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Short Title: Work Centrality and Psychological Contracts

THE RELATIONS BETWEEN WORK CENTRALITY, PSYCHOLOGICAL CONTRACTS,
AND JOB ATTITUDES: THE INFLUENCE OF AGE

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Abstract

The current study sought to explain a largely overlooked theme in psychological contract literature, that is, how individual factors are related to formation of psychological contract. It investigated the relationship between people's work centrality, psychological contracts, and job attitudes. It was expected that people with higher work centrality would be less likely to have a transactional contract and more likely to have a relational contract with the employer. Furthermore, it was expected that psychological contract (transactional and relational) would mediate the relations between work centrality and job attitudes. Finally, we expected age to moderate the relations between work centrality and the psychological contract. The study was conducted among 465 employees in a Dutch health care organization. Structural equation models supported the mediating effect of psychological contract types in the relations between work centrality and three job attitudes (work engagement, job satisfaction, and turnover intention). Moreover, it was found that the relations between work centrality and psychological contract were stronger for older workers than for younger workers.

Keywords: work centrality, psychological contract, job attitudes, age, older workers.

PSYCHOLOGICAL CONTRACTS AS A MEDIATOR BETWEEN WORK CENTRALITY AND JOB ATTITUDES

The employment relationship literature has gained huge popularity in the last decades (Coyle-Shapiro & Shore, 2007). The employment relationship is conceptualized in terms of psychological contracts between employees and their organizations, which have been found to have a positive impact on job attitudes and work behaviors (see e.g., Bal, De Lange, Jansen, & Van der Velde, 2008; Zhao, Wayne, Glibkowski, & Bravo, 2007). However, there is little research available on individual differences in perceptions of the nature of the psychological contract. For instance, it has been suggested that age plays an important role in psychological contracts (Bal et al., 2008; Schalk, 2004). Furthermore, Herriot and Pemberton (1997) argued that negotiation of psychological contracts may be influenced by individual needs and preferences; since for some people, work forms an important aspect of life, they may be more highly motivated to negotiate a favorable psychological contract with their organization. Hence, work centrality may be an important determinant of the type of psychological contract that people negotiate with their organization.

Recently, the interest in concepts such as work centrality and work identity has increased substantially (Ibarra, 1999; Ibarra & Barbulescu, 2009; Ng & Feldman, 2008; Pratt, Rockmann, & Kaufmann, 2006). Work centrality is a work-based self-concept that determines how people identify with their work roles (Hirschfeld & Feild, 2000; Walsh & Gordon, 2008), and how they act, think and feel at work (Ashforth & Kreiner, 1999). Although a significant amount of research has been devoted to how people identify with others in social situations (e.g., social identity theory; Ashforth & Mael, 1989), still little is known about individual identification processes, and in particular how one's work centrality influences work motivation and behavior. Therefore, the current study investigates how work centrality is related to the employment relationship between

the worker and the organization, and how this employment relation mediates the relations between work centrality and job attitudes.

Since evidence shows that employees with relational contracts are among the more committed and better-performing employees (Dabos & Rousseau, 2004; Raja et al., 2004), we argue that a relational psychological contract mediates the positive association between high work centrality and job attitudes. A transactional psychological contract, on the other hand, is expected to mediate the negative association between low work centrality and job attitudes.

Finally, we argue that the relation of work centrality with psychological contract is contingent on employee age; the relations are assumed to be stronger for older workers than for younger workers. Younger workers are motivated to negotiate a relational contract with their organization rather than a transactional contract, regardless of the role of work in their lives. For older workers however, the level of investment they put in their work and their relationship with the organization depend on the level of importance they attach to work in their lives (Grant & Wade-Benzoni, 2009). Therefore, it is assumed that work centrality is particularly important to elicit positive job attitudes among older workers compared to younger workers.

The study contributes to previous research in a number of ways. First, the study contributes to a further understanding of how psychological contracts are formed between workers and their organizations by investigating the impact of work centrality on psychological contracts, which has not been investigated yet. Secondly, this study aims to increase our knowledge of the process through which work centrality is related to job attitudes by investigating psychological contract as mediator in these relations. Finally, we provide further understanding on the role of age at the workplace by investigating the moderating role of age in the relations between work centrality and psychological contracts.

