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Understanding social media use for work

Content, causes, and consequences

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Publication date
2017

Document Version
Other version

License
Other

Link to publication

Citation for published version (APA):
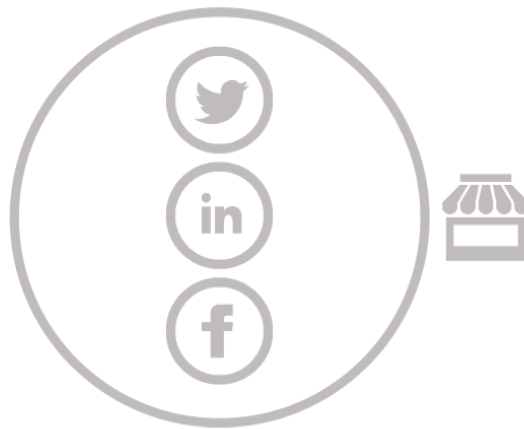van Zoonen, W. (2017). *Understanding social media use for work: Content, causes, and consequences*.

Chapter 4

Understanding the Consequences of Social media Use for Work.

Abstract

Social media become increasingly institutionalized in the workplace, however, the use of these technologies has been associated with both positive and negative consequences. This study argues that the positive and negative consequences of social media use should be viewed as social media related demands and resources. The job demands and resources theory is used as the theoretical underpinning for a framework that incorporates the challenges (demands) and opportunities (resources) that are typically associated with social media use. In doing so the relationship between work-related social media use and employee wellbeing has been explored. This study shows that interruptions and work-life conflict are important challenges, whereas, accessibility and communication efficiency are opportunities associated with social media use for work. The results indicate that the relationship between social media use and individual level outcomes might be more complex than previously established as opposing mechanism mitigate each other.

Keywords: Social Media; Resources and Demands; Employee wellbeing; Organizational Communication.

Introduction

Social media have gained traction in the workplace (Treem & Leonardi, 2012) as these technologies enable employees to stay connected to work, engage in effective communication practices (e.g., Trimi & Galanxhi, 2014; Utz, 2015; Vitak, Lampe, Gray, & Ellison, 2012), increase performance (Shami, Nichols, Chen, Road, & Jose 2014), and provide opportunities for collaborative work (Ollier-Malaterre, Rothbard, & Berg, 2013). These positive associations that accrue from social media use have caused them to gain traction in the context of work (Shami et al., 2014).

However, a tension based lens critiquing the pro-technology discourse, which often assumes only positive impacts for communication technologies increasingly receives attention and identifies some contradictory tensions that characterize the utilization of these tools (Majchrzak, Faraj, Kane, & Azad, 2013; Vitak, et al., 2012). In other words, the advantages associated with social technology use may come at a great cost as these technologies simultaneously present some distinct challenges (Bucher, Fieseler, & Suphan, 2013; Ollier-Malaterre et al, 2013; Skeels & Grudin, 2009). For instance, the use of social technologies has been linked to increased unpredictability, (Perlow, 2012) work life invasion (Skeels & Grudin, 2009), information overload and interruptions (e. g., Bucher, et al., 2013).

Managing the paradoxical consequences of communication technologies can be highly demanding for employees and affect their wellbeing (e.g., Ter Hoeven, van Zoonen, & Fonner, 2016). To advance our understanding of the consequences of social media use for use we rely on the job demands and resources model, which allows us to simultaneously consider the opposing effects associated with both advantages and disadvantages of work-related social media use. The job demands and resources model (JD-R model) is based on the premise that employees experience job demands (disadvantages) and have limited job resources (advantages) (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). These demands and resources may vary per job and how these jobs are organized. Demands refer to physical, psychological and social aspects of the job that require physical and/or psychological expenditure from employees resulting in physiological and/or psychological depletion (Bakker & Demerouti, 2007). Resources refer to physical, psychological and/or social aspects of the job that help employees achieve work goals and reduce demands presented by the job. As a

result, job resources reduce physiological and psychological costs and stimulate personal growth and development (Schaufeli, Bakker, & van Rhenen, 2009). Thus, resources motivate employees and help address demands effectively. Previous studies have shown that job demands exhaust employees' mental and physical resources and lead to burn-out symptoms (Bakker & Demerouti, 2007; Bakker, Demerouti, & Sanz-Vergel, 2014). This study argues that the rationale of the JD-R model can be applied in the context of work-related social media use when social media related advantages (i.e., resources) and challenges (i.e., demands) are considered.

Research in the field of organizational communication has identified several advantages and challenges associated with social media use in the workplace. Drawing on research in organizational psychology theory, specifically, the job demands and resources theory, this study argues that these advantages and challenges should be viewed as technology-related resources and demands. In doing so this study provides a theoretical basis to better understand the consequences of communication social media use in organizational contexts.

