

Crossover of Work Engagement Among Japanese Couples: Perspective Taking by Both Partners

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This study among 426 Japanese couples working in different occupational sectors tested the hypothesis that perspective taking moderates the crossover of work engagement. More specifically, we predicted that husbands' work engagement would cross over to their wives, particularly when wives scored high on perspective taking (the spontaneous tendency to adopt the psychological perspective of other people). A similar effect was predicted from wives to husbands. In addition, we hypothesized that the crossover effect would be most pronounced when both partners were high in perspective taking (i.e., a 3-way interaction effect). The results of moderated structural equation modeling analyses confirmed the moderating role of perspective taking, but only for women; women who took the perspective of their partner scored higher on engagement with increasing partner engagement. Moreover, the results showed that engagement crossover was strongest when both men and women were high (vs. low) in perspective taking. This 3-way interaction effect was found from husbands to wives, and vice versa. These findings expand the crossover literature by shedding light on the crossover process.

Keywords: crossover, contagion, empathy, employee engagement, perspective taking

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* (Bakker, Westman, & Van Emmerik, 2009; Westman, 2001). 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 strain, and these studies have shown that several types of strain may cross over from one person to another (intimate partner, colleagues). For

example, researchers have found that anxiety (Westman, Etzion, & Horovitz, 2004), depression (Katz, Beach, & Joiner, 1999; Vinokur, Price, & Caplan, 1996; Westman & Vinokur, 1998), and job burnout (e.g., Bakker, Westman, & Schaufeli, 2007; Westman & Etzion, 1999) may cross over between closely related individuals.

Recently, researchers have started to examine the crossover of positive well-being, including marital satisfaction (Demerouti, Bakker, & Schaufeli, 2005), flow at work (Bakker, 2005), and work engagement (Bakker, Demerouti, & Schaufeli, 2005; Bakker, Van Emmerik, & Euwema, 2006). Although these studies made a strong case for the existence of positive crossover, they did not illuminate the mechanisms responsible for the crossover. Bakker and Demerouti (2009) in their recent study among Dutch dual-earner couples were the first to study the role of empathy in the crossover process. They found that the crossover of work engagement is dependent on perspective taking; the crossover of engagement from wives to their husbands was strongest when husbands were high in perspective taking. However, Bakker and Demerouti's design did not allow a test of bidirectional crossover and did not examine the role of both senders' and receivers' characteristics in the crossover process.

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The present study looks at bidirectional crossover of work engagement, that is, from women to men and from men to women. Furthermore, we aim to replicate and expand previous findings in Western countries by conducting a study among Japanese dual-earner couples. This is important because virtually all studies on crossover have been conducted in Europe and the United States (for an exception, see Shimazu, Bakker, & Demerouti, 2009). Our central aim is to test the hypothesis that the crossover of engagement is strongest when both partners score high on perspective taking. A focus on characteristics of the “sender” and “receiver” in the dyad is new and will clearly expand the crossover literature.

Theoretical Background and Hypotheses Development

The Crossover Process

Westman (2001; Westman & Etzion, 1999) has argued that there are three main mechanisms responsible for crossover. Note that Westman has generally referred to the crossover of strain instead of positive states. The first mechanism concerns the direct transmission of strain 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) suggested almost 30 years ago that the effect of one’s strain on the spouse’s distress might be the result of empathy as expressed in statements such as “We feel their pain is our own” (p. 771).

The second mechanism suggests that the relationship between partners’ strain is spurious, because what appears to be a crossover effect is the result of common experiences. For instance, if the couple is confronted with common stressors such as financial problems or the death of a family member, they both may feel miserable. Consequently, their feelings of depression may be positively related. Or, if both partners encounter a very positive experience such as the academic success of their child, their feelings of happiness may be positively related.

Finally, Westman (2001) argued that crossover may be the result of an indirect interaction process positing mediating and moderating effects. Specifically, she stated 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 or hinder the attainment of instrumental goals) mediates the crossover of depression from one

partner to the other (e.g., Westman & Vinokur, 1998; see also Bakker, Demerouti, & Dollard, 2008). In other words, the mechanism of indirect crossover focuses on the conditions that facilitate crossover processes. The important issue is the spiral that starts when one role sender’s state and actions affect the partner, and vice versa (Westman, 2001). According to Westman, accurate knowledge of the spouse’s job stress may be an important mechanism in the crossover process.

In the present study, we examine the role of perspective taking in the crossover process. We use a sample of Japanese dual-earner couples and focus on the transmission 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 & Bakker, 2004). *Vigor* refers to high levels of energy and mental resilience while working. *Dedication* signals 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 work, whereby time passes quickly. 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 Bakker & Leiter, 2010; May, Gilson, & Harter, 2004).

