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Exploring the positive side of personal internet use at work: Does  
it help in managing the border between work and nonwork?

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### **Abstract**

Many employees use the internet at work for personal reasons, and it has been suggested that this behavior can be understood as an attempt to manage the border between work and nonwork.

Using data from 190 office workers, the study aims to test how well work/family border theory can explain personal internet use. The results only partly support work/family border theory, as only the amount of private demands and identification with work at work were significant predictors of personal internet use (which was found to be unrelated to work-nonwork balance).

These findings suggest that work/family border theory offers only a limited perspective for the explanation of why people use the internet at work for personal business.

Keywords: cyberloafing; cyberslacking; non-work-related computing; work/life balance; work/family border theory

### Highlights

- We focus on the question of whether using the internet at work has positive aspects
- Employees with many nonwork demands used the internet more often for private reasons
- Personal internet use was not correlated with work-nonwork balance
- The guiding work/family border theory was only partially supported

Exploring the positive side of personal internet use at work: Does it help in managing the border between work and nonwork?

Think back to your most recent day at work: Were you focusing solely on your job or did you also check your private emails, surf news webpages, download music, or shop online? If the latter is the case, you are certainly not alone. Several studies (e.g., Henle, Kohut, & Booth, 2009; Liberman, Seidman, McKenna, & Buffardi, 2011; Lim, 2002; Vitak, Crouse, & LaRose, 2011) suggest that many employees use the internet for nonwork-related businesses during working time.

The personal use of the internet at work has mostly been described using terms with negative connotations (Richards, 2012) such as internet misuse (e.g., de Lara, Tacoronte, & Ding, 2006), cyberloafing (e.g., Jia, Jia, & Karau, 2013), non-work-related computing (Bock & Ho, 2009), or cyberslacking (e.g., Lavoie & Pychyl, 2001). The use of such negatively connotated terms is consistent with the widespread assumption among researchers (cf. Ivarsson & Larsson, 2011) that personal use of the internet during working time should be prevented to ensure that working time is actually spent on work. Sharing this negative view on personal internet use at work, several employers have implemented electronic use policies that aim at curtailing personal use of the internet (Henle et al., 2009).

However, not all people in the field share such a negative view of personal internet use at work (e.g., Coker, 2013; Ivarsson & Larsson, 2011). A central idea of this alternative viewpoint is that people's personal use of the internet at work can be considered as a response to the blurred border between work and nonwork - as many employees are expected to answer work emails at home, they might reciprocate this by answering private emails at work. Thus, personal internet

use at work can be understood as border-crossing behavior, and this border-crossing may be beneficial for the work-nonwork balance of employees (and this implies that it should not be restricted by employers' policies).

Given the dominance (see Ivarsson & Larsson, 2011; Richards, 2012) of the negative view on personal internet use at work, and as a response to Richards' (2012) call for more research in this area, this study aims to contribute to the literature on this phenomenon by exploring it from a more positive viewpoint, namely a work-nonwork border-crossing perspective. In particular, we use Clark's (2000) work/family border theory to argue for a particular set of predictors of personal internet use during work time.

### **1. Theoretical background**

Achieving a healthy balance between work and nonwork has become a major challenge for many employees (e.g., Byron, 2005). People repeatedly complain that work interferes with their private life, for example because work duties make it difficult to provide the care that children need (often called work-family conflict, e.g., Allen et al., 2012, or work-to-family conflict, e.g., Byron, 2005), and such a work-to-family conflict is known to be negatively correlated with, for instance, job and life satisfaction (Kossek & Ozeki, 1998).

Clark's (2000) work/family border theory postulates that individuals are often proactive and try to manage the border between work and nonwork. Thus, not only can events in one domain affect the other domain (with people reacting to these events), but people can shape each domain in an active way through communication and behavior depending on the needs of each domain. According to Clark, employees actively cross the border between both domains (work and nonwork) and shape each domain in an active way through communication and behavior

depending on the needs of each.<sup>1</sup> One example of border-crossing is the use of the internet provided at work for personal reasons. For example, employees may use their work internet connection to arrange whether friends can pick up their children from school and enable them to do the shopping after work.