Theoretical Perspectives

The Job Demands and Resources Model

The JD-R model is an overarching model that can be applied in various occupational settings to predict employee well-being – i.e., job burnout and engagement - regardless of the particular demands and resources (Bakker & Demerouti, 2007; Crawford, LePine, & Rich, 2010; Demerouti et al., 2001; Nahrgang, Morgeson, & Hofmann, 2011; Woerkom, Bakker, & Nishii, 2016). Central to the JD-R model is the assumption that every occupation has specific risk factors that can be classified as demands and resources associated with job stress (Bakker & Demerouti, 2007). Job demands refer to the physical, social, or organizational aspects of a job that require sustained effort and are thus associated with psychological costs such as exhaustion (Demerouti et al., 2001). Examples of job demands are high work pressure, unfavorable physical environment, and emotionally demanding interactions with others (Bakker & Demerouti, 2007). Job resources, in turn, refer to physical, psychological, social or organizational aspects of a job that are I) functional in achieving work goals, II) reduce job demands and their associated costs, and III) stimulate personal growth and development (Bakker & Demerouti, 2007). Such job resources – e.g., increased autonomy, leader-member

exchange, feedback and task significance - are typically associated with increased levels of engagement (Bakker, Demerouti, & Sanz-Vergel, 2014).

Various empirical studies have supported the notion that job demands lead to exhaustion, diminished task effectiveness, increased burnout and longer and more frequent sick leaves, whereas, job resources simultaneously counteract these effects (Bakker, Demerouti, & Verbeke, 2004, Bakker, et al., 2014; Ter Hoeven & van Zoonen, 2015). Thus, job demands may deplete employees' energy resources and lead to exhaustion, while job resources may mitigate the effects these job demands place on employees and simultaneously increase engagement (Bakker et al., 2014; Crawford, et al., 2010; Llorens, Bakker, Schaufeli, & Salanova, 2006; Schaufeli & Bakker, 2004; Woerkom, et al., 2016).

The JD-R theory has previously been applied to model the paradoxical consequences of communication technology use in the workplace (Ter Hoeven, et al., 2016). The authors show that the rational behind the JD-R model is supported when applied to communication technology use. Hence the JD-R model provides a theoretical framework for modeling the opposing consequences of technology use and links these consequences to employee wellbeing.

Several scholars have proposed that the use of communication technologies and social media, in particular, presents employees with specific challenges and advantages (Fonner & Roloff, 2012; 2012; Gajendran & Harrison, 2007; Leonardi, Treem, & Jackson, 2010; Skeels & Grudin, 2009; Treem & Leonardi, 2012; Utz, 2015). For instance, Ter Hoeven, van Zoonen and Fonner (2016) identified communication effectiveness and accessibility as importance resources, while interruptions and unpredictability were identified as technology related demands. This is substantiated by numerous studies that describe similar tensions as a result of communication technology use (Chesley, 2010; 2014; Fonner & Roloff, 2012; Mazmanian, Orlikowski, & Yates, 2013). Similarly, social media may present employees with advantages such as informational benefits (Utz, 2015) or challenges such as increased work-life conflict (Skeels & Grunig, 2009). Notably, these demands and resources are not exclusive to social media as they are associated with other communication technologies as well.

Social Media Related Demands

Social media, such as Facebook and Twitter, are social spaces where professional and personal interactions coexist (Ollier-Malaterre, et al., 2013). In addition, these social networks, including LinkedIn afford the possibility of perpetual connectivity (Treem & Leonardi, 2012) The blurring of social and temporal boundaries may cause them to be used in ways that are intrusive to other life domains create role conflicts (Bucher, et al., 2013; Ollier-Malaterre, et al., 2013; Park, Fritx, & Jex, 2011).

Social media may induce role conflict as its use complicates our metaphors of time and place including the belief that audiences are separated from each other (Marwick & Boyd, 2010). Employees frequently utilize personally owned social media to stay connected to work and engage in work related information sharing (Utz, 2015). The 24-hour connectedness facilitated by social media use may lead to an invasion of work into the private domain (Bucher, et al., 2013). Recent findings suggest that 36.5% of the tweets sent from personally owned Twitter accounts are work related, of these work-related tweets 48.9% is sent outside of regular office hours (*Chapter one*). This supports the notion that work-related conversations on social media continue during time off (*Chapter one*), making invasion inevitable (Bucher et al., 2013). As processing or creating work related information requires time and effort causing depletion of psychological resources its use may impose work/life conflict. This is supported by several studies that show that social media presents difficulties in navigating between life domains (e.g., Ollier-Malaterre, et al., 2013; Vitak, et al., 2012). Resolving these work/life conflicts requires psychological expenditures that may deplete employee's resources. Hence, work/life conflict is seen as a social media related challenge that may result in increased burnout and reduced levels of engagement.