Research has shown that engaged employees exhibit personal initiative, proactive behavior, and learning motivation (Schaufeli & Salanova, 2007; Sonnentag, 2003). Engaged workers are happy to help their colleagues (Halbesleben & Wheeler, 2008), and because of their extraversion, enthusiasm, and success they are highly visible (Bakker & Xanthopoulou, 2009; Langelaan, Bakker, Schaufeli, & Van Doornen, 2006). Moreover, some studies have indicated that engaged workers function better at home (e.g., Peeters, Watez, Demerouti, & De Regt, 2009). Not surprisingly, work engagement has been found to cross over between marital partners (Bakker & Demerouti, 2009; Bakker et al., 2005) as well as between colleagues (Bakker et al., 2006; Bakker & Xanthopoulou, 2009).

Perspective Taking

The present study focuses on empathy as the potential underlying mechanism causing crossover.

Several scholars have defined *empathy* as the ability to “place oneself mentally and emotionally in the world of another person, to apprehend another’s condition and state of mind, to communicate understanding back to the other and perceive his reaction to it” (Åström, Nilsson, Norberg, Sandman, & Winblad, 1991, p. 67). Similarly, Lazarus (1991) defined empathy as “sharing another’s feelings by placing oneself psychologically in that person’s circumstances” (p. 287).

The core relational theme for empathy involves the sharing of another person’s emotional state. Accordingly, the work engagement expressed by the sender may fuel the receiver’s engagement, because it focuses the receiver’s thoughts on the positive aspects of work that make him or her 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.

At a theoretical level, empathy may best be considered as a set of related constructs including both emotional and nonemotional components (Davis, 1983; Deutsch & Madle, 1975). On the basis of such a multidimensional view of empathy, Davis developed the interpersonal reactivity index, which consists of four separate dimensions. In the present study, we focus on *perspective taking*: “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). Perspective taking is a nonemotional or cognitive type of empathy and involves the ability to recognize and understand the thoughts of others. We focus particularly on perspective taking because it has been found that people who score high on perspective taking show better social functioning—they score more favorably on measures of shyness, loneliness, and social anxiety (Davis, 1983). Also, perspective takers are more inclined to direct their attention to others (Davis, 1983) and to help these others (Oswald, 1996). Perspective-taking ability should allow individuals to anticipate the behavior and reactions of others, therefore facilitating smoother and more rewarding interpersonal relationships (Davis, 1983).

In line with Bakker and Demerouti (2009), we predict that perspective taking moderates the crossover of work engagement. In their study among working couples, Bakker and Demerouti found that the crossover of work engagement from wives to

their husbands was strongest when husbands scored high on perspective taking. We expand the latter study by examining crossover both from wives to their husbands and from husbands to their wives. This test of bidirectional crossover offers an even more robust test of Westman’s (2001) hypothesis that empathy explains the crossover of well-being between spouses.

Hypothesis 1. Perspective taking moderates the relationship between women’s and men’s work engagement: (a) the crossover of engagement from men to women will be strongest when women are characterized by high (vs. low) levels of perspective taking; and (b) the crossover of engagement from women to men will be strongest when men are characterized by high (vs. low) levels of perspective taking.

Perspective Taking by Both Partners

During interactions, individuals who try to take the perspective of each other and imagine how they would feel if they were in the position of their partners take over the work engagement of their partner. This engagement is then communicated back to the partner and presumably strengthened. Our central hypothesis is therefore that the crossover of engagement is strongest when both partners score high on perspective taking.

Mutual perspective taking increases the probability that the attitudes and emotions communicated are reciprocated, because these attitudes and emotions are better perceived and understood. Indeed, researchers have found evidence for the reciprocation of several emotions, including embarrassment (Miller, 1987) and sadness (Batson & Shaw, 1991), but also laughter (Provine, 1992). In the context of organizations, Walter and Bruch (2008) developed a dynamic model of the emergence of positive affective similarity in work groups that is conceptually similar to the model proposed in the present study. They argued that positive group affective similarity and within-group relationship quality are reciprocally related in the form of a self-reinforcing spiral, which is driven by mechanisms of affective sharing and affective similarity–attraction between group members. This *positive group affect spiral* is proposed to continuously strengthen both the similarity of group members’ positive affect and the quality of their interpersonal relationships in a dynamic process.

On the basis of this literature, we expect that the crossover of work engagement will be most likely if both partners score high on perspective taking. Under these conditions, partners are likely to elaborate upon

each other's standpoints and to be aware of the emotional state of the other regardless of whether the partner referred to it (Westman, 2001). In this way, the study adds to the crossover literature by examining the role of personal characteristics of the sender as an important determinant of crossover next to the characteristics of the receiver or the interpersonal factors as suggested by Westman (2001). If the sender's work-related attitude is one of high work engagement, it is likely that this attitude is most clearly communicated when both partners try to understand each other. Therefore, we predict a three-way interaction effect:

Hypothesis 2. The relationship between women's and men's work engagement is most strongly positively related when both score high on perspective taking: (a) the crossover of engagement from men to women will be strongest when men and women are both characterized by high (vs. low) levels of perspective taking; and (b) the crossover of engagement from women to men will be strongest when men and women are both characterized by high (vs. low) levels of perspective taking.

