Original Article

Boundary Work Tactics and Their Effects on Information and Communication Technology Use After Hours and Recovery

Taking Action When Boundaries Are Blurring

Kathrin Reinke[1], Lisa Niederkrome[2], and Sandra Ohly[2]

[1]Department of Business Psychology, Hochschule Fresenius, Wiesbaden, Germany
[2]Department of Business Psychology, University of Kassel, Germany

Abstract: With an increasing use of work-related technologies after hours and mobile working, boundaries between work and personal life domains blur more and more, impairing recovery. Qualitative studies have shown that individuals use various boundary work tactics to actively manage their work–nonwork boundaries. However, it remains largely unknown how the use of such tactics contributes to recovery. This research differentiates types of availability-related boundary work tactics and organizes them according to their underlying motives: preventive, restrictive, and rejecting tactics. The results of a cross-sectional study (N = 249) and a validation study (N = 175) support the proposed motive-oriented structure of tactics and show differential prediction of psychological detachment and relaxation. Implications for practice and future research are discussed.

Keywords: boundary theory, availability, boundary management, boundary work tactics, recovery

With an increasing use of information and communication technologies (ICT) after hours, boundaries between work and personal lives more and more blur (Boswell et al., 2016; Towers et al., 2006), particularly in current times of increased remote and mobile working (Rudolph et al., 2021). Although the blurring of boundaries offers greater flexibility, it often leads to longer working hours (D. K. Allen & Shoard, 2005) as well as impaired recovery and well-being (Hu et al., 2021; Thörel et al., 2022). Consequently, many professionals face the challenge to actively manage the boundaries between their work and personal lives (Kossek, 2016). Several qualitative studies have shown that professionals use various boundary work tactics, i.e., certain actions or strategies to actively manage work–nonwork boundaries (T. D. Allen et al., 2021; Sayah, 2013), which can be categorized based on their content (e.g., communicative or technological, Kreiner et al., 2009; Sayah, 2013). While these categorizations are helpful to understand which diverse tactics individuals use, research on boundary work tactics is currently limited because (1) studies differ in how they categorize and treat specific tactics, and (2) it remains largely unknown how these various tactics relate to individuals' recovery. This limits our understanding of the efficacy of boundary work tactics (Rudolph et al., 2021).

Addressing this limitation, our study aims at contributing to our understanding of the effects of distinct boundary work tactics on individuals' recovery. Thereby, we focus on tactics that address actively managing work influences via ICT during leisure time. We refer to such tactics as availability-related boundary work tactics. Drawing on principles of boundary theory (Ashforth et al., 2000; Clark, 2000) and the effort-recovery model (Meijman & Mulder, 1998), we first propose a new conceptual framework that helps to distinguish the variety of tactics according to their underlying motives: preventive, restrictive, and rejecting tactics. Second, we provide first insights on how these motive-oriented tactics relate to constructs in their nomological net in a validation study with 175 participants. Finally, we add initial insights on how the use of such tactics relates to individuals' work-related ICT use after hours and recovery experiences, using a cross-sectional study with 249 participants. Together, our research sheds light on the structure as well as the effectiveness of distinct availability-related boundary work tactics for maintaining professionals' recovery in times of boundary blurring.

Boundary Work Tactics and Recovery

Theoretical Framework

According to boundary theory (Ashforth et al., 2000; Clark, 2000), individuals differ in how they prefer to and manage the boundaries between different life domains, ranging on a continuum from segmentation to integration. While segmenting boundaries involves setting clear and thick boundaries between the roles of different domains, integration refers to boundaries that are more permeable and flexible and crossed more frequently (Ashforth et al., 2000).

Studies examining boundary management have either examined *how much* individuals segment or integrate different life domains as their focal variable of interest, that is, the degree of segmentation or integration (e.g., Powell & Greenhaus, 2010; Reinke & Gerlach, 2022; Wepfer et al., 2018). Alternatively, (mainly qualitative) studies have investigated *how* individuals manage their work–nonwork boundaries, that is, which specific boundary work tactics individuals purposefully apply to achieve the desired degree of segmentation or integration (e.g., T. D. Allen et al., 2021; Kreiner et al., 2009).

The Effort-Recovery Model (ERM, Meijman & Mulder, 1998) posits that work effort is related to an increased psychophysiological activation. These short-term stress reactions are reversible by engaging in recovery processes: Recovery from work allows the individuals' functional systems to return to a baseline, both on a psychological and physiological level. This implies that recovery processes can only begin when individuals are no longer exposed to their work demands (Meijman & Mulder, 1998). Yet with increasing boundary blurring, recovery processes are more likely to be interrupted by work and thus, work demands, resulting into insufficient recovery (Hu et al. 2021; Thörel et al., 2022). According to the ERM, this may lead to detrimental consequences for the individuals' physiological and psychological health (Meijman & Mulder, 1998). It follows that a certain degree of segmentation during leisure time is necessary to start the recovery process and engage in uninterrupted phases of recovery. Thus, to foster their recovery, both *segmenters* and *integrators* should employ certain boundary work tactics. However, the boundary work tactics they employ might differ in regard of the level of permeability they allow for, as some tactics build more clear and thick boundaries than others (e.g., Sayah, 2013; Towers et al., 2006). In the following, we review and organize prior research on such tactics.

Literature Review and Categorization of Boundary Work Tactics

Concepts and scales are often misaligned in boundary management research, resulting into some terminological confusion (see Cobb et al., 2022 for a review). As outlined by Cobb et al. (2022), many quantitative studies have examined the degree of segmentation or integration (referred to as enactment in Cobb et al., 2022). In contrast, qualitative studies were instrumental in creating knowledge about boundary work tactics (e.g., T. D. Allen et al., 2021; Fonner & Stache, 2012; Kreiner et al., 2009; Lirio, 2017), providing different categorizations. For instance, Kreiner et al. (2009) differentiate between behavioral, temporal, physical, and communicative tactics. Additional tactics were identified subsequently (e.g., Cousins & Robey, 2015; Fonner & Stache, 2012), in part based on Kreiner's initial categorization (e.g., T. D. Allen et al., 2021; Lirio, 2017) and in part focusing specifically on work-related ICT use and mobile working (e.g., Lirio, 2017; Sayah, 2013), specifying and extending Kreiner et al.'s (2009) broad behavioral subcategory *leveraging technology*.