H1a: Work-related social media use is positively related to exhaustion through enhanced work-life conflict

H1b: Work-related social media use is negatively related to engagement through enhanced work-life conflict

Another challenge arises as social media affords employees perpetual connectivity or at least the expectation of such connectivity – i.e., creating a situation in which employees can be reached anytime and anywhere (Bucher et al., 2013), which in turn could enhance interruptions (Jarvenpaa & Lang, 2005; Ter Hoeven et al., 2016). An interruption is "a synchronous interaction which is not initiated by the recipient, is unscheduled, and results in the recipient discontinuing their current activity" (Rennecker & Godwin, 2005, p. 250).

Social media use may increase interruptions as it allows instantaneous information exchanges and inquiries. Interruptions have been identified as an undesirable outcome of different communication technologies, such as email use and smartphone use, in the workplace (Fonner & Roloff, 2012). As with other data-intensive communication technologies increased use of social media exposes employees to a greater number of interactions that may interfere with their work routine. Generally, technology facilitates the accumulation of unanticipated tasks and requests that are generated by incoming messages (Perlow, 2012) for example through social media. This accumulation of messages and information can deplete an employee's energy (Derks & Bakker, 2014; Perlow, 2012) and reduce engagement (Ter Hoeven, et al., 2016).

H2a: Work-related social media use is positively related to exhaustion through interruptions

H2b: Work-related social media use is negatively related to engagement through interruptions

Social Media Related Resources

Social media afford behaviors that were difficult or impossible to perform before these technologies entered the workplace (Treem & Leonardi, 2012). For instance, social media can contribute directly to horizontal and vertical communication in organizations (Miles and Mangold, 2014; Trimi & Galanxhi, 2014) enrich internal communication (Huang, Baptista, & Galliers, 2013), and knowledge sharing (Ellison, Gibbs, & Weber, 2015; Utz, 2015), in a cost and time-efficient manner (Denyer, Parry, & flowers, 2011). Hence, social media serve as platforms to efficiently exchange work-related information (e.g., Miles & Mangold, 2014; Ollier-Malaterre, et al., 2013; Utz, 2015; Zhao & Rosson, 2009).

The enhanced communication effectiveness facilitated by social media use in organizations has been ascribed to the notion that social media add to the a) multivocality of communication, b) increased reach and richness of communication and c) simultaneous co-creation of rhetorical content (Huang, et al., 2013). Moreover, social media's unique affordances enable organization-wide information sharing (e.g., Treem and Leonardi, 2012). Hence, we argue that effective communication is associated with social media use in turn; effective communication is positively related to engagement while diminishing exhaustion (e.g., Ter Hoeven, et al., 2016).

The exposition of social media related demands (work-life conflict) and resources (effective communication) is also substantiated by Vitak et al. (2012) who found that: "Participants recognized the benefits of social media to share information, interact, and reach out to diverse groups, but many also worried about context collapse: the blurring of boundaries between users' personal and professional lives" (p. 557).

H3a: Work-related social media use is negatively related to exhaustion through enhanced communication effectiveness.

H3b: Work-related social media use is positively related to engagement through enhanced communication effectiveness.

Another important resource of social media is the increased accessibility these technologies facilitate (Bucher, et al., 2013; Treem & Leonardi, 2012). Accessibility is regarded as a valuable resource as it increases professional competence and control (Chesley, 2010; Jarvenpaa & Lang, 2005; Ter Hoeven, et al., 2016). Accessibility refers to being available when needed by others. Being accessible is instrumental in helping others and being a competent and accountable employee (Mazmanian, et al., 2013). Social media may increase employees' visibility in organizations (Treem & Leonardi, 2012) and enhance feelings of proximity and being in touch colleagues (Zhao & Rosson, 2009).

In the context of communication technology use, accessibility was found to facilitate the relationship between technology use employee wellbeing – i.e., engagement and exhaustion (Ter Hoeven et al., 2016). Social media allow employees to stay connected to work 24 hours a

day (Bucher, et al., 2013). Van Zoonen and colleagues (2016) found that almost half of the work-related tweets sent from employees' personal Twitter accounts were sent outside of regular office hours. This supports the notion that social media facilitates accessibility among employees regardless of temporal or spatial boundaries. Bucher et al. (2013) note that in professional life, this can lead to an apparent need to be connected and hooked into the conversation at all times. Similarly, Perlow (2012) describes the cycle of responsiveness arguing that contemporary communication technologies allow employees to be always "on", referring to the time employees do not necessarily spend working but are available. Social media presents yet another communication channel through which employees can reach each other (Ellison, Steinfield, & Lampe, 2011; Ollier-Malaterre et al., 2013; Zhao & Rosson, 2009). Hence, accessibility is viewed as a social media resource and as such enhances engagement and decreases exhaustion.

H4a: Work-related social media use is negatively related to exhaustion through enhanced accessibility.

H4b: Work-related social media use is positively related to engagement through enhanced accessibility.