Context of the Present Study

A special feature of the present study is that it is conducted among Japanese couples. Japanese couples may differ from Western couples in several ways, and this is one important reason to conduct the study in Japan. Markus and Kitayama (1991) have argued that Eastern people share an "interdependent view of self," whereas Western people share an "independent view of self." Accordingly, valued behaviors in Eastern culture are belonging, staying in one's place, engaging in proper action, and promoting the goals of the group, whereas valued behaviors in Western culture are individual creativity, self-expression, recognition of personal attributes, and promotion of personal goals. This may suggest that perspective taking plays a more important role in the crossover process among the Japanese people than among Western people because the Japanese people are less inclined to express their engagement. However, although two studies examined crossover among dual-earner couples in Japan (Kato & Kanai, 2007; Shimazu et al., 2009), there are no empirical studies that examined the role of perspective taking in crossover among Japanese couples.

Method

Participants and Procedure

The present study is a part of the Tokyo Work-family INterface (TWIN) study, a large cohort study. The TWIN study aims at examining spillover and crossover processes of well-being among all dual-earner couples with preschool children (more than 4000 couples) in the Setagaya ward, Tokyo, Japan. To the best of our knowledge, this is the largest work-family interface study that collected data from dual-earner couples. In the present article, we analyze the first wave of data collected in 2008, focusing especially on work engagement and perspective taking.

Working partners were approached through the nursery schools where they brought their children. With help of the Child-Raising Assistance department of the Setagaya ward, a letter was sent to all directors of nursery schools in this ward. The letter explained the aims, procedure, and ethical consideration of the study. Eighty-one out of all 82 nurseries agreed to participate. The researchers sent two identical questionnaires, one for each partner, through the nursery schools. The questionnaire included scales that were translated from English to Japanese. We followed the translation-back-translation procedure. Participants were included in the study on a voluntary basis. The partners were kindly requested to fill out the questionnaires independently. Respondents returned their questionnaires in closed and prestamped envelopes to the researcher at the university.

Of the 8964 questionnaires distributed, 2992 were returned, resulting in a response rate of 33.4%. Please note that because of the large number of items, we randomly distributed one of two types of questionnaires (i.e., Types A and B) to couples. This article used the Type A questionnaire, which includes measures of work engagement and perspective taking. The participants used in the present study were 852 adults (i.e., 426 couples) who met the following four criteria: (a) having at least one child 6 years of age or younger; (b) having a partner (neither widowed nor divorced status); (c) being a dual-earner household; and (d) completing all the items of the variables. Please note that we could not calculate the response rate according to the type of questionnaire because we unfortunately did not have information on the number of distributed questionnaires of each type; we had information only on the total number of questionnaires distributed. Demographic information—such as age, educational background, number of children, occu-

pation, and working hours per day—is shown by gender in Table 1. The whole procedure followed in the present study was reviewed and approved by the Ethics Committees of the Graduate School of Medicine, University of Tokyo.

Measures

Perspective taking was assessed with the Interpersonal Reactivity Index (Davis, 1983). The scale includes 7 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.” Participants could respond using a 5-point scale ranging from (1) *totally disagree* to (5) *totally agree*. The internal reliability (Cronbach’s alpha) of the scale was .62 and .68 for women and men, respectively.

Work engagement was assessed for both genders with the Utrecht Work Engagement Scale (UWES;

Schaufeli & Bakker, 2003). Several studies have shown that the UWES has good psychometric properties (Schaufeli & Bakker, 2004; Schaufeli, Salanova, González-Romá, & Bakker, 2002; Shimazu et al., 2008). *Vigor* was assessed with 6 items, including “At my job, I feel bursting with energy.” *Dedication* was measured with 5 items, such as “I am enthusiastic about my job.” *Absorption* was measured with 6 items, including “I am immersed in my work.” The items of the engagement scales used a 7-point response format (0 = *never*, 6 = *every day*). Cronbach’s alpha was .92 for both genders.

Statistical Analyses

To test the 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 provides measures of fit of

Table 1
Characteristics of Participants (N = 426 Couples)

Demographic	Men				Women				Statistical test	p
	n ^a	Mean	SD	%	n	Mean	SD	%		
Age	421	38.01	5.08		421	36.14	(4.06)		$t(420) = 10.26^b$	<.001
Occupation									$\chi^2(3) = 6.33$	0.10
Worker for private company	330			77.46	311					73.00
Civil servant	37			8.69	55					12.91
Self-employed	53			12.44	48					11.27
Teacher	6			1.41	12					2.82
Job contract									$\chi^2(2) = 57.11$	<.001
Full time (≥ 40 hrs/wk)	407			95.54	336					78.87
Part time (<40 hrs/wk)	5			1.17	57					13.38
Other	13			3.05	30					7.04
Education									$\chi^2(1) = 10.68$.001
Less than college or special training school	116			27.23	161					37.79
Bachelor’s degree or higher	309			72.54	265					62.21
Job type									$\chi^2(8) = 139.07$	<.001
Management	87			20.47	14					3.3
Technical engineering	152			35.76	155					36.9
Service sector	45			10.59	34					8.1
Factory/construction work	19			4.47	3					0.7
Over-the-counter business	6			1.41	14					3.3
Salesperson	30			7.06	9					2.1
Warehousing, vehicular, haulage business	8			1.88	1					0.2
Clerical job	67			15.76	182					43.3
Other	11			2.59	14					1.9
Work hours per day	402	9.93	2.63		402	7.40	1.89		$t(401) = 15.45$	<.001

^a The numbers do not add up to the total number of the participants because of occasionally missing data. ^b Paired *t* test.

the models under study. We followed the procedure proposed by Mathieu, Tannenbaum, and Salas (1992), as described by Cortina, Chen, and Dunlap (2001). We expanded this procedure by examining the two-way and three-way interaction effects in two overall models. The models included occupation type, gender, age, and number of children as control variables.