Common of most categorizations is their focus on the tactics' content: Tactics are categorized based on whether individuals use time, space, communication, behavior, or functions of ICT to manage work influences during leisure time (e.g., T. D. Allen et al., 2021; Cousins & Robey, 2015; Park et al., 2020). An example for a temporal tactic is to limit the work-related use of ICT after hours to a certain duration (Lirio, 2017), while using space as a tactic may include to store away work-related ICT after hours (T. D. Allen et al., 2021; Towers et al., 2006). An example for a communicative tactic is to set expectations for one's times of (un)availability (e.g., T. D. Allen et al., 2021; Kreiner et al., 2009). An example for a behavioral tactic is to utilize the availability of other individuals such as colleagues (Kreiner et al., 2009). Finally, technological tactics refer to tactics that utilize device-related and program-related functions of ICT, for example, to turn off work-related push notifications after hours (Sayah, 2013; Schlachter, 2018). As one of the scarce studies linking different boundary work tactics[1] to outcomes, Carlson et al. (2016) found that temporal, physical, and behavioral boundary

[1] We point out that some of the enactment scales identified in Cobb et al. (2022) include items that can be regarded as tactics (e.g., communication scale in Clark, 2000). To avoid mingling different concepts and terms, we decided to only report studies here that purposefully and conceptually built on a framework of boundary work tactics.

work tactics relate to family satisfaction and engagement. In this study, tactics were examined from a rather general level, without specifying concrete actions that the individuals pursued. Besides, Park et al. (2020) found that among communicative tactics and one technological tactic (individuals (not) receiving work e-mail alerts on their phones), only the technological tactic predicted ICT demands. While these results are promising, they are limited in only examining general or selected specific tactics and neglecting recovery as an outcome.

Furthermore, while the aforementioned focus on the tactics' content in prior categorizations helps to provide insights on which tactics individuals use, we propose that understanding the tactics' effects on recovery requires to consider the tactics' underlying motives. Specifically, we argue that different tactics serve different purposes, reflecting boundary work on the segmentation–integration continuum (Ashforth et al., 2000): Some tactics completely prevent influences from work to personal life by creating clear and impermeable boundaries, such as putting away work-related devices during leisure time (Towers et al., 2006). In contrast, other tactics only partly limit influences and thus allow for some permeability of work–nonwork boundaries, such as reading work e-mails in leisure time and selectively responding to them (Sayah, 2013). Thus, tactics in the same contentual category may serve different motives: For example, the technological tactic *turning off work-related push messages after hours* helps to limit the perception of work-related communication and thus to limit the unregulated presence of work topics or work demands in the personal domain. However, individuals who employ this tactic may still actively read their work messages in leisure time. In contrast, the technology-related tactic *turning off work-related ICTs after hours* completely avoids work influences during leisure time and creates more impermeable boundaries (Sayah, 2013), helping to achieve stronger segmentation. Accordingly, considering that stronger segmentation is more beneficial for recovery (Wepfer et al., 2018), tactics with different motives might likewise relate differently to individuals' recovery, with some tactics being more effective than others. Thus, to shed light on the effects of different availability-related boundary work tactics on recovery, we suggest that the tactics need to be conceptually organized according to their underlying motive instead of their content. Based on our comprehensive literature review, we derive three underlying motives that are (1) preventive, (2) restrictive, and (3) rejecting and assign previously described tactics in the literature to these motives. We provide an overview of the three motives and their corresponding tactics in Table 1.

Preventive tactics refer to tactics that aim at preventively limiting or rejecting work influences via ICT during leisure time. These typically include actions that are initiated at one time and then should be in place more permanently. For example, individuals can inform colleagues that communicating via phone is only acceptable in case of emergency (Sayah, 2013) or use separate phones for work-related and personal purposes (Cousins & Robey, 2015; additional examples in Table 1). We assume that such tactics help to preventively set stronger boundaries, creating the prerequisites to allow for fewer work influences via ICT after hours a priori. Thus, this type of tactic might be particularly relevant for individuals who prefer to segment their work–nonwork boundaries.

Restrictive tactics aim at actively limiting work influences during leisure time, but they do not completely prohibit them, hence allowing for some permeability of work–nonwork boundaries. In contrast to preventive tactics, restrictive tactics involve actions that are taken more flexibly, depending on the current situation the individual is in. Individuals who employ restrictive temporal tactics divide leisure time into phases and decide for themselves when to engage in work-related activities. For example, work-related ICT use after hours can be restricted to a certain time period (Lirio, 2017; Sayah, 2013). Furthermore, technological tactics can help to limit (the perception of) work influences, for example, by turning off automatic messaging tools after hours (Sayah, 2013; Schlachter, 2018). In sum, work influences are not fundamentally avoided by these tactics, but they are limited. This type of tactics might be particularly relevant for individuals who prefer to integrate work–nonwork boundaries to some degree. Similarly, these tactics might be more suitable for individuals who deal with a high workload that does not allow them to completely leave work behind after hours.

Finally, we refer to *rejecting tactics* as strategies that primarily pursue the goal of separating work from the personal life domain by not engaging with work at all after hours. The aim is to draw clear, impermeable boundaries for a given leisure period. Compared to preventive tactics, these strategies involve rather flexible actions that can be adapted depending on the situation. For example, individuals can decide to not read any work-related messages at the weekend or during their vacation (Kossek et al., 2006; Sayah, 2013). Tactics are also employed to ensure that work-related communication cannot be noticed during leisure time, for example, by turning off work phones or storing them away (Cousins & Robey, 2015; Fonner & Stache, 2012; see Table 1). In sum, these tactics aim at separating work and personal life more strictly. Similar to preventive tactics, they should be mostly relevant for individuals who prefer a clear segmentation. Yet, while preventive tactics rather involve one-time actions, rejecting tactics are applied repeatedly in everyday life to foster segmentation.

Table 1. Overview of availability-related boundary work tactics in leisure time organized by motive