Method

Sample and Procedure

Data were collected by PanelClix (a professional research company) using an online survey.[4] Email invitations were sent to 775 Dutch employees from various organizations. A total of 421 Dutch employees completed the survey between December 16 and December 25, 2015. The response rate was 54.32%. The average age of the respondents was 42.53 years (SD=11.69); 50.4% were male. The respondents indicated that they worked 36.90 hours per week (SD=7.00), which closely resembled the overall Dutch workforce (whose average age is 41.4 years old; average working hours per week 33.07).[5] Of the participants, 48.7% had earned

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[4] Their panel is ISO26362 certified.
[5] Figures derived from the central bureau of statistics (statline.cbs.nl/) and the Dutch ministry of education, culture, and science (http://www.trendsinbeeld.minocw.nl/grafieken/3_1_2_31.php).

an advanced degree and 28.5% had a managerial position at their organization. The majority was employed in one of the following sectors: healthcare (18.5%), government/public administration (12.1%), business services (11.2%), industry (10.2%), education/science (8.6%), trade/commercial services (7.6%), and financial services (5.7%).

Measures

The latent constructs in the model were measured with three to five indicators measured on a seven-point Likert scale.

Burnout and engagement. Burnout was measured using its core dimension *emotional exhaustion,* which is the central feature of burnout and the most distinct manifestation of this syndrome (Ter Hoeven, et al., 2016). It represents the individual stress dimension of burnout and refers to feeling overextended and depleted of emotional and physical resources (Maslach, Schaufeli, & Leiter, 2001, p. 399). To measure this construct, the five items of the sub dimension "emotional exhaustion" of the Dutch version of the Maslach Burnout Inventory were employed (MBI-NL; see Schaufeli & Van Dierendonck, 1994). This included items such as '*A full days work is a heavy burden for me*.' The factor loadings of these items ranged from .83 to .94.

Engagement is characterized by a high level of energy and was tapped using its core dimension i.e., vigor. Vigor is defined as high levels of energy and mental resilience while working. This was measured using five items of the Utrecht Work Engagement Scale were employed (UWES; Schaufeli & Bakker, 2004; Schaufeli et al., 2009; Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 72). This included items such as '*While at work, I am bursting with energy*.' The factor loadings of these items ranged from .72 to .90.

Demands. *Work to life conflict* was measured using four items derived from Netemeyer, Boles, and McMurrian, (1996). Sample items for work to life conflict include '*the demands of my work interfere with my home and family life.*' The factor loadings of these items ranged from .72 to .91. The concept *interruptions* evaluated communication in which the employee is interrupted while performing his or her work, using three items derived from Ter Hoeven et al. (2016) with factor loadings ranging from .63 to .92. A sample item is '*At work, communication technologies cause interruptions*.'

Resources. *Efficient communication* was measured using the Communication Quality Scale (CQS) constructed by Ten Brummelhuis et al. (2012). Efficient communication refers to the extent to which communication enables effortless, functional and timely communication using four items such as '*The communication with my colleagues is very efficient.*' The factor loadings of these items ranged from .68 to .72. *Accessibility* refers to the ease and pace with which an employee can be reached by colleagues and was assessed by three items, including '*It is easy for my colleagues to reach me.*' The factor loadings of these items ranged from .70 to .87.

Work-related social media use. This measure evaluates the use of personally owned social media accounts for work-related communication. The scale is derived from van Zoonen et al., (2016). We measured this construct by tapping into the use of Facebook, Twitter, and LinkedIn as sub-dimensions of work-related social media use. Each dimension was measured using five items such as; '*I share organizational accomplishments on my personally owned Facebook account.*' The factor loadings of these items ranged from .84 to .96. The sub-dimensions loaded on the second order construct work-related social media use: Facebook .69; LinkedIn .72, and Twitter, .59. Table 1 includes descriptives, bivariate correlations and alpha coefficients (α range 0.66 - 0.94). Figure 1 shows all the standardized factor loadings.

Analysis

We employed structural equation modeling (SEM) to test our hypotheses using AMOS 20. Incremental and absolute fit indices are presented to assess model fit. Two incremental fit indices are used: The Tucker-Lewis Index (TLI) and the Comparative Fit Index (CFI). Model fit indices of > .95 indicate good model fit. Two absolute fit indices are examined: a standardized version of the root mean squared residual (SRMR) and the root mean square of approximation (RMSEA), with cut-off values of ≤ 0.08 and ≤ 0.05, respectively, which indicate a close model fit. Additionally, the χ^2 statistic is presented. We extracted 5,000 bootstrap samples from the data to estimate the model parameters and standard errors. We also used bootstrapping to calculate confidence intervals to compare the regression weights of indirect pathways (i.e., contrasting effects). Contrasting effects are calculated to determine which paths should be given statistical credence (e.g., the indirect path on exhaustion through

communication effectiveness versus the indirect paths on exhaustion through work-life conflict).

Results

Multivariate Assumption and Common Method Variance

Curve estimations were performed for all the relationships in the model and indicated that all these relationships were sufficiently linear and could thus be tested using a covariance-based algorithm, such as that used in AMOS. Given the cross-sectional nature of the data common method bias was assessed. First, a Harman's single-factor test –i.e., extracting a single factor in a principal component analysis -, for all the observed indicators in our model was conducted, which explains 29.65% of the variance. Second, we assessed common method variance using a common latent factor analysis test. Results indicated the common method variance in our model was 0.04%. These results indicate that common method variance is not a problem in our data.

