

Focus on opportunities as a boundary condition of the relationship between job control and work engagement: A multi-sample, multi-method study

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The concept of *focus on opportunities* describes how many new goals, options, and possibilities employees believe to have in their personal future at work. In this multi-sample, multi-method study, the authors investigated relationships between focus on opportunities and general and daily work engagement and the moderating role of focus on opportunities on between- and within-person relationships between job control and work engagement. Based on a social cognitive theory framework on the motivating potential of a future temporal focus, it was hypothesized that focus on opportunities is positively related to work engagement. Further, consistent with the notion of compensatory resources, it was expected that job control is not related to work engagement among employees with a high focus on opportunities, whereas job control, as an external resource of the work environment, is positively related to work engagement among employees with a low focus on opportunities. Both a cross-sectional survey study ($N = 174$) and a daily diary study ($N = 64$) supported the hypotheses. The study contributes to research on the job demands-resources model as it emphasizes the role of focus on opportunities as a motivational factor in the relationship between job control and work engagement.

Keywords: Work engagement; Focus on opportunities; Job control; Daily diary study.

Work engagement is a positive and fulfilling mental state that consists of three core components (Schaufeli, Salanova, González-Romá, & Bakker, 2002). *Vigour* is defined as the willingness to invest effort in one's work, a state of mental resilience, and high levels of energy. *Dedication* is characterized by experiencing enthusiasm, pride, and intense identification with one's job. *Absorption* means being fully concentrated in one's work, and finding it difficult to detach oneself from the task at hand (Schaufeli et al., 2002). Researchers and practitioners are increasingly interested in work engagement because it is positively associated with meaningful organizational outcomes such as task performance (Bakker & Bal, 2010; Gorgievski, Bakker, & Schaufeli, 2010; Rich, Lepine, & Crawford, 2010), low turnover intentions (de

Lange, De Witte, & Notelaers, 2008), and organizational commitment (Hakanen, Bakker, & Schaufeli, 2006; Schaufeli & Bakker, 2004). The goal of this multi-sample, multi-method study is to extend the growing literature on work engagement by investigating the concept of *focus on opportunities* both as a predictor of work engagement and as a boundary condition of the positive relationship between job control and work engagement. Specifically, we intend to contribute to the literature by showing that focus on opportunities is a motivational factor and a compensatory resource that is positively related to work engagement especially when job control is low.

The concept of focus on opportunities was originally developed by personality and developmental psychologists (Cate & John, 2007; Lang &

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Carstensen, 2002). It has recently been adapted to the work context and has been validated in previous research (Bal, Jansen, van der Velde, de Lange, & Rousseau, 2010; Gielnik, Zacher, & Frese, 2012; Kooij & Van De Voorde, 2011; Zacher & Frese, 2009, 2011). Focus on opportunities describes how many new goals, plans, options, and possibilities employees believe to have in their personal future at work (Zacher & Frese, 2009, 2011). Compared to other time-related concepts, such as *future orientation* (Shipp, Edwards, & Lambert, 2009; Zimbardo & Boyd, 1999), it is an age-related motivational concept that changes over a time period of several years and decades, and may vary with changes in work characteristics (Seijts, 1998; Zacher & de Lange, 2011; Zacher & Frese, 2009; Zacher, Heusner, Schmitz, Zwierzanska, & Frese, 2010). Focus on opportunities is related to, but conceptually distinct, from self-efficacy, which is defined as an individual's beliefs about his or her capabilities necessary to attain certain outcomes (Bandura, 1997). Whereas self-efficacy captures people's confidence to create opportunities for themselves (Bandura, 2000), focus on opportunities refers to people's perceptions of their objective opportunities in their future at work (Zacher & Frese, 2011). Further, focus on opportunities differs from trait optimism (Scheier & Carver, 1985), as it involves a more realistic approach to thinking about the future and future opportunities at work (Schneider, 2001; Zacher & Frese, 2011).

Based on a social cognitive theory framework that emphasizes the importance of a future-oriented temporal focus for motivation (Karniol & Ross, 1996; Oettingen & Mayer, 2002), we assume that high levels of focus on opportunities provide employees with an energizing and motivational resource that is related to work engagement. In addition, we investigate focus on opportunities as a moderator of the generally positive relationship between the work characteristic of job control and work engagement. The concept of *job control* involves employees' perceived control over tasks, methods, scheduling, and the number of decision possibilities at work, and specifies the degree of autonomy and personal influence in the workplace (Jackson, Wall, Martin, & Davids, 1993; Morgeson & Humphrey, 2006; Terry & Jimmieson, 1999). Work environments with high levels of job control strengthen employees' willingness to dedicate effort to their jobs and also have energizing and motivating effects on employees (Bakker, 2009, 2011; Hackman & Oldham, 1980). However, the boundary conditions of the relationship between job control and work engagement have so far been neglected by researchers (Demerouti & Bakker, 2011). Based on the notion of compensatory resources (Hobfoll & Leiberhan, 1987), we argue that a high level of focus on opportunities may

compensate for low levels of job control in predicting work engagement, because both focus on opportunities and job control have similar energizing effects on employees. As both concepts have similar effects on motivational processes, it may be possible that they compensate for each other in predicting work engagement. Thus, we propose that job control is not related to work engagement among employees with a high focus on opportunities, whereas job control, as an external resource of the work environment, is positively related to work engagement among employees with a low focus on opportunities.

We further intend to contribute to the literature by investigating the role of focus on opportunities for both between- and within-person relationships between job control and work engagement in two studies. In the between-person study design (Study 1), we focused on whether differences between employees in their general levels of job control explain variation in their general levels of work engagement. Based on the suggestion that measures of work engagement should also consider the temporal and dynamic dimensions of the concept (Bakker, Albrecht, & Leiter, 2011a, 2011b), Study 2 addresses the question whether daily fluctuations in job control within employees (i.e., across several work days) are associated with daily variation of work engagement within the same employees (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Daily diary studies represent a method capable of detecting temporal fluctuations and patterns in the variables under study and tend to be better suited when addressing questions of dynamic processes (Bolger, Davis, & Rafaeli, 2003; Ohly, Sonnentag, Niessen, & Zapf, 2010). Hence, our study aims at an integrated approach that comprises both within- and between-person relationships which is necessary to fully understand motivated behaviour and engagement at work (Ohly et al., 2010).