In her theory, Clark (2000) focuses on the interplay of variables: how many private demands an employee has (private demands), how strong the border between work and nonwork is (border strength), how far-reaching the influence of an employee is (influence), how much an employee identifies with work (identification), and how much the supervisor supports border-crossing behavior (supervisory support for border-crossing), which we will explain in the next sections. Clark's central assumption is that people engage in border-crossing behavior depending on the needs of each domain. Applied to personal internet use at work, this suggests that personal internet use at work is driven by private demands (which can be defined as obligations that people have towards others who do not belong to their work domain). If employees have many private obligations (e.g., being the main carer for a family or a trainer of an amateur soccer team), these obligations make it likely that the internet connection at work will be used to manage them. Consistent with this reasoning, we propose:

*H1: Private demands will have a positive relationship with the extent of personal internet use at work.*

Clark (2000) also proposed that border-crossing behavior is restricted by the strength of the border (which can be defined as the degree to which elements from one domain can enter into another domain). An example of a strong border is that of an employee whose employer

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<sup>1</sup> Although the theory speaks of the family domain, its arguments also apply to the nonwork domain in general (as a more general description that is also applicable to people who do not live within a traditional family context).

restricts the access to private emails (cf. Henle et al., 2009) or has established a policy describing acceptable and unacceptable internet use for personal purposes (cf. Jia et al., 2013; Strader, Fichtner, Clayton, & Simpson, 2011). Clark (2002) reported that the strength of the border between work and home is associated with the extent of cross-border communication (e.g., communication with family about work and communication at work about family). In the same way that this variable influences cross-border communication, it should also have an impact on employees' border-crossing behavior. First evidence for this hypothesis comes from the study of Garrett and Danziger (2008) who found the restrictions on computer use are negatively correlated with personal internet use at work.

Furthermore, having many private demands and experiencing a weak border should lead to a particularly large extent of personal internet use at work. Consequently, we propose:

*H2: Border strength will (a) have a negative relationship with the extent of personal internet use at work and (b) moderate the relationship between private demands and the extent of personal internet use at work (i.e., the lower the border strength, the more positive the relationship between private demands and the extent of personal internet use at work).*

According to the work/family border theory, two attributes of the border-crossers are most relevant: influence and identification. Clark (2000) defines influence as the power of the individual to negotiate and make changes to the borders of a domain. Each person's domain has elements over which the person can exert a given degree of influence and to which the person can make changes, and also elements which are difficult to alter because of situational, organizational or family constraints (Clark, 2000). Jobs may, for example, limit the person's freedom to manage the borders due to the establishment of rules that prevent the individual

negotiation between an employee and her or his supervisor regarding the extent to which personal internet use can be tolerated. However, many people have at least some control over aspects of the border in each domain (Ashforth, Kreiner, & Fugate, 2000), such as the work schedule or the way of managing responsibilities. In her study focusing on cross-border communication, Clark (2002) found that influence at home is associated with increased communication about work in the home domain and influence at work is associated with increased communication at work about home. As a result, influence at work should have an important impact on border-crossing behavior in general and therefore also on personal internet use at work itself. Consistent with this, Reinecke (2009) found that people with more influence play more computer games during working hours than people with less influence. Furthermore, influence may interact with private demands: People who have many private obligations and who can exert a high degree of influence at their workplace may be particularly likely to engage in personal internet use at work (i.e., if there is a need to use the internet for personal reasons and also the possibility to do so, internet use is particularly likely). Hence, we propose:

*H3: Influence at the workplace will (a) have a positive relationship with the extent of personal internet use at work and (b) moderate the relationship between private demands and the extent of personal internet use at work (i.e., the higher the influence at the workplace, the more positive the relationship between private demands and the extent of personal internet use at work).*

The second relevant attribute of border-crossers is identification with work (Clark, 2000), which is the degree of importance the person attaches to the job in comparison with other life domains. People who identify strongly with their work are less likely to engage in home-related activities at work (see also Liberman et al., 2011). What is more, Clark argued that employees

with high identification with work like to shape their work situation in a way that allows them to perform well, and such shaping may be particularly likely if private demands are high. For example, an employee with very strong work identification might not even think about engaging in any personal business (no matter whether she/he feels any pressure from her/his family situation). This would also be consistent with the results of Jia et al. (2013) and Garrett and Danziger (2008): Jia et al. found that people who consider their work as meaningful use the internet at work less for personal purposes; Garrett and Danziger found that people who feel loyal to their organization engage in less non-work-related computing. Therefore, we expect this variable to have an impact on the relationship between private demands and personal internet use at work, both directly and indirectly as a moderator of the relationship between private demands and the extent of personal internet use at work. Hence, we propose:

*H4: Identification with the job will (a) have a negative relationship with the extent of personal internet use at work and (b) moderate the relationship between private demands and the extent of personal internet use at work (i.e., the higher the identification with the job, the less negative the relationship between private demands and the extent of personal internet use at work).*

According to the work/family border theory (Clark, 2000), supervisors also play an essential role in facilitating or inhibiting border-crossing behavior because they are the main border-keepers: They may or may not provide the required social support for border-crossing. According to Clark (2000; for a similar argument see Pee, Woon, & Kankanhalli, 2008), supervisors are more likely to provide such support if they are aware of the responsibilities and challenges employees face in other life domains (other-domain awareness according to Clark, 2000), and if they care about a team member as a total person (commitment to the border-crosser



according to Clark, 2000). Given that personal internet use at work is a type of border-crossing behavior, supervisory support for border-crossing should thus be an important factor in explaining the relationship between private demands and the frequency of personal internet use at work, both directly and in interaction with private demands. Thus, we propose:

*H5: Supervisory support for border-crossing will (a) have a positive relationship with the extent of personal internet use at work and (b) moderate the relationship between private demands and the extent of personal internet use at work (i.e., the higher the supervisory support for border-crossing, the more positive the relationship between private demands and the extent of personal internet use at work).*

Clark's (2000) work/family border theory also has testable implications for the relationship between personal internet use at work and work-nonwork balance. Work-nonwork balance can be defined as a satisfactory resolution of the work and nonwork domains (see Valcour, 2007), and such a balance might be reached more easily if people cope with nonwork demands by crossing the border between work and nonwork -- by using the internet provided at work for personal reasons. In other words, if personal internet use at work is indeed a border-crossing activity between work and home (cf. Clark, 2000), it should be helpful in achieving work-nonwork balance (cf. Anandarajan, Simmers, & D'Ovidio, 2011). Thus, we propose:

*H6: The extent of personal internet use at work will have a positive relationship with work-home balance.*

## 2. Method

### 2.1 Participants

With the aim of reaching employees from a variety of companies and fields, we contacted participants from the German-speaking area of Switzerland in different ways. An announcement regarding this study was published in the Swiss magazine “Beobachter”, and we also contacted participants through Swiss adult language schools, through a link to the survey that was placed on the Web Experiment List ([www.wexlist.net](http://www.wexlist.net), Reips & Lengler, 2005), and on the street. We explained the purpose of the research in general terms (“time management at work”) and participants were assured that their responses would be kept confidential and would only be used for research purposes. Participants could either use an online survey or send us an email or letter with their address so that we could send them a paper survey (together with a prepaid envelope). The final sample consisted of 190 office workers (90 filling out the online version and 100 completing the paper version). With 56.4% of participants reporting to be female, the variable of gender had a reasonably equal distribution. The average reported age was 36.4 years ( $SD = 10.3$ ). Participants also varied in terms of their marital status, with 25.0% being single, 27.7% in domestic partnerships, 36.2% married and 11.2% separated or divorced. More than half of the people reported not having any children (63.4%), 29.0% reported having 1-2 children and only 6.4% reported having three or more children (plus 2 participants who did not reveal this information). Participants worked in a variety of job sectors, ranging from the construction to the hotel /restaurant and credit/insurance sector. The average amount of working hours per week based on the job contract was 37.1 hours ( $SD = 9.5$ ), and the average workload in reality was 40.1 hours ( $SD = 11.9$ ). Participants spent an average of 76.9% of their working time in front of

the computer ( $SD = 21.8$ ), and only 5.8% of their working time was spent at home ( $SD = 13.3$ ).

Their average organizational tenure was reported to be 5.7 years ( $SD = 5.9$ ).

## **2.2 Measures**

Participants answered all items on a 7-point Likert scale (ranging from 1 = strongly disagree to 7 = strongly agree) unless otherwise mentioned. The whole questionnaire was presented in German. When original items were in English, a bilingual person translated items from English into German and another bilingual person back-translated them (which supported the agreement of the two language versions), unless otherwise mentioned.