Measurement Model

The measurement model indicates good model fit χ^2 (678)=1330.89; CFI= 0.96; TLI=0.96; SRMR= 0.05 and RMSEA= 0.048 (CI: 0.044, 0.052). Cross-factor correlations were examined to determine discriminant validity. The correlation between exhaustion and engagement was the highest in the model (-.48). The other correlations between the latent constructs in the model ranged from -.25 to .46 (see Table 1), this demonstrates adequate discriminant validity.

Convergent validity was assessed by examining the factor loadings and squared multiple correlations. The factor loadings of the social media sub-dimensions on the second order construct work-related social media use were; Facebook .70, Twitter .57, and LinkedIn .68. The factor loadings of all observed variables on the intended latent construct were significant and sizable ranging from .63 to .98 (see Figure 1). These results indicate satisfactory convergent validity; as such further examination of the structural model is justified.

Table 1. Correlations and descriptive statistics

Variable	M (SD)	1	2	3	4	5	6	7	8	9	10	11	12
1 Social Media use [a]	1.58 (1.04)	**.66**											
2 Interruptions	3.18 (0.89)	.12	**.85**										
3 Accessibility	3.99 (0.60)	.12	.10	**.79**									
4 Work to life conflict	2.35 (0.89)	.12	.31	-.03	**.89**								
5 Efficient communication	3.76 (0.59)	.13	-.01	.25	-.11	**.78**							
6 Exhaustion	2.81 (1.31)	-.02	.30	-.14	.46	-.25	**.94**						
7 Engagement	5.08 (1.15)	.10	-.17	.23	-.16	.38	-.48	**.91**					
8 Gender	1.50 (0.50)	-.12	-.05	-.07	.03	-.03	.08	-.04	-				
9 Age	42.53 (11.69)	-.12	-.02	-.02	.10	.02	.00	.12	-.17	-			
10 Organizational tenure	9.97 (9.44)	-.14	.10	-.06	.07	-.04	-.02	.09	-.12	.44	-		
11 Hours a week	36.90 (7.00)	.14	.14	.08	.05	.11	-.04	.11	-.45	.05	.04	-	
12 Managerial position	1.29 (0.45)	.20	.13	.01	.09	.15	-.06	.12	-.24	.09	.06	.25	-

N= 421. Values on the diagonal in Bold are reliabilities (α). The two dichotomous variables were anchored as follows: gender (1 = male, 2 = female) and managerial position (1 = yes, 2 = no). [a] represents a second order construct, comprised of Facebook, Twitter and LinkedIn use. Correlations of .10 or higher were significant at p < .05.

145

Structural Model

To test the hypotheses a structural model linking work related social media to exhaustion and engagement through opposing mediation effects was estimated. The structural model shows good model fit. χ^2 (687) = 1449.42; CFI = 0.95; TLI = 0.95; SRMR = 0.07 and RMSEA = 0.051 (CI: 0.048, 0.055). Hypothesis 1a is supported because work related social media affects exhaustion through increased work-life conflict (b*= 0.141, CI95%[.029; .288], p = 0.017). Additionally, hypothesis 1b is supported as work related social media use is associated with engagement through increased work life conflict (b*= -0.037, CI95%[-.112; -.002], p = 0.035).

Hypotheses 2 assumes that interruptions are a social media related demand that is therefore related to exhaustion and reduces engagement. Interruptions were found to facilitate the relationship between social media use and exhaustion (b*= 0.054, CI95%[.003; .145], p = 0.039) and engagement (b*= -0.043, CI95%[-.127; -.002], p = 0.035). This supports the reasoning reflected in H2a and H2b.

The opposite effect is expected to occur, simultaneously, through efficient communication and accessibility. The findings support the rationale reflected in hypothesis 3a as work-related social media use was negatively related to exhaustion through enhanced communication efficiency (b*= -0.109, CI95%[-.236; -.037], p = 0.001). In turn, as expected the findings also support hypothesis 3b as a positive indirect effect was found between work-related social media use and engagement through efficient communication (b*= 0.175, CI95%[.062; .368], p = 0.001).

Hypotheses 4a and 4b were also supported. Accessibility facilitates the relationship between social media use and engagement (b*= 0.057, CI95%[.009; .163], p = 0.009), and between social media use and exhaustion (b*= -0.036, CI95%[-.117; -.004], p = 0.021). The model explains 30.7% of the variance in exhaustion and 25.9% of the variance in engagement.