The Concept of Work Centrality

Work centrality is defined as “individual beliefs regarding the degree of importance that work plays in their lives” (Hirschfeld & Feild, 2000; Walsh & Gordon, 2008, p.46). Work centrality determines how one acts both at the workplace and outside of it (Alvesson, Ashcraft, & Thomas, 2008). High work centrality means that one identifies with one’s work role, and sees work as an important aspect of life (Diefendorff, Brown, Kamin, & Lord, 2002). Thus, individuals with high work centrality attach more importance to the role of work in life than individuals who score low on work centrality. It is generally acknowledged that work centrality is a relatively stable attitude towards work that is not extremely sensitive to conditions of a particular work setting (Hirschfeld & Feild, 2000). Similar to concepts such as personality, work centrality is assumed to be stable over shorter periods of time (state-wise), and to develop over longer time frames (trait-wise; see e.g. Atchley, 1989; Caspi, Roberts, & Shiner, 2005; Roberts, Walton, & Viechtbauer, 2006). In contrast to work centrality, concepts such as job involvement are particularly influenced by work-related experiences, such as job demands and resources.

We argue that work centrality differs from concepts such as job and work involvement. While work centrality refers to the extent to which people perceive work as a main component of their life, job and work involvement refer to the extent to which people are immersed in their *present* job or work (Diefendorff et al., 2002; Fortner, Crouter, & McHale, 2004; Paullay, Alliger, & Stone-Romero, 1994). As such, work centrality is broader in scope than job involvement, since it reflects the importance of work in general, whereas the scope of work and job involvement concern the job that a person currently has. Theoretically, people with low work centrality may report high levels of job involvement, when a person is immersed in activities at work and thinks regularly about issues at work, even when not working (Diefendorff et al., 2002). Therefore, work centrality and job and work involvement are distinct constructs (Paullay et al., 1994).

Work centrality also differs from concepts such as workaholism, overcommitment, and work alienation. Work centrality can be regarded as the positive antipode of work alienation (Hirschfeld & Feild, 2000). Work centrality leads to identification with the work role, and consequently investment of time and energy in building a relationship with the employer, through which employees become engaged in the world of work (Hirschfeld & Feild, 2000). Hence, work centrality leads to engagement in work, whereas work alienation represents *disengagement* from work and the work role (Hirschfeld & Feild, 2000; Ng, Sorensen, & Feldman, 2007). Concepts such as overcommitment, workaholism, and Type A behavior patterns are also related to disengagement from work in the long run (Burke & Fiksenbaum, 2009; Ng et al., 2007; Schaufeli, Taris, & Van Renen, 2008).

Research has shown that engagement and disengagement represent two distinct processes (see e.g. Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004a). On the one hand, job and personal resources (i.e., work centrality) consist of positive features that relate to higher engagement, satisfaction, and intent to remain with the company (Schaufeli et al., 2008). On the other hand, overcommitment to work, workaholism, and Type A behaviors consist of mainly negative features that relate to higher burnout, work alienation and health problems in the long run (Ng et al., 2007; Schaufeli et al., 2008). In sum, work centrality refers to a different construct than workaholism or work alienation, with differential patterns in relation to outcomes.

Work Centrality and Psychological Contracts

The psychological contract is defined by 'individual beliefs, shaped by the organization, regarding an exchange agreement between individuals and their organizations' (Rousseau, 1995, p.9). There are two broad classifications of the type of psychological contract one has with the organization: *transactional* and *relational* (Rousseau, 1995; Rousseau & Parks, 1993).

Transactional contracts have a short-term monetizable scope with little mutual involvement in the

lives and activities of each other (Rousseau & Parks, 1993). The focus is purely materialistic. Relational contracts, however, are based on mutual agreement with both exchanges of monetizable elements and socio-emotional elements. The focus of the relationship is long-term and open-ended (Rousseau & Parks, 1993). In line with previous research on psychological contract, we expect that transactional and relational contract represent two distinct dimensions that are negatively correlated (Dabos & Rousseau, 2004; Millward & Hopkins, 1998; Raja et al., 2004).

Since people with a high work centrality value work and are focused on building a relationship with the employer which is constituted of mutual investment, it is likely that high work centrality is related to having a more relational psychological contract. Conversely, people with a low work centrality will be more likely to have a 'tit-for-tat' transactional contract with the organization. This can be theoretically explained by Resource Theory (Hobfoll, 2002; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007, 2009). Consistent with this theory, people allocate their resources according to their preferences, because resources such as time and energy are valuable and their investment comes at a price (Hobfoll, 2002). Since work plays an important role in the lives of people with high work centrality, they are willing to allocate their resources to work, and to invest in building a mutual relationship with their organization (i.e., a relational contract). People with low work centrality, on the other hand, attach little value to work, and will not be willing to allocate their resources to work (Grant & Wade-Benzoni, 2009). As a consequence, they will not invest in the relation with their organization and a transactional contract is more likely to occur. Therefore, the first hypothesis is:

H1: Work centrality is negatively related to (a) transactional psychological contract, and positively related to (b) relational psychological contract.