Category	Examples	Source examples
Preventive tactics: strategies that preventively limit work-related influences via ICT during leisure time		
Communicative tactics	Communicate availability expectations via e-mail signature	Schlachter, 2018
	Display the work status (e.g., "absent") to colleagues	Lirio, 2017
	Communicate to work contacts that contact is only possible via cell phone in case of emergency	Sayah, 2013
	Communicate expectations and preferences for work-related ICT use to customers, colleagues, managers	Boswell et al., 2016
Technological tactics	Use different ICT for work-related matters than for personal matters	Allen et al., 2021; Cousins & Robey, 2015; Sayah, 2013;
	Use different e-mail accounts or different telephone numbers for work-related matters than for personal matters	Kreiner et al., 2009; Sayah, 2013
Restrictive tactics: strategies that restrict work influences via ICT during leisure time to some extent		
Temporal tactics	Turn off ICT on which work-related messages or calls are received within leisure time at certain times, e.g., during social interaction, sport, dinner	Allen & Shoard, 2005; Sayah, 2013; Schlachter, 2018
	Limit the work-related use of ICT after hours to a certain duration	Lirio, 2017; Schlachter, 2018
	Limit the work-related use of ICT after hours to certain time windows	Sayah, 2013; Schlachter, 2018
	Automatically update work-related e-mails only at specific times	Schlachter, 2018
Prioritizing tactics	Read, process, or accept work-related communications according to urgency and priority, e.g., time-sensitive or urgent customer issues	Boswell et al., 2016; Colbert et al., 2016; Sayah, 2013; Towers et al., 2006
	Read work-related e-mails and decide whether a reaction is necessary based on urgency	Cousins & Robey, 2015
	Answer work-related calls, but directly ask for the reason of the call and, if there is little urgency, quickly end the call	Boswell et al., 2016; Sayah, 2013
	Involve other people so that they take own work-related messages/calls and forward only important ones	Kreiner et al., 2009
	Use the display information to decide whether to accept work-related calls during leisure time	Cousins & Robey, 2015; Kreiner et al., 2009; Sayah, 2013
Technological tactics	Limit the use of ICT for work-related matters to selected ICT (e.g., only on smartphone, not on computer) to control ICT use through choice of medium	Lirio, 2017; Sayah, 2013
	Turn off automatic updates/push messages of work-related communication	Sayah, 2013
	Mute work messages after hours	Allen et al., 2021
	Exclusively use e-mails for work-related communications, as this allows to choose the time for processing the messages	Kreiner et al., 2009; Lirio, 2017
Rejecting tactics: strategies that entirely reject work influences via ICT during leisure time		
Spatial tactics	Put away ICT for work-related communication after work	Allen et al., 2021; Kossek et al., 2006; Towers et al., 2006
	Leave ICT for work-related communication at the workplace	Cousins & Robey, 2015; Fonner & Stache, 2012; Sayah, 2013
	Do not take ICT for work-related communication on vacation	Allen & Shoard, 2005
Technological tactics	Switch off ICT on which work-related messages or calls are received outside working hours	Cousins & Robey, 2015; Fonner & Stache, 2012
	Block work-related notifications during leisure time	Schlachter, 2018
Temporal tactics	Do not check or read work-related e-mails during leisure time	Kossek et al., 2006; Sayah, 2013
	Ignore work-related calls during leisure time	Sayah, 2013

Hypothesis Development

In the following, we develop hypotheses for the relationships between the three motive-oriented tactics, ICT use after hours, and recovery. The tactics include a wide range of actions to prevent, restrict, or reject work influences via ICT during leisure time. Consequently, we argue that using these tactics will help to reduce work-related ICT use in leisure time. Previous research already points to a negative relationship between boundary creation and ICT use at home (Barber & Jenkins, 2014; Barber & Santuzzi, 2015). Accordingly, we hypothesize:

Hypothesis 1: The use of (a) preventive, (b) restrictive, and (c) rejecting boundary work tactics is negatively related with work-related ICT use after hours.

Following principles of boundary theory (Ashforth et al., 2000; Clark, 2000) and the ERM model (Meijman & Mulder, 1998), we propose that using tactics to prevent, restrict, or reject work influences during leisure time helps professionals to engage in uninterrupted phases of recovery, allowing them to engage in recovery experiences (psychological detachment, relaxation, mastery, and control; Sonnentag & Fritz, 2007). Prior research suggests that psychological detachment, that is, mentally disengaging from work after hours (Sonnentag & Fritz, 2007), is positively affected by creating boundaries (Barber & Jenkins, 2014). Results from qualitative studies suggest that tactics such as turning off work devices or muting work messages may help to prevent continuous work-related thoughts and thus, to mentally disconnect from work (T. D. Allen et al., 2021; Sayah, 2013). Accordingly, we hypothesize:

Hypothesis 2: The use of (a) preventive, (b) restrictive, and (c) rejecting boundary work tactics is positively related to psychological detachment.

Relaxation refers to a state of high positive affect and low activation and can be fostered by specific relaxation exercises and activities (Sonnentag & Fritz, 2007). These experiences are not possible when individuals are constantly reminded of their work demands during leisure time. Using boundary work tactics should enable to experience relaxation.

Hypothesis 3: The use of (a) preventive, (b) restrictive, and (c) rejecting tactics is positively related to relaxation.

Experiences during leisure time that involve personal challenges are described as mastery experiences, which distract from the daily work routine and build competencies (Sonnentag & Fritz, 2007). Again, we suggest that work intruding leisure time can impede this distraction: Using boundary work tactics that limit or eliminate work-related influences should have a positive effect on mastery experiences.

Hypothesis 4: The use of (a) preventive, (b) restrictive, and (c) rejecting tactics is positively related to mastery.

Besides, control refers to being able to decide what to do in one's leisure time and when and how to engage in this activity (Sonnentag & Fritz, 2007). Monitoring work-related messages after hours, which may involve current or upcoming tasks, may cause professionals to feel an urge to respond to these messages (Barber & Santuzzi, 2015). We suggest that this limits the free choice of activities during leisure time and accordingly, results in experiencing less control. In contrast, all boundary work tactics should increase the experience of control during leisure time.

Hypothesis 5: The use of (a) preventive, (b) restrictive, and (c) rejecting boundary work tactics is positively related to control.

Finally, since all three motive-oriented types of tactics were described as effective by participants (e.g., Kreiner et al., 2009; Sayah, 2013), we do not propose differential effects of the tactics on recovery experiences, but rather explore them:

Research Question 1: Does the strength of the relationships of the three boundary work tactics with (a) work-related ICT use after hours and (b) recovery experiences differ?

Method

Sample

We conducted our main study in summer 2019. Participants were recruited via the authors' professional and personal networks as well as various professional social media. In total, 249 professionals (50.2% female; mean age 38.75 years, *SD* = 12.29; 49.8% with managerial responsibilities) participated in the online study. For 73.1% of the participants, there were no children younger than 18 years living with them. Participants' current employment breaks down as follows: employed (74.3%), working student (10.8%), civil servant (8.0%), self-employed (6.5%), and other (0.4%). To further validate the measure, checking construct validity and the tactics' position in their nomological net, we conducted an additional validation study (see Table S1 in the Electronic Supplementary Material (ESM 1) for details on the constructs' measures and their expected relationships). This sample of 175 workers (47.4%

female, mean age: 48.4 years, 36.6% with managerial responsibilities, 70.3% without children living with them, 84% employed, 8.6% self-employed, and 7.6% civil servant) was recruited using a professional survey provider.

Measures

As the main study was conducted in German, scales were translated and back-translated, if necessary, by the authors. If not indicated otherwise, items were measured with a response scale ranging from 1 (never) to 5 (always).

Availability-Related Boundary Work Tactics

Based on our literature review, we first developed a scale with 33 items describing temporal, spatial, prioritizing, communicative, and technological tactics, which matched preventive, restrictive, and rejecting tactics. To test content validity, we first assessed the measure in a think-aloud study with six (50% female) employees. Participants' spoken thoughts were noted and recorded. Furthermore, we asked open-ended questions about the items' comprehensibility and relevance and adjusted them accordingly. The resulting scale consisted of 28 items. A sample item for a preventive tactic (communicative) is "I communicate to my work contacts that in my leisure time, I am available via ICT in an emergency only." A sample item for a restrictive tactic (temporal) is "In my leisure time, I limit work-related ICT use to a certain duration." A sample item for a rejecting tactic (spatial, reversed for analyses) is "I take ICT, on which I am contacted professionally, with me on vacation."