Specifically, we examined two similar processes—that is, crossover from men to women, and crossover from women to men—using conceptually similar models (but different variables). Thus, to test the two-way and three-way interaction effects specified in Hypotheses 1a and 2a, we tested a model that included seven exogenous factors (men’s work engagement, women’s perspective taking, men’s perspective taking, the 3 two-way interaction terms, and the three-way interaction term) and one endogenous factor (women’s work engagement; see Figure 1). A similar model was built to test Hypotheses 1b and 2b regarding the crossover from women to men. Here, women’s work engagement, men’s perspective tak-

ing, women’s perspective taking, and the interaction terms were included as exogenous factors, and men’s work engagement was included as the endogenous factor. Each exogenous variable had only one indicator that was the standardized (centered) scale score of the respective factor (cf. Mathieu et al., 1992). The indicator of the latent two-way interaction factor was the multiplication of the standardized scale scores of the work engagement factor and the perspective-taking factor, whereas the indicator of the latent three-way interaction factor was the multiplication of the standardized scale scores of the three factors involved. The endogenous latent variable used three indicators. Men’s vigor, dedication, and absorption were the indicators of men’s work engagement; women’s vigor, dedication, and absorption were the indicators of women’s work engagement.

The models included direct paths from the seven exogenous factors to the endogenous latent work engagement variable. The perspective taking and

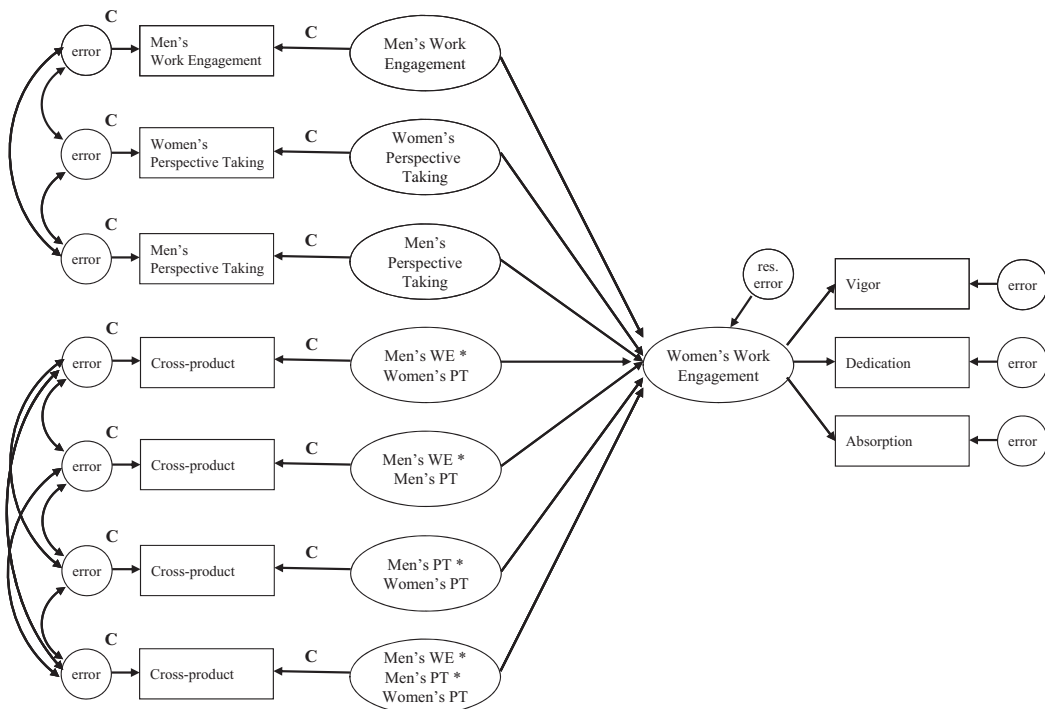


Figure 1. The study model is shown: crossover from men to women. All constrained paths and error variances are marked with C. WE = work engagement; PT = perspective taking; res. error = residual error. Type of occupation, gender, age, and number of children are included as control variables.

work engagement main effect factors were allowed to correlate, and correlations between these variables and the interaction terms were constrained to be zero. Furthermore, the interaction terms were allowed to correlate with each other. The paths from the latent exogenous factors to their indicators were fixed using the square roots of the scale reliabilities, and the error variances of each indicator were set equal to the product of their variances and 1 minus their reliabilities. See Figure 1 for our final model. For more details regarding the calculation of the reliability score of the two-way interaction term, we refer to Cortina et al. (2001). To calculate the reliability of the three-way interaction term, we used the same formula as for the two-way interaction, including 1 two-way interaction term as an independent factor in the formula. Finally, in all models we controlled for age, level of education, and number of children.

