



# The crossover of work engagement between working couples

## A closer look at the role of empathy

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### Abstract

**Purpose** – The purpose of this paper is to examine the role of empathy (empathic concern and perspective taking) in the crossover process. Specifically, it aims to test whether empathy moderates the crossover effect of women's work engagement to their men's work engagement. Additionally, it seeks to investigate the relationship between men's engagement and colleague ratings of job performance.

**Design/methodology/approach** – Hypotheses were tested using a cross-sectional design with three sources of information: 175 Dutch women and their partners working in different occupational sectors, as well as 175 colleagues of the male participants.

**Findings** – Results of moderated structural equation modeling analyses showed that the crossover of work engagement from women to men was strongest when men were high (vs low) in perspective taking (the spontaneous tendency of a person to adopt the psychological perspective of other people). Empathic concern did not moderate the crossover effect. In addition, men's work engagement was positively related to in-role and extra-role performance.

**Practical implications** – Results suggest that work engagement is not only important for one's own, but also for one's partner's performance. This implies that companies should try to facilitate engagement.

**Originality/value** – The findings shed light on the crossover process, and indicate under which conditions employees are influenced by their partners and consequently change their work behavior.

**Keywords** Family life, Employee behaviour, Job satisfaction, The Netherlands

**Paper type** Research paper

The process that occurs when the psychological well-being experienced by one person affects the level of well-being of another person is referred to as crossover (Westman, 2001) or transmission (Jones and Fletcher, 1993; Rook *et al.*, 1991). Crossover is a dyadic, inter-individual transmission of well-being between closely related individuals that occurs within a particular domain such as the workplace or the family. Most studies conducted during the past decade have focused on unwell-being, and these studies have shown that several types of strain may crossover from one person to another (intimate partners, or colleagues), including anxiety (Westman *et al.*, 2004), depression (Katz *et al.*, 1999; Vinokur *et al.*, 1996; Westman and Vinokur, 1998), and job



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burnout (Bakker *et al.*, 2005, 2001; Bakker and Schaufeli, 2000; Westman and Etzion, 1995, 1999).

Only a few studies have examined the crossover of positive well-being, including life satisfaction (Demerouti *et al.*, 2005), flow at work (Bakker, 2005), and work engagement – a positive, fulfilling, and work-related state of mind which is characterized by vigor, dedication and absorption (Bakker *et al.*, 2005, 2006). Although these studies made a strong case for the existence of positive crossover, they did not illuminate the mechanisms responsible for the crossover. The first aim of the present study is to examine the role empathy plays in the crossover of work engagement from working women to their partners. The second aim is to examine whether crossover is a mechanism through which family influences job performance as rated by peers. Specifically, we tested whether men's engagement, in turn, has an impact on their job performance. Before we review the theoretical background of our crossover hypotheses, we will first briefly introduce the concept of work engagement.

### **Work engagement**

Work engagement is defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli *et al.*, 2002). Vigor is characterized by high levels of energy and mental resilience while working. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, and challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (see also, Schaufeli and Bakker, 2004). In short, engaged employees have high levels of energy and are enthusiastic about their work. Moreover, they are often fully immersed in their work so that time flies (see also May *et al.*, 2004).

Research has shown that engaged workers report good mental (Schaufeli *et al.*, in press) and psychosomatic health (Demerouti *et al.*, 2001). Furthermore, they exhibit personal initiative, proactive behavior and learning motivation (Sonnetag, 2003; Schaufeli and Salanova, 2007). This agrees with the results of qualitative research showing that engaged employees take initiative and generate their own positive feedback (Schaufeli *et al.*, 2001). Taken together, these findings suggest that engaged workers are able and willing to "go the extra mile". In addition, this is consistent with the notion that vigor and dedication are the core elements of work engagement (see also González-Romá *et al.*, 2006).

### **The crossover process**

Westman (2001, 2006; Westman and Etzion, 1999) has argued that there are three main mechanisms responsible for crossover. The first mechanism concerns the direct transmission of well-being between partners. According to Westman, strain in one partner produces an empathic reaction in the other that increases his or her level of strain. Eckenrode and Gore (1981, p. 771) suggested already more than 25 years ago that the effect of one's strain on the spouse's distress might be the result of empathy as expressed in reports such as "We feel their pain is our own". However, to our knowledge, the empathy explanation has never been tested in empirical research.

The second mechanism suggests that the relationship between partners' strain is spurious, since what appears to be a crossover effect is the result of common stressors

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experienced by both partners. For instance, if both partners are working intensively, they do not have much time to spend on joint, relaxing leisure activities. In addition, partners usually share similar family circumstances (e.g., family resources and stressors). Consequently, the fact that they share similar feelings can be due to shared context.

Finally, Westman (2006) argues that crossover may be the result of an indirect interaction process. Specifically, she states that social support or undermining behaviors may mediate the crossover of one partner's strain to the other partner's strain. Indeed, it has been shown that social undermining (i.e. to express negative affect, convey negative evaluation or criticism, or hinder the attainment of instrumental goals) mediates the crossover of depression from one partner to the other (e.g., Westman and Vinokur, 1998).

Note that Westman has generally referred to the crossover of *unwell-being*, but she also suggests that just as negative aspects of the job may have a negative impact on one's partner's well-being; positive experiences may cross over to the partner as well (Westman, 2001). To our knowledge, two studies examined the crossover of positive experiences between partners. The study of Mauno and Kinnunen (1999) that investigated the crossover of marital satisfaction, in addition to the transmission of negative experiences (exhaustion and psychosomatic complaints), found no empirical support for crossover. Demerouti *et al.* (2005) found that while exhaustion crossed over from women to men, life satisfaction crossed over from men to women.

### **A closer look at the crossover process**

The present study focuses on empathy as the potential underlying mechanism causing direct crossover. Generally, it is assumed that the emotions expressed by one partner elicit an empathic reaction in the other partner. This agrees with the literal root meaning of the word empathy: "feeling into". Starcevic and Piontek (1997) define empathy as interpersonal communication that is predominantly emotional in nature and involves the ability to be affected by the other's affective state, as well as to be able to read in oneself what that affect has been. Similarly, Lazarus (1991, p. 287) defined empathy as "sharing another's feelings by placing oneself psychologically in that person's circumstances".