Psychological Contract and Job Attitudes

Psychological contracts serve as signals for employees about the state of their relationship with the employer (Guest, 2004). Psychological contract theory predicts that when employee and organization have a relationship that is characterized by mutual investment and reciprocal commitment to the relationship, the relationship may become a self-fulfilling prophecy which makes both employee and organization more attached to each other (Dabos & Rousseau, 2004). The employee anticipates future rewards by the employer with increased satisfaction, engagement, and with decreased turnover intention. Moreover, a relational contract facilitates positive personal and organizational outcomes, because of the mutual commitment to the relationship by both employee and organization (Raja et al., 2004). Furthermore, according to social exchange theory, people engage in interactions with other people because they are motivated by the expectations of receiving inducements from the other party (Blau, 1964; Gouldner, 1960). Relational contracts increase the likelihood of receiving future rewards of the organization. Employees anticipate these future rewards of the employer with increased positive attitudes. Finally, Millward and Hopkins (1998) hold that employees with a relational contract are more likely than those with a transactional contract to be committed to the goals of the organization and to behave as organizational citizens. Therefore, people with a relational contract will be more satisfied with their job, more engaged in their work, and less likely to look for another job. Conversely, people with a transactional contract will be less satisfied, engaged and more inclined to turnover. Support for direct relations between the type of psychological contract one has with the organization and job attitudes has been shown in previous studies (Dabos & Rousseau, 2004; Millward & Hopkins, 1998; Raja et al., 2004). In sum, the second hypothesis is:

H2: Transactional contract is negatively related to (a) job satisfaction, (b) work engagement, and positively related to (c) turnover intentions.

Relational contract is positively related to (d) job satisfaction, (e) work engagement, and negatively related to (f) turnover intentions.

Psychological Contract as Mediator in the Relations between Work Centrality and Job Attitudes

Furthermore, we argue that psychological contract mediates the relations between work centrality and job attitudes, in line with hypotheses 1 and 2. People with high work centrality attach higher meaning to the role of work in their lives, and consequently invest time and effort in building a mutual long-standing relationship with their employer. Thus, high work centrality results in a relational contract with the organization, which in turn results in higher job satisfaction, engagement in the job, and a lower tendency to leave the organization (Diefendorff et al., 2002). People with low work centrality, on the other hand, attach little value to the role of work in their lives, and invest little time and effort into the relation with their employer. Thus, low work centrality results in a transactional contract with the organization which in turn results in lower satisfaction and engagement, and higher turnover intention.

The mediating role of psychological contract between work centrality and job attitudes can be explained by job orientation theory and resource theory (Grant & Wade-Benzoni, 2009; Hobfoll, 1989, 2002). People with high work centrality are willing to invest their valuable resources of time and energy in work, and to invest in the relationship with their organization. As a consequence, these people are more likely to negotiate relational contracts instead of transactional contracts, resulting in positive attitudes (Judge, Bono, Erez, & Locke, 2005; Xanthopoulou et al., 2009). Similarly, research that distinguishes between people perceiving their work as a job (i.e., as a means to fulfill the values of supporting oneself, one's family, and one's leisure time) or as a 'calling' (i.e., as an end in and of itself) (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997) has shown that this latter group of people is more highly motivated to invest in their relationship with their organization (see also Grant & Wade-Benzoni, 2009). Empirical

evidence for positive relations between work centrality and job attitudes were found in a study of Aryee and Luk (1996), who showed that work centrality was positively related to career satisfaction. Along similar lines, Diefendorff and colleagues (2002) found positive relations between work centrality and organizational citizenship behaviors and Witt and colleagues (Witt, Patti, & Farmer, 2002) found positive relations between work centrality and organizational commitment.

In sum, transactional contracts functions as a negative mediator, with work centrality negatively relating to transactional contract, which in turn, negatively relates to job satisfaction and work engagement, and positively relates to turnover intention. The reverse applies to relational contracts, with work centrality positively relating to relational contracts, and relational contracts positively relating to job satisfaction and work engagement, and negatively relating to turnover intention. The third hypothesis is:

H3: Transactional contract fully mediates the relation between work centrality and (a) job satisfaction, (b) work engagement, and (c) turnover intention.

H3: Relational contract fully mediates the relation between work centrality and (d) job satisfaction, (e) work engagement, and (f) turnover intention.