The fit of the models was assessed with the chi-square statistic, the goodness-of-fit index (GFI), the comparative fit index (CFI), the Tucker-Lewis Index (TLI), and the root-mean-square error of approximation (RMSEA). It is suggested that GFI, CFI, and TLI values that exceed .90 and RMSEA values as high as .08 are indicative of acceptable fit (Byrne, 2001). A significant interaction effect is evident when the path coefficient from the interaction factors to the endogenous factor 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-square difference statistic.

Results

Descriptive Statistics

Table 2 shows the means, standard deviations, and correlations between all scales included in this study.

Results of MSEM Analyses: Crossover of Men to Women

Hypotheses 1a and 2a were tested using one structural equation model, as is depicted in Figure 1. Results of MSEM analyses indicated that the hypothesized model of engagement crossover from men to women with both partners' perspective taking as moderators fit well to the data, $\chi^2(63) = 143.35$, GFI = .96, TLI = .90, CFI = .93, RMSEA = .06. A first finding was that there was a main effect of men's work engagement on women's work engagement ($\gamma = .21, p < .001$). Importantly, both the latent Men's Work Engagement \times Women's Perspective Taking interaction factor ($\gamma = .19, p < .01$) and the three-way interaction factor ($\gamma = .22, p < .01$) had a significant impact on women's work engagement. Testing the model with and without the path from the latent two-way interaction factor to women's work engagement showed that the elimination of the path significantly worsened the fit of the model, $\Delta\chi^2(1) = 8.19, p < .01$. A similar worsening in model fit was found when the path from the three-way interaction factor to women's work engagement was eliminated from the proposed model, $\Delta\chi^2(1) = 8.61, p < .01$.

Table 2
Means, Standard Deviations (SD), and Correlations Between Study Variables (N = 426 Couples)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
<i>Men</i>											
1. Work engagement	3.06	1.03									
2. Vigor	2.89	1.12	.90**								
3. Dedication	3.41	1.10	.93**	.79**							
4. Absorption	2.89	1.20	.89**	.66**	.74**						
5. Perspective taking	3.59	0.65	.19**	.16**	.20**	.14**					
<i>Women</i>											
6. Work engagement	3.18	1.02	.21**	.21**	.16**	.18**	.06				
7. Vigor	3.17	1.11	.20**	.20**	.17**	.16**	.07	.92**			
8. Dedication	3.55	1.07	.21**	.21**	.16**	.20**	.06	.93**	.82**		
9. Absorption	2.82	1.15	.16**	.16**	.12*	.15**	.04	.90**	.71**	.75**	
10. Perspective taking	3.60	0.59	.05	.07	.02	.04	.00	.23**	.19**	.24**	.21**

* $p < .05$. ** $p < .01$.

To examine the direction of the effects, we derived a graphical representation of the interactions from the simple slope analyses (Aiken & West, 1991; Frazier, Tix, & Barron, 2004). We computed predicted values of women's work engagement for two groups, namely for those who scored 1 standard deviation below and above the mean on the predictor (men's work engagement) and moderator (perspective taking) variables. After that, figures representing the form of the interactions could be drawn. Consistent with Hypothesis 1a, the crossover of engagement from men to women was positive and stronger when women were high (vs. low) in perspective taking. Higher levels of men's work engagement coincided with higher levels of women's engagement, but only for women with high levels of perspective taking (see Figure 2). Slope difference tests indicated that the relationship between men's and women's engagement was significantly more strongly positive when women were high (vs. low) in perspective taking ($t = 9.20, p < .001$).

Moreover, consistent with Hypothesis 2a, the crossover of engagement from men to women was strongest when both partners scored high on perspective taking (see Figure 3). Slope difference tests indicated that the relationship between men's and women's engagement was significantly stronger and more positive when both partners were high in perspective taking than when one of the partners was low in perspective taking ($ts > 3.01, ps < .01$).

Results of MSEM Analyses: Crossover of Women to Men

In a second MSEM analysis, we tested the model of engagement crossover from women to men. Hypotheses 1b and 2b were tested in one overall model. Results indicated that this model also fit reasonably well to the data, $\chi^2(63) = 148.07$, GFI = .96, TLI = .88, CFI = .92, RMSEA = .06. There was a main effect of women's work engagement on men's work engagement ($\gamma = .15, p < .01$). However, this time the latent Women's Work Engagement \times Men's Perspective Taking interaction factor had a nonsignificant relationship with men's work engagement ($\gamma = .04, p = .56$). This means that Hypothesis 1b was rejected. Instead, women's work engagement interacted with women's perspective taking in predicting men's work engagement ($\gamma = .22, p < .001$). This indicates that the crossover of work engagement from women to men is dependent on women's (not men's) perspective taking (see also below). Furthermore, unexpectedly, men's and women's perspective taking interacted significantly ($\gamma = .17, p < .05$). Importantly, all these effects were qualified by a significant three-way interaction effect ($\gamma = .17, p < .05$).