Frequency of ICT Use

Work-related ICT use after hours was assessed with the item: "How often do you use ICT for work-related matters in your free time?"

Recovery Experiences

We measured each recovery experience with four items developed by Sonnentag and Fritz (2007) on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Control Variables

We controlled for job demands as an important predictor of recovery (Sonnentag et al., 2017), measured with five items from Richter et al. (2000), using a response scale from 1 (strongly disagree) to 5 (strongly agree).

Results

Preliminary Analyses

We first tested the factor solution of the tactics, conducting an explorative factor analysis (principal axis factoring) with varimax rotation, using SPSS version 27. Examining the Kaiser's criteria suggested seven factors with eigenvalues above 1, with three factors marginally showing values above 1. Considering the scree-plot as well as the small eigenvalues rather suggested a three-factor or four-factor solution. Among these two, the three-factor solution represented the most conceptually interpretable as well as statistically distinct solution, as the three factors corresponded to the three motive-oriented types of tactics, with Factor 1 corresponding to preventive tactics, Factor 2 to restrictive tactics, and Factor 3 to rejecting tactics. Yet, as depicted in Table S2 in ESM 1, six items either showed cross-loadings to another factor above .30 or loadings below .40 onto their corresponding factor. Following recommendations by Howard (2016), we removed these items and reran the analysis with 22 items. As shown in Table 2, factor loadings now ranged between .42 and .84 without any cross-loading above .30. This three-factor solution accounted for 38.48% of the total variance.

Besides, we conducted confirmatory factor analyses (CFA) with Mplus (Muthén & Muthén, 1998-2017) with our validation sample, which suggested to further remove the item (preventive tactic) "I use different email accounts for work-related matters and for personal matters" due to loadings below .40 (see Table 2). The resulting, final three-factor model showed a better fit (χ^2 = 347.89, *df* = 180; RMSEA = 0.07; CFI = 0.93, SRMR = 0.08) than a one-factor model (χ^2 = 591.30, *df* = 179; RMSEA = 0.12; CFI = 0.84, SRMR = 0.13). We also examined the three motive-oriented tactics' intercorrelations with relevant constructs in their nomological net with the validation sample. As shown in Table 3, correlations with the related construct of general boundary work tactics were mostly low to medium in size, with the highest correlation of *r* = .57. Besides, the three motive-oriented tactics showed differential correlations with segmentation preferences and segmentation enactment as we expected in our description of the tactics' categorization. For example, restrictive tactics showed the lowest correlations with segmentation preferences (*r* = .19) as well as segmentation enactment (*r* = .21), while rejecting tactics showed the highest correlations (*r* = .38 for segmentation preferences; *r* = .52 for segmentation enactment). Together, these results suggest discriminant and convergent validity, indicating that the three motive-oriented tactics represent distinct types with differential relationships in their nomological net. Hence, we proceeded with this three-factor solution in our main study. The final measure with 21 items is shown in Table S3 in ESM 1. Table 4 depicts the correlations between the study variables in our main study.

Table 2. Factor loadings for motive-oriented types of tactics (22 items)

Items	Preventive	Restrictive	Rejecting
I use different phone numbers for work-related matters and for personal matters.	.56 [.52]		
I use different e-mail accounts for work-related matters and for personal matters.[a]	*.44 [.35]*		
I use different ICT for work-related matters and for personal matters.	.55 [.46]		
I indicate to my work contacts via my status (e.g., online or absent) when I am available in my leisure time and when I am not.	.42 [.51]		
I inform my work contacts by means of absence notes that I am not available during my leisure time.	.58 [.65]		
I communicate to customers or colleagues that I prefer not to be contacted via ICT in my leisure time for work-related matters.	.58 [.89]		
I communicate to supervisors that I prefer not to be contacted via ICT in my leisure time for work-related matters.	.62 [.91]		
I communicate to my work contacts that in my leisure time, contact via ICT is only possible in an emergency.	.52 [.84]		
In my leisure time, I limit myself to certain ICT (smartphone only, laptop only, etc.) for receiving and editing work-related messages.		.42 [.64]	
In my leisure time, I put away ICT on which I am contacted professionally at certain times (e.g., during certain social interactions, sports, dinner).		.46 [.70]	
In my leisure time, I limit myself to using written messages (no phone calls) for work-related communication because it gives me flexibility in determining how and when to respond.		.60 [.76]	
In my leisure time, I limit work-related ICT use to certain time slots.		.75 [.76]	
In my leisure time, I check work-related messages only at certain times.		.64 [.77]	
In my leisure time, I limit the work-related use of ICT to a certain duration.		.77 [.78]	
In my leisure time, I decide whether to take work-related calls depending on who is calling.		.43 [.69]	
In my leisure time, I make decisions about responding to work-related messages based on urgency through the use of an answering machine or mailbox.		.44 [.66]	
In my leisure time, I decide which work-related messages to read or process based on urgency.		.55 [.74]	
In my leisure time, I read work-related messages. (r)			.84 [.95]
In my free time, I check work-related messages. (r)			.78 [.92]
I take ICT, on which I am contacted professionally, with me in my leisure time. (r)			.67 [.77]
I take ICT, on which I am contacted professionally, with me on vacation. (r)			.70 [.65]
In my leisure time, I take work-related calls. (r)			.55 [.79]

Note. Results for factor loadings from explorative factor analysis (principal axis factoring) with varimax rotation with 22 items and $N = 249$. Results for factor loadings from the CFA of the validation study are shown in parentheses, with $N = 175$. Loadings below .30 are not displayed. [a] Item was discarded for hypothesis testing due to its factor loading below .40 in the CFA results of the validation study. The final scale consists of the remaining 21 items. Items marked with (r) were reversed for the analyses.

Hypothesis Testing

We tested our hypotheses with path analyses using Mplus. We specified the proposed paths between the three motive-oriented tactics, ICT use, and recovery experiences in Model 1. Recovery experiences were allowed to covary. In Model 2, we additionally controlled for paths from job demands to all endogenous variables. We show the results in Table 5.

In regard of work-related ICT use after hours, rejecting tactics had a negative effect ($\beta = -0.43$, $p < .01$), while preventive tactics ($\beta = -0.06$, $p = .26$) and restrictive tactics ($\beta = -0.08$, $p = .21$) were unrelated to ICT use (Model 1). When controlling for job demands, the effect of preventive tactics became marginally nonsignificant ($\beta = -0.11$, $p = .07$; Model 2). Hypothesis 1c was supported, while Hypotheses 1a and 1b were not.