Age as a Moderator in the Relations between Work Centrality and Psychological Contract

Finally, we argue that age moderates the relation between work centrality and psychological contract. Since workforces are aging throughout Europe, it is necessary to investigate age-related differences in work motivation and alike processes (Grant & Wade-Benzoni, 2009). We argue that the relation between work centrality and the psychological contract is stronger for older workers than for younger workers. This is expected because younger workers are motivated to negotiate a relational contract rather than a transactional contract, regardless of the level of their work centrality. For older workers however, the extent to which

work plays a central role in their life will be essential to the type of psychological contract they have with their organization. Older workers with high work centrality will be more likely to have a relational contract and less likely to have a transactional contract than older workers with low work centrality.

When people age, they become more aware of the fact that time is finite, and thus will prioritize tasks and goals that are meaningful (Carstensen, 2006; Grant & Wade-Benzoni, 2009). At the same time, the resources of older adults become more valuable, because of losses in resources and the need for more resources in order to maintain a certain level of functioning (Baltes, Staudinger, & Lindenberger, 1999). Therefore, older adults will think more thoroughly about where to allocate their time and energy. Older workers who value the role of work in their life will be motivated to invest in the relationship with the organization. In line with this reasoning, positive associations have been found between work centrality and the intention to remain in the company of older workers (Armstrong-Stassen & Schlosser, 2008; Schmidt & Lee, 2008). Older workers who prioritize emotional meaningful goals *outside* of their work, such as taking care of family and volunteering work, will be more likely not to invest in the relationship with their organization (Grant & Wade-Benzoni, 2009). Hence, for older workers who attach low importance to work, the relationship with their organization will be more transactional and less relational than for older workers high on work centrality. The fourth hypothesis is:

H4: Age moderates the relation between work centrality and (a) transactional contract and (b) relational contracts, such that the relation will be stronger for older worker than for younger workers.

Figure 1 shows the conceptual model of the study.

Insert Figure 1 about here

METHOD

Sample and Procedure

Data were collected from a health care organization situated in the middle of the Netherlands. The organization provided mental health care for children as well as for adults. Access to the organization was gained through contact with the board of directors and personnel manager. Surveys were distributed in autumn of 2008, by means of a digital questionnaire which could be accessed through an email that was sent to all employees within the organization. The data were collected using self-report questionnaires, based on 465 employees who completed the survey (response rate of 21%). No significant differences were found in terms of age, organizational tenure, gender, work status, and education between the sample and the overall employee population working for the organization. The mean age of the sample was 43 years (SD = 11 years), 73% was female, and 50% had children living at home. On average, participants worked 14 years for the company and 8 years in their current function.

Measures

Previously published scales were used to collect data relevant for the study. Because the study was part of a larger study on the role of the psychological contract in health care organizations, shortened scales were used to measure the concepts. Unless stated otherwise, all measures were assessed using a 5-point Likert-type scale (1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; and 5=strongly agree).

Work Centrality. This measure was a shortened scale of the measure of Hirschfeld and Feild (2000). Their scale was based on the measure of Lodahl and Kejner (1965; see also Paullay et al., 1994). The three items are: “The major satisfaction in my life comes from my job”, “The

most important things that happen to me involve my work”, and “I have other activities more important than my work” (reverse coded). The scales alpha’s reliability was .75.

Psychological Contract. To measure transactional and relational psychological contracts, the shortened 18-item scale of Raja and colleagues (2004) was used, which was developed by Millward and Hopkins (1998). Transactional and relational contracts are both assessed by nine items. The items measuring transactional contract referred to a purely monetizable exchange agreement between employee and organization, whereas the items for the relational contract referred to a long-term agreement, with investment of the organization in the long-term relationship with the employee, through offering advancement and promotion opportunities (Rousseau, 1995). Raja and colleagues (2004) showed that the current measure of the both types of psychological contract correlated highly with the psychological contract measure of Rousseau (2000; transactional $r = .71$; relational $r = .59$), therefore providing convergent validity of the measure. Finally, similar correlations between the two types of psychological contract with turnover intentions have been found for the Rousseau measure (transactional $r = .37$; relational $r = -.60$; Dabos & Rousseau, 2004) and the Millward and Hopkins measure (transactional $r = .26$; relational $r = -.57$; Raja et al., 2004). After exploratory factor analysis on the 18 items (PCA with varimax rotation), five items did not load on either of the two factors. Three items that were assumed to load on the transactional factors loaded on a third factor, and two items from the relational factor loaded on a fourth factor. Therefore, these five items were deleted, and factor scores were calculated with the remaining items. See Appendix A for the items that were used in the current study. The reliability for transactional contract was .71 and for relational contract .82.