The core relational theme for empathy would involve the sharing of another person's emotional state, distressed or otherwise. Accordingly, strain in one partner may produce an empathic reaction in the other, which – in its turn – increases the receiver's strain. Or conversely, the work engagement expressed a female worker may fuel her partner's engagement, because it focuses his thoughts on the positive aspects of work that make him enthusiastic. Social learning theorists (e.g., Bandura, 2001; Stotland, 1969) support this view, and have explained the transmission of emotions as a conscious processing of information. They suggest that individuals imagine how they would feel in the position of another and thus come to experience and share others' feelings (see also Bakker *et al.*, 2007).

At a theoretical level, empathy may best be considered as a set of related constructs including both emotional and non-emotional components (Davis, 1980, 1983; Deutsch and Madle, 1975). Based on such a multidimensional view of empathy, Davis developed the interpersonal reactivity index, which consists of four separate dimensions. Two of these are of special interest for the present study. One component is perspective taking,

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that is “the spontaneous tendency of a person to adopt the psychological perspective of other people – to entertain the point of view of others” (Davis, 1983, p. 169). This component clearly refers to the non-emotional or cognitive type of empathy. It should be noted that Davis does not refer to the valence of the cognitions in his definition of perspective taking. The second component of interest is empathic concern, which refers to “an individual’s tendency to experience feelings of warmth, compassion, and concern for others” (Davis, 1983, p. 169). Thus, in contrast to perspective taking, empathic concern is clearly an indicator of emotional responsivity.

The present study is the first to test Westman’s (2001, 2006) hypothesis that empathy moderates the crossover of well-being. On the basis of the literature, we formulated the following two hypotheses:

- H1.* Empathic concern moderates the relationship between women’s and men’s work engagement. The crossover of engagement will be strongest when men are characterized by high (vs low) levels of empathic concern.
- H2.* Perspective taking moderates the relationship between women’s and men’s work engagement. The crossover of engagement will be strongest when men are characterized by high (vs low) levels of perspective taking.

### **Work engagement and performance**

The second aim of this study is to examine the way that the home situation influences men’s job performance. Evidence for such a relationship would show that engagement is rooted in objective work behavior. Greenhaus and Powell (2006) suggest that scales that provide a global evaluation of the degree to which an employee allows transference of positive and/or negative experiences between domains (home-work conflict or facilitation) help to improve our knowledge on the impact of family on work. However, as Greenhaus and Powell suggest, we need to combine such subjective evaluations with direct measures of experiences and outcomes in the work and the family domain. In the present study, we test whether the work engagement of the women influences the work engagement of the men, which consequently influences their performance at work.

Most managers believe that there is a strong and positive link between employee well-being and job performance (Wright and Cropanzano, 2000). The general assumption is most probably that if individuals are happy, they are energetic and willing to invest effort in their work. Scientific research has indeed shown that subjective well-being coincides with many positive phenomena. For example, researchers have found that people who are happy and energetic are less likely to catch colds (Cohen *et al.*, 2003), and they do better in social relationships (Lyubomirsky *et al.*, 2005). Happy people are more sociable and other people like them more. They are also more helpful and altruistic.

In addition, happy people are better able to cope with difficult situations (Veenhoven, 1988), since they generally have more resources. According to Lyubomirsky *et al.* (2005, p. 804):

[...] the success of happy people rests on two main factors. First, because happy people experience frequent positive moods, they have a greater likelihood of working actively toward new goals while experiencing those moods. Second, happy people are in possession of past skills and resources, which they have built over time during previous pleasant moods.

Recent studies have indeed indicated that work engagement is positively related to performance (for an overview, see Demerouti and Bakker, 2006). For example, Salanova *et al.* (2005) showed that levels of engagement were positively related to customer ratings of performance, through service climate. Also, in their survey study among employees from a wide range of occupations, Schaufeli *et al.* (2006) found that work engagement was positively related to in-role performance ( $\beta = 0.37$ ), whereas workaholism was not. Furthermore, in their diary study among teachers, Bakker and Bal (2007) showed with multi-level analysis that state levels of work engagement were fueled by job resources, and were predictive of in-role and extra-role performance. Finally, using a different conceptualization and measure of work engagement, Harter *et al.* (2002) demonstrated that employees' levels of engagement were positively related with business-unit performance (e.g., customer loyalty, profit, and productivity). On the basis of this overview, we formulated the third and final hypothesis:

- H3.* Work engagement is positively related to (colleague ratings of) in-role and extra-role performance.

## Method

### *Procedure*

Participants were recruited by nine psychology students of a Dutch university. Each of the students was asked to approach 20 dual-earner couples as a requirement for their bachelor thesis. Of the 180 packages with questionnaires distributed, 175 were returned completed, resulting in a response rate of 97 percent. The students left two questionnaires to each couple, as well as a separate one-page questionnaire for a colleague of the man. The questionnaires were code-numbered to match the data of the partners and the colleague. Despite this code numbering, the participants remained unidentified as all questionnaires were answered anonymously. The partners were kindly requested to fill in the questionnaires independently. In addition, the men were instructed to approach a colleague with whom they collaborated on a daily basis, with the request to fill in the short questionnaire regarding performance. Colleagues used closed envelopes to return the completed questionnaire to the participant. Each couple returned their own questionnaires and the colleague questionnaire to the researchers using pre-stamped envelopes. We decided to examine one-directional crossover effects and use the male participants as target persons. In The Netherlands, men more often occupy full-time jobs than women, and we reasoned that it would therefore be easier for colleagues to judge men's job performance. The female participants filled in questions regarding their work engagement, whereas men reported on their empathy and work engagement. Men's colleagues were invited to evaluate the job performance of the target participants.

### *Participants*

The participants in the study were 175 Dutch couples of dual-earner parents. Men were almost three years older than women,  $t(348) = 2.31$ ,  $p < 0.05$  (men  $M = 43.97$ ,  $SD = 10.43$ , women  $M = 41.31$ ,  $SD = 10.93$ ). Most participants (69.1 percent) had children: 12.0 percent had one child, 33.7 percent had two children, and 23.4 percent had three children or more. There was no difference between the genders regarding educational level,  $t(348) = 0.73$ ,  $p = 0.47$ . The most frequently mentioned level of education was college education (34.3 percent), followed by university (33.5 percent).