RELATIONSHIP BETWEEN JOB CONTROL AND WORK ENGAGEMENT

We first propose that job control is positively related to work engagement (Bakker & Demerouti, 2008; Bakker, Demerouti, & Euwema, 2005). We base this assumption on the job demands-resources model (Bakker & Demerouti, 2007; Demerouti & Bakker, 2011; Korunka, Kubicek, Schaufeli, & Hoonakker, 2009), which assumes a motivational process whereby job resources such as job control influence work engagement. Job resources are supposed to have an intrinsic motivational function as they fulfil basic human needs (cf. Bakker & Demerouti, 2007; Deci & Ryan, 2000). For example, high levels of job control satisfy the need for autonomy (Parker, Jimmieson, &

Amiot, 2010). Employees in high-control jobs should have higher levels of work engagement because these jobs provide them with personal autonomy and possibilities for own decision making. Further, high levels of job control provide a good prerequisite for attachment to one's work role. This is related to the perception of meaningfulness as people like to devote more effort and time in their job (cf. Bakker, 2009; Bakker & Demerouti, 2007; Kahn, 1990). In contrast, employees in low-control jobs should have lower levels of work engagement, as these jobs are very restricted in terms of decision-making possibilities and autonomy (Fay & Kamps, 2006). Hence, the job demands-resources model includes job control as a situational resource that has motivational or energizing capacity. This is in line with job characteristics theory (Hackman & Oldham, 1976), which highlights the motivational potential of job resources such as autonomy. Empirical evidence for these assumptions comes from field studies across homogenous as well as heterogeneous samples of employees with different job, organizational, and occupational backgrounds (Bakker & Bal, 2010; de Lange et al., 2008).

Hypothesis 1: There is a positive relationship between job control and work engagement.

THE ROLE OF FOCUS ON OPPORTUNITIES

We further argue that employees' focus on opportunities is positively related to their work engagement. We base this assumption on social cognitive approaches on the importance of a future-oriented temporal focus for motivation and the motivating potential of positive thinking about the future (Karniol & Ross, 1996; Lewin, 1943; Oettingen & Mayer, 2002). People with a high focus on opportunities think positively about their personal future at work, they perceive their occupational future as full of possibilities, and they concentrate on the options, plans, and goals that they can pursue in their future (Zacher & Frese, 2009, 2011).

Lewin (1943) was the first psychologist to recognize the relevance of one's future temporal focus for motivation. He stated that the future is reflected in people's goals that are relevant for current behaviour and motivation (Eccles & Wigfield, 2002; Karniol & Ross, 1996). Hence, high levels of focus on opportunities have a self-regulatory and motivational potential as they contribute to goal selection, goal pursuit, intrinsic work motivation, and work performance (de Lange, Bal, Van der Heijden, De Jong, & Schaufeli, 2011; Gielnik et al., 2012; Zacher et al., 2010). People

who focus on their future goals, plans, and opportunities may also perceive their work as more meaningful (Zacher & Frese, 2011). Research in positive psychology — the study of conditions that foster optimal functioning of human beings (Seligman & Csikszentmihalyi, 2000) — suggests that people's well-being and motivation are strongly influenced by positive thinking about the future. For example, research showed that writing down future life-goals leads to increased happiness (King, 2001). Consistent with the approaches, we argue that focus on opportunities is positively associated with work engagement.

Hypothesis 2: There is a positive relationship between focus on opportunities and work engagement.

We further suggest that focus on opportunities moderates the strength of the generally positive relationship between job control and work engagement. Specifically, we suggest that job control is not related to the work engagement of employees with a high focus on opportunities, whereas job control as an external resource is positively related to the work engagement of employees with a low focus on opportunities.

Previous research suggests that both job control and focus on opportunities function as motivational resources. Specifically, both concepts have the potential to energize and motivate employees which, in turn, positively impacts on their level of work engagement. Job control has an energizing capacity (Bakker & Demerouti, 2007; Demerouti & Bakker, 2011; Morgeson & Humphrey, 2006). Focus on opportunities represents one's work-related opportunities in the future (Zacher & Frese, 2009) with positive effects on motivation in the present (Karniol & Ross, 1996; Oettingen & Mayer, 2002). Because both concepts are assumed to activate similar fundamental processes, it may be possible that these resources compensate for each other in predicting work engagement. Accordingly, we argue that a high future-oriented focus on opportunities compensates for low levels of current job control in predicting work engagement, such that employees with a high focus on opportunities and low job control exhibit the same level of work engagement as employees with high job control. A high focus on opportunities acts as a future-oriented motivational resource for employees with low levels of job control. In addition, currently high levels of job control should represent an important external resource that enables employees with a low future-oriented focus on opportunities to show enthusiasm and invest energy in their work (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Kahn, 1990).

Our argument is based on the notion of compensatory resources that is grounded in the substitution hypothesis by Hobfoll and Lieberman (1987). Resources are defined as objects, conditions, personal characteristics, or skills that are valued by an individual or that serve as a means of obtaining what is valued by an individual (Hobfoll & Shirom, 2001). According to the substitution hypothesis, "when a given resource is absent, a second resource may substitute for it" (Hobfoll & Lieberman, 1987, p. 20). The substitution hypothesis has been investigated in previous research in work and organizational psychology (LePine & Van Dyne, 1998; Speier & Frese, 1997). For example, Speier and Frese (1997) demonstrated that personal resources may substitute for each other by showing that the relationship between job control and personal initiative was stronger for people with low compared to high levels of self-efficacy. Thus, the positive work situation appeared to compensate for low individual predispositions to act proactively (cf. Bindl & Parker, 2010).