Similarly, rejecting tactics ($\beta = 0.31$, $p < .01$) were positively related to psychological detachment in Model 1, while preventive ($\beta = -0.09$, $p = .15$) and restrictive tactics were not ($\beta = 0.10$, $p = .11$). However, when controlling for job demands in Model 2, not only rejecting tactics ($\beta = 0.27$, $p < .01$) but also restrictive tactics ($\beta = 0.12$, $p < .05$) showed a positive effect on psychological detachment. Thus, Hypotheses 2b and 2c were supported, but only when controlling for job demands. Hypothesis 2a was rejected.

Table 3. Validation study: descriptive statistics and correlations among motive-oriented tactics and variables in their nomological net

Variable	*M*	*SD*	α	1	2	3	4	5	6	7	8	9
1. Preventive tactics	3.05	1.17	.87	—								
2. Restrictive tactics	3.25	1.11	.91	.60** [.48; .71]	—							
3. Rejecting tactics	3.60	1.05	.91	.35** [.21; .47]	.10 [−.07; .26]	—						
4. Temporal tactics	3.95	0.81	.79	.28** [.17; .39]	.25** [.12; .39]	.40** [.25; .54]	—					
5. Physical tactics	3.81	0.86	.90	.27** [.14; .39]	.17* [.03; .31]	.55** [.44; .65]	.73** [.63; .81]	—				
6. Behavioral tactics	2.96	1.31	.95	.41** [.27; .55]	.47** [.32; .59]	.02 [−.13; .17]	.34** [.20; .47]	.21** [.07; .34]	—			
7. Communicative tactics	3.27	1.23	.86	.57** [.46; .68]	.54** [.39; .66]	.27** [.12; .42]	.35** [.22; .47]	.42** [.28; .55]	.44** [.30; .56]	—		
8. Segmentation preferences	3.88	0.99	.91	.34** [.20; .47]	.19* [.05; .33]	.38** [.25; .51]	.40** [.27; .53]	.51** [.40; .62]	.20** [.06; .34]	.46** [.33; .59]	—	
9. Segmentation enactment	3.27	1.07	.94	.36** [.22; .48]	.21** [.07; .35]	.52** [.39; .62]	.55** [.44; .65]	.72** [.63; .79]	.24** [.09; .39]	.41** [.28; .54]	.56** [.43; .67]	—
10. Satisfaction with WLB	3.87	0.93	.96	.18* [.05; .31]	.07 [−.07; .21]	.38** [.25; .50]	.49** [.37; .60]	.55** [.42; .66]	−.01 [−.16; .15]	.16* [.02; .29]	.11 [−.03; .26]	.41** [.28; .55]

Note. Pearson correlations among motive-oriented tactics and variables in their nomological net, with their corresponding 95% confidence interval in square brackets. α = Cronbach's α; WLB = work–life balance. $N = 175$. *$p < .05$, **$p < .01$.

Table 4. Descriptive statistics and correlations among motive-oriented tactics and study variables

Variable	*M*	SD	α	1	2	3	4	5	6	7	8
1. Job demands	3.39	0.75	.80	—							
2. Preventive tactics	2.67	0.97	.76	.25** [.11; .37]	—						
3. Restrictive tactics	2.87	0.86	.81	.13* [.01; .25]	.26** [.14; .36]	—					
4. Rejecting tactics	2.72	0.99	.83	−.16* [−.27; −.04]	.26** [.13; .37]	.08 [−.08; .22]	—				
5. ICT use	3.42	0.96	—	.17** [.06; .28]	−.19** [−.31; −.07]	−.13* [−.27; .01]	−.45** [−.57; −.34]	—			
6. Detachment	2.93	0.87	.90	−.31** [−.43; −.18]	.04 [−.10; .17]	.11 [−.03; .23]	.35** [.23; .46]	−.26** [−.38; −.13]	—		
7. Relaxation	3.52	0.78	.89	−.12† [−.27; −.03]	.20** [.08; .33]	.18** [.03; .30]	.19** [.07; .31]	−.11† [−.24; .04]	.38** [.25; .49]	—	
8. Mastery	3.28	0.77	.86	.03 [−.11; .17]	.09 [−.05; .21]	.11† [−.03; .25]	.00 [−.13; .13]	−.03 [−.15; .10]	.04 [−.11; .16]	.27** [.11; .39]	—
9. Control	3.96	0.82	.93	−.15* [−.28; −.01]	.07 [−.05; .19]	−0.03 [−.16; .09]	.12† [−.01; .25]	.00 [−.15; .14]	.23** [.10; .35]	.51** [.40; .59]	.30** [.18; .41]

Note. Pearson correlations among motive-oriented tactics and other study variables, with their corresponding 95% confidence interval in square brackets. α = Cronbach's α. ICT use = work-related ICT use after hours; Detachment = psychological detachment. $N = 249$. †$p < .1$, *$p < .05$, **$p < .01$.

Table 5. Results from path analyses and relative weight analyses

	Work-related ICT use after hours				Psychological detachment				Relaxation				Mastery				Control			
Variable	Est.	*SE*	*t*	RRW	Est.	*SE*	*t*	RRW	Est.	*SE*	*t*	RRW	Est.	*SE*	*t*	RRW	Est.	*SE*	*t*	RRW
Model 1																				
Preventive tactics	−0.06	0.06	−1.13	.01	−0.09	0.06	−1.43	.01	0.13	0.07	1.97*	.02	0.07	0.07	0.94	.01	0.06	0.07	0.86	.00
Restrictive tactics	−0.08	0.06	−1.25	.02	0.10	0.06	1.62	.00	0.13	0.07	1.97*	.02	0.10	0.08	1.24	.01	−0.05	0.07	−0.74	.00
Rejecting tactics	−0.43	0.06	−6.96**	.19	0.31	0.07	4.67**	.10	0.15	0.07	2.01*	.03	−0.03	0.07	−0.45	.00	0.14	0.07	1.93†	.02
ICT use	—	—	—		−0.12	0.07	−1.79†	.04	0.00	0.07	0.04	.00	−0.02	0.07	−0.30	.00	0.06	0.07	0.87	.00
Model 2																				
Preventive tactics	−0.11	0.06	−1.81†	.01	−0.01	0.06	−0.17	.01	0.18	0.07	2.74**	.03	0.07	0.08	0.86	.01	0.11	0.07	1.63	.00
Restrictive tactics	−0.09	0.06	−1.44	.03	0.12	0.06	2.11*	.00	0.15	0.07	2.26*	.03	0.10	0.08	1.24	.01	−0.03	0.06	−0.50	.01
Rejecting tactics	−0.39	0.06	−6.21**	.17	0.27	0.07	3.86**	.08	0.12	0.08	1.57	.02	−0.03	0.08	0.02	.00	0.11	0.07	1.48	.01
ICT use	—	—	—		−0.08	0.06	−1.19	.03	0.03	0.07	0.44	.00	−0.02	0.07	−0.30	.00	0.09	0.07	1.25	.00
Job demands	0.15	0.06	2.51*	.03	−0.27	0.06	−4.34**	.08	−0.17	0.07	−2.41*	.02	0.00	0.08	0.02	.00	−0.17	0.07	−2.48*	.02

Note. Estimates are standardized results from path analyses, specifying all paths simultaneously in Model 1 and Model 2, respectively. Est. = estimates; RRW = raw relative weights; ICT use = work-related ICT use after hours. N = 249. †p < .1, *p < .05, **p < .01.