Testing the model with and without the paths from the latent Women's Engagement \times Women's Perspective Taking interaction factor to men's work engagement showed that the elimination of the

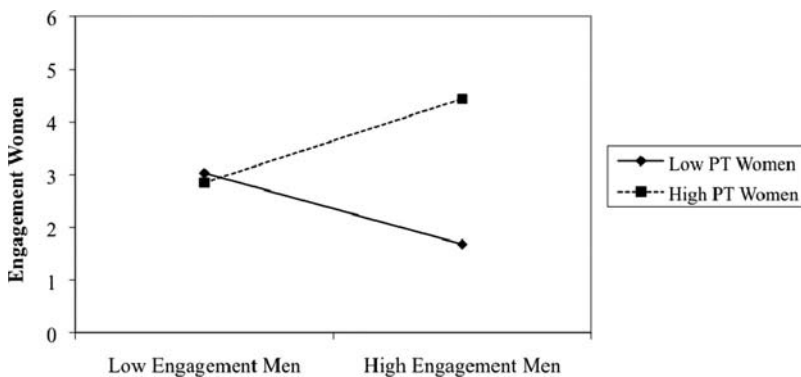


Figure 2. Interaction effect of men's work engagement and women's perspective taking (PT) on women's work engagement.

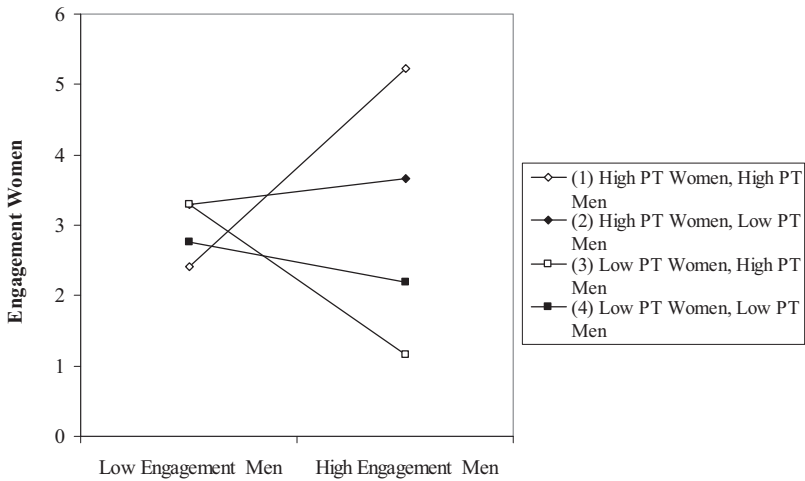


Figure 3. Interaction effect of men's work engagement, women's perspective taking (PT), and men's perspective taking on women's work engagement.

path significantly worsened the fit of the model, $\Delta\chi^2(1) = 11.20, p < .001$. Also, a worsening in model fit was found when the path from the three-way interaction factor to men's work engagement was eliminated from the proposed model, $\Delta\chi^2(1) = 5.23, p < .05$.

Simple slope analyses indicated that the crossover of engagement from women to men was stronger when women were high (vs. low) in perspective taking (see Figure 4). Higher levels of women's work engagement coincided with higher levels of men's

work engagement, but only if women reported high levels of perspective taking. Moreover, consistent with Hypothesis 2b, the crossover of engagement from women to men was strongest when both partners scored high on perspective taking (see Figure 5). Slope difference tests indicated that the relationship between women's engagement and men's engagement was significantly stronger when both partners were high in perspective taking than when women were high in perspective taking but men were low in perspective taking ($t = 2.63, p < .01$).

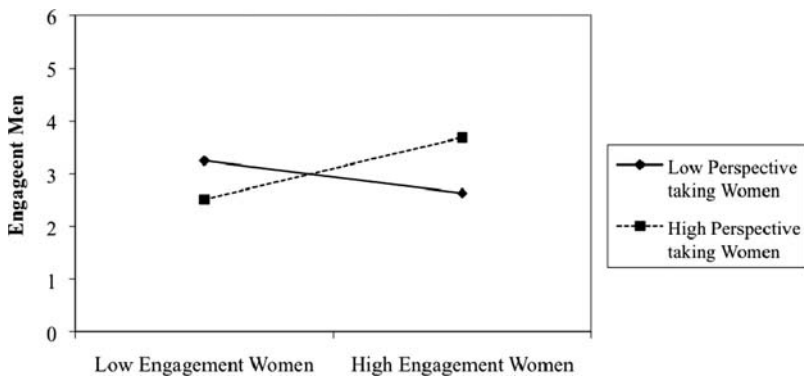


Figure 4. Interaction effect of women's work engagement and women's perspective taking on men's work engagement.