Employees with high levels of focus on opportunities may be better able to compensate for low job control because they allocate more energy and attention to work-related future goals and plans and are more likely to perceive their work as meaningful despite low situational job control (Karniol & Ross, 1996; Strauss, Griffin, & Parker, 2012). Further, employees with a high focus on opportunities may be more engaged and motivated to invest energy in their work because the anticipated value of their future goals and opportunities is higher (Karniol & Ross, 1996). Employees with a high focus on opportunities may anticipate an increase in job control in the future which may lead to current work engagement (Karniol & Ross, 1996; Lewin, 1943). Hence, we assume that a high level of focus on opportunities provides employees with additional motivational resources over and above the motivational potential of job control that is important for showing work engagement in the present (Hobfoll & Shirom, 2001; Karniol & Ross, 1996; Strauss et al., 2012). Consistent with the substitution hypothesis (Hobfoll & Lieberman, 1987), we argue that high levels of both job control and focus on opportunities do not lead to an additional increase in work engagement. The lack of both motivational resources, however, should result in low levels of work engagement.

Hypothesis 3: Focus on opportunities moderates the relationship between job control and work engagement, such that the relationship is positive for low levels of focus on opportunities, whereas no such positive relationship is expected for high levels of focus on opportunities.

METHOD

Study 1 sample and procedure

Our first sample consisted of 174 employees of a manufacturing company in central Germany. Of the participants, 169 (97.1%) were male, ages ranged from 16 to 64 years, and the average age was 36.77 years ($SD = 14.70$). Sixty-three participants (36.2%) had a general education degree, 82 (47.1%) had a middle school degree, 13 (7.5%) had a degree that allows for admission into a technical college (typically two more years of school after the middle school degree), seven (4%) had a high school degree, and nine (5.2%) had a university degree. On average, participants had been employed for 19.72 years in their lives ($SD = 15.04$ years). Participants were blue-collar workers and worked primarily in technical occupations. Frequently named jobs were mechanic, electrician, and technician. The company had 814 employees in total at the time of the study. Due to time constraints arising from shift work and company restrictions, we were not able to invite all employees of the company to participate in our study. Instead, data were collected in three consecutive steps using self-report questionnaires. First, 27 union workplace representatives of the company completed the questionnaire during their monthly meeting. Second, 39 apprentices of the company completed the questionnaire during their annual assembly. Finally, 128 employees out of 249 employees (51%) present during the biannual employee assembly organized by the labour union completed the questionnaire, resulting in a total of 194 returned questionnaires. Due to missing data in the central study variables, we were able to use data from 174 employees.

We compared our sample with the population from which it was drawn using data gathered by the German Federal Statistical Office on blue-collar workers (Statistisches Bundesamt, 2005). Overall, 87.9% men and 12.1% women are working in blue-collar jobs, and the average age of employees working in this sector is between 35 and 40 years (Schwan, 2007; *Statistik der Bundesagentur für Arbeit*, 2010). Thus, our sample is fairly representative in terms of average age but it includes a slightly higher proportion of men compared to the population of blue-collar employees.

Study 2 sample and procedure

The second sample consisted of 64 administrative employees working for a university in central Germany. As a first step of data collection for this study, the management board of the university was contacted and informed about our study. After consent was obtained, we contacted 563 randomly selected administrative employees of the university by email and invited them to participate in the daily diary

study. In total, 84 participants agreed to participate in the study (response rate: 14.9%). Of this sample, 64 employees provided complete data and were included in the analyses. Thirty-seven (58%) of the employees were female and 27 (42%) were male. Their age distribution ranged from 20 to 62 years, and the average age was 41.9 years ($SD = 11.8$). In terms of educational background, four participants (6.3%) had a general education degree, 16 (25.0%) had a middle school degree, 17 (26.6%) had a high school degree, and 26 (40.5%) a university degree. One participant (1.6%) did not provide information on his or her education. Participants held a variety of nonacademic service jobs throughout the university such as administrative jobs or professional jobs in the field of technology.

According to data from the German Federal Statistical Office (Schwan, 2007) and the Federal Employment Office (*Statistik der Bundesagentur für Arbeit*, 2010), 62.6% of German employees working in the public sector are women and 37.4% are men. The average age is 44 years. Hence, our sample is fairly representative with regard to age and gender distributions.

Data collection took place over one work week (Monday to Friday). Participants filled out a general online questionnaire including questions on demographic variables such as education and general level of focus on opportunities on Monday, and two daily online questionnaires from Tuesday to Friday. Focus on opportunities is a motivational concept that changes over longer time periods (e.g., several years or decades) but not on a daily basis (Cate & John, 2007; Zacher & de Lange, 2011), and was therefore assessed only once in the general questionnaire. To maintain anonymity, participants entered a four-digit code each time they answered the questionnaires. The first daily questionnaire was answered around noon (between 11 a.m. and 1 p.m.) and included questions on daily job control. The second daily questionnaire was answered before the end of the work day (between 3 p.m. and 6 p.m.) and included questions on daily work engagement. We deleted those participants from our analyses with missing data in more than four of the daily questionnaires (more than two days) in order to ensure that there was enough within-person variance in the data to be explained. Overall, we received 364 daily responses (5.7 out of 8 possible daily observations) which equates to 182 paired daily questionnaires.

Study 1 measures and analysis

Focus on opportunities. We adapted five items from Carstensen and Lang's (1996; see also Lang &

Carstensen, 2002) Future Time Perspective scale by adding the word "occupational" to each item (Gielnik et al., 2012). The items are "Many opportunities await me in my occupational future", "I expect that I will set many new goals in my occupational future", "My occupational future is filled with possibilities", "I could do anything I want in my occupational future", "The opportunities that await me in my occupational future are limited". They were answered on a 5-point scale, ranging from 1 ("not true at all") to 5 ("very true"). Cronbach's alpha of the scale was .90.

Job control was measured with four self-report items from a well-validated and widely used German scale (Semmer, 1982; Zapf, 1993). A sample item was "Can you yourself decide on which way to carry out your work?" Participants gave their answers on a scale ranging from 1 ("very little") to 5 ("very much"). Cronbach's alpha of the scale was .79.