**Personal internet use at work** the following eight items: “I check non-work-related emails during working time,” “I send private emails during working time,” “I browse news websites during working time to keep myself informed about the latest news,” “I browse entertainment-related websites during working time,” “I browse non-work-related websites during working time, and “I use the internet for private purposes during working time”.

Participants were asked to report the usual number of times they engaged in each of these types of personal activities during their working time. They were measured using a six-point scale ranging from 1 = “less than once per week”, 2 = “once per week”, 3 = “several times per week”, 4 = “once per day”, 5 = “several times per day” to 6 = “several times per hour”. The average was used for later analyses. To test the homogeneity of the scale, we conducted a principal component analysis, extracting only one factor. This factor explained 68% of the variance, and factor loadings varied between .92 and .75, supporting a one-factor solution.

**Private demands.** The amount of private demands faced by employees was measured using the following five items: “I have many private demands”, “My private demands require much of my time”, “I have the impression I am not paying sufficient attention to my private

obligations”, “It would be good if I had more time for my private obligations”, and “I have to rush in order to meet all my private obligations.” The wording of the items was kept general to ensure that the items would also be relevant for people without children or who did not live in a traditional family structure. As a test of homogeneity, we conducted a principal component analysis, extracting only one factor. This factor explained 58% of the variance (with factor loadings between .84 and .65), supporting a one-factor solution.

***Border strength.*** This index variable (Streiner, 2003) was measured with the following three self-created items focusing on the ease with which elements from other domains may enter into the job domain, as facilitated by the types of media shown to be relevant for personal internet use at work: “In my firm, people can access private email portals like gmx, gmail, hotmail, etc.” (reverse-coded), “In my firm, there are certain websites that are blocked and cannot be accessed”, and “My firm checks the type of web pages that employees have visited”. The response options ranged from 1 = “no”, 2 = “probably”, to 3 = “yes” (plus an explicit “don’t know” option, counted as a missing response).

***Influence*** was measured using the empowerment scale of Clark (2002), which contains five items (e.g., “I am in charge of my activities at work” and “I can choose what I do at work”).

***Identification with the job*** was assessed using Kanungo’s (1982) nine-item job involvement scale. Sample items are “To me, my job is only a small part of who I am” (reverse-coded) and “Most of my interests are centered around my job”.

***Supervisory support for border-crossing*** was assessed using five items, which asked participants to indicate the degree of other-domain awareness and commitment on the part of their supervisors towards their private obligations. The first three items measured awareness and were adapted from Clark’s (2002) communication with family about work scale: “My supervisor

understands my private demands,” “My supervisor listens when I talk about my private life,” and “My supervisor acknowledges that I have private obligations.” Given that these items did not include the commitment aspect, we created two additional items that focused on the degree of commitment or support received from the supervisor (“My supervisor gives me the opportunity to manage my work schedule flexibly when private obligations arise” and “My supervisor supports me in my private obligations”). We conducted a principal component analysis to test the homogeneity of the scale, extracting only one factor, which explained 70% of the variance, and factor loadings varied between .92 and .74 (thus supporting a one-factor solution).

*Work-nonwork balance* was measured using Valcour’s (2007) five-item scale, translated into German by Holger Steinmetz, University of Giessen, Germany, and Sascha Haun, University of Mainz, Germany, for an as yet unpublished research project. Participants are asked to indicate their level of satisfaction based on a scale ranging from 1 = “very dissatisfied” to 5 = “very satisfied”. Sample items are “How satisfied are you with the way you divide your time between work and personal or family life?” and “How satisfied are you with your ability to balance the needs of your job with those of your personal or family life?” It should be noted here that the wording of the items included references not only to family life but also to personal life in general, thus ensuring that the items were equally relevant for people with or without children as well as to those not living in a traditional family structure.

### 3. Results

Table 1 reports the descriptive statistics, Cronbach’s alphas, and correlations for all variables. Table 2 shows the results of hierarchical multiple regression analyses (with paper vs. online version as a control variable). As can be seen, private demands and identification with the job were significant predictors in the final model, confirming hypotheses H1 and H4a.

However, border strength, influence, and supervisory support for border-crossing were not significant predictors, therefore not confirming hypotheses H2a, H3a, and H5a. Adding interactions did not result in a significant increase in explained variance ( $R^2$  change = .03,  $p = .14$ ). Given this nonsignificant increase, the significant beta weight for the interaction between private demands and border strength should not be used for interpretative purposes. Thus, the data failed to confirm hypotheses H2b, H3b, H4b, and H5b.