However, women worked more often with people (84 percent) than did men (69.7 percent),  $\chi^2(1) = 10.04$ ,  $p < 0.002$ , while men worked more often with information (18.3 percent) than women (10.3 percent),  $\chi^2(1) = 4.57$ ,  $p < 0.03$ . For example, more women (29.3 percent) than men (13.1 percent) worked in health care (as a physician, nurse, therapist), whereas more men worked in industry – as a production manager, constructor, engineer (men: 8.6 percent, women 2.3 percent) and in business – as an accountant, lawyer, salesperson (men 22.3 percent vs women: 14.3 percent). On average, men had 21.03 (SD = 11.46) years of work experience, whereas women had 16.71 (SD = 10.41) years of work experience. Finally, as expected, more men (86.2 percent) than women (28.0 percent) worked full-time,  $\chi^2(1) = 108.44$ ,  $p < 0.001$ . More specifically, men worked on average 38.44 hours (SD = 8.00) while women worked 26.82 hours (SD = 9.52). Thus, our sample included somewhat older, highly educated full-time working men and part-time working women with considerable job tenure.

### Measures

Empathy was assessed using two scales from the Interpersonal Reactivity Index (Davis, 1980). The perspective taking sub-scale includes seven items measuring the tendency to adopt the point of view of other people in everyday life. A sample item from this scale is “I sometimes try to understand my friends better by imagining how things look from their perspective”. The empathic concern scale (also seven items) measures the tendency to experience feelings of warmth, compassion, and concern for other people. A typical item from this scale is: “I often have tender, concerned feelings for people less fortunate than me”. For both scales, men could respond using a five-point scale ranging from (1) “totally disagree” to (5) “totally agree”. Earlier studies have shown that the internal reliabilities of these scales range from 0.71 to 0.77, and test-retest reliabilities from 0.62 to 0.71 (Davis, 1980).

Work engagement was assessed for both genders with the Utrecht Work Engagement Scale (UWES (Schaufeli and Bakker, 2003)). Several studies have shown that the UWES has good psychometric properties (Schaufeli and Bakker, 2004; Schaufeli *et al.*, 2002). The two central subscales of vigor and dedication were used in the present study (see González-Romá *et al.*, 2006). Vigor was assessed with six-items, including “At my job, I feel bursting with energy”. Dedication was measured with five items, such as “I am enthusiastic about my job”. The items of the engagement scales used a seven-point response format (0 = never, 6 = every day).

Performance – two types of performance were assessed. In-role performance is defined as those officially required outcomes and behaviors that directly serve the goals of the organization (Motowidlo and Van Scotter, 1994). Extra-role performance is defined as actions that go beyond what is stated in formal job descriptions and that increase organizational effectiveness (McKenzie *et al.*, 1991). The two types of performance were each assessed with three items of the instrument developed by Goodman and Svyantek (1999). Here is an example of both scales: “Achieves the objectives of the job” (in-role), and “Willingly attends functions not required by the organization, but helps in its overall image” (extra-role). Colleagues of the men were asked to indicate the extent to which they found each statement characteristic of the men (0 = not at all characteristic, 6 = totally characteristic). We conducted additional analyses to examine the validity of both scales, using the data of Bakker *et al.* (2004). In



the latter study ( $n = 146$ ), the original scales of Goodman and Svyantek (1999) were used. Results showed that the shortened scales used in the present study correlated strongly with the original scales:  $r = 0.92$ ,  $p < 0.001$  for in-role performance, and  $r = 0.94$ ,  $p < 0.001$  for extra-role performance. This clearly shows that the scales are valid, and measure the intended constructs.

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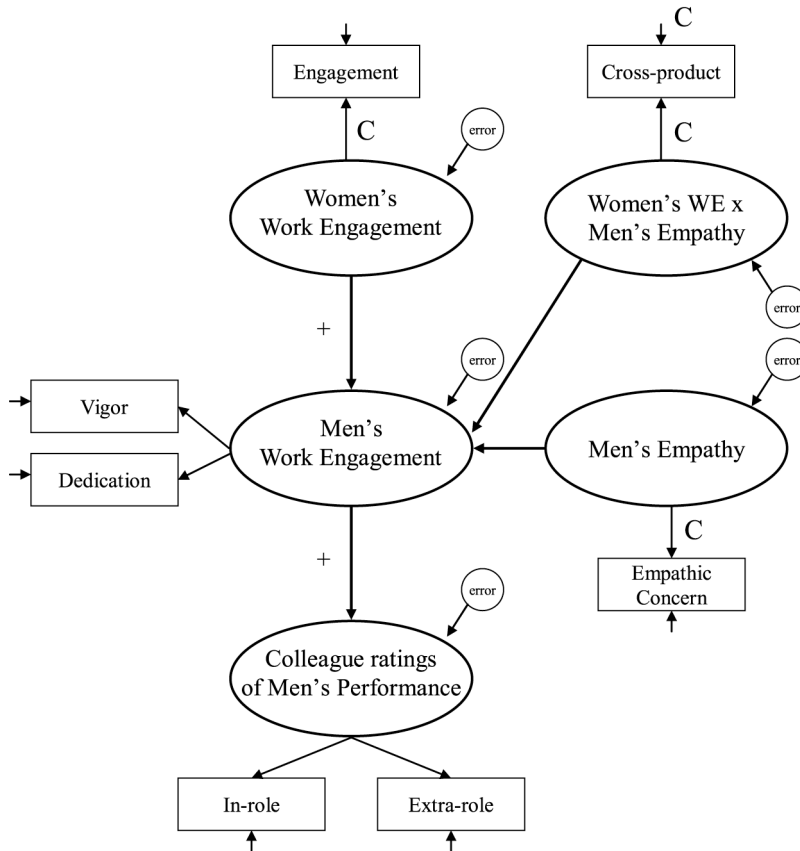
### *Statistical analyses*

To test the three hypotheses, we conducted moderated structural equation modeling (MSEM) analyses, using the AMOS software package (Arbuckle, 2003). We preferred MSEM to hierarchical regression analyses, because MSEM allows assessing and correcting for measurement error, and it allows more than one dependent variable. Additionally, MSEM provides measures of fit of the models under study. We followed the procedure proposed by Mathieu *et al.* (1992), as described by Cortina *et al.* (2001).