Work engagement was assessed with the nine-item short version of the Utrecht Work Engagement Scale (UWES) developed by Schaufeli et al. (2002). The nine items cover the three facets of the work engagement concept: vigour (sample item: "At my work, I feel bursting with energy", Cronbach's $\alpha = .75$), dedication (sample item: "I am proud of the work that I do", Cronbach's $\alpha = .82$), and absorption (sample item: "I am immersed in my work", Cronbach's $\alpha = .81$). All items were scored on a 7-point scale, ranging from 1 ("never") to 7 ("always"). We were interested in work engagement as a composite score. Thus, we computed an overall mean score following previous studies (e.g., de Lange et al., 2008; Sonnentag, 2003; Xanthopoulou et al., 2009). Cronbach's alpha for the overall scale of work engagement was .92.

Demographic control variables. We controlled for age and education because previous research showed that age and education influence focus on opportunities (Cate & John, 2007; Zacher & Frese, 2009). Participants reported their highest German educational degree achieved (0 = no degree, 1 = general education degree, 2 = middle school degree, 3 = high school degree, and 4 = university degree). Note that it was not possible to control for gender in this study because the vast majority of participants (97.1%) were male. The results were equivalent when we did not control for participants' age and education.

We conducted a confirmatory factor analysis using the Mplus software (Muthén & Muthén, 2007) to examine whether focus on opportunities, job control, and work engagement constitute three distinct factors. The three-factor model with factors that were allowed to covary had an acceptable fit to the

data, $\chi^2(136) = 295.961$, CFI = .91, RMSEA = .09. Although the fit indices were slightly below standard (Hu & Bentler, 1999), the three-factor model was superior to the one-factor model which did not fit the data well, $\chi^2(138) = 535.728$, CFI = .77, RMSEA = .14. We tested our hypotheses by using hierarchical moderated regression analyses. The variables were mean-centred before we entered them into the analyses and before we calculated the interaction term (Cohen, Cohen, West, & Aiken, 2003).

Study 2 measures and analysis

Focus on opportunities was measured in the general questionnaire with the same five items as in Study 1. Cronbach's alpha of the scale was .91.

Demographic control variables. We controlled for age, gender (1 = male, 2 = female), and education (1 = no degree, 2 = general education degree, 3 = middle school degree, 4 = high school degree, 5 = university degree). Again, the results were equivalent when we did not control for these variables.

Daily job control was assessed in the first daily questionnaire with five items adapted to the daily level from the German version of the Work Design Questionnaire (Morgeson & Humphrey, 2006; Stegmann et al., 2010). A sample item was "Today, the job allows me to plan how I do my work". Items were answered on 5-point scales ranging from 1 ("not true at all") to 5 ("very true"). Cronbach's α of this scale was .91.

Daily work engagement was measured in the second daily questionnaire with five items adapted to the daily level from Schaufeli et al.'s (2002) nine-item scale (UWES). Items used were "Today, I was enthusiastic about my work" and "Today, my work inspired me" (dedication), "Today, I felt strong and vigorous in my work", "Today at my work, I felt bursting with energy" (vigour), and "Today, I was happily engrossed in my work" (absorption). All items were scored on a 7-point scale ranging from 1 ("not true at all") to 7 ("very true"). Cronbach's α of the overall scale for daily work engagement was .93.

In Study 2, each participant provided data at the person level (e.g., focus on opportunities) and at the day level (e.g., daily job control, daily work engagement). This constituted a nested data structure as daily measures were nested within persons (Raudenbush & Bryk, 2002). To test our hypotheses, we used Hierarchical Linear Modelling, which allowed us to simultaneously model within- and between-person relations among the variables of interest. Repeated measures of job control were person-mean centred in order to ensure that the relations among the within-person level variables were unconfounded by

between-person variance (Enders & Tofighi, 2007). Focus on opportunities as between-person variable was grand-mean centred.

Further, multilevel confirmatory factor analysis of the daily job control and daily work engagement items with person-mean centred scores was applied. Model fit indicators provided by Mplus (Muthén & Muthén, 2007) supported a two-factor model solution with daily job control and daily work engagement as two distinct yet related factors, $\chi^2(90) = 1380.84$, CFI = .89, RMSEA = .09, SRMR(within) = .08, SRMR(between) = .14. However, we need to acknowledge that these values fall somewhat below conventional standards for cutoff criteria of fit indices (Hu & Bentler, 1999).

RESULTS

Study 1

Table 1 shows the descriptive statistics and intercorrelations of the Study 1 variables. Table 2 shows the results of a hierarchical moderated regression analysis. Consistent with Hypothesis 1, there was a positive and significant relationship between job control and work engagement, ($\beta = .21$, $p < .01$) (see Table 2). Supporting Hypothesis 2, the relationship between focus on opportunities and work engagement was positive and significant, ($\beta = .40$, $p < .01$). Hypothesis 3 states that focus on opportunities moderates the relationship between job control and work engagement, such that the relationship is positive for employees with a low focus on opportunities and nonsignificant for employees with a high focus on opportunities. As can be seen in Table 2 (Model 2), the interaction between job control and focus on opportunities was significant ($\beta = -.20$, $p < .01$). Consistent with our expectations, the simple slope for employees with a low focus on opportunities ($\beta = .47$, $p < .01$), was positive and significant, whereas the simple slope for employees with a high focus on opportunities was nonsignificant ($\beta = .10$, *ns*). This significant interaction effect is

TABLE 1
Means (*M*), standard deviations (*SD*), and intercorrelations of variables (Study 1)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Age	36.77	14.70	–				
2. Education	2.94	1.03	.02	–			
3. Job control	3.16	0.83	.23**	.10	–		
4. Focus on opportunities	3.04	1.01	-.59**	.18*	.03	–	
5. Work engagement	4.38	1.09	.00	.16*	.27**	.31**	–

N = 174. * $p < .05$, ** $p < .01$.