Hypothesis 6 concerned the relationship between personal internet use at work and work-life balance and the two performance facets. As can be found in Table 1, personal internet use at work did not have a significant relationship with work-life balance ( $r = .08$ ).

#### **4. Discussion**

This study explored the phenomenon of people using the internet at work for personal reasons, relying on work/family border theory (Clark, 2000, 2002) as a theoretical perspective. The results only partly confirmed the prediction of work/family border theory, as the variables deduced from this theory explained variance in personal internet use at work. In particular, private demands and identification with the job were found to predict personal internet use at work, as predicted. However, personal internet use at work failed to be predicted by border strength, supervisors' support for border-crossing, or influence, and was not positively correlated with work-life balance. Furthermore, adding moderators did not explain additional variance.

The finding that private demands seem to drive personal internet use at work is consistent with the main argument of Clark (2000) that employees actively manage the border between work and nonwork in order to cope with demands and obligations from their private life. This suggests the importance of situational variables because the amount of private demands likely

depends on the family situation (e.g., taking care of small children) or on the extent to which people engage in nonwork activities (e.g., engaging in local politics).

According to the results, personal internet use at work can be predicted by the extent to which employees identify with their work, as predicted by Clark's (2000) work/family theory (see also Jia et al., 2013, and Garrett & Danziger, 2008). Clark argued that employees differ in their work identification and that these differences matter for border-crossing (e.g., by using the internet at work for personal reasons), because border-crossing from work to nonwork is less accepted by highly identified employees - they rather work at work instead of engaging in personal internet use.

However, we were unable to find a relationship between personal internet use at work and work-nonwork balance -- a relationship that is also implied by work/family border theory (Clark, 2000) and by other researchers (Anandarajan et al., 2011). This is surprising because the logic seems straightforward: Coping with nonwork demands can be easier if people do some of their nonwork tasks (e.g., arrange a dentist appointment) from work. It should be noted, though, that we did not study this experimentally and we thus do not know what participants' work-nonwork balance would look like if the employer made the personal use of the internet less possible. In other words, personal internet use at work might have reduced some nonwork demands but not to a sufficient extent, meaning that the correlation between personal internet use and work-nonwork balance was too small (i.e., .08) to reach significance.

Unexpectedly, border strength was not a predictor of personal internet use at work (nor a moderator). An inspection of its mean reveals that it was rather low, suggesting that employers in our sample only seldom seem to restrict internet use or check the type of web pages visited by employees, maybe because employers fear that a restriction could foster a climate of distrust (see

also de Lara, 2006) or lead to difficult legal and privacy issues (Miller & Wells, 2007). Such a low mean could have led to a floor effect in our study.

Influence was not a predictor of personal internet use either (nor a moderator), despite the arguments put forward in the work/family border theory (Clark, 2000) and despite hints in the literature regarding online-gaming at work (Reinecke, 2009). This implies that the variance in the extent to which employees generally have influence on what they do at work and when seems to be irrelevant for personal internet use at work.

According to work/family border theory (Clark, 2000), supervisory support for border-crossing should predict personal internet use at work, but our data did not confirm this (nor the role of this variable as a moderator). This is also in contrast to the results of Pee et al. (2008) who found that general social support for non-work-related computing (e.g., family's, friends', and top management's support) is related to the intention to engage in non-work-related computing. This suggests that the role of the supervisor for personal internet use might be smaller as previously assumed.

All in all, this study only partly supported work/family border theory, as several hypotheses could not be confirmed empirically, which suggests that this theory only offers a limited perspective for the explanation of why people engage in personal internet activities on the job. Either this perspective needs to be extended by incorporating other predictors, or other perspectives should be sought that can explain more (or at least other parts of the) variance.

As with all studies, the current study has its limitations. In particular, common method variance may be considered a problem. It should be noted, however, that methodologists have shown this problem to be overrated (e.g., Brannick, Chan, Conway, Lance, & Spector, 2010), and Siemsen, Roth and Oliviera (2010) demonstrated that common method variance actually



attenuates regression weights (particularly of interactions) if several variables are included in a multiple regression analysis. Furthermore, cross-sectional studies like this one should not be interpreted causally.