For each hypothesized interaction effect, we tested a model that included three exogenous factors (men's empathy, women's work engagement, the interaction between both variables), and two endogenous factors (men's work engagement, and colleague ratings of men's performance). We tested two different models, one for empathic concern and one for perspective taking. The exogenous variables had only one indicator that was the standardized (centered) scale score of the respective factor (see Mathieu *et al.*, 1992). The indicator of the latent interaction factor was the multiplication of the standardized scale scores of the empathy factor (in the first model empathic concern, and in the second model perspective taking), and women's work engagement. As indicator of women's work engagement we used the mean score of vigor and dedication. The two endogenous latent variables each used two indicators: men's vigor and dedication were the indicators of men's work engagement, and colleague ratings of men's in-role and extra-role performance were the indicators of the latent performance factor.

The models included direct paths from the three exogenous factors (men's empathy, women's work engagement, and their interaction) to men's work engagement (vigor and dedication). This model is displayed in Figure 1. The correlations between all exogenous latent factors were constrained to be zero. Parameters that were constrained according to the strategy of Mathieu *et al.* (1992; see also Cortina *et al.*, 2001) are marked with a C.

We calculated the reliability of the interaction term using the formula advanced by Bohrnstedt and Marwell (1978). Their formula is calculated on the basis of the reliability of both variables (women's work engagement and perspective taking/empathy) used to form a product term and the correlation between the two latent variables; for women's work engagement and perspective taking, it yielded a value of 0.52 while for women's work engagement and empathy this was 0.61. This value was used to fix the  $\lambda$  value for the path from the latent interaction factor to its indicator. As with all exogenous variables, the error variance of the indicator of the latent interaction factor was set equal to the product of its variance and one minus its reliability. Finally, for women's work engagement and perspective taking/empathy, the path from the latent variables to their corresponding observed variable was equal to the square root of the reliability of the observed score.



**Figure 1.**  
Hypothesized moderated structural equation model

The fit of the models was assessed with the  $\chi^2$  statistic, the goodness of fit index (GFI) and the root mean square error of approximation (RMSEA). It is suggested that GFI values that exceed 0.90 and RMSEA values as high as 0.08 are indicative of good fit (Byrne, 2001). A significant interaction effect is evident when the path coefficient from the interaction factor to the endogenous factors is statistically significant. The final step for confirming the significance of an interaction is to test the model with and without the path from the latent interaction factor to the endogenous factors, and compare the two models on the basis of the  $\chi^2$ -difference statistic.

## Results

### *Descriptive statistics*

Table I shows the means, standard deviations, correlations, and the internal consistencies of all scales included in this study. As can be seen, the reliabilities were moderate to acceptable for all scales. Furthermore, the composite, sum score of women and men's work engagement is significantly correlated ( $r = 0.22, p < 0.01$ ) providing a first indication of direct crossover. Men's work engagement and in particular their dedication is positively related to both in-role and extra-role performance.



**Table I.**  
Means, standard deviations (SD), correlations and reliabilities (Cronbach's alpha; on the diagonal) of the study variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Work engagement W	4.19	0.65	0.87									
2. Vigor W	3.44	0.76	0.90**	0.70								
3. Dedication W	4.18	1.10	0.92**	0.75**	0.89**							
4. Work engagement M	4.26	0.68	0.22**	0.16*	0.26**	0.92**						
5. Vigor M	3.51	0.81	0.20**	0.13*	0.25**	0.92**	0.84**					
6. Dedication M	4.26	1.18	0.22**	0.17*	0.25**	0.93**	0.73**	0.91				
7. Empathic concern M	3.58	0.37	0.12*	0.09	0.10	0.14*	0.14*	0.14*	0.69			
8. Perspective taking M	3.40	0.33	0.03	0.04	0.01	0.23**	0.20*	0.25**	0.33**	0.62		
9. In-role performance M	4.78	0.78	0.00	0.06	-0.06	0.19*	0.11	0.22**	0.01	0.16*	0.87	
10. Extra-role performance M	4.33	0.97	0.01	0.01	-0.01	0.22**	0.21**	0.21**	0.22**	0.30**	0.36**	0.72

**Notes:** W = Women, M = Men; \*  $p < 0.05$ ; \*\*  $p < 0.01$

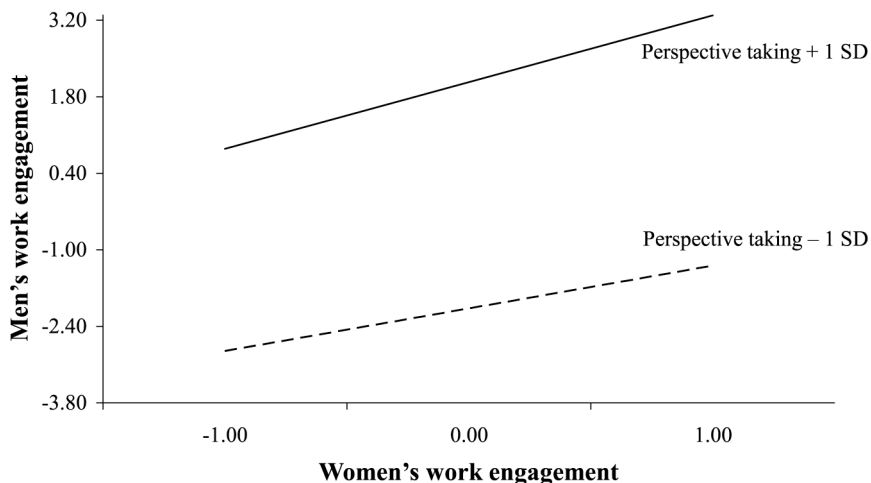
### Results of MSEM analyses

Results of MSEM analyses provided *no* support for our first hypothesis that empathic concern would moderate the crossover effect. While the fit of the model to the data was satisfactory,  $\chi^2(13) = 26.52$ ,  $p = 0.01$ , GFI = 0.96, TLI = 0.89, CFI = 0.93, RMSEA = 0.08, the latent interaction factor was not significantly related to men's work engagement ( $\gamma = 0.10$ , ns). However, the model including perspective taking as a moderator showed a good fit to the data,  $\chi^2(13) = 21.19$ ,  $p = 0.07$ , GFI = 0.97, TLI = 0.93, CFI = 0.96, RMSEA = 0.06; and the latent interaction factor had a significant impact on men's work engagement ( $\gamma = 0.20$ ,  $p < 0.05$ ). Testing the model with and without the path from the latent interaction factor to men's work engagement showed that the elimination of the path significantly worsened the fit of the model,  $\Delta\chi^2(1) = 5.27$ ,  $p < 0.05$ .