TABLE 2
Results of hierarchical moderated regression analysis with work engagement as dependent variable (Study 1)

Variable	Work engagement					
	Model 1			Model 2		
	B	SE	β	B	SE	β
Intercept	4.38	0.08		4.39	0.07	
Age	0.01	0.01	.19*	0.01	0.07	.17
Education	0.07	0.08	.07	0.08	0.07	.08
Focus on opportunities	0.43	0.10	.40**	0.41	0.10	.38**
Job control	0.28	0.10	.21**	0.32	0.09	.24**
Job control \times Focus on opportunities				-0.27	0.09	-.20**
R ²		.19			.23	
ΔR^2					.04	

N = 174. *p < .05, **p < .01. All independent and control variables were mean-centred.

displayed in Figure 1. Altogether, these findings support Hypothesis 3.¹

Study 2

The descriptive statistics and inter-correlations of the Study 2 variables are presented in Table 3. Before testing our hypotheses, we investigated whether systematic within- and between-person variance existed in the dependent variable by estimating a null model with random effects. The analyses showed that 43.7% of the variance in daily work engagement was within-person variance and 56.3% was between-person variance. For job control as our independent variable, 64.9% of the variance was within-person variance and 35.1% was between-person variance. Thus, the application of multilevel analysis was appropriate (Bliese, 2000; Bryk & Raudenbush, 1992).

Hypothesis 1 argues for a positive within-person relationship between daily job control and work engagement. Multilevel regression results showed that the relationship was nonsignificant ($\gamma = 0.14$,

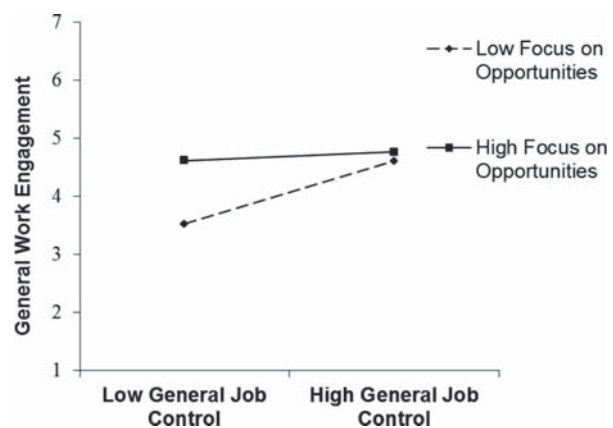


Figure 1. Focus on opportunities as a moderator of the between-person relationship between job control and work engagement (Study 1).

$SE = 0.11$, *ns.*) (see Model 1 in Table 4). Thus, Hypothesis 1 was not supported in this study.

Hypothesis 2 states that focus on opportunities is positively related to work engagement. Consistent with this hypothesis, we found a positive and significant within-person relationship between focus on opportunities and daily work engagement ($\gamma = 0.37$, $SE = 0.15$, $p < .05$) (see Model 1 in Table 4).

Hypothesis 3 states that focus on opportunities moderates the within-person relationship between daily job control and daily work engagement. We tested Hypothesis 3 with a cross-level interaction model by adding focus on opportunities as a predictor of the within-person relationship between daily job control and daily work engagement. Before testing the cross-level interaction, we examined whether the slope variance was significant for the daily job control–daily work engagement relationship (Bliese & Ployhart, 2002; Hofmann, 1997). To this

¹Schaufeli et al. (2002) suggested that vigour, dedication, and absorption represent three distinct dimensions of work engagement. Although we were primarily interested in work engagement as a composite score (Schaufeli, Bakker, & Salanova, 2006; Sonnentag, 2003), we conducted additional analyses in order to test our hypotheses for the three dimensions separately. With regard to Hypothesis 1, the relationship between job control and work engagement was significant for all three dimensions, $\beta = .28$, $p < .01$ for dedication; $\beta = .21$, $p < .01$ for vigour; $\beta = .29$, $p < .01$ for absorption. Further, Hypothesis 2 was also supported for the three dimensions respectively, $\beta = .43$, $p < .01$ for dedication; $\beta = .37$, $p < .01$ for vigour; $\beta = .38$, $p < .01$ for absorption. Supporting Hypothesis 3, focus on opportunities moderated the relationship of job control with dedication, $\beta = -.23$, $p < .01$, vigour, $\beta = -.21$, $p < .01$, and absorption, $\beta = -.18$, $p < .05$.

TABLE 3
Means (*M*), standard deviations (*SD*), and intercorrelations of variables (Study 2)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
Between-person level								
1. Gender	1.58	0.50	–					
2. Age	41.86	11.80	–.06	–				
3. Education	4.16	1.13	–.14	.06	–			
4. Focus on opportunities	2.59	0.90	–.17	–.49**	.03	–		
Within-person level								
5. Daily job control	3.58	0.86	.08	–.04	.05	.11	–	.17*
6. Daily work engagement	3.92	1.21	–.19	–.18	.06	.37**	.19	–

Gender (1 = male; 2 = female). Correlations and descriptive statistics represent the between-person level (*N* = 64). We calculated between-person correlations by aggregating variables across measurement occasions. Correlations above the diagonal represent the within-person level (*N* = 182). We standardized the variables prior to calculating the coefficients in order to have standardized coefficients on the within-person level. **p* < .05, ***p* < .01.