Test of Indirect Effects

The hypotheses refer to indirect effects between social media use and well-being measures rather than full or partial mediation. All a) $X \rightarrow M$ and b) $M \rightarrow Y$ paths were significant (see Figure 1). These significant a and b paths represent the indirect effects through social media-related resources and demands, as indicated by the bootstrapping results (see

Table 2). In the model without the mediators the effects of social media use on engagement b*= 0.274, BC95% [-.006; .660] p = 0.055; and social media use on exhaustion b*= -0.114, BC95% [-.465; .166] p = 0.424, are both not significant. In the model with the mediators the direct effect of social media use on engagement decreased to; b*= 0.152, BC95% [-.119; .480] p = 0.240; and the direct effect of social media use on exhaustion was, b*= -0.144, BC95% [-.442; .112] p = 0.261. The absence of significant direct effects supports the notion of indirect effects (as opposed to mediation) implied by our hypothesized model.

Contrast of Indirect Effects

The structural model presented here included opposing indirect effects. To determine which path of the opposing effects should be given more credence pairwise comparisons of indirect effects were conducted. The contrasts of indirect effects are listed in Table 2. The indirect effects were compared to each other in terms of effect size by linking the same pair of independent and dependent variables. Since the comparison entails opposite effects (negative versus positive indirect effects) the contrasting estimate denotes the difference in effect size in which the sum of pairwise indirect pathways should significantly differ from zero to denote a difference in effect magnitude.
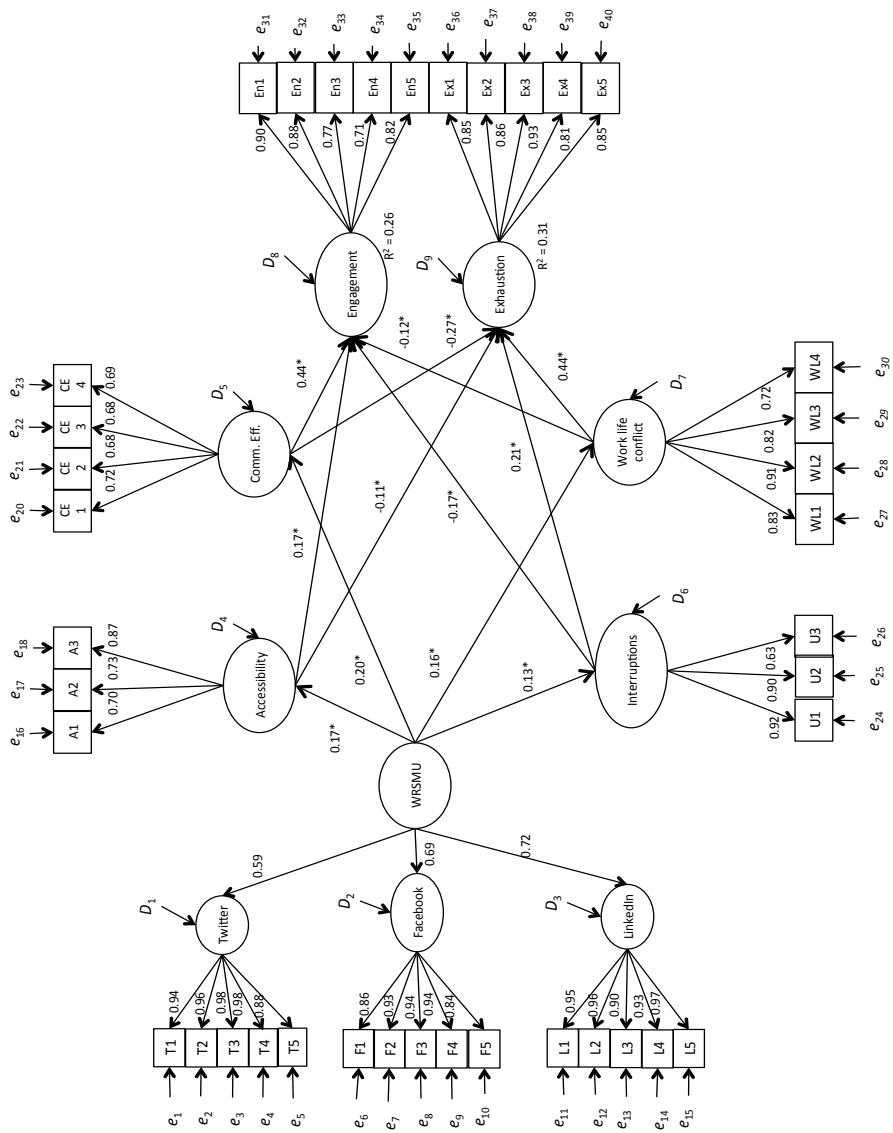
Figure 1. Structural regression model with standardized estimates. Significance is flagged * *p* < .05.