Job Attitudes. Three job attitudes were investigated in the present study. *Job satisfaction* was measured with six items from Van der Sluis (2000). An example is “I am satisfied with my current job”. The reliability was .84. *Work engagement* was measured by the Utrecht Work

Engagement Scale (UWES, Schaufeli & Bakker, 2003, 2004a). The scale consisted of 7 items, which could be answered on a 7 point-scale, ranging from ‘never’ to ‘daily’. An example is: “At my work, I feel bursting with energy”. Previous research has shown that the scale is internally consistent and valid (Schaufeli & Bakker, 2004b). The reliability was .92. *Turnover intention* was measured with the scale from Wayne, Shore and Liden (1997) and consisted of five items aimed at thinking of leaving the organization. An example is “As soon as I can find a better job, I’ll leave [name of company]”. The internal consistency as reported by Wayne and colleagues was .89. In the current study the alpha reliability was .88.

Control Variables. In the analyses, a number of control variables that possibly influence the variables under study were added. These were gender (1 = female, 2 = male), dependent children living at home (1 = no, 2 = yes), educational level (on a 7-point scale, ranging from primary education to university degree), work status (1 = part-time, 2 = fulltime), and organizational tenure (measured in years).

Statistical Analyses

Confirmatory factor analyses (CFA) were conducted to assess the measures’ factor structure. The analyses were conducted in Lisrel 8.72 (Jöreskog & Sörbom, 2005). Table 1 presents the results of the CFAs. First, a model was tested with the proposed six factors of the study: work centrality, transactional contract (six items), relational contract (seven items), job satisfaction, work engagement, and turnover intention. This model reached acceptable fit ($\chi^2 = 1619.51, p < .001, df = 494, RMSEA = .07, CFI = .95$). All of the factor loadings of the items on their respective factors were significant. Moreover, this model fitted significantly better than a model with one psychological contract factor (Model 3), a model with one general job attitude factor (Model 2), and a model with all items combined into a single factor (see Table 1). Finally, an unmeasured latent factor was added to test for common source method bias (Podsakoff,

MacKenzie, Lee, & Podsakoff, 2003, Model 5). The model including this latent factor did not improve model fit. Therefore, it can be concluded that common method bias did not influence the validity of the factor structure. Moreover, the confirmatory factor analysis showed that work centrality was conceptually different from the other scales of the study and that there was no overlap between the variables of the study (Hirschfeld & Feild, 2000). Table 1 presents the findings of the CFA. Table 2 presents the descriptive statistics of the variables under study. Work centrality was positively related to age ($r = .19, p < .01$), negatively to education ($r = -.11, p < .05$), positively to organizational tenure ($r = .15, p < .01$), and to working fulltime ($r = .14, p < .01$). Moreover, work centrality was negatively related to transactional contract ($r = -.15, p < .01$), and positively to relational contract ($r = .13, p < .01$). Transactional contract was positively related to being a man ($r = .12, p < .05$), and to organizational tenure ($r = .12, p < .05$). Relational contract was negatively related to age ($r = -.31, p < .01$), and to organizational tenure ($r = -.22, p < .01$).

 Insert Tables 1 and 2 about here

The hypotheses were tested with moderated structural equation modeling using Lisrel 8.72 (MSEM; Jöreskog & Sörbom, 2005). Covariance analyses were preferred over hierarchical regression analyses because the first allows for correction of measurement error. The procedure of Mathieu, Tannenbaum and Salas (1992; see also Cortina, Chen, & Dunlap, 2001) was followed to conduct the analyses. We built a model including three exogenous variables (work centrality, age, and the interaction between work centrality and age). Each exogenous variable had one indicator, which was the standardized scale score (Cortina et al., 2001). For the interaction term, we multiplied the centered score of work centrality and the centered score of age. The paths from

the latent exogenous factors to their indicators were fixed with the square roots of the scale reliabilities, whereas the error variances of each indicator were set equal to the product of their variances and one minus their reliabilities (see Cortina et al., 2001). Moreover, the correlations between work centrality and the interaction term and between age and the interaction term were set to zero. Work centrality and age and were allowed to correlate (see for more details Cortina et al., 2001).

For the latent endogenous variables, it is recommended to use partial disaggregation models because latent factors need more than one indicator for a model to be identified (Bagozzi & Edwards, 1998; Yuan, Bentler, & Kano, 1997). This means that for the psychological contract measures and the outcome variables item parcels were used instead of the scale scores as indicators of the latent variable. We conducted preliminary factor analyses to assess which items have similar factor structure. The items with similar relative errors are recommended to combine in item parcels (Yuan et al., 1997). Item parceling was conducted based on the decision that the constructs had acceptable reliabilities (Cronbach's alpha > .70). For significant interactions, we plotted the interaction patterns using simple slope analysis with slopes one standard deviation below and above the mean of the moderator, in line with recommendations of Aiken and West (1991).