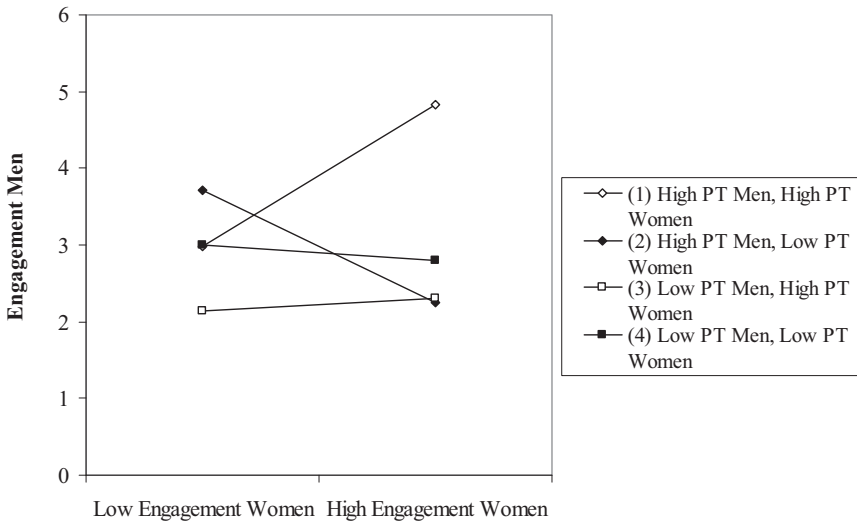


Figure 5. Interaction effect of women's work engagement, men's perspective taking (PT), and women's perspective taking on men's work engagement.

Discussion

The central aim of the present study was to take a closer look at the crossover process. We followed Westman's (2001) advice to add a measure 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 and intimate partners. Because 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—among working couples. We hypothesized that perspective taking reinforces and thus qualifies 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 of the “receiver” moderates this crossover effect. However, this interaction effect was found only when women were the receivers of the information. Women (but not men) who were inclined to adopt the point of view of their partner were more strongly influenced by their partner's work engagement than were their counterparts who were low in perspective taking. Interestingly, women's engagement also interacted with women's perspective taking in predicting men's engagement, suggesting that women's

ability to take the view of the partner is crucial for engagement crossover. Importantly, all of these effects were further qualified by the predicted three-way interaction: The crossover of work engagement was most likely when both partners were high in perspective taking. In what follows, we discuss the most important contributions of the present study.

Theoretical Contributions

The present findings add to the literature in at least three ways. First, the finding that work engagement crosses over between partners replicates previous studies among working couples (Bakker et al., 2005; Bakker & Demerouti, 2009). This strengthens our belief that positive experiences may cross over just as well as do 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 light on the process of crossover, and indicates under which conditions employees are influenced by their partner. Our findings offer support for the empathy explanation for the crossover process (Westman, 2001). More specifically, the cognitive type of empathy—perspective taking—explained women's ability to pick up their husband's enthusiasm about work. Note

that the process of perspective taking is qualitatively different from the emotional type of empathy, empathic concern. Whereas empathic concern refers to “an individual’s tendency to experience feelings of warmth, compassion, and concern for others” (Davis, 1983, p. 169), perspective taking refers to the tendency to adopt the psychological perspective of other people. It is well conceivable that empathic concern is more important when it comes to the crossover of strain—when emotional responsiveness is important. Perspective taking may be more important when the emotions and attitudes that are transmitted are positive. Future research should try to put these hypotheses directly to the test.

A third contribution of this study is that, consistent with our predictions (Hypotheses 2a and 2b), women’s and men’s work engagement were most strongly positively related when both scored high on perspective taking. In other words, crossover of work engagement is most likely when the “sender” as well as the “receiver” takes the partner’s perspective. Because perspective taking requires imaginatively experiencing the situation of one’s partner, reciprocal perspective taking facilitates smoother and more rewarding interpersonal relationships (Davis, 1983). Hence, if the sender’s work engagement is high, it is likely that his or her engagement is most clearly communicated when both partners are perspective takers. Therefore, the study contributes to the literature by adding a personal characteristic of the sender, that is, perspective taking, and not only of the receiver, as was the case in the crossover research until now. Similar to the dynamic model of the emergence of positive affective similarity (Walter & Bruch, 2008), our study suggests that future research on crossover would profit by considering characteristics of both senders and receivers.

It is interesting to note that we found a two-way interaction of women’s engagement with women’s (i.e., senders’), not with men’s (receivers’), perspective taking in the crossover from women to men: A positive relationship between women’s and men’s engagement was found when women (senders) scored high on perspective taking (see Figure 4). In contrast, in crossover from men to women, we found a two-way interaction of men’s engagement with women’s (receivers’), not with men’s (i.e., senders’), perspective taking: A positive relationship between men’s and women’s engagement was found when women scored high on perspective taking (see Figure 2). These results suggest that perspective taking of women plays a particularly important role in the crossover of work engagement whether women are

receivers or senders. This may be explained by gender role differences among Japanese couples. In Japan, women play a central role in family roles, such as child care and housework—also in dual-earner couples (Gender Equality Bureau, Japanese Cabinet Office, 2007). This means that women usually have to invest more effort in managing their family, which leads to less attention to issues, such as their partners’ work, other than family responsibilities. However, if they try to take the perspective of men’s work and they are inclined to direct their attention to men’s work as well as to their family responsibilities, then reciprocal communication among couples will be facilitated, which facilitates the crossover of work engagement.