To examine the direction of the effect, a graphical representation of the interaction was derived from the simple slope analyses (Aiken and West, 1991; Frazier *et al.*, 2004). We computed predicted values of men's work engagement for two groups, namely for those who score 1 standard deviation below and above the mean on the predictor (women's work engagement) and moderator (perspective taking) variables. After that, a figure representing the form of the interaction could be drawn (Figure 2). Consistent with *H2*, the crossover of engagement was stronger when men were characterized by high (vs low) levels of perspective taking. When women's work engagement was high, men with high levels of perspective taking reported higher work engagement.

### Other relationships

Results of the MSEM analyses showed that women's work engagement had a positive main effect on their partner's work engagement ( $\gamma = 0.25$ ,  $p < 0.01$ ). Whereas men's perspective taking was also significantly and positively related to their work engagement ( $\gamma = 0.29$ ,  $p < 0.001$ ), men's empathy showed a nonsignificant positive effect ( $\gamma = 0.16$ ). Finally, and as predicted in *H3*, men's work engagement was positively related to their job performance (operationalized by colleague ratings of their in-role and extra-role performance;  $\gamma = 0.38$ ,  $p < 0.01$ ). The Sobel test showed that the



**Figure 2.**  
Interaction effect of  
women's work  
engagement and men's  
perspective taking on  
men's work engagement

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indirect effect of women's work engagement on men's job performance through men's work engagement was significant,  $z = 2.34$ ,  $p = 0.025$ . Both models explained 14 percent of the variance in job performance.

### Discussion

The central aim of the present study was to take a closer look at the crossover process. We followed Westman's (2002) suggestion to add measures of empathy to crossover research in order to test the hypothesis that direct crossover is the result of an empathic reaction among closely related individuals – intimate partners. Since most studies to date have focused on the crossover of negative experiences (e.g., depression, burnout, anxiety) among couples, we decided to investigate the transmission of a positive experience – work engagement – from working women to their partners. We hypothesized that empathic concern and perspective taking reinforce and thus qualify the crossover effect. The results of moderated structural equation modeling analyses clearly showed that work engagement crosses over between partners. Furthermore, results supported the hypothesis that perspective taking moderates this crossover effect. Men who were inclined to adopt the point of view of other people in everyday life (perspective taking) were more strongly influenced by their partners' work engagement than their counterparts. For empathic concern we did not find such an effect.

These findings add to the literature in at least two ways. First, the finding that work engagement crosses over between partners replicates a previous study among working couples (Bakker *et al.*, 2005). This strengthens our belief that positive experiences may cross over just as well as negative experiences, although positive experiences and feelings are not merely the absence of stress but qualitatively different experiences (Fredrickson, 2001). Second, the present study sheds some light on the process of crossover, and indicates under which conditions employees are influenced by their partners and consequently change their work behavior. Our findings offer partial support for the "direct-empathy" explanation for the crossover process (Westman, 2001, 2006).

Both empathic concern and perspective taking require imaginatively experiencing the situation of one's partner. Nevertheless, and interestingly, only perspective taking moderated the crossover of work engagement effect, and showed that work engagement was most likely to cross over when men were characterized by the spontaneous tendency to adopt the psychological perspective of their partner. We can only speculate about the reasons why empathic concern did not act in a similar way. Whereas perspective taking clearly refers to the non-emotional or cognitive type of empathy, empathic concern is clearly an indicator of emotional responsiveness. It is conceivable that the latter type of empathy is more likely to moderate the crossover of negative (vs positive) emotions. Empathic concern refers to a person's tendency to experience feelings of warmth, compassion, and concern for others, and this may be the active psychological mechanism when it comes to the crossover of strain. Nevertheless, we found that working women who communicated enthusiastically about their work influenced their partners' level of engagement, particularly when the men listened carefully and related emotionally to their wives.

Emotional and cognitive attunement greatly serves the goal of understanding the other's emotions, and is thus highly valuable in communication. In the current study,

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perspective taking had a main effect on work engagement as well, suggesting that this trait can be seen as a positive quality or personal resource (Hobfoll, 2002). However, it should be noted that perspective taking (just like empathic concern) might become a potential risk or vulnerability factor if the topic of the communication is negative. When having conflicts, or when one partner is burned-out, understanding may have deleterious effects. Indeed, marital adjustment research (e.g., Ickes and Simpson, 1997; Sillars, 1998) has shown that understanding may benefit couples as a general rule, but too much understanding regarding high-conflict issues or potentially threatening issues may be detrimental to the relationship. For example, Simpson *et al.* (2003) videotaped married couples as they tried to resolve a problem in their marriage. Both spouses then viewed a videotape of the interaction, recorded the thoughts and feelings they had at specific time points, and tried to infer their partner's thoughts and feelings. Consistent with predictions, when the partner's thoughts and feelings were relationship-threatening, greater empathic accuracy on the part of the perceiver was associated with pre-to-post-test declines in the perceiver's feelings of subjective closeness. The reverse was true when the partner's thoughts and feelings were nonthreatening. Future crossover studies should focus on the role of empathy in the transmission of negative work-related experiences, including burnout and work-related depressive symptoms.

Finally, results of the Sobel-test indicated that women's work engagement indirectly influenced men's performance, through men's work engagement. This finding is a clear demonstration of family-work facilitation (Van Steenbergen, 2007), and indicates how experiences in the family domain may crossover at home from one partner to the other, and consequently spillover to the work domain. The positive relationship between men's work engagement and colleague ratings of their in-role and extra-role performance is consistent with the happy-productive worker thesis. Male employees who feel vigorous and strong, and are highly dedicated to their work perform better in terms of their role obligations and organizational citizenship behaviors. Whereas some studies in this domain have not found convincing evidence for the happy-productivity hypothesis, we found reasonable support for the link between work engagement and job performance. Previous research was generally characterized by small studies, and included positive affect, the absence of negative affect, job satisfaction, and (reduced levels of) exhaustion (Wright and Cropanzano, 2000). Our study suggests that it is the combination of "can do" (vigor) and "will do" (dedication) that is important. The results are in line with some recent studies showing that work engagement has positive effects on organizational performance (e.g., Salanova *et al.*, 2005; Harter *et al.*, 2002).

### *Limitations*

One limitation of the present study is that we only investigated the unidirectional effect of women's work engagement on men's engagement. In her review, Westman (2002) shows that although the evidence for bidirectional crossover is accumulating (e.g., Bakker *et al.*, 2005; Demerouti *et al.*, 2005; Hammer *et al.*, 1997), most (stress) crossover studies have been unidirectional, examining and finding effects of husbands' job stress on the well-being of their wives (e.g., Burke *et al.*, 1980; Jackson and Maslach, 1982; Long and Voges, 1987; Pavett, 1986; Rook *et al.*, 1991). These studies related to the wives as the passive recipients of stress and strain from their husbands, and in some cases had mixed samples of working and non-working wives. We decided to examine

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the unidirectional effect of working women's engagement to their husbands' engagement since previous (stress) research has shown that crossover of stress and strain flows from husbands to wives more than from wives to husbands (Bolger *et al.*, 1989; Jones and Fletcher, 1993; Westman *et al.*, 2001). Thus, our study can be seen as a conservative test of the crossover effect. A second reason to use women as the senders of the information was that Dutch male employees work more often full-time, and therefore their performance is better visible for colleagues who are asked to rate their performance.

Another limitation of this study is that we focused on inter-gender relationships, and the generalizability of the results to same gender couples is unknown. In addition, our study was conducted among a heterogeneous sample of working couples in The Netherlands. We do not know how representative our sample is of the working population, which limits the external validity of our findings. Note, however, that the response rate was very high, which is unusual for crossover research. Future studies should illuminate whether the present findings can be generalized to same gender couples and other national contexts.

### Conclusion

The present study clearly showed that work engagement crosses over between partners, and confirms the notion that – just like negative states – positive states do transfer between closely related individuals. Furthermore, perspective taking is one of the explanatory variables: men who were inclined to adopt the point of view of other people in everyday life were most likely to “catch” the vigor and dedication of their partners. Future studies could investigate other potential mediators and moderators like the amount of communication (in terms of hours) or the content of communication (including discussing conflicts or only positive experiences, etc.) Future studies should also investigate whether empathic concern plays a similar role as a moderator when it comes to negative states (e.g. burnout). Finally, our study adds to the literature on work engagement by showing that this positive state of well-being is predictive of other ratings of performance.

### References

- Aiken, L.S. and West, S.G. (1991), *Multiple Regression: Testing and Interpreting Interactions*, Sage, Newbury Park, CA.
- Arbuckle, J.L. (2003), *Amos 5.0 Update to the Amos User's Guide*, Small Waters, Chicago, IL.
- Bakker, A.B. (2005), “Flow among music teachers and their students: the crossover of peak experiences”, *Journal of Vocational Behavior*, Vol. 66 No. 1, pp. 26-44.
- Bakker, A.B. and Bal, P.M. (2007), “How work engagement influences performance: a weekly diary study among starting teachers”, manuscript submitted for publication.
- Bakker, A.B. and Schaufeli, W.B. (2000), “Burnout contagion processes among teachers”, *Journal of Applied Social Psychology*, Vol. 30 No. 11, pp. 2289-308.
- Bakker, A.B., Demerouti, E. and Schaufeli, W.B. (2005), “Crossover of burnout and work engagement among working couples”, *Human Relations*, Vol. 58 No. 5, pp. 661-89.
- Bakker, A.B., Demerouti, E. and Verbeke, W. (2004), “Using the job demands-resources model to predict burnout and performance”, *Human Resource Management*, Vol. 43 No. 1, pp. 83-104.