Regarding relaxation, preventive (β = 0.13, p < .05), restrictive (β = 0.13, p < .05), and rejecting tactics (β = 0.15, p < .05) showed a positive effect in Model 1. In Model 2, the positive effect of preventive (β = 0.18, p < .01) and restrictive tactics remained (β = 0.15, p < .05), while rejecting tactics did not predict relaxation anymore (β = 0.12, p = .12), supporting Hypotheses 3a and 3b but not Hypothesis 3c.

In regard of mastery, no significant effects were found, neither in Model 1 nor Model 2. Regarding control, only rejecting tactics showed a marginally nonsignificant, positive effect in Model 1 (β = 0.14, p = .054), while preventive (β = 0.06, p = .39) and restrictive tactics did not (β = −0.05, p = .46). However, in Model 2, the positive effect of rejecting tactics became nonsignificant (β = 0.11, p = .14). Hypotheses 4 and 5 were rejected.

Finally, to examine RQ1, we compared the effects of the three motive-oriented tactics on work-related ICT use after hours and recovery experiences. The findings suggest that their raw relative weights (Tonidandel & LeBreton, 2015) differ, depending on outcome (Table 5): Rejecting tactics were the strongest predictor of work-related ICT use after hours and psychological detachment. Preventive and restrictive tactics were the strongest predictors of relaxation when controlling for job demands.

Discussion

On the basis of principles of boundary theory (Ashforth et al., 2000; Clark, 2000) and the ERM (Meijman & Mulder, 1998), this study examines a variety of tactics that professionals employ to manage the boundary of their personal life and how the use of such tactics relates to their work-related ICT use after hours and recovery experiences. Following recent calls by scholars (Hu et al., 2021; Rudolph et al., 2021), we aim to contribute to research on boundary management and recovery by providing insights on the structure and effectiveness of distinct boundary work tactics.

Implications for Research

Our study contributes to research in several ways. First, we provide a comprehensive overview of boundary work tactics found in previous studies (e.g., T. D. Allen et al., 2021; Cousins & Robey, 2015; Sayah, 2013). Organizing these different tactics in (1) preventive, (2) restrictive, and (3) rejecting tactics, we propose a conceptual framework that helps to distinguish the variety of tactics according to their underlying motives. Our studies' results provide support that diverse tactics can be ascribed to these three types of motives. With this motive-oriented perspective, our research complements previous studies that mostly focused on contentual categories (e.g., Fonner & Stache, 2012; Lirio, 2017). Besides, by showing that the three motive-oriented

tactics relate differently to segmentation preferences and segmentation enactment, our research initially acknowledges that boundary work tactics may serve different purposes – with rejecting tactics facilitating impermeable boundaries and restrictive tactics allowing for more permeability, which reflects boundary work on the segmentation–integration continuum (Ashforth et al., 2000; Kreiner et al., 2009). With its parsimonious, theory-based framework, our conceptualization has the potential to align the various existing categorizations because additional tactics could be assigned to our framework. As our studies further provide initial support that the three tactics relate differently to boundary conditions such as segmentation preferences and job demands, a fruitful pathway for future studies may be to build on this conceptual framework and to examine how such boundary conditions interact with the use and efficacy of boundary work tactics. As such, segmentation preferences and job demands might not only predict the use of tactics but also determine if and how the tactics relate to various outcomes. Consequently, we could gain a more theory-based understanding of which tactics might be more effective for segmenters versus integrators or when job demands are high versus low.

Second, we contribute to research by capturing a variety of distinct availability-related boundary work tactics in our studies. While previous studies investigated rather broad tactics, which did not necessarily refer to concrete actions (Carlson et al., 2016) or only addressed selected specific tactics (Park et al., 2020), our research portrays a diversity of specific boundary work tactics and provides a scale to measure them. Thereby, our validation study provides first insights on how the motive-oriented tactics relate to constructs in their nomological net. Together, our approach to examine distinct tactics enables to add to our understanding of what specific strategies may be effective in managing boundaries and fostering recovery (Hu et al., 2021; Rudolph et al., 2021).

Third, our study offers initial insights on the relationship between different types of availability-related boundary work tactics, work-related ICT use after hours, and recovery experiences. While previous findings on boundary work tactics mostly resulted from qualitative studies (e.g., T. D. Allen et al., 2021; Sayah, 2013), we shed light on the relationships of the use of tactics with recovery in a quantitative study design.

In more detail, our results show that rejecting tactics are negatively related to work-related ICT after hours, indicating that tactics aiming at stricter segmentation are most effective in reducing work-related ICT use after hours compared to the other tactics. In addition, our findings suggest that several tactics can help to foster recovery. Specifically, our results show that rejecting tactics are positively related to psychological detachment. Thus, substantiating previous qualitative results (Sayah, 2013), rejecting tactics might help to not only behaviorally but also to mentally disengage from work. Besides, we found that restrictive tactics are positively related to psychological detachment when controlling for job demands. This finding indicates that when employees decide to not engage with work for some time after hours, for example, by putting away their work-related ICT during certain activities, their psychological recovery process can start. Besides, our study showed a positive effect of both preventive and restrictive tactics on relaxation. In contrast, rejecting tactics did not predict relaxation when job demands were controlled for. Together, these findings indicate that not only tactics building very strong boundaries can support recovery experiences but also tactics that allow for some permeability can be beneficial. Particularly, restrictive tactics might represent an important alternative strategy to promote recovery when the use of rejecting tactics is not realistic or wanted, for example, when employees are working flexibly or prefer to integrate their life domains (Kreiner et al., 2009; Sayah, 2013).

Results on mastery and control were less conclusive, showing rather nonsignificant relationships in our analyses. This finding suggests that boundary work tactics might be more crucial to foster psychological detachment and relaxation. Rejecting tactics seem to be most effective to promote psychological detachment and thus, to help to reduce psychological load from work demands (Headrick et al., 2023). In addition, restrictive and preventive tactics seem helpful to increase relaxation, a recovery experience that rather helps to gain psychological resources (Headrick et al. 2023).

