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Always available via WhatsApp: Mapping everyday boundary work practices and privacy negotiations

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Abstract

Messaging apps such as WhatsApp collapse temporal and spatial distances and enable continuous interactions. At the same time, messaging apps blur boundaries by default and contribute to the blending of different relational contexts as well as the collapsing of absence and presence. Whereas existing studies have mainly focused on the blurring of boundaries between work and private life, this study expands beyond the personal/professional binary and considers boundary work in more nuanced relational contexts. In order to provide a better understanding of boundary work within messaging practices, we conducted interviews and focus groups with employees from a variety of Dutch workplaces, and with participants of WhatsApp neighborhood crime prevention groups. Our findings highlight two forms of boundary work strategies. First, respondents purposefully tinker with WhatsApp features to manage the boundaries between absence and presence. Second, they use smartphone and WhatsApp functionalities to carefully construct segmentations between different contexts. The meaning of particular contexts, the materiality of messaging apps, and technical know-how play a crucial role in these boundary-sculpting practices. The importance of our study is in noting how the ongoing contradictions of messaging practices—being always available but always negotiating that availability—affect everyday experiences of freedom, privacy, and autonomy in significant ways.

Keywords

Privacy, boundary work, connected presence, practice theory, messaging apps, WhatsApp

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Introduction

Saskia lives in a quiet neighborhood in a midsize city in the Netherlands. She works at a primary school, has two children, practices yoga, has an active social life, and participates in a neighborhood crime prevention group. She uses WhatsApp to keep in touch with her family, friends, fellow yoga practitioners, neighbors, colleagues, and many others. For her, WhatsApp is convenient, especially because its functionalities allow her to monitor if her messages have been received and read. At the same time, Saskia also struggles to keep track of all the different conversations. When she receives neighborhood messages at work or messages from colleagues during the weekend, the boundaries between different contexts become blurry. Saskia often experiences pressure to respond and feels WhatsApp conversations can invade her privacy.

Saskia is one of the respondents in this study and she is not the only one who experiences messaging apps this way. The ability to communicate with colleagues, neighbors, family, and friends across the world has never been easier. Mobile devices and messaging apps such as WhatsApp, iMessage, and Signal collapse temporal and spatial distances and create potential for constant networked connections (Burchell, 2015). While they enable people to engage in asynchronous mobile conversations not bound by place or time, messaging apps can also be perceived as volatile, addictive, immediate, distractive, and privacy invasive (Mascheroni & Vincent, 2016; Park & Mo Jang, 2014; Pielot et al., 2014; Storch & Ortiz Juarez-Paz, 2019; Sultan, 2014). In order to cope with the communication overload (CO) caused by continuous interactions (Licoppe, 2004), individuals actively negotiate boundaries between different relational contexts, and between being absent and present.

To understand and contextualize these strategies and practices, we explore the ongoing negotiations of boundaries as forms of boundary work (Clark, 2000; Nippert-Eng, 1996a, 1996b). Our research focuses on messaging practices in the Netherlands in order to answer the research question: How do individuals use functionalities of messaging apps to negotiate boundaries in asynchronous communication across different relational contexts? The example of Saskia demonstrates that everyday use of messaging apps blurs the boundaries between family life, work contexts, community activities, and social contacts. While most existing studies focus solely on the blurring boundaries between work and private life (Jahn et al., 2016; Olson-Buchanan & Boswell, 2006; Schalow et al., 2013; Vitak et al., 2012; Walden, 2016), this study expands beyond the professional/personal binary in order to consider boundary work in more nuanced relational contexts with children, partners, friends, neighbors, and colleagues.

We aim to provide a better understanding of the complexities of boundary work practices by presenting an in-depth account of the use of WhatsApp by two different groups of respondents. The first group consists of employees in a variety of Dutch workplaces, ranging from multinational companies to restaurants. The second group contains moderators and participants of WhatsApp Neighborhood Crime Prevention (WNCP) groups, a popular phenomenon in the Netherlands. In these WhatsApp group conversations, neighbors exchange warnings, concerns, and information about suspicious activities in their neighborhood (Lub & De Leeuw, 2017). We explore how respondents from these two groups of WhatsApp users engage in boundary work in order to manage constant networked connections.

The next section explores literature about the benefits and pitfalls of constant networked connections, the collapsed dichotomy between absence and presence, and boundary work strategies. The results section adds to this body of research by providing an overview of messaging strategies our respondents use to negotiate their privacy, freedom and autonomy in relational contexts surrounding work and neighborhood connections. Our research highlights two different forms of boundary management. On the one hand, respondents safeguard their personal time by deliberately being absent from digital interactions. On the other hand, they actively sculpt boundaries between different contexts.

Constant networked connections, information overload and context collapse

The smartphone is integrated in our everyday routines and individuals have an ambivalent relationship with this domesticated technology (De Reuver et al., 2016). Smartphones enable long distance connections and can offer assurance and feelings of safety. However, they can also cause social disconnection when distraction and misunderstanding lead to negative emotional responses (Storch & Ortiz Juarez-Paz, 2019). Smartphones enable asynchