regression, are inappropriate for use with categorical dependent variables (Zickar & Gibby, 2003). The dependent variable in this investigation —anticipated post-retirement employment status— will have four categories: ‘no plans for work,’ ‘plans for volunteer work,’ ‘plans for paid work,’ and ‘plans for volunteer and paid work.’ Contrasts of predictive effects on the dependent variable will be created across every two categories in the MNL analysis. Thus, antecedents will be tested for: (i) ‘plans for volunteer work’ against ‘no plans,’ (ii) ‘plans for paid work’ against ‘no plans,’ (iii) ‘plans for volunteer and paid work’ against ‘no plans,’ and (iv) ‘plans for volunteer work’ against ‘plans for paid work.’

In the first step of the MNL regression, demographic and structural variables will be entered into the equation. On the basis of findings from Griffin and Hesketh (2008), such indicators are expected to be related to both post-retirement work and volunteer work. In a second step, the functions of work variables (both extrinsic and intrinsic) will be added to the model. In the third and final step, the first two blocks of variables will again be entered, followed by interaction terms between the two functions of work dimensions (i.e., extrinsic

and intrinsic work functions) and gender. For all blocks entered into the MNL regression models, chi-square difference tests will be used to assess improvements in model fit across hierarchical levels.

Results

Descriptive analyses

Seventy-five per cent of study respondents reported having some sort of plans for post-retirement volunteer work (either vague plans or clear plans), whereas 29 per cent had either vague or clear plans for post-retirement paid work. By combining these two items it was possible to ascertain that 18 per cent of respondents had no plans for post-retirement paid or volunteer work, 53 per cent had plans for volunteer work, 7 per cent had plans for post-retirement paid work, and 22 per cent had plans for post-retirement paid and volunteer work.

Figure 1 presents the extent to which participants expected to miss the various functions of work after retiring. Each bar represents the percentage of individuals who agree or strongly agree that they will miss each particular work function. The function that participants expect to miss the most is “social contacts”, followed by “money”. Overall, female participants reported higher “missing” scores for each of the work functions relative to male participants.

Table 1 shows Pearson correlations for all explanatory variables, whereas Table 2 presents the means and standard deviations for the explanatory variables for each of the four categories of the dependent variable. The correlations between the predictor variables (see Table 1) were only moderate, thus discounting multicollinearity.

<Insert Tables 1 & 2 and Figure 1 about here>

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Multivariate analyses

Results of the initial multinomial logistic regressions are reported in Table 3. The -2log likelihood and chi-square values indicate that the hypothesized model – including the function of work variables – resulted in a better fit than the basic model, which included only demographic and structural variables ($\chi^2_{\text{diff}} = 385.21$, $\Delta\text{df} = 6$, $p < 0.05$).

<Insert Table 3 about here>

Demographic and structural variables

As seen in Table 3, gender significantly predicted plans for post-retirement work: women were more inclined to have plans for volunteer work, whereas men were more likely to plan for post-retirement paid work. Partner status was unrelated to any form of post-retirement work.

In line with findings from previous research, we found that education and health were positively related to all combinations of post-retirement plans for paid work, whereas wealth was negatively related to post-retirement plans for paid work. In addition, it was shown that having a managerial position increased the odds of plans for all forms of post-retirement paid work, whereas pre-retirement engagement in volunteering increased the odds of plans for post-retirement volunteer work.

Functions of work

The extrinsic function of work was a significant predictor of intentions to work for pay in retirement, even after controlling for the demographic and structural variables. That is, a one unit increase in the extrinsic function of work (missing money) increased the odds of intending to do paid work rather than no work by 14 per cent (OR = 1.14, CI 1.02-1.28, $p < 0.05$), and intending to do paid work rather than volunteer work by 31 per cent (OR = 1.31, CI 1.18-1.45, $p < 0.001$). In contrast, a one unit increase in the extrinsic function of work decreased the odds of intending to do volunteer work rather than no work by 13 per cent.

Stronger expectations to miss the extrinsic function of work did not distinguish between plans for volunteer and paid work compared to no plans for post-retirement work. All in all, these results support Hypothesis 1 that the extrinsic function of work is positively related to plans for post-retirement paid work and negatively related to plans for volunteer work.

This same analysis revealed that the intrinsic function of work was a significant predictor of intentions to work for all types of post-retirement employment. Specifically, a one unit increase in the intrinsic function of work increased the odds of intending to do volunteer work rather than no work by 39 per cent (OR = 1.39, CI 1.29-1.53, $p < 0.001$). Moreover, a one unit increase in the intrinsic function of work more than doubled the odds of intending to do paid work rather than no work (OR = 2.09, CI 1.81-2.41, $p < 0.001$), and volunteer and paid work (OR = 2.33, CI 2.10-2.60, $p < 0.001$) rather than no work. All in all, these results support Hypothesis 2a that the intrinsic function of work is positively related to plans for any type of post-retirement paid work. Hypothesis 2b, however, which assumed no significant differences in the size of the effects across types of post-retirement work, was not supported. The results suggest a stronger association between the intrinsic function of work and plans for post-retirement paid work. This can be seen most clearly in Table 3 column 4, where plans for post-retirement paid work are tested against plans for post-retirement volunteer work. This finding suggests that a one unit increase in the intrinsic function of work increases the odds of intending to engage in paid rather than volunteer work by 50 per cent (OR = 1.50, CI 1.32-1.70, $p < 0.001$).

Gender differences

The descriptive results shown in Tables 1 and 2, as well as the results of the MNL shown in Table 3, suggest that men and women differ appreciably in their post-retirement plans. Women are more inclined to have plans to engage in volunteer work, whereas men were more likely to plan for post-retirement paid work. Interestingly, as is clear from the

findings shown in Table 1 and Figure 1, women were also more likely than men to expect to miss the extrinsic *as well as* the intrinsic functions of work. To follow up on that finding, an exploratory analysis was conducted to further investigate gender differences in plans for post-retirement work, and more particularly, the moderating effects of gender on the relationship between the functions of work and plans for post-retirement work engagement (involving both volunteer and paid work).

Results of Step 3 – reported in Table 4 - showed that gender moderated the predictive effect of the extrinsic function of work in explaining “planning for post-retirement paid work” against “no plans for work” (OR = 0.79, CI 0.64-0.99, $p < 0.05$). The value of the interaction term is less than 1, indicating that the positive effect of the extrinsic function of work (missing money) was weaker for female versus male older adults. Further, gender moderated the predictive effect of the intrinsic function of work in explaining “planning for post-retirement volunteer and paid work” against “no plans for work” (OR = 0.78, CI 0.62-0.97, $p < 0.05$). Again, the value of the interaction term is less than 1, indicating that the positive effect of the intrinsic function of work was weaker for female versus male older adults. All in all, these findings suggest that the functions of work have a different impact on men’s plans than they do for women.

<Insert Table 4 about here>

Discussion

Most of the existing research that explains post-retirement work decisions tend to focus on the older adult’s opportunity structure as predictors; that is, on resources such as health, education and finances (e.g., Cahill, Giandrea, & Quinn, 2015; Pleau & Shauman, 2013). It is unclear, however, whether these factors reflect differential preferences for – or rather differential access to post-retirement work options (Van Solinge, 2014). In order to

establish a better understanding of the motivational factors that influence older worker's engagement in post-retirement work, we incorporated functions of employment in our study. More specifically, we examined functions of work to understand worker's plans in preretirement years to engage in paid and volunteer work once they enter retirement. It was hypothesized, based on image theory and theories of work motivation, that the unique functions of work that will be missed for any one individual (i.e., based on beliefs that are part of one's value image) will be predictive of one's specific post-retirement work plans to volunteer, engage in paid work, or do both (as specified by one's trajectory image). Analyses based on data from a large scale survey among 5,972 older workers in the Netherlands generally support the idea that the anticipated loss of extrinsic and intrinsic functions of work upon retirement motivates older employees to make plans for post-retirement work engagement. The effects of the perceived loss of functions of work were found to predict individuals' post-retirement work plans, above and beyond the frequently studied effects of demographic factors and indicators of the older adult's opportunity structure.

Our study reveals that a considerable proportion (82%) of late career older workers are interested in post-retirement work (either paid or unpaid, or both). This strong prevalence of employment plans for the future suggest that work-related schemata (in the form of one or more trajectory images) are well developed by the time individuals draw near to retirement age. We found that having plans for post-retirement work in general (both paid and unpaid) is more prevalent whenever older workers expect a greater loss of the intrinsic function of work, and that planning for post-retirement paid work, in particular, is more prevalent whenever older workers expect to encounter a greater loss from the extrinsic function of work. These findings serve to support a core premise of image theory, which is that one's trajectory image is formulated in the context of one's values, morals, and beliefs about oneself—or in other words, in the context of one's value image (Beach, 1998; Beach &

Mitchell, 1987). In the present investigation, this clear relationship between the value and trajectory images is exemplified by multiple statistically significant relationships between the perceived importance of the extrinsic and intrinsic functions of work, and plans for either paid or unpaid employment (or both).

We further hypothesized that the impact of the intrinsic function of work on post-retirement work plans would not differ between plans for engagement in volunteer work and plans for engagement in paid work. Both paid and volunteer work may compensate for the expected non-financial losses of work, given that both activities may help maintain internal and external continuity, and thus, serve to facilitate adjustment (Von Bonsdorff & Ilmarinen, 2013). This hypothesis was, however, not confirmed. We found a stronger effect of the intrinsic functions of work on plans for engagement in paid work, compared to plans for engagement in volunteer work. Generally, the findings highlight the importance of studying post-retirement paid and volunteer work simultaneously, as a way to best achieve a comprehensive understanding of post-retirement adaptive strategies among older individuals.

We also examined whether expectations of missing work functions have a differential gender effect on post-retirement employment plans. The findings suggest that this is indeed the case. First, the effect of the expected loss of the extrinsic function of work on paid work was moderated by gender, such that male older workers with higher levels on the extrinsic function of work (vs. lower levels) were more likely to plan for post-retirement paid work, but that was not the case for their female counterparts. Second, the expected loss of the intrinsic work role was a stronger predictor for planned engagement in post-retirement paid *and* unpaid work among men. Broadly, these findings seem to support and expand the conclusions that were drawn by Zhan and colleagues (2015) based on their study on status striving and bridge employment, which suggested “that when the motivational orientation matches one’s gender role expectation, the effect of motivational orientation on bridge

employment is likely amplified” (Zhan et al., 2015, p. 1328). A valuable direction for future research would be to further develop theories that account for gender differences in the impact of psychological antecedents on post-retirement work plans.

This study is different from the majority of previous studies on post-retirement work that have been conducted in a European context in that it was based on a sample of late career older adults in the Netherlands born between 1950 and 1955. This cohort was the first that experienced the consequences of changes in the Dutch pension system (i.e., the closing of early exit routes and a substantial increase of the state pension age). Previous research on the same sample (Van Solinge & Henkens, 2017) has shown that a significant proportion of older workers are very angry (or even extremely angry) about the increase in the retirement age, and worried about their ability to keep up with their job until retirement age, either physically or mentally. The substantially higher retirement age currently in place may affect late career worker’s plans, as well as their motivation to be involved in post-retirement paid and unpaid employment. In advance, we had expected reduced interest in post-retirement paid work. The proportion who are considering post-retirement paid work (29%) is, however, more or less in line with actual post-retirement employment rates in the Netherlands (Dingemans, Henkens, & Van Solinge, 2016). When follow-up data from this project become available, it should be possible to examine the extent to which individuals’ plans actually resulted in post-retirement work engagement.

When interpreting the findings from this study, some limitations should be kept in mind. One possible limitation relates to the generalizability of the results. Although the study is based on a random sample of wage employed older workers in more than 1,500 organizations covered by three of the biggest pension funds in the Netherlands, the sample is not representative of all older workers in the Netherlands. Our sample includes a larger proportion of higher educated older workers than the general population in the corresponding

age bracket. As a result, the prevalence of post-retirement work plans may be somewhat overestimated. A second limitation of the present study is that our predictor variables (functions of work) and outcome variable (post-retirement work plans) were measured at the same time, and consequently, it was not possible to draw conclusions regarding causality. Nevertheless, we think that this use of cross-sectional data may not strongly threaten the main gist of our conclusions.

Despite these limitations, this study clearly shows that the expected loss of functions of work upon retirement relates to the plans older employees make regarding engagement in volunteer work, paid work, or both, during their post-retirement lives. Beyond having implications for understanding retirement-linked employment, the findings also have implications for social policy. With the pending retirement of members of the large “Baby Boom” generation, increasing attention is being paid by policymakers to strategies that could encourage older adults to stay active and healthy well into late life. A better understanding of the motivational antecedents of post-retirement work plans may therefore inform those policies, as well as strategies that promote older adult’s social integration through volunteering and/or post-retirement paid employment. In this regard, however, some caution is warranted. Dingemans et al. (2016) have shown that actual engagement in bridge employment is strongly influenced by the opportunities and restrictions in the social context in which the retirement process unfolds. Moen and Flood (2013) found similar results for volunteering. Therefore, policy makers and those who work with older workers should realize that even though older workers may be willing to take up post-retirement paid or unpaid work, they may not always be capable of doing so.

References

- Adams, G. A., & Rau, B. L. (2011). Putting off tomorrow to do what you want today. Planning for retirement. *American Psychologist*, *66*(3), 180-192. doi: 10.1037/a0022131
- Alcover, C.-M. (2017). Bridge employment: Transitions from career employment to retirement and beyond. In E. Parry & J. McCarthy (Eds.), *The Palgrave Handbook of Age Diversity and Work*. London: Palgrave Macmillan UK.
- Beach, L. R. (1998). *Image theory: Theoretical and empirical foundations*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Beach, L. R., & Mitchell, T. R. (1987). Image Theory: Principles, goals, and plans in decision making. *Acta Psychologica*, *66*(3), 201-220.
- Beehr, T. A., & Bennett, M. M. (2015). Working after retirement: Features of bridge employment and research directions. *Work, Aging and Retirement*, *1*(1), 112–128. doi: 10.1093/workar/wau007
- Brougham, R. R., & Walsh, D. A. (2007). Image theory, goal incompatibility, and retirement intent. *The International Journal of Aging and Human Development*, *65*(3), 203-229.
- Cahill, K. E., Giandrea, M. D., & Quinn, J. F. (2013). Bridge employment. In M. Wang (Ed.), *The Oxford handbook of retirement* (pp. 293-310). New York: Oxford University Press.
- Cahill, K. E., Giandrea, M. D., & Quinn, J. F. (2015). Retirement patterns and the macroeconomy, 1992–2010: The prevalence and determinants of bridge jobs, phased retirement, and reentry among three recent cohorts of older Americans. *The Gerontologist*, *55*(3), 384-403.
- Calvo, E., Haverstick, K., & Sass, S. A. (2009). Gradual retirement, sense of control, and retirees' happiness. *Research on Aging*, *31*(1), 112-135. doi: 10.1177/0164027508324704
- Connolly, T., & Beach, L. R. (1998). The theory of image theory: An examination of the central conceptual structure. In L. Beach (Ed.), *Image theory: Theoretical and empirical foundations* (pp. 249-259). Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Damman, M., Henkens, K., & Kalmijn, M. (2015). Missing work after retirement: The role of life histories in the retirement adjustment process. *The Gerontologist*, *55*(5), 802-813. doi: 10.1093/geront/gnt169
- De Nederlandsche Bank. (2015). Jaargegevens Individuele Pensioenfondsen 2015. Retrieved 22-2-2017, from De Nederlandsche Bank <https://www.dnb.nl/statistiek/statistieken-dnb/financiele-instellingen/pensioenfondsen/gegevens-individuele-pensioenfondsen/index.jsp>
- De Vaus, D., Wells, Y., Kendig, H., & Quine, S. (2007). Does gradual retirement have better outcomes than abrupt retirement? Results from an Australian panel study. *Ageing & Society*, *27*(5), 667-682. doi: 10.1017/S0144686X07006228
- Dendinger, V. M., Adams, G. A., & Jacobson, J. D. (2005). Reasons for working and their relationship to retirement attitudes, job satisfaction and occupational self-efficacy of bridge employees. *International Journal of Aging and Human Development*, *31*(1), 21-35. doi: 10.2190/K8KU-46LH-DTW5-44TU
- Dingemans, E., Henkens, K., & Van Solinge, H. (2016). Access to bridge employment: Who finds and who does not find work after retirement? *The Gerontologist*, *56*(4), 630-640. doi: 10.1093/geront/gnu182
- Dingemans, E., Henkens, K., & Van Solinge, H. (2017). Working retirees in Europe: individual and societal determinants. *Work, employment and society*, *31*(6), 972-991. doi: 10.1177/0950017016664677
- Enders, C. K. (2010). *Applied missing data analysis*. New York: Guilford Press.
- Fasbender, U., Wang, M., Voltmer, J.-B., & Deller, J. (2016). The meaning of work for post-retirement employment decisions. *Work, Aging and Retirement*, *2*(1), 12–23. doi: 10.1093/workar/wav015
- Feldman, D. C., & Beehr, T. A. (2011). A three-phase model of retirement. *American Psychologist*, *66*(3), 193-203. doi: 10.1037/a0022153
- França, L. H., & Hershey, D. A. (2018). Financial Preparation for Retirement in Brazil: a Cross-Cultural Test of the Interdisciplinary Financial Planning Model. *Journal of cross-cultural gerontology*, *33*(1), 43-64.

- Griffin, B., & Hesketh, B. (2008). Post retirement work: The individual determinants of paid and volunteer work. *Journal of Occupational and Organizational Psychology*, 81(1), 101-121.
- Hakim, C. (2011). Women's lifestyle preferences in the 21st century: implications for family policy *The future of motherhood in Western societies* (pp. 177-195): Springer.
- Hershey, D. A., Henkens, K., & Van Dalen, H. P. (2007). Mapping the minds of retirement planners: A cross-cultural perspective. *Journal of Cross-Cultural Psychology*, 38(3), 361-382.
- Jahoda, M. (1981). Work, employment, and unemployment: Values, theories, and approaches in social research. *American Psychologist*, 36(2), 184-189.
- Jahoda, M. (1982). *Employment and Unemployment*. Cambridge: Cambridge University Press.
- Jahoda, M. (1997). Manifest and latent functions. In N. Nicholson (Ed.), *The Blackwell encyclopedic dictionary of organizational psychology* (pp. 317-318). Cambridge: Cambridge University Press.
- Kanfer, R., Frese, M., & Johnson, R. E. (2017). Motivation related to work: A century of progress. *Journal of Applied Psychology*, 102(3), 338-355.
- Little, T. D., Jorgensen, T. D., Lang, K. M., & Moore, E. W. G. (2014). On the Joys of Missing Data. *Journal of Pediatric Psychology*, 39(2), 151-162. doi: 10.1093/jpepsy/jst048
- Loretto, W., & Vickerstaff, S. (2013). The domestic and gendered context for retirement. *Human Relations*, 66(1), 65-86. doi: Doi 10.1177/0018726712455832
- Mitchell, T. R., Rediker, K. J., & Beach, L. R. (1986). Image theory and organizational decision making. In H. P. Sims & D. A. Gioia (Eds.), *The thinking organization* (pp. 293-316). San Francisco: Jossey-Bass.
- Morrow-Howell, N. (2010). Volunteering in later life: Research frontiers. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 65(4), 461-469. doi: 10.1093/geronb/gbq024
- Pleau, R. L. (2010). Gender differences in post-retirement employment. *Research on Aging*, 32(3), 267-303. doi: 10.1177/0164027509357706
- Pleau, R. L., & Shauman, K. (2013). Trends and correlates of post-retirement employment, 1977-2009. *Human Relations*, 66(1), 113-141. doi: 10.1177/0018726712447003
- Price, C. A. (2003). Professional women's retirement adjustment: The experience of reestablishing order. *Journal of Aging Studies*, 17(3), 341-355. doi: 10.1016/S0890-4065(03)00026-4
- Prothero, J., & Beach, L. R. (1984). Retirement decisions: Expectations, intention and action. *Journal of Applied Social Psychology*, 14(2), 162-174.
- Settels, J., & McMullin, J. (2017). Gender and relationship status interaction and likelihood of return to work post-retirement. *Canadian Journal on Aging*, 36(3), 366-385. doi: 10.1017/S0714980817000204
- Tavener, M., Vo, K., & Byles, J. E. (2015). Work and other activities in retirement. *Journal of the American Geriatrics Society*, 63(7), 1476-1477.
- Topa, G., Moriano, J. A., Depolo, M., Alcover, C. M., & Morales, J. F. (2009). Antecedents and consequences of retirement planning and decision-making: A meta-analysis and model. *Journal of Vocational Behavior*, 75(1), 38-55. doi: 10.1016/j.jvb.2009.03.002
- Van Solinge, H. (2013). Adjustment to retirement. In M. Wang (Ed.), *The Oxford handbook of retirement* (pp. 311-324). New York: Oxford University Press.
- Van Solinge, H. (2014). Who opts for self-employment after retirement? A longitudinal study in the Netherlands. *European Journal of Ageing*, 11(3), 261-272
- Van Solinge, H., & Henkens, K. (2017). Older workers' emotional reactions to rising retirement age: The case of the Netherlands. *Work, Aging and Retirement*, 3(3), 273-283. doi: 10.1093/workar/wax010
- Von Bonsdorff, M. E., & Ilmarinen, J. (2013). Continuity theory and retirement. In M. Wang (Ed.), *The Oxford handbook of retirement* (pp. 73-87). Oxford: Oxford University Press.
- Wöhrmann, A. M., Deller, J., & Wang, M. (2013). Outcome expectations and work design characteristics in post-retirement work planning. *Journal of Vocational Behavior*, 83(3), 219-228. doi: 10.1016/j.jvb.2013.05.003
- Wöhrmann, A. M., Deller, J., & Wang, M. (2014). A mixed-method approach to post-retirement career planning. *Journal of Vocational Behavior*, 84(3), 307-317. doi: 10.1016/j.jvb.2014.02.003

- Zhan, Y., Wang, M., & Shi, J. (2015). Retirees' motivational orientations and bridge employment: Testing the moderating role of gender. *Journal of Applied Psychology, 100*(5), 1319–1331. doi: 10.1037/a0038731
- Zickar, M. J., & Gibby, R. E. (2003). Data analytic techniques for retirement research. In G. A. Adams & T. A. Beehr (Eds.), *Retirement: Reasons, Processes and Results* (pp. 264-290). New York: Springer.

Table 1

Pearson correlations for all explanatory variables (N=5,972)

	1	2	3	4	5	6	7	8	9
<i>Demographic Variables</i>									
1 Gender (female=1)	--								
2 Partner status (partnered=1)	-.25*	--							
<i>Opportunity Structure</i>									
3 Education	.14*	.00	--						
4 Health	.02	.05*	.08*	--					
5 Wealth	-.09*	.23*	.19*	.15*	--				
6 Manager position (yes = 1)	-.24*	.11*	-.12*	.01	-.06*	--			
7 Working hours	-.52*	.06*	-.07*	.04*	.00	.24*	--		
8 Pre-ret. volunteer (yes = 1)	-.05*	.02	.14*	.05*	.09*	.07*	-.02	--	
<i>Functions of work</i>									
9 Extrinsic	.13*	-.07*	-.19*	-.19*	-.24*	-.09*	-.03*	-.09*	--
10 Intrinsic	.19*	-.07*	.00*	.01	-.01*	-.03*	-.10*	.02	.19*

* $p < 0.05$

Table 2

Means and standard deviations (in parentheses) for the explanatory variables (N=5,972)

	No plans	Plans for volunteer work	Plans for paid work	Plans for volunteer & paid work	Total
<i>Demographic variables</i>					
Gender (female =1)	0.41 (0.49)	0.50 (0.50)	0.32 (0.47)	0.39 (0.49)	0.44 (0.50)
Partner Status (partnered = 1)	0.85 (0.36)	0.81 (0.39)	0.83 (0.38)	0.81 (0.39)	0.82 (0.39)
<i>Opportunity Structure</i>					
Educational level (1-3)	2.12 (0.80)	2.29 (0.75)	2.24 (0.80)	2.39 (0.75)	2.28 (0.77)
Health (1-5)	3.16 (0.89)	3.19 (0.86)	3.32 (0.85)	3.33 (0.84)	3.21 (0.86)
Wealth (1-7)	4.07 (1.72)	4.18 (1.63)	3.92 (1.92)	4.04 (1.74)	4.11 (1.70)
Manager position (yes = 1)	0.21 (0.41)	0.22 (0.42)	0.36 (0.48)	0.32 (0.47)	0.25 (0.43)
Working hours (1-3)	2.42 (0.64)	2.34 (0.64)	2.52 (0.63)	2.46 (0.64)	2.39 (0.64)
Pre-ret. volunteer (yes = 1)	0.11 (0.32)	0.41 (0.49)	0.17 (0.37)	0.43 (0.49)	0.34 (0.48)
<i>Functions of work</i>					
Extrinsic function (0-4)	2.04 (1.17)	1.87 (1.09)	2.18 (1.17)	2.08 (1.10)	1.97 (1.12)
Intrinsic function (0-4)	1.19 (0.84)	1.41 (0.82)	1.66 (0.89)	1.74 (0.84)	1.46 (0.85)
N	1,061	3,158	411	1,342	5,972

Note: Sample participants were aged 60-65 in 2015

Table 3

Results of the multinomial logistic regression analysis explaining post-retirement plans for volunteering and/or bridge employment. Relative risk ratios and 95 per cent confidence intervals are shown (N=5,972 older workers)

	No plans (0) vs. plans for volunteer work (1)	No plans (0) vs. plans for paid work (1)	No plans (0) vs. plans for volunteer & paid work(1)	Plans for volunteer work (0) vs. plans for paid work (1)		
<i>Demographic Variables</i>						
Gender	1.26 (1.03-1.54)*	0.48 (0.34-0.66)***	0.67 (0.53-0.85)***	0.38 (0.28-0.51)***		
Partner Status	0.84 (0.68-1.02)	0.80 (0.57-1.15)	0.75 (0.59-0.95)*	0.96 (0.71-1.28)		
<i>Opportunity Structure</i>						
Educational level						
Low (baseline)	--	--	--	--		
Medium	1.22 (0.98-1.50)	1.29 (0.91-1.81)	1.74 (1.34-2.25)***	1.05 (0.77-1.45)		
High	1.28 (1.02-1.62)*	1.96 (1.35-2.83)***	2.65 (2.00-3.51)***	1.53 (1.09-2.14)*		
Health	0.97 (0.89-1.06)	1.26 (1.10-1.45)***	1.14 (1.03-1.26)*	1.31 (1.15-1.47)***		
Wealth	0.99 (0.95-1.04)	0.90 (0.84-0.97)**	0.92 (0.87-0.97)**	0.91 (0.85-0.97)**		
Work Sector						
Government (baseline)	--	--	--	--		
Education	1.16 (0.92-1.47)	0.78 (0.54-1.14)	1.00 (0.76-1.32)	0.67 (0.48-0.95)*		
Construction	1.05 (0.83-1.32)	0.93 (0.65-1.33)	1.18 (0.90-1.55)	0.89 (0.64-1.22)		
Care	1.04 (0.80-1.34)	1.14 (0.75-1.73)	0.96 (0.70-1.31)	1.10 (0.75-1.60)		
Social Work	1.23 (0.96-1.57)	1.09 (0.74-1.61)	1.46 (1.10-1.94)**	0.89 (0.62-1.26)		
Managerial position	1.04 (0.86-1.25)	1.91 (1.45-2.50)***	1.45 (1.18-1.79)***	1.83 (1.44-2.33)***		
Working hours						
12-19 (baseline)	--	--	--	--		
20-35	1.16 (0.88-1.53)	0.85 (0.53-1.37)	0.97 (0.70-1.35)	0.73 (0.48-1.13)		
36+	1.08 (0.80-1.47)	0.91 (0.55-1.52)	1.10 (0.77-1.58)	0.85 (0.53-1.34)		
Involved in Volunteering	5.22 (4.25-6.40)*	1.36 (0.98-1.88)	5.13 (4.10-6.42)***	0.26 (0.20-0.34)***		
<i>Functions of Work</i>						
Extrinsic	0.87 (0.81-0.93)***	1.14 (1.02-1.28)*	1.04 (0.96-1.13)	1.31 (1.18-1.45)***		
Intrinsic	1.39 (1.29-1.53)***	2.09 (1.81-2.41)***	2.33 (2.10-2.60)***	1.50 (1.32-1.70)***		
Constant	1.41 (0.83-2.37)	0.07 (0.03-0.18)***	0.13 (0.07-0.24)***	0.05 (0.02-0.12)***		
Variables entered in steps:	Log likelihood	Goodness-of-fit-index	DF	Δchi^2	Δdf^2	Pseudo R ²
1. Demographic and structural variables	-6579.98	737.63***	42			0.053
2. Functions of Work	-6387.38	1122.84***	48	385.21***	6	0.081

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 4

Results of the multinomial logistic regression analysis explaining post-retirement plans for volunteering and/or bridge employment. Relative risk ratios and 95 per cent confidence intervals are shown (N=5,972 older workers) - interaction effects

	No plans (0) vs. plans for volunteer work (1)	No plans (0) vs. plans for paid work (1)	No plans (0) vs. plans for volunteer & paid work(1)		Plans for volunteer work (0) vs. plans for paid work (1)	
Gender	1.39 (0.95-2.04)	0.74 (0.37-1.48)	1.11 (0.69-1.79)		0.53 (0.28-1.01)	
<i>Functions of Work</i>						
Extrinsic	0.91 (0.83-1.00)*	1.24 (1.08-1.43)**	1.06 (0.95-1.18)		1.37 (1.20-1.56)***	
Intrinsic	1.34 (1.17-1.53)***	2.09 (1.74-2.52)***	2.61 (2.25-3.04)***		1.56 (1.32-1.84)***	
<i>Interaction Effects</i>						
Extrinsic*Gender	0.91 (0.79-1.03)	0.79 (0.64-0.99)*	0.96 (0.82-1.13)		0.88 (0.71-1.08)	
Intrinsic*Gender	1.07 (0.89-1.29)	1.02 (0.76-1.37)	0.78 (0.62-0.97)*		0.95 (0.73-1.24)	
Variables entered in steps:	Log likelihood	Goodness-of-fit-index	DF	Δchi ²	Δdf	Pseudo R ²
1. Demographic and structural variables	-6579.98	737.63***	42			0.053
2. Functions of Work	-6387.38	1122.84***	48	385.21***	6	0.081
3. Interaction Terms	-6377.84	1141.93***	54	19.09*	6	0.082