An avenue for future research could be to study personal internet use at work *in situ*. For example, research could employ experience sampling methods, allowing momentary behaviors (e.g., whether people engage in personal business) as well as momentary thoughts and feelings (e.g., Csikszentmihalyi & LeFevre, 1989) to be measured. Research questions that could be answered with these methods include, for instance, whether personal internet use at work is triggered by certain states or whether personal internet use at work typically means that people multitask (cf. König, Oberacher, & Kleinmann, 2010).

Future research would also benefit from a more fine-grained perspective instead of studying general personal internet use at work (cf. Ugrin & Pearson, 2013). In particular, Facebook has become a very common social networking site that is also assessed at work. So far, we know for example that general Facebook usage is related to work attitudes (the number of Facebook correlates negatively with how much employees care about their work performance, Chou, Hammond, & Johnson, 2013), but more research about Facebook use at work is clearly needed.

In addition, future research should take into account that the work-nonwork border might be becoming further blurry, for example because Facebook is increasingly used by companies for marketing (although Facebook started as social networking site for students). If, for instance, employees are responsible for the Facebook profile of their employers, it is probably difficult for them to be continuously online on Facebook with their employer's accounts but completely

offline with their private accounts. Thus, such further blurring of the border might generally increase people's personal internet use at work.

This study also has important practical implications. The fact that personal internet use at work was not found to be related to better levels of work-life balance suggests that this behavior might not be the optimal strategy for achieving such a balance. Instead, companies may rather invest in work-life programs such as job sharing, on-site childcare or satellite work spaces, etc. (e.g., Perry-Smith & Blum, 2000). Offering employees such programs should increase their flexibility in dealing with private demands in such a way that they do not need to carry out such activities during working time.

To conclude, our results are more consistent with the view that personal internet use at work is a predominantly negative phenomenon (e.g., Lim, 2002, but see, e.g., Coker, 2013). If personal internet use at work is not related to work-nonwork balance but negatively to identification at work (a characteristic organizations should value, Riketta, 2005), organizations should be worried if they find that their employees use the organizational internet for personal purposes.

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Table 1

*Means, Standard Deviations, Cronbach's Alphas, and Intercorrelations of Variables*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Personal internet use at work	2.65	1.29	.90							
2. Work-nonwork balance	3.74	0.83	.07	.92						
3. Private demands	4.09	1.17	.20**	-.25**	.82					
4. Border strength	1.73	0.60	.06	-.12	.00	N/A <sup>a</sup>				
5. Influence	4.77	1.16	.03	.32**	-.11	.00	.89			
6. Identification with the job	3.66	1.01	-.27**	-.13	-.04	-.06	.06	.86		
7. Supervisory support for border-crossing	5.14	1.12	.12	.39	-.05	.17*	.27**	-.21	.88	
8. Paper/online	1.47	0.50	.06	-.09	-.02	.01	-.12	-.18*	-.01	N/A <sup>b</sup>

*Note:*  $N = 190$ . Cronbach's alphas in the diagonal where applicable. Paper/online coded as 1 = paper, 2 = online.

\*  $p < .05$ , \*\*  $p < .01$ .

<sup>a</sup> non-applicable due to being an index variable (Streiner, 2003); <sup>b</sup> non-applicable due to being a single item.



Table 2

*Hierarchical Multiple Regression Analyses (with Personal Internet Use at Work Being the Dependent Variable)*

	Model 1	Model 2	Model 3
Paper/online (as a control variable)	.07	.04	.06
Private demands		.20**	.19**
Border strength		.04	.02
Influence		.06	.07
Identification with the job		-.25**	-.24**
Supervisory support for border-crossing (BC)		.01	.01
Private demands × border strength			-.18* <sup>a</sup>
Private demands × influence			-.03
Private demands × supervisory support for BC			.04
Private demands × identification with the job			-.02
$R^2$	.00	.11	.15
$R^2$ change		.11*	.03 <sup>n.s.</sup>

*Note:* Beta coefficients are shown. The components of the interaction term were centered before multiplication.  $N = 190$ . Paper/online coded as 1 = paper, 2 = online.

<sup>a</sup> = should not be interpreted given the nonsignificant  $R^2$  change.

\*  $p < .05$ , \*\*  $p < .01$ .