A structural model was specified in which work centrality affects the psychological contract, and in which the psychological contract was related to the job attitudes. Moreover, we included paths from age to transactional and relational contract, as well as paths from the interaction between age and work centrality to transactional and relational contract. Tests for mediation were conducted in line with procedures as described by James and colleagues (2006), (see also LeBreton, Wu, & Bing, 2009; MacKinnon, Fairchild, & Fritz, 2007; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Finally, we included paths from the control

variables to work centrality, the psychological contract measures, and the job attitudes. The results of the research model are shown in Figure 2. To evaluate model fit, established goodness-of-fit measures were used. The Root Mean Square Error of Approximation with values of below .08 are assumed to be acceptable, and below .05 as good (Bentler, 1990; Hu & Bentler, 1999). Furthermore, Non-Normed Fit Index (NNFI), Comparative Fit Index (CFI), and Incremental Fit Index (IFI) should be above .90.

 Insert Figure 2 about here

RESULTS

Model Fit. The proposed full mediation model fitted well ($\chi^2 = 135.69$ $p < .01$; $df = 47$, RMSEA = .06; NNFI = .95; CFI = .97; IFI = .97). To evaluate whether the full mediation model obtained better fit than a partial mediation model, we constructed a model with direct paths from work centrality to the job attitudes. This partial mediation model obtained good fit ($\chi^2 = 130.08$ $p < .01$; $df = 44$, RMSEA = .07; NNFI = .95; CFI = .97; IFI = .97). However, this more complex partial mediation model did not obtain significant better fit than the full mediation model ($\Delta\chi^2 = 5.61$, $\Delta df = 3$, ns). None of the paths from work centrality to the job attitudes was significant. Therefore, the full mediation model obtained the best fit.

Hypothesis Testing. In line with Hypothesis 1 we found that work centrality was negatively related to transactional contract ($\gamma = -.13$, $p < .01$), and was positively related to relational contract ($\gamma = .17$, $p < .001$). Thus, the first condition for the mediating role of psychological contract between work centrality and job attitudes was fulfilled.

In line with Hypothesis 2, transactional contract was negatively related to job satisfaction ($\gamma = -.71$, $p < .001$), and to work engagement ($\gamma = -.68$, $p < .001$), and positively related to turnover

intention ($\gamma = .67, p < .001$). Furthermore, relational contract was positively related to job satisfaction ($\gamma = .30, p < .001$), and to work engagement ($\gamma = .28, p < .001$), and negatively related to turnover intention ($\gamma = -.18, p < .01$). Therefore, hypothesis 2 was fully supported.

Hypothesis 3 predicted a mediating effect of psychological contract in the relation between work centrality and job attitudes. This hypothesis was tested in line with the procedure as described by James and colleagues (2006), and MacKinnon and colleagues (2002, 2007). In addition, Sobel tests were conducted (Sobel, 1982). First, there must be a significant relation between the independent variable (work centrality) and the mediator (psychological contract). From the results for hypothesis 1, it is shown that work centrality is significantly related to both types of psychological contract. Second, the mediator must be related to the dependent variables. The results of hypothesis 2 show that both transactional and relational contracts are related to the three types of job attitudes. To estimate whether the mediation effects of transactional and relational contract were significant, Sobel tests (Sobel, 1982) were conducted. Transactional contract significantly mediated the effect between work centrality and job satisfaction (Sobel test $z = 3.48, p < .001$), work engagement (Sobel test $z = 3.45, p < .001$), and turnover intention (Sobel test $z = 3.43, p < .001$). Relational contract also significantly mediated the relation of work centrality with job satisfaction (Sobel test $z = 2.68, p < .01$), work engagement (Sobel test $z = 2.64, p < .01$), and turnover intention (Sobel test $z = -2.30, p < .05$). The indirect standardized effects of work centrality on job satisfaction were $\gamma = .19, p < .001$, on work engagement $\gamma = .18, p < .001$, and on turnover intention $\gamma = -.17, p < .001$. Thus, hypothesis 3 is supported.

Hypothesis 4 stated that age moderates the relations between work centrality and the psychological contract. Age was negatively related to both transactional contract ($\gamma = -.26, p < .01$), and to relational contract ($\gamma = -.36, p < .001$). The interaction between age and work centrality was significantly related to transactional contract ($\gamma = -.16, p < .05$) as well as to

relational contract ($\gamma = .11, p < .05$). The interaction patterns are shown in Figures 3 and 4. Simple slope analyses revealed that the relation between work centrality and transactional contract was not significant for younger workers ($\gamma = -.03, ns$), whereas the relationship was negative for older workers ($\gamma = -.34, p < .001$; see Figure 3). Furthermore, the relation between work centrality and relational contract was also not significant for younger workers ($\gamma = .10, ns$), whereas the relation was positive for older workers ($\gamma = .28, p < .001$). The relations between work centrality and transactional and relational contract were stronger for older workers than for younger workers. Thus, hypotheses 4a and 4b are fully supported.