- 
- Bakker, A.B., Van Emmerik, I.J.H. and Euwema, M.C. (2006), "Crossover of burnout and engagement in work teams", *Work & Occupations*, Vol. 33 No. 4, pp. 464-89.
- Bakker, A.B., Schaufeli, W.B., Demerouti, E. and Euwema, M.C. (2007), "An organizational and social psychological perspective on burnout and work engagement", in van den Bos, K., Hewstone, M., de Wit, J., Schut, H. and Stroebe, M. (Eds), *The Scope of Social Psychology: Theory and Applications*, Psychology Press, Oxford, pp. 227-50.
- Bakker, A.B., Schaufeli, W.B., Sixma, H. and Bosveld, W. (2001), "Burnout contagion among general practitioners", *Journal of Social and Clinical Psychology*, Vol. 20 No. 1, pp. 82-98.
- Bandura, A. (2001), "Social cognitive theory: an agentic perspective", *Annual Review of Psychology*, Vol. 52, pp. 1-26.
- Bohrnstedt, G.W. and Marwell, G. (1978), "The reliability of products of two random variables", in Schuessler, K.E. (Ed.), *Social Methodology*, Joseey-Bass, San Francisco, CA, pp. 254-73.
- Bolger, N., DeLongis, A., Kessler, R. and Wethington, E. (1989), "The contagion of stress across multiple roles", *Journal of Marriage and the Family*, Vol. 51 No. 1, pp. 175-83.
- Burke, R.J., Weir, T. and DuWors, R.E. (1980), "Work demands on administrators and spouse well-being", *Human Relations*, Vol. 33 No. 4, pp. 253-78.
- Byrne, B.M. (2001), *Structural Equation Modeling with AMOS: Basic Concepts, Applications, and Programming*, Lawrence Erlbaum Associates, Mahwah, NJ.
- Cohen, S., Doyle, W.J., Turner, R.B., Alper, C.M. and Skoner, D.P. (2003), "Sociability and susceptibility to the common cold", *Psychological Science*, Vol. 14 No. 5, pp. 389-95.
- Cortina, J.M., Chen, G. and Dunlap, W.P. (2001), "Testing interaction effects in LISREL: examination and illustration of available procedures", *Organizational Research Methods*, Vol. 4 No. 4, pp. 324-60.
- Davis, M.H. (1980), "A multidimensional approach to individual differences in empathy", *JSAS Catalog of Selected Documents in Psychology*, Vol. 10 No. 4, p. 85.
- Davis, M.H. (1983), "Measuring individual differences in empathy: evidence for a multidimensional approach", *Journal of Personality and Social Psychology*, Vol. 44 No. 1, pp. 113-26.
- Demerouti, E. and Bakker, A.B. (2006), "Employee well-being and job performance: where we stand and where we should go", in McIntyre, S. and Houdmout, J. (Eds), *European Perspectives in Occupational Health Psychology*, Vol. 1, ISMAI Publishers, Maia.
- Demerouti, E., Bakker, A.B. and Schaufeli, W.B. (2005), "Spillover and crossover of exhaustion and life satisfaction among dual-earner parents", *Journal of Vocational Behavior*, Vol. 67 No. 2, pp. 266-89.
- Demerouti, E., Bakker, A.B., De Jonge, J., Janssen, P.P.M. and Schaufeli, W.B. (2001), "Burnout and engagement at work as a function of demands and control", *Scandinavian Journal of Work, Environment & Health*, Vol. 27 No. 4, pp. 279-86.
- Deutsch, F. and Madle, R. (1975), "Empathy: historic and current conceptualizations, measurement, and a cognitive theoretical perspective", *Human Development*, Vol. 18 No. 4, pp. 267-87.
- Eckenrode, J. and Gore, S. (1981), "Stressful events and social support: the significance of context", in Gottlieb, B. (Ed.), *Social Networks and Social Support*, Sage, Beverly Hills, CA, pp. 43-68.
- Frazier, P.A., Tix, A.P. and Barron, K.E. (2004), "Testing moderator and mediator effects in counseling psychology", *Journal of Counseling Psychology*, Vol. 51 No. 1, pp. 115-34.
- Fredrickson, B. (2001), "The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions", *American Psychologist*, Vol. 56 No. 3, pp. 218-26.



- González-Romá, V., Schaufeli, W.B., Bakker, A.B. and Lloret, S. (2006), "Burnout and work engagement: independent factors or opposite poles?", *Journal of Vocational Behavior*, Vol. 62, pp. 165-74.
- Goodman, S.A. and Svyantek, D.J. (1999), "Person-organization fit and contextual performance: do shared values matter?", *Journal of Vocational Behavior*, Vol. 55, pp. 254-75.
- Greenhaus, J.H. and Powell, G.N. (2006), "When work and families are allies: a theory of work-family enrichment", *The Academy of Management Review*, Vol. 31, pp. 72-92.
- Hammer, L.B., Allen, E. and Grigsby, T.D. (1997), "Work-family conflict in dual-earner couples: Within individual and crossover effects of work and family", *Journal of Vocational Behavior*, Vol. 50 No. 2, pp. 185-203.
- Harter, J.K., Schmidt, F.L. and Hayes, T.L. (2002), "Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis", *Journal of Applied Psychology*, Vol. 87, pp. 268-79.
- Hobfoll, S.E. (2002), "Social and psychological resources and adaptation", *Review of General Psychology*, Vol. 6 No. 4, pp. 307-24.
- Ickes, W. and Simpson, J. (1997), "Managing empathic accuracy in close relationships", in Ickes, W. (Ed.), *Empathic Accuracy*, Guilford Press, New York, NY, pp. 218-50.
- Jackson, S.E. and Maslach, C. (1982), "After-effects of job-related stress: families as victims", *Journal of Occupational Behavior*, Vol. 3, pp. 63-77.
- Jones, F. and Fletcher, B. (1993), "Transmission of occupational stress: a study of daily fluctuations in work stress and strain and their impact on marital partners", in Schroder, H., Rescke, K., Johnston, M. and Maes, S. (Eds), *Health Psychology: Potential Indivarsity*, Roderer Verlag, Regensburg, pp. 328-38.
- Katz, J., Beach, S. and Joiner, T. (1999), "Contagious depression in dating couples", *Journal of Social and Clinical Psychology*, Vol. 18 No. 1, pp. 1-13.
- Lazarus, R.S. (1991), *Emotion and Adaptation*, Oxford University Press, New York, NY.
- Long, N. and Voges, K. (1987), "Can wives perceive the sources of their husbands' occupational stress?", *Journal of Occupational Psychology*, Vol. 60 No. 3, pp. 235-42.
- Lyubomirsky, S., King, L. and Diener, E. (2005), "The benefits of frequent positive affect: does happiness lead to success?", *Psychological Bulletin*, Vol. 131 No. 6, pp. 803-55.
- McKenzie, S.B., Podsakoff, P.M. and Fetter, R. (1991), "Organizational citizenship behavior and objective productivity as determinants of managerial evaluations of salespersons' performance", *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 1, pp. 123-50.
- Mathieu, J.E., Tannenbaum, S.I. and Salas, E. (1992), "Influences of individual and situational characteristics on measures of training effectiveness", *Academy of Management Journal*, Vol. 35 No. 4, pp. 828-47.
- Mauno, S. and Kinnunen, U. (1999), "The effects of job stressors on marital satisfaction in Finnish dual-earner couples", *Journal of Organizational Behavior*, Vol. 20 No. 6, pp. 879-95.
- May, D.R., Gilson, R.L. and Harter, L.M. (2004), "The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work", *Journal of Occupational and Organizational Psychology*, Vol. 77 No. 1, pp. 11-37.
- Motowidlo, S.J. and Van Scotter, J.R. (1994), "Evidence that task performance should be distinguished from contextual performance", *Journal of Applied Psychology*, Vol. 79 No. 4, pp. 475-80.
- Pavett, C.M. (1986), "High-stress professions: satisfaction, stress, and well-being of spouses of professionals", *Human Relations*, Vol. 39 No. 12, pp. 1141-54.