It is also interesting to note that crossover of work engagement was found among Japanese workers regardless of their markedly low levels of work engagement (Shimazu, Miyanaka, & Schaufeli, 2010). According to Iwata, Roberts, and Kawakami (1995), maintenance of social harmony is one of the most important values in Japanese society, and the Japanese have been taught since childhood to understate their own virtues and not to behave assertively. This tendency to suppress positive affect expression in public is considered to lead to reporting lower scores of work engagement (Shimazu, Miyanaka, & Schaufeli, 2010). However, given the crossover of work engagement between Japanese partners, they may express positive emotions in nonpublic situations such as at their homes. Future research should examine characteristics of interactions between Japanese partners (e.g., communication behaviors, emotion expression) in more detail.

Although Japanese people have a tendency to suppress positive emotions (Kitayama, Markus, & Kurokawa, 2000), in the present study, we did find crossover of work engagement. Because self-expression is one of the valued behaviors in Western countries (Markus & Kitayama, 1991), we may have a higher likelihood to find crossover of work engagement in Western countries. Thus, our findings from Japan can most probably be generalized to Western countries as well.

Strengths and Limitations

The present study has several strengths and limitations. First, this study was the first to examine a three-way interaction in the process of crossover of work-related well-being among working couples—not only receiver’s but also sender’s level of perspective taking was taken into account. Because the cross-

over of engagement was strongest when both partners were high in perspective taking, future crossover research would seem to profit from examining other characteristics of the sender as well (e.g., sender expressiveness). Second, this study was conducted among Japanese dual-earner couples, and our findings replicate and expand previous findings on crossover in Western countries. This suggests that the hypothesized crossover model does apply equally well among the Japanese who have a tendency to suppress positive affect expression. Third, the present study included a relatively large sample, resulting in sufficient statistical power. Also, our participants were working in a wide range of occupational sectors, suggesting that the findings can be generalized across occupations.

In terms of limitations, it should be noted that we used only survey data and that the design of the study was cross-sectional. Although it would be difficult to attribute the theoretically substantiated and empirically validated three-way interaction effects to common-method variance, future research may try to link the survey data with, for example, other ratings of job performance. A second possible limitation is that although we used a validated scale, the reliability of the perspective-taking scale was relatively low (.62 and .68 for women and men, respectively). However, we corrected for unreliability by using moderated structural equation modeling analysis. Additionally, the effects were in the predicted direction, suggesting that unreliability was not a serious problem in this study. A third possible limitation is that the low response rate may have had unexpected influences on results. There is a possibility that the parents who invested long hours in child rearing could not find time to respond to the questionnaire. It is also possible that parents who were less interested in work-family issues did not participate in this survey because of not feeling the need to do so. Future research should take an effort to reduce these possible selection biases.

Practical Implications

Our findings have important implications for organizations that aim at flourishing workforces. Organizations should facilitate engagement among their employees, because this spreads around and may even influence the partner at home. Work engagement can initiate a process of work-family enrichment that may facilitate recovery during leisure time, and indirectly have a beneficial impact on the individual's job performance (Bakker & Xanthopoulou, 2009; Son-

ntag, 2003). Previous studies have consistently shown that daily work engagement may be built (a) through the allocation of sufficient job resources (e.g., feedback, coaching) to employees and (b) through the enhancement of employees' positive self-beliefs (e.g., self-efficacy or optimism; e.g., Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009; for an overview, see Bakker & Leiter, 2010). Moreover, because work engagement crosses over to the partner, it may even have an impact on the partner's job performance (Bakker & Demerouti, 2009). This positive crossover effect may eventually result in a positive overall image of the organization. Next to stimulating work engagement through the allocation of sufficient job resources to their employees, human resources management could offer communication/social skills training, including the skill of expressing and interpreting positive emotions when interacting with others. Such training could possibly facilitate positive crossover within and outside of the organization. In addition, managers may facilitate and cultivate frequent exchange among engaged employees, because engaged workers have a positive impact on colleagues with whom they collaborate (Bakker & Xanthopoulou, 2009).

Conclusion

The present study clearly shows that work engagement crosses over between partners and confirms the notion that—just as with negative states—positive states do transfer between closely related individuals. Furthermore, perspective taking is one of the explanatory variables: Individuals who were inclined to adopt the point of view of others in everyday life were most likely to “catch” the vigor, dedication, and absorption of their partners. Future studies should investigate whether perspective taking or another dimension of empathy such as empathic concern play a similar role as that of moderators when it comes to negative states (e.g., burnout). Most important, our study showed that it is crucial to consider characteristics of both members of the dyad when it comes to explaining the crossover of work engagement. Particularly when two persons take each other's perspective, there is a high probability of crossover of engagement.

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