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

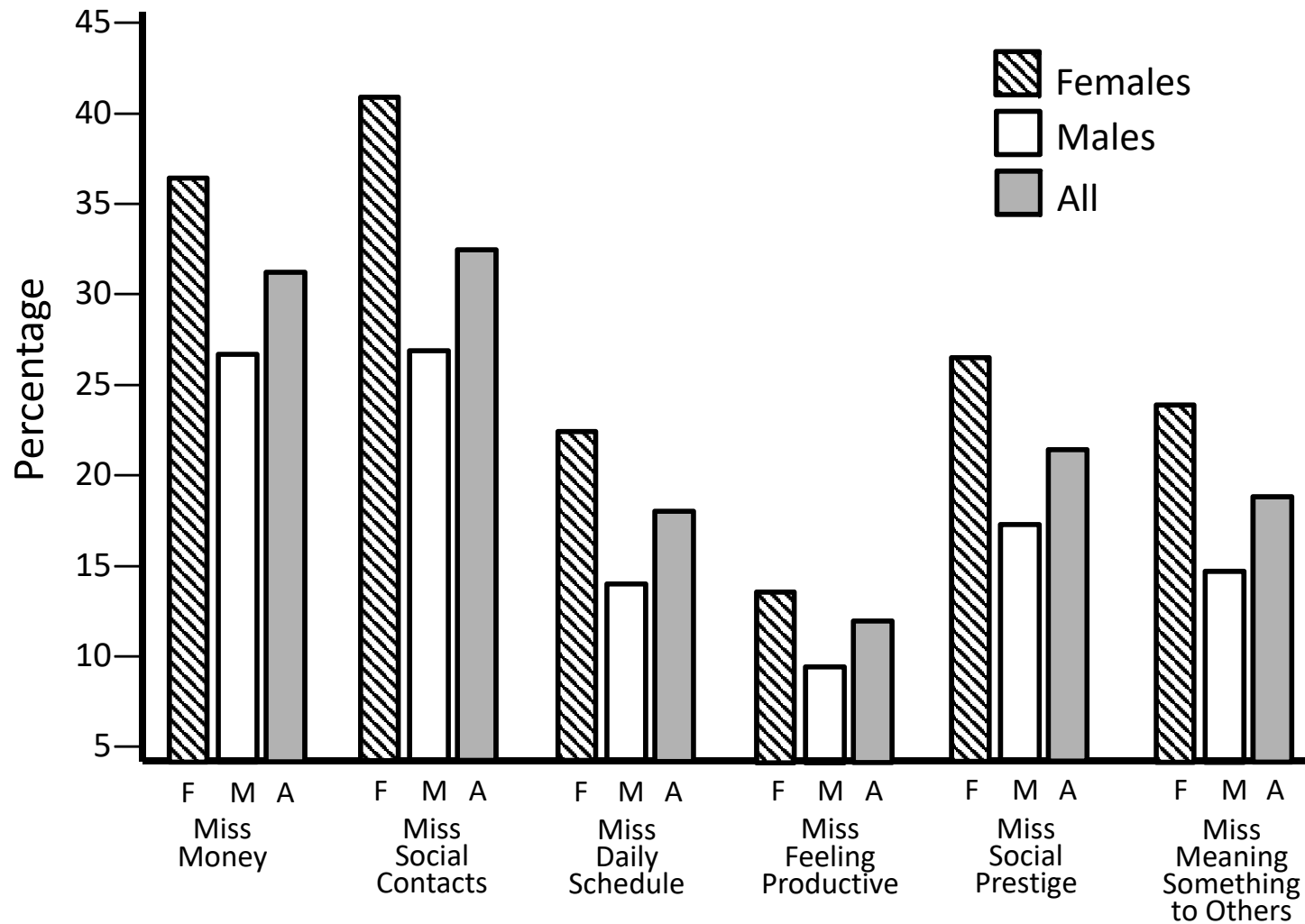


Figure 1. Functions of work respondents report they will miss after retiring. Each bar represents the percentage of individuals who agree or strongly agree they will miss each particular work function. F = females, M = males, A = all participants.