- 
- Rook, S.K., Dooley, D. and Catalano, R. (1991), "Stress transmission: the effects of husbands' job stressors on emotional health of their wives", *Journal of Marriage and the Family*, Vol. 53 No. 1, pp. 165-77.
- Salanova, M., Agut, S. and Peiró, J.M. (2005), "Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate", *Journal of Applied Psychology*, Vol. 90 No. 6, pp. 1217-27.
- Schaufeli, W.B. and Bakker, A.B. (2003), *The Utrecht Work Engagement Scale (UWES)*, Test Manual, Department of Social and Organizational Psychology, Utrecht.
- Schaufeli, W.B. and Bakker, A.B. (2004), "Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study", *Journal of Organizational Behavior*, Vol. 25 No. 3, pp. 293-315.
- Schaufeli, W.B. and Salanova, M. (2007), "Work engagement: an emerging psychological concept and its implications for organizations", in Gilliland, S.W., Steiner, D.D. and Skarlicki, D.P. (Eds), *Research in Social Issues in Management (Volume 5): Managing Social and Ethical Issues in Organizations*, Vol. 5, Information Age Publishers, Greenwich, CT, pp. 135-77.
- Schaufeli, W.B., Salanova, M., González-Romá, V. and Bakker, A.B. (2002), "The measurement of engagement and burnout: a two sample confirmatory factor analytic approach", *Journal of Happiness Studies*, Vol. 3 No. 1, pp. 71-92.
- Schaufeli, W.B., Taris, T.W. and Bakker, A.B. (2006), "Dr Jeckyll or Mr Hyde: on the differences between work engagement and workaholism", in Burke, R.J. (Ed.), *Research Companion to Working Time and Work Addiction*, Edward Elgar, Cheltenham, pp. 193-217.
- Schaufeli, W.B., Taris, T.W. and Van Rhenen, W. (in press), "Workaholism, burnout, and work engagement: three of a kind or three different kinds of employee well-being?", *Applied Psychology: An International*.
- Schaufeli, W.B., Taris, T.W., Le Blanc, P., Peeters, M., Bakker, A.B. and De Jonge, J. (2001), "Maakt arbeid gezond? Op zoek naar de bevlogen werknemer" ("Does work make happy? In search of the engaged worker)", *De Psycholoog*, Vol. 36, pp. 422-8.
- Sillars, A.L. (1998), "(Mis)understanding", in Spitzberg, B.H. and Cupach, W.R. (Eds), *The Dark Side of Relationships*, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 73-102.
- Simpson, J.A., Oriña, M.M. and Ickes, W. (2003), "When accuracy hurts, and when it helps: a test of the empathic accuracy model in marital interactions", *Journal of Personality and Social Psychology*, Vol. 85 No. 5, pp. 881-93.
- Sonnentag, S. (2003), "Recovery, work engagement, and proactive behavior: a new look at the interface between non-work and work", *Journal of Applied Psychology*, Vol. 88 No. 3, pp. 518-28.
- Starcevic, V. and Piontek, C.M. (1997), "Empathic understanding revisited: conceptualization, controversies, and limitations", *American Journal of Psychotherapy*, Vol. 51 No. 3, pp. 317-28.
- Stotland, E. (1969), "Exploratory investigations of empathy", in Berkowitz, L. (Ed.), *Advances in Experimental Social Psychology*, Vol. 4, Academic Press, New York, NY, pp. 271-314.
- Van Steenbergen, E.F. (2007), "Work-family facilitation: a positive psychological perspective on role combination", unpublished doctoral dissertation, Leiden University, Leiden.
- Veenhoven, R. (1988), "The utility of happiness", *Social Indicators Research*, Vol. 20, pp. 333-54.
- Vinokur, A., Price, R.H. and Caplan, R.D. (1996), "Hard times and hurtful partners: how financial strain affects depression and relationship satisfaction of unemployed persons and their spouses", *Journal of Personality and Social Psychology*, Vol. 71 No. 1, pp. 166-79.
- Westman, M. (2001), "Stress and strain crossover", *Human Relations*, Vol. 54, pp. 557-91.

- Westman, M. (2002), "Crossover of stress and strain in the family and in the workplace", in Perrewé, P.L. and Ganster, D.C. (Eds), *Research in Occupational Stress and Well-being*, Vol. 2, JAI Press/Elsevier Science, Greenwich, CT, pp. 143-81.
- Westman, M. (2006), "Crossover of stress and strain in the work-family context", in Jones, F., Burke, R.J. and Westman, M. (Eds), *Work-life Balance: A Psychological Perspective*, Psychology Press, Hove.
- Westman, M. and Etzion, D. (1995), "Crossover of stress, strain and resources from one spouse to another", *Journal of Organizational Behavior*, Vol. 16, pp. 169-81.
- Westman, M. and Etzion, D. (1999), "The crossover of strain from school principals to teachers and vice versa", *Journal of Occupational Health Psychology*, Vol. 4, pp. 269-78.
- Westman, M. and Vinokur, A. (1998), "Unraveling the relationship of distress levels within couples: common stressors, emphatic reactions, or crossover via social interactions?", *Human Relations*, Vol. 51, pp. 137-56.
- Westman, M., Etzion, D. and Danon, E. (2001), "Job insecurity and crossover of burnout in married couples", *Journal of Organizational Behavior*, Vol. 22 No. 5, pp. 467-81.
- Westman, M., Etzion, D. and Horovitz, S. (2004), "The toll of unemployment does not stop with the unemployed", *Human Relations*, Vol. 57, pp. 823-44.
- Wright, T.A. and Cropanzano, R. (2000), "Psychological well-being and job satisfaction as predictors of job performance", *Journal of Occupational Health Psychology*, Vol. 5 No. 1, pp. 84-94.

#### Further reading

- Bakker, A.B., Le Blanc, P.M. and Schaufeli, W.B. (2005), "Burnout contagion among nurses who work at intensive care units", *Journal of Advanced Nursing*, Vol. 51 No. 3, pp. 276-87.
- Schaufeli, W.B. and Bakker, A.B. (2001), "Werk en welbevinden: Naar een positieve benadering in de Arbeids- en Gezondheidspsychologie" ("Work and well-being: Towards a positive approach of occupational health psychology)", *Gedrag & Organisatie*, Vol. 14, pp. 229-53.

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