TABLE 4
Results of multilevel analysis with daily work engagement as dependent variable (Study 2)

Variable	Work engagement								
	Null model			Model 1			Model 2		
	γ	<i>SE</i>	<i>t</i>	γ	<i>SE</i>	<i>t</i>	γ	<i>SE</i>	<i>t</i>
Intercept	3.93	0.13	30.89**	3.93	0.12	33.47**	3.93	0.12	33.49**
Between-person level									
Gender				–0.24	0.25	–0.96	–0.24	0.25	–0.96
Age				–0.00	0.01	–0.21	0.00	0.01	–0.24
Education				0.04	0.11	0.38	0.04	0.10	0.42
Focus on opportunities				0.37	0.15	2.42*	0.37	0.15	2.42*
Within-person level									
Daily job control				0.14	0.11	1.31	0.14	0.10	1.34
Cross-level interaction									
Daily job control × Focus on opportunities							–0.20	0.09	–2.06*
Between-person intercept variance	0.80	0.18		0.65	0.16		0.65	0.16	
Within-person intercept variance	0.63	0.08		0.62	0.08		0.60	0.08	
R^2_{between}					.183			.181	
R^2_{within}					.016			.049	
–2*log (lh)	529.42			517.39			513.22		
Δ –2*log				12.03*			4.17*		
Δ <i>df</i>				5			1		

γ = unstandardized HLM regression coefficient; *SE* = standard error; *N* = 182 observations nested within 64 participants. Gender (1 = male; 2 = female). Within-person level variables were person mean-centred, and between-person level variables were grand-mean centred. R^2_{between} = between-person variance explained by the predictors was calculated by using the formula: $(\tau_{\text{null model}} - \tau_{\text{fixed-effect model}}) / \tau_{\text{null model}}$; R^2_{within} = within-person variance explained by the predictors was calculated by using the formula: $(\sigma^2_{\text{null model}} - \sigma^2_{\text{fixed-effect model}}) / \sigma^2_{\text{null model}}$ (Hofmann, Griffin, & Gavin, 2000); log (lh) = likelihood ratio. **p* < .05, ***p* < .01.

end, we estimated a model that regressed daily work engagement on daily job control at the within-person level and estimated the pooled within-person parameters at the between-person level without including any between-person predictors. Results showed that the chi-square test of the variance in the within-person slopes was significant ($\chi^2(63) = 114.96, p < .01$). Hence, we could subsequently investigate whether focus on opportunities predicts variability in the slopes of the daily job control–work engagement relationship.

Table 4 (Model 2) shows the results of the cross-level moderation analysis using HLM. Focus on opportunities significantly predicted the slope of the

within-person relationship between daily job control and work engagement ($\gamma = -0.20, SE = 0.09, p < .05$). This interaction is plotted in Figure 2. We conducted a simple slope test developed for HLM (Preacher, Curran, & Bauer, 2006). Similar to Study 1, results indicated that the relationship between daily job control and daily work engagement was positive and significant for employees with a low (i.e., one *SD* below the mean) level of focus on opportunities, $\gamma = 0.32, t = 2.34, p < .05$, and nonsignificant for employees with a high level (i.e., one *SD* above the mean) of focus on opportunities, $\gamma = -0.04, t = -0.32, ns$. Further, we tested the improvement of Model 2 above

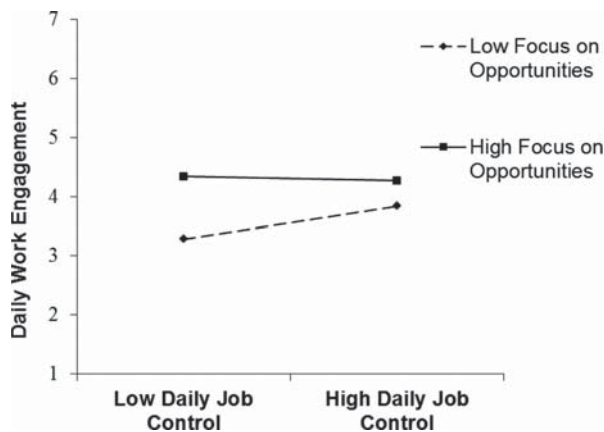


Figure 2. Focus on opportunities as a moderator of the within-person relationship between daily job control and daily work engagement (Study 2).

Model 1 by computing the difference between the two respective likelihood ratios. The likelihood ratio test compares the deviance ($-2 \times \log$ likelihood) of the two models. The difference is based on a chi-square distribution with the number of degrees of freedom equal to the number of different parameters in the two models. Model 2, which in addition to the demographic control variables and the main effects of daily job control and focus in opportunities included the interaction effect, showed a better model fit than Model 1 ($\Delta -2 \times \log = 4.17$, $\Delta df = 1$, $p < .05$). Altogether, these findings support Hypothesis 3.

DISCUSSION

We aimed to contribute to the work engagement literature by investigating the role of focus on opportunities as a predictor of work engagement and as a moderator of the relationship between job control and work engagement. We examined our hypotheses using a cross-sectional survey study with a *between*-person design based on a sample of blue-collar workers, and in a daily diary study with a *within*-person design based on a sample of administrative employees. The results supported most of our hypotheses. As expected, in Study 1 job control and focus on opportunities were positively related to work engagement, and focus on opportunities moderated the positive between-person relationship between job control and work engagement. Specifically, the relationship was positive and significant for employees with a low focus on opportunities and weak and nonsignificant for employees with a high focus on opportunities.

In Study 2, we replicated two of the findings from Study 1 on the daily level. First, focus on

opportunities positively predicted daily work engagement. Second, we found a cross-level interaction between focus on opportunities and daily job control, such that daily job control was positively and significantly related to daily work engagement when focus on opportunities was low, but not when it was high. However, contrary to Hypothesis 1, daily job control was not generally positively related to daily work engagement in Study 2. This finding might be due to the characteristics of our study design. Asking participants to report general levels of job control and work engagement in Study 1 is prone to memory biases and a lack of accuracy. Daily experiences that capture within-person perceptions and experiences in situ provide insights over and above reports gathered through between-person approaches (Ohly et al., 2010). Hence, our finding is consistent with earlier research showing that relationships between variables can vary strongly depending on a between- or a within-person approach (cf. Schalk, van der Heijden, de Lange, & van Veldhoven, 2011). Nevertheless, previous diary studies found strong support for the relationship between job control and work engagement (see, for example, Bakker & Bal, 2010; Xanthopoulou et al., 2009). However, Bakker and Bal (2010) studied job resources and work engagement on a weekly basis by referring to job control and work engagement experienced during the last week and by assessing both the independent and the dependent variable at one measurement occasion. Our study included a time lag between the assessment of job control at noon and work engagement at the end of the workday. This limits the potential for common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), but may have influenced our results.