Table 2. Indirect Pathways Using Bootstrapping

	Bootstrapping		BC 95% CI		
	Estimate	SE	Lower	Upper	P
H1a WRSMU → Work to life → Exhaustion	.141	.065	.029	.288	.017
H1b WRSMU → Work to life → Engagement	-.037	.026	-.112	-.002	.035
H2a WRSMU → Interruptions → Exhaustion	.054	.034	.003	.145	.039
H2b WRSMU → Interruptions → Engagement	-.043	.030	-.127	-.002	.035
H3a WRSMU → Efficient communication → Exhaustion	-.109	.050	-.236	-.037	.001
H3b WRSMU → Efficient communication → Engagement	.175	.076	.062	.368	.001
H4a WRSMU → Accessibility → Exhaustion	-.036	.026	-.117	-.004	.021
H4b WRSMU → Accessibility → Engagement	.057	.037	.009	.163	.009
Contrasts					
Work to life vs. Efficient communication on Exhaustion	.032	.086	-.141	.208	.685
Work to life vs. Accessibility on Exhaustion	.105	.071	-.028	.252	.113
Interruptions vs. Efficient communication on Exhaustion	-.056	.059	-.182	.050	.289
Interruption vs. Accessibility on Exhaustion	.017	.041	-.067	.099	.665
Efficient communication vs. work to life on Engagement	.138	.083	.006	.335	.039
Efficient communication vs. Interruptions on Engagement	.132	.080	.004	.310	.042
Accessibility vs. work to life on Engagement	.019	.045	-.059	.123	.630
Accessibility vs. Interruptions on Engagement	.014	.045	-.066	.113	.709

The pairwise comparison of the indirect effects linking social media use to exhaustion show that the social media related demands are mitigated by the social media related resources. The indirect effect of social media use on exhaustion through work life conflict is not significantly larger in magnitude than the indirect effects through efficient communication (b*= 0.032, BC95% [-.141; .208] p = 0.685) and accessibility (b*= 0.105, BC95% [-.028; .252] p = 0.113). Similarly, the contrast between the indirect effects through interruptions versus efficient communication (b*= -0.056, BC95% [-.182; .050] p = 0.289) and accessibility (b*= 0.017, BC95% [-.067; .099] p = 0.665) cannot be distinguished in terms of the effect magnitude.

Finally, the indirect effects linking social media use to engagement were contrasted. The contrast between the indirect effects through accessibility versus interruptions (b*= 0.014, BC95% [-.066; .113] p = 0.709) and work life conflict (b*= 0.019, BC95% [-.059; .123] p = 0.630) were not significantly different in effect size. In turn, the indirect effect through efficient communication was stronger than the indirect effects though interruptions (b*= 0.132, BC95% [.004; .310] p = 0.042) and work life conflict (b*= 0.138, BC95% [.006; .335] p = 0.039).

Control Variables and Alternative Models

The control variables gender, age, organizational tenure, managerial position, and working hours per week were consecutively modeled. All the parameters presented in the final model held true when controlling for these variables. This result indicates that the control variables had no influence on the overall findings; as such, we excluded these variables from the final model for reasons of parsimony.

Model fit statistics for alternative models were examined to determine whether these models correspond with the data for alternative explanations. Model deterioration was assessed using a $\Delta \chi^2$ test. First, we re-specified our structural model as a CFA. This model represents the unanalyzed associations between factors (i.e., covariances) that are not directional. Model fit indices suggest significant model deterioration compared with the retained structural model ($\Delta\chi^2$=50.03, p < 0.001). Additionally, we estimated a reversed model using exhaustion and engagement to explain social media use, thus reversing the causal directionalities (Kline, 2011). The overall fit of the model suggests an inferior fit to the data compared with the retained model ($\Delta\chi^2$=21.60, p < 0.001).

Discussion

This study argues that the opposing consequences of work-related social media use should be evaluated as social media related demands and resources. Social media allows employees to communicate efficiently and increase accessibility but simultaneously presents employees with increased interruptions and work to life conflict. This study shows that the JD-R model can be applied to examine the consequences of employees' social media use, emphasizing the importance of both demands and resources in the relationship between social media use and employee well-being – i.e., exhaustion and engagement. Work-related social media use fosters greater efficiency in work communication and accessibility, which in turn reduces exhaustion and enhances engagement. However, work-related social media also induces interruptions and boundary conflicts, which yield opposite effects on exhaustion and engagement. The results show that the social media resource accessibility mitigates the effects through social media related demands – i.e., interruptions and work-life conflict. Furthermore, the indirect effect between social media use and engagement through efficient communication is stronger than the opposing indirect effects through social media related demands. This

suggests that employees are able to benefit from the communicative effectiveness social media offers them in terms of engagement. This advantage is not supported in relation to exhaustion, as the social media demands yield stronger effects there. Hence, the social media related demands, for a large part, mitigate the social media related resources.

Theoretical Implications

The findings contribute to the literature by emphasizing the influence of the opposing consequences of social media use on exhaustion and engagement. This study shows that the positive associations attributed to social media use are mitigated by the negative consequences its use simultaneously provokes. This indicates that the relationship between social media use and its consequences for employees is more complex than previously established and that opposing effects must be considered. Previous research on social media use in organizations has identified information benefits (Utz, 2015), social benefits (Skeels & Grunig, 2009) and connectivity (Treem & Leonardi, 2012) as advantages associated with social media use. In turn, work-life conflict (Ollier-Malaterre, et al., 2013; Vitak et al., 2012) and interruptions (Bucher, et al., 2013) have been labeled as negative consequences of social media use. This study adds that these positive and negative associations of social media should be viewed as resources and demand. Specifically, the findings suggest that the JD-R model provides a useful framework for studying the effects of social technologies in organizations.