Lastly, our findings indicate that reducing work-related ICT use after hours might not be the decisive factor to promote recovery: Work-related ICT use after hours did not predict any recovery experiences when job demands were controlled for. Instead, job demands showed positive effects on work-related ICT use after hours, as well as negative effects on psychological detachment, relaxation, and control. This finding underpins previous notions from scholars that ICT use is not detrimental for employee recovery per se (Heissler et al., 2022; Reinke & Ohly, 2021) but rather a result of high job demands and consequently, of work-related thoughts. Thus, work-related ICT use after hours could rather be seen as a behavioral strategy to deal with high job demands (Heissler et al., 2022). Besides, job demands affected the relationships of tactics with recovery in our study. When controlling for job demands, restrictive and preventive tactics became more effective, while rejecting tactics became less helpful. When job demands were not controlled for, rejecting tactics overall seemed to be more effective than the other tactics. These findings indicate that different boundary work tactics might be used in response to different levels of job demands. Hence, job demands need

to be considered in future research as a potential antecedent of the use of boundary work tactics as well as a moderator that might influence the tactics' effects on recovery.

Practical Implications

Our results provide support that using availability-related boundary work tactics can foster employee recovery, particularly psychological detachment and relaxation. Hence, organizations should support their employees in engaging in boundary work tactics, for example, by developing employment agreements or by offering trainings in which employees learn about boundary work tactics and practice to implement them in their daily life. Thereby, employees should first become aware of their boundary management preferences, which might range from segmentation to integration. Next, they should learn about preventive, rejecting, and restrictive tactics and how those can match their preferences. As a result, employees may become more conscious about their boundary management and learn to actively apply those tactics that are suitable for their preferences and needs.

Limitations and Directions for Future Research

Our study has several limitations. First, the use of cross-sectional data does not allow for any causal inferences. Hence, it should be a fruitful pathway for future research to measure job demands, boundary work tactics, work-related ICT use after hours, and recovery in a longitudinal study design. Since recovery experiences are likely to vary within individuals among time (Sonnentag & Fritz, 2007), studies could examine whether those within-person fluctuations are affected by the person's use of boundary work tactics in a daily diary study. Besides, reciprocal relationships between the use of boundary work tactics and recovery experiences should be examined (Heissler et al., 2022): Boundary work tactics might be a behavioral response to low recovery experiences or high demands. For example, when individuals experience low detachment, they might engage in tactics that help them to overcome this.

We further suggest that future studies should examine the role of boundary conditions influencing the efficacy of boundary work tactics. Beyond the aforementioned potential role of job demands and segmentation preferences as moderators, other availability-related demands such as availability expectations and norms (Thörel et al., 2022) might affect whether the use of boundary work tactics actually translates into improved recovery and well-being.

Although our categorization of boundary work tactics and the corresponding measurement scale were based on a comprehensive literature review, future studies could expand our focus on availability-related tactics and add other tactics such as transition rituals (Ashforth et al., 2000; Kreiner et al., 2009). Besides, while our studies provide initial support for the scale's validity, it should be noted that model fit in the CFA was acceptable yet not good (Schermelleh-Engel et al., 2003), possibly because of the relatively small sample size. Alternatively, this might indicate that the scale should be refined, for example, by combining content-oriented categories with motive-oriented categories. Thus, we strongly suggest testing and validating the scale in different samples and with an extended set of criterion variables, such as work-related thoughts or affective well-being (e.g., Thörel et al., 2022).

Conclusion

Our research has three important implications. First, the diversity of availability-related boundary work tactics can be assigned to three motive-oriented types of tactics: preventive, restrictive, and rejecting tactics, which acknowledges that boundary work occurs along the segmentation–integration continuum. Second, our study offers insights into the relationships between different tactics and recovery, indicating that all three motive-oriented tactics contribute to recovery, with rejecting and restrictive tactics predicting psychological detachment and preventive and restrictive tactics predicting relaxation when job demands are controlled for. Finally, our results add to previous research questioning work-related ICT use after hours as a stressor itself and suggest rather considering the role of job demands. Together, this research provides new insights about the structure and effects of availability-related boundary work tactics for professionals' work-related ICT use after hours and recovery.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of the article at https://doi.org/10.1027/1866-5888/a000335

ESM 1. Tables detailing constructs assessed in the validation study, factor loadings for motive-oriented types of tactics, and the final measure used in the main study. Information on power analyses and data cleaning is also provided.

References

Allen, D. K., & Shoard, M. (2005). Spreading the load: Mobile information and communications technologies and their effect on information overload. *Information Research*, *10*(2), Article 227.

Allen, T. D., Merlo, K., Lawrence, R. C., Slutsky, J., & Gray, C. E. (2021). Boundary management and work–nonwork balance while working from home. *Applied Psychology: An international Review*, *70*(1), 60–84. https://doi.org/10.1111/apps.12300

Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *Academy of*

Management Review, *25*(3), 472–491. https://doi.org/10.5465/amr.2000.3363315

Barber, L. K., & Jenkins, J. S. (2014). Creating technological boundaries to protect bedtime: Examining work–home boundary management, psychological detachment and sleep. *Stress and Health*, *30*(3), 259–264. https://doi.org/10.1002/smi.2536

Barber, L. K., & Santuzzi, A. M. (2015). Please respond ASAP: Workplace telepressure and employee recovery. *Journal of Occupational Health Psychology*, *20*(2), 172–189. https://doi.org/10.1037/a0038278

Boswell, W. R., Olson-Buchanan, J. B., Butts, M. M., & Becker, W. J. (2016). Managing" after hours" electronic work communication. *Organizational Dynamics*, *45*(4), 291–297. https://doi.org/10.1016/j.orgdyn.2016.10.004

Carlson, D. S., Ferguson, M., & Kacmar, K. M. (2016). Boundary management tactics: An examination of the alignment with preferences in the work and family domains. *Journal of Behavioral and Applied Management*, *16*(2), 51–70.

Clark, S. C. (2000). Work/family border theory: A new theory of work/family balance. *Human Relations*, *53*(6), 747–770. https://doi.org/10.1177/0018726700536001

Cobb, H. R., Murphy, L., Thomas, C. L., Katz, I. M., & Rudolph, C. W. (2022). Measuring boundaries and borders: A taxonomy of work–nonwork boundary management scales. *Journal of Vocational Behavior*, *137*, Article 103760. https://doi.org/10.1016/j.jvb.2022.103760

Colbert, A., Yee, N., & George, G. (2016). The digital workforce and the workplace of the future. *Academy of Management Journal*, *59*(3), 731–739. https://doi.org/10.5465/amj.2016.4003

Cousins, K., & Robey, D. (2015). Managing work-life boundaries with mobile technologies: An interpretive study of mobile work practices. *Information Technology & People*, *28*(1), 34–71. https://doi.org/10.1108/ITP-08-2013-0155

Fonner, K. L., & Stache, L. C. (2012). All in a day's work, at home: Teleworkers' management of micro role transitions and the work–home boundary. *New Technology, Work and Employment*, *27*(3), 242–257. https://doi.org/10.1111/j.1468-005X.2012.00290.x

Headrick, L., Newman, D. A., Park, Y. A., & Liang, Y. (2023). Recovery experiences for work and health outcomes: A meta-analysis and recovery-engagement-exhaustion model. *Journal of Business Psychology*, *38*(4), 821–864. https://doi.org/10.1007/s10869-022-09821-3

Heissler, C., Kern, M., & Ohly, S. (2022). When thinking about work makes employees reach for their devices: A cross-lagged panel diary study. *Journal of Business and Psychology*, *37*(5), 999–1016. https://doi.org/10.1007/s10869-021-09781-0

Howard, M. C. (2016). A review of exploratory factor analysis decisions and overview of current practices: What we are doing and how can we improve? *International Journal of Human-Computer Interaction*, *32*(1), 51–62. https://doi.org/10.1080/10447318.2015.1087664

Hu, X., Barber, L. K., Park, Y., & Day, A. (2021). Defrag and reboot? Consolidating information and communication technology research in I-O psychology. *Industrial and Organizational Psychology*, *14*(3), 371–396. https://doi.org/10.1017/iop.2021.3

Kossek, E. E. (2016). Managing work-life boundaries in the digital age. *Organizational Dynamics*, *45*(3), 258–270. https://doi.org/10.1016/j.orgdyn.2016.07.010

Kossek, E. E., Lautsch, B. A., & Eaton, S. C. (2006). Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work–family effectiveness. *Journal of Vocational Behavior*, *68*(2), 347–367. https://doi.org/10.1016/j.jvb.2005.07.002

Kreiner, G. E., Hollensbe, E. C., & Sheep, M. L. (2009). Balancing borders and bridges: Negotiating the work-home interface via boundary work tactics. *Academy of Management Journal*, *52*(4), 704–730. https://doi.org/10.5465/amj.2009.43669916

Lirio, P. (2017). Global boundary work tactics: Managing work and family transitions in a 24–7 global context. *Community, Work & Family*, *20*(1), 72–91. https://doi.org/10.1080/13668803.2016.1272545

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In P. J. D. Drenth, & H. Thierry (Eds.), *Handbook of work and organizational psychology: Vol. 2. Work psychology* (pp. 5–33). Psychology Press.

Muthén, L. K., & Muthén, B. (1998-2017). *Mplus user's guide* (8th edn).

Park, Y., Liu, Y., & Headrick, L. (2020). When work is wanted after hours: Testing weekly stress of information communication technology demands using boundary theory. *Journal of Organizational Behavior*, *41*(6), 518–534. https://doi.org/10.1002/job.2461

Powell, G. N., & Greenhaus, J. H. (2010). Sex, gender, and the work-to-family interface: Exploring negative and positive interdependencies. *Academy of Management Journal*, *53*(3), 513–534.

Reinke, K., & Gerlach, G. (2022). Linking availability expectations, bidirectional boundary management behavior and preferences, and employee well-being: An integrative study approach. *Journal of Business and Psychology*, *37*(4), 695–715. https://doi.org/10.1007/s10869-021-09768-x

Reinke, K., & Ohly, S. (2021). Double-edged effects of work-related technology use after hours on employee well-being and recovery: The role of appraisal and its determinants. *German Journal of Human Resource Management*, *35*(2), 224–248. https://doi.org/10.1177/2397002221995797

Richter, P., Hemmann, E., Merboth, H., Fritz, S., Hansgen, C., & Rudolf, M. (2000). Das Erleben von Arbeitsintensität und Tätigkeitsspielraum – Entwicklung und Validierung eines Fragebogens zur orientierenden Analyse (FIT). *Zeitschrift für Arbeits- und Organisationspsychologie*, *44*(3), 129–139. https://doi.org/10.1026//0932-4089.44.3.129

Rudolph, C. W., Allan, B., Clark, M., Hertel, G., Hirschi, A., Kunze, F., Shockley, K., Shoss, M., Sonnentag, S., & Zacher, H. (2021). Pandemics: Implications for research and practice in industrial and organizational psychology. *Industrial and Organizational Psychology: Perspectives on Science and Pracice*, *14*(Special Issue 1-2), 1–35. https://doi.org/10.1017/iop.2020.48

Sayah, S. (2013). Managing work-life boundaries with information and communication technologies: The case of independent contractors. *New Technology, Work & Environment*, *28*(3), 179–196. https://doi.org/10.1111/ntwe.12016

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research*, *8*(2), 23–74.

Schlachter, S. (2018). *Voluntary work-related ICT use during non-work time: its antecedents and consequences for employee recovery and well-being* [Dissertation]. http://epubs.surrey.ac.uk/845728/

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology*, *12*(3), 204–221. https://doi.org/10.1037/1076-8998.12.3.204

Sonnentag, S., Venz, L., & Casper, A. (2017). Advances in recovery research: What have we learned? What should be done next?. *Journal of Occupational Health Psychology*, *22*(3), 365–380. https://doi.org/10.1037/ocp0000079

Thörel, E., Pauls, N., & Göritz, A. S. (2022). The association of work-related extended availability with recuperation, well-being, life domain balance and work: A meta-analysis. *Organizational Psychology Review*, *12*(4), 387–427. https://doi.org/10.1177/20413866221116309

Tonidandel, S., & LeBreton, J. M. (2015). RWA web: A free, comprehensive, web-based, and user-friendly tool for relative

weight analyses. *Journal of Business and Psychology*, *30*(2), 207–216. https://doi.org/10.1007/s10869-014-9351-z

Towers, I., Duxbury, L., Higgins, C., & Thomas, J. (2006). Time thieves and space invaders: Technology, work and the organization. *Journal of Organizational Change Management*, *19*(5), 593–618. https://doi.org/10.1108/09534810610686076

Wepfer, A. G., Allen, T. D., Brauchli, R., Jenny, G. J., & Bauer, G. F. (2018). Work-life boundaries and well-being: Does work-to-life integration impair well-being through lack of recovery? *Journal of Business and Psychology*, *33*(6), 727–740. https://doi.org/10.1007/s10869-017-9520-y

History
Received September 27, 2022
Revision received June 21, 2023
Accepted June 26, 2023
Published online October 16, 2023

Funding
Open access publication enabled by University of Kassel.

ORCID
Kathrin Reinke
https://orcid.org/0000-0002-1116-4436
Sandra Ohly
https://orcid.org/0000-0001-6818-7519

Sandra Ohly
Department of Psychology
University of Kassel
ITeG
Pfannkuchstraβe 1
34121 Kassel
Germany
ohly@uni-kassel.de