Furthermore, the nonsignificant effect of daily job control on work engagement in Study 2 may be explained by the significant interaction of job control with focus on opportunities. Hence, the relationship between daily job control and daily work engagement may be more likely to occur under certain moderating conditions or may even be indirect based on psychological mechanisms that we did not assess in our study. For instance, previous research has emphasized the mediating role of personal resources such as self-efficacy, optimism, and positive mood states in the relationship between job characteristics and work engagement (Xanthopoulou et al., 2009).

Our findings extend the literature on work engagement in several ways. First, we contribute to research on the job demands-resources model by taking into account focus on opportunities as a boundary condition of the relationship between job control and work engagement (Bakker, 2009; Demerouti & Bakker, 2011). In line with the substitution of resources hypothesis (Hobfoll & Liberman, 1987),

job control appears to be less strongly related to work engagement when people's focus on opportunities is high. Conceptually, focus on opportunities is a representation of people's future possibilities for control, decision making possibilities, plans, and goals (Zacher & Frese, 2009). We argued and found that focus on opportunities compensates for low current job control and results in higher work engagement if people anticipate having many work-related opportunities in the future. However, when people's focus on opportunities is low, job control is positively related to work engagement. Thus, job control motivates employees even in times when they believe that they have no future opportunities. Consistent with the substitution hypothesis (Hobfoll & Leiberhan, 1987), we found that high levels of both job control and focus on opportunities that involve people's perceptions of work-related opportunities do not lead to an additional increase in work engagement. Overall, our findings reveal that it is important to investigate combinations of resources instead of investigating single resource of interest because similar resources can substitute one another (Hobfoll, Freedy, Lane, & Geller, 1990).

Second, our study contributes to the literature by following the suggestion by Bakker et al. (2011a, 2011b) to more strongly consider the dynamic facets of the work engagement concept and focus on within-person fluctuations. So far, most research on work engagement and job control has employed between-person study designs (cf. Bakker, 2009). By investigating these variables on the daily level we can more closely examine short-term processes and everyday experiences within people (Bakker et al., 2011a; Sonnentag, Dormann, & Demerouti, 2010). Study 2 showed that a large amount of variance in work engagement and job control can be explained by within-person variation.

Third, a main contribution is that we were able to replicate our findings in two different samples with employees from different occupations. Independent of the specific occupation, we found compensatory effects that suggest that focus on opportunities is particularly beneficial for people's work engagement when levels of general or daily job control are low. Finally, drawing on a social cognitive theory framework, this study emphasizes the important role of a future-oriented focus on opportunities as a motivational factor. Our study also highlights that job control serves an important function for work engagement when employees' focus on opportunities is restricted. Hence, our study underpins previous theory and research that suggest time represents a crucial variable in understanding and explaining human motivation (Schmidt & DeShon, 2007; Steel & König, 2006).

Limitations and future research

Study 1 had three major limitations. First, job control and work engagement were reported at the same time, thus raising the potential problem of artificially inflated correlations due to common method variance (Podsakoff et al., 2003). Second, study participants were blue-collar workers from one manufacturing company in Germany and 97.1% of them were male. This raises potential concerns about the generalizability of our results. Finally, work engagement has originally been conceptualized as a fluctuating concept (Bakker et al., 2011b; Kahn, 1990; Sonnentag et al., 2010), whereas our between-person design study neglects the temporal nature of the job control-work engagement relation. It remains unclear for which time period employees assessed their level of work engagement and the validity of general questionnaire measures is threatened due to the possibility of retrospection bias (Alliger & Williams, 1993).

We addressed these limitations of Study 1 by conducting a second study. We used a daily diary design (Ohly et al., 2010) because diary studies are better suited for addressing questions of daily experiences and dynamic episodes. Further, we measured daily job control in the morning and daily work engagement in the evening. Finally, we attempted to replicate the findings of Study 1 in a white-collar sample. Despite these strengths, Study 2 also had some limitations.

First, with 64 participants and an overall 364 daily responses our sample size and the number of observations was relatively small. However, according to multilevel power calculations presented by Scherbaum and Ferreter (2009), our sample sizes on the between- and within-person level are sufficient to detect a medium effect size with a power of around .75. Also, the number of participants on the between-person level is well within the range of other recent diary studies (e.g., Beal & Ghandour, 2011; Bissing-Olson, Iyer, Fielding, & Zacher, in press; Bledow, Schmitt, Frese, & Kühnel, 2011) and this overall sample size has a stronger influence on the power than the number of observations on the within-person level (Scherbaum & Ferreter, 2009; Snijders & Bosker, 1993).

Second, similar to Study 1, we assessed all of the variables with self-report measures. However, we tried to minimize this limitation by separating the measurements of daily job control from measurements of work engagement in order to alleviate concerns of common method bias (Podsakoff et al., 2003). In addition, one potential problem of daily diary studies is that repeated measurements of variables might induce familiarity with the items, which can cause reactivity and thus lead to changes in

people's response style (Alliger & Williams, 1993; Bolger et al., 2003).

Third, we hypothesized a causal relationship between job control and work engagement. However, due to the fact that in diary studies it is impossible to control for all confounding factors, reciprocal linkages cannot be ruled out. We assessed work engagement in the afternoon questionnaire only. Although we included a time lag between the measurement of the predictor and criterion variables, controlling for previous assessments of the criterion variable would have enabled us to make stronger inferences about the causal direction of the within-person relationship (cf. Judge & Ilies, 2004). Future research should assess the criterion variable at both measurement points. Moreover, it might be possible to find reciprocal effects if longer time frames are studied (Frese, Garst, & Fay, 2007), and if relations of focus on opportunities with engagement and motivated behaviour are examined in standardized, controlled, yet naturalistic experimental settings (Steel & König, 2006).