Studying social media-related resources would provide a positive narrative, whereas only including social media-related demands would confirm a negative relationship. Likewise, studying a direct effect on social media use and individual level outcomes without considering these opposing effects, could lead to falsely accepting a null hypothesis, since there are opposing mechanisms that cancel each other out. This study demonstrates the importance of adopting a tension-based lens to understanding the consequences of social media use for work.

The positive association of social media in this study – i.e., efficient communication and accessibility – are in line with earlier research that argued that social media afford possibilities for effective knowledge sharing (Treem & Leonardi, 2012) and interaction with a diverse group (Vitak et al., 2012). Similarly, the challenges presented here increased work-life conflict (Ollier-malaterre, et al., 2013; Vitak, et al., 2012) and interruptions (Bucher et al., 2013) have been theorized as well. Although this study identified two important opposing

mechanisms relevant to social media use, we do not claim to be exhaustive. Drawing on research on communication technology use in the workplace, several other tensions might be identified relevant to work-related social media use. For instance, Perlow (2012) describes the cycle of responsiveness reflecting the tensions between responsiveness, always being 'on', and increased unpredictability. In a recent study unpredictability was identified as a technology related demand. Arguably these technology related demands and resources transpose to the context of work-related social media use as well (Ter Hoeven et al. 2016).

Finally, although the relationship between (enterprise) social media use in the workplace and impression management (Boyd & Ellison, 2007; Gibbs, Rozaidi, & Eisenberg, 2013), knowledge sharing (Gibbs, et al., 2013; Treem & Leonardi, 2012), boundary conflicts (Ollier-Malaterre, et al., 2013; Vitak, et al., 2012), and work performance (Leftheriotis & Giannakos, 2014; Moqbel, Nevo, & Kock, 2013) is reasonably established, this study is among the first to show that social media use for work is related to employee wellbeing through opposing mechanisms. The findings imply that technology is indeed paradoxical (Jarvenpaa & Lang, 2005) and that at least its consequences in the context of organizations and communication should be viewed as such.

Practical Implications

As social technologies become increasingly institutionalized in organizations certain outcomes of social media use warrant additional attention. Although social media use gained traction among employees because the positive associations it carries, employees might also experience negative consequences that might cause exhaustion and reduce engagement. This study suggests that organizations that allow or support the use of social technologies should focus on protecting employees from the increased intrusion between life domains and the increased interruptions employees may experience.

Organizations can facilitate guidelines for responsible use of these technologies to help employees cope with social media-related demands. In doing so organizations can help employees find a balance between staying connected to work and allowing information and communication with coworkers while protecting the boundaries between life domains. This way, employees may benefit from the resources social media offer while reducing the demands that counteract these benefits.

Many studies argue that social norms are important for the manner in which technologies are used. In that respect, Treem, Dailey, Pierce, and Leonardi (2015) discuss the importance of technological frames that shape the meaning employees attribute to technology. Mazmanian (2013) argues that the use of technology and the importance that is attributed to it is socially constructed. Essentially, this means that employees cannot simply ignore or refrain from using social media – not in the least because they also use these accounts personally – if they are committed to succeeding in a social environment that expects accessibility and responsiveness. This suggests that the collective technological frames have an important influence over how social technologies are used. Organizations should, therefore, focus on the social origins and social solutions to for instance the intrusive use of these technologies for employees' personal life domains.

Finally, this study suggests employees do not necessarily benefit from work-related social media use in terms of their wellbeing. Therefore, managerial efforts should be directed at harnessing employees from the demands social media place on them, while capitalizing on the resources social media offer. Recently, studies have suggested that social media use increased work performance. However, this view might be contested when considering both social media related resources and demands.

Limitations and Future Research

A few limitations of this study need to be acknowledged. First, this study relies on cross-sectional data hence no claims with regard to the causality of the relationships among work-related social media use, social media related demands and resources and wellbeing could be made. Other types of research are required to substantiate the causality of the relationship between work-related social media use and wellbeing.

Second, although social media are becoming increasingly institutionalized in organizations research has not yet developed well-validated scales to measure these behaviors. This study developed a scale based on an extensive content analysis by Van Zoonen and colleagues (2016). However, to avoid the proliferation of different and contrasting effects that may be caused by different conceptualizations of use and add to cumulative knowledge on work-related social media use, it may be worthwhile to further validate the scale that taps into the use of social media for work.

Finally, as mentioned above this study is likely to have captured the most prevalent social media related resources and demands, as derived from the literature, but this study is not exhaustive. Additional research is needed to advance our understanding of the opposing consequences of social technologies.

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