DISCUSSION

The current study investigated the mediating effects of psychological contracts in the relations between work centrality and job attitudes, as well the moderating role of age in the relations between work centrality and psychological contract. Work centrality was found to be related to psychological contracts people have with their organizations; people with higher work centrality are more likely to have a relational contract with the organization, and are less likely to have a transactional contract. In addition, both psychological contract types fully mediated the relations between work centrality and job satisfaction, work engagement, and turnover intention. Thus, psychological contracts play a critical role in the way work centrality is related to job attitudes. As suggested, work centrality is a stable concept (Hirschfeld & Feild, 2000), with psychological contract fully mediating the relationship between work centrality and job attitudes.

This research contributes to the literature on work centrality, psychological contracts, and aging at work. First, by showing that work centrality is related to positive attitudes towards the job, this study contributes to the literature on work centrality, which is mainly focused on antecedents of work centrality (Mannheim, Baruch, & Tal, 1997). In addition to organization citizenship behavior, career satisfaction, and organization commitment (Aryee & Luk, 1996;

Diefendorff et al., 2002; Witt et al., 2002), work centrality was found to influence job satisfaction, work engagement, and turnover intention. Thus, work centrality is an important concept to include in studies on work behavior.

Second, although there are many studies on the effects of psychological contracts, little research has been conducted on how psychological contracts are negotiated (Raja et al., 2004). In addition to findings that personality relates to the psychological contract (Raja et al., 2004; Tallman & Bruning, 2008), this study contributes to a further understanding of formation of psychological contracts. People with high work centrality invest in their work and their relationship with the organization, and consequently are able to negotiate a more profitable psychological contract that is aimed at the long-term and involves both economic and socio-emotional elements (Hobfoll, 2002; Grant & Wade-Benzoni, 2009; Rousseau & Parks, 1993).

Furthermore, the results showed that psychological contract mediated the relations between work centrality and job attitudes. This finding provides an explanation or reveals the underlying processes through which work centrality has a positive effect on job attitudes. Workers with high work centrality are willing to invest their time and effort in work, and thus in their relation with the organization. These workers will negotiate a relational psychological contract, which will result in positive job attitudes. Conversely, workers with a low work centrality are not willing to invest in work or in their relation with the organization. These workers will negotiate a transactional 'tit-for-tat' psychological contract, which will result in negative job attitudes.

Subsequently, we contributed to the literature on aging at work by examining the impact of age on the relation between work centrality and job attitudes. First of all, we found negative relations between age and both transactional and relational contracts. Particularly the negative relation between age and relational contracts is in contrast with the nature of relational contracts, which are aimed at long-term relationships between employees and their organizations. This is

likely to be more prevalent among older workers (Rousseau & Parks, 1993). However, it might be that older workers become more aware of the fact that time is finite, and thus have a shorter future time perspective (Carstensen, 1995). Therefore, they would focus more on the short-term, and negotiate a transactional psychological contract. Another explanation is that a lack of investment of the organization in the employee might cause employees to believe that they have a transactional rather than a relational contract with their organization. Thus, older workers might be as likely as younger workers to be offered transactional contracts. However, presence of relational contracts might be more likely among younger workers than among older workers, since many organizations are aimed at offering possibilities for building human capital for younger workers with an open infinite future rather than for older workers whose future is limited (Simpson, Greller, & Stroh, 2002).

Furthermore, we found that work centrality particularly influences the psychological contract of older workers. Older workers will think more thoroughly about where to allocate their time and energy (Baltes et al., 1999; Carstensen, 2006; Grant & Wade-Benzoni, 2009). Hence, when work is an important part of their lives, older workers will invest in the relationship with the organization. On the other hand, when work is not an important part of their lives, older workers will not invest in the relationship with their organization (Grant & Wade-Benzoni, 2009). In sum, older workers who attach high importance to work have a relational relationship with their organization. Similarly, positive associations have been found between work centrality and the intention to remain in the company of older workers (Armstrong-Stassen & Schlosser, 2008; Schmidt & Lee, 2008). Thus, work centrality is an important concept that explains why older workers want to invest in work, and might even explain why older workers continue working.

Limitations and Future Research

There are limitations to the study that have to be addressed. First, the cross-sectional nature of the study limited the findings in that we could not show evidence for causal relationships. Although we could test for the likelihood of the direction of the relationships, it is still possible that the concepts of the study are reciprocally related. For instance, the work centrality of people holding positive attitudes about their jobs may be enhanced by the positive experiences at work (Pachulicz, Schmitt, & Kuljanin, 2008; Xanthopoulou et al., 2009). Further longitudinal research is needed to investigate these reciprocal relationships over time.

Moreover, because all variables were measured from one source, the employee, there is a chance of common method bias (Podsakoff et al., 2003). Theoretically, concepts like work centrality and psychological contracts exist in the 'eye of the beholder', and therefore self-reports are deemed appropriate to measure these concepts (Pratt et al., 2006; Rousseau, 1995). The confirmatory factor analysis including a common latent factor did not improve model fit, showing evidence for the distinction of the concepts investigated in this study. However, future studies should also investigate whether work centrality and psychological contract contribute to the bottom line, and whether or not they are related to concepts such as OCB's, absenteeism, and turnover. All in all, we are confident that the results were not seriously affected by common method bias.

A further limitation was that contextual differences were not included in the study design. The current study was conducted among people working in health care; replication of the study in other sectors might produce different results. In contexts where the zone of negotiability within psychological contracts is small (Schalk & Roe, 2007), work centrality might not have a significant impact on whether one will have a transactional or relational contract with the organization. Moreover, certain contexts will attract people with high work centrality, whereas in other contexts the reverse might be the case.

Finally, the response rate of the current study was not high (21%). Although the sample was not significantly different from employee population in terms of age, gender, organizational tenure, work status, or education, we could not estimate whether the non-response was random or not (Newman, 2009). It could be that unsatisfied employees are less willingly to cooperate with a study that has been supported by their organization (Rogelberg, Luong, Sederburg, & Cristol, 2000). However, at the same time it could be that unsatisfied employees use organizational surveys to express their opinions about the organization (Newman, 2009; Rogelberg et al., 2003). Therefore, future research could shed more light on this issue.

Practical Implications

This study has implications for organizations as well. Since the study showed that people with high work centrality are the ones with relational contracts, organizations may focus more on attracting personnel by selecting those who have high work centrality. Employees with relational psychological contracts are those who are among the more satisfied, engaged and loyal employees (see also Dabos & Rousseau, 2004; Raja et al., 2004). Furthermore, the work centrality of older workers provides information about their willingness to invest in work and in the relation with their organization.

Moreover, organization may want to offer relational contracts to their employees, since this study showed that employees with relational contracts are more satisfied, more engaged in their work, and show lower tendency to leave the organization. Relational contracts cost time and energy for the organization to establish. Employees are motivated when the organization offers skill development, job security, flexibility, and good career prospects. Absence of these types of inducements may cause employees to perceive their psychological contract as transactional relationship with the organization.

Conclusion

The current study investigated the mediating role of psychological contract in the relation between work centrality and job attitudes. It was found that work centrality is positively related to relational contracts and negatively related to transactional contracts, which in their turn relate to job attitudes. We provided empirical evidence that people with high work centrality are able to negotiate a relational contract with the organization, which consequently makes them more satisfied with their job, more engaged in their work, and less inclined to leave the organization. In addition, this study investigated the moderating role of age in relations between work centrality and psychological contracts. It was found that work centrality particularly determines the psychological contracts that older workers have with their organization.

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Appendix A: Psychological Contract Items^a

Transactional Contract ($\alpha = .71$)

I work only the hours set in my contract and no more.

My commitment to this organization is defined by my contract.

I prefer to work a strictly defined set of working hours.

I only carry out what is necessary to get the job done.

I work to achieve the purely short-term goals of my job.

It is important to be flexible and to work irregular hours if necessary. (reverse-coded)

Relational Contract ($\alpha = .82$)

I expect to grow in this organization.

I feel part of a team in this organization.

I have a reasonable chance of promotion if I work hard.

The organization develops/rewards employees who work hard and exert themselves.

I expect to gain promotion in this company with length of service and effort to achieve goals.

I feel this company reciprocates the effort put in by its employees.

I am motivated to contribute 100% to this company in return for future employment benefits.

^aThe items are from Millward and Hopkins (1998).

Figure Caption

Figure 1: Research model of the current study.

Figure 2: Lisrel results for the hypothesized model ($N = 465$). * $p < .05$; ** $p < .01$; *** $p < .001$.

Figure 3: Interaction between age and work centrality on transactional contract.

Figure 4: Interaction between age and work centrality on relational contract.