Fourth, in both studies the response rate was very low, raising concerns about the validity of our results. For example, it may be possible that employees with generally low levels of work engagement decided not to participate in our study. Self-selection bias is more likely to exist when study participants can entirely decide for themselves whether or not they like to participate in a study and is more strongly prevalent in diary study designs due to their intrusive nature. We compared our samples to statistics from the German Federal Statistical Office (Schwan, 2007; Statistisches Bundesamt, 2005) and the Federal Employment Office (*Statistik der Bundesagentur für Arbeit*, 2010) that are available on blue-collar workers and administrative employees from the public sector. We found that both samples were fairly representative in terms of average age and the proportion of females and males—at least for Study 2. Our sample in Study 1 comprised a slightly higher proportion of men compared to the population of blue-collar workers. However, blue-collar occupations include not only employees from the metal-working industry but also from different industries. This may limit this comparison. Overall, then, generalizations of our findings must be done carefully, keeping in mind a threat of internal validity due to possible self-selection bias (Ohly et al., 2010).

Fifth, we argued that the proximal mediators by which job control and focus on opportunities affect work engagement may be the same. Both job control and focus on opportunities were assumed to be energizing and activating which positively impacts ones level of work engagement. So far, our studies have not examined the underlying mechanisms. Hence, the empirical investigation of these underlying

mechanisms that account for the compensatory effect should be subject of future research.

Similarly, we argued for motivating effects of thinking about the future such that employees tend to attain future-oriented goals and activities when they report being high in focus on opportunities (Karniol & Ross, 1996). However, we did not measure processes of individuals' goal selection, attainment, and goal commitment in our study and thus do not have detailed information on which goals are pursued and whether or not goals are future oriented. Hence, we recommend future research to assess individuals' goals along with the difficulty and specificity of the adopted goals as these characteristics have proven to influence the intensity and persistence of effort exerted to goal-oriented behaviour (Locke & Latham, 1990).

In addition, we argue that more intensive research on the concept of focus on opportunities is necessary. For instance, future research should examine how focus on opportunities relates to other cognitive-motivational constructs that were not considered in this study. For example, the motivational orientation of promotion focus from Higgins' (1998) regulatory focus theory can be expected to somewhat overlap with focus on opportunities (Zacher & de Lange, 2011). They may both act as self-guides for behavioural regulation and approach-oriented strivings by reflecting internal standards and focusing on achieving personally important aspirations and ambitions. Whereas promotion focus can be both a chronic disposition, as well as a motivational state evoked by situational signals (Higgins, 1998), focus on opportunities may change over a time period of several years and decades (Zacher & de Lange, 2011).

Future research might also investigate the relationship between focus on opportunities and optimism. Whereas optimism is defined as a general disposition to expect positive outcomes (Scheier & Carver, 1985), focus on opportunities can be described as a more realistic job-related form of optimism that changes with increasing age and changing work characteristics (Zacher & Frese, 2009, 2011). Future empirical studies on focus on opportunities should include optimism as a control variable in the analyses in order to investigate the effects of focus on opportunities over and above individuals' level of optimism.

Moreover, future research could investigate the drivers of temporal changes in focus on opportunities. For instance, it remains unknown whether changes in focus on opportunities may also be a result of career transitions such as promotions, job rotation, or organizational mobility (Feldman & Ng, 2007). With regard to job characteristics as antecedents of focus on opportunities, Zacher and Frese (2011) showed that job complexity was not significantly related to focus on opportunities in a

homogeneous sample of blue-collar workers. Similarly, in the current study, we used two relatively homogeneous samples with regard to work tasks and responsibilities. Thus, it can be assumed that the variability in job complexity was rather low. However, other research with more heterogeneous samples revealed weak but positive relationships between job complexity and focus on opportunities (e.g., Zacher & Frese, 2009; Zacher et al., 2010). This suggests that future research using heterogeneous samples should consider controlling for job complexity.

Practical implications and conclusion

Based on the notion of compensatory resources that is grounded in the substitution hypothesis (Hobfoll & Leiberman, 1987), our findings provide another theoretical case to realize practical interventions and suggestions in order to improve engagement at work (Bakker et al., 2011a). The finding that job control does not affect work engagement of all employees alike has implications for job design and human resource management. On the one hand, our results suggest that, in order to engage employees, organizations would benefit from job-level interventions such as increasing employees' job control—this would be especially necessary for employees with a low focus on opportunities. Job control as a work resource seems to be a crucial motivating factor for employees when they perceive their future goals, plans, and opportunities to be low. On the other hand, our findings suggest that employees with a high focus on opportunities neither gain nor suffer from high levels of job control. It seems as if these employees are provided with a strong inner motivational impetus that affects motivation and engagement independent of job characteristics such as control. Hence, with regard to focus on opportunities as a motivational construct, it might be interesting for organizations to establish ways and implement tools developed to select for and increase employees' focus on opportunities—especially when it is impossible to elevate levels of job control. One possible way to do so may be to promote an organizational culture of opportunities to learn and grow (cf. Bakker et al., 2011a; Buckingham & Coffman, 1999). Organizations need to provide employees from all educational backgrounds with adequate development opportunities as well as vertical and horizontal career options focusing on future work goals, plans, and possibilities. Additionally, interventions such as mentoring activities of leaders, coaching and appraisal interviews that adhere to employees' developmental options, and goal setting might be useful. Because focus on opportunities is negatively related to age, promoting an organizational culture of opportunities to learn and grow may be especially important in order to

maintain motivation and engagement of older employees who are staying in the labour market for longer periods of time than ever before (Schalk et al., 2010). In line with Bakker et al. (2011a), we propose that future work needs to be done in order to evaluate the effectiveness of job-level and individual-level interventions mentioned.

In conclusion, this multi-sample, multi-method study contributes to the work and organizational psychology literature on work engagement by showing that employees' focus on opportunities—defined as the goals, plans, and possibilities employees believe they have in their personal future at work—is positively related to work engagement and moderates the relationship between job control and work engagement. Focus on opportunities is a motivational factor and a compensatory resource that is positively related to work engagement, especially when current job control is low. However, job control seems to be an important motivating factor for employees when they perceive their future goals, plans, and opportunities to be low. Future research is now needed to replicate and extend the current findings, in order to gain a better understanding of the interactive effects of future-oriented focus on opportunities as a person characteristic and work characteristics such as job control on employees' general and daily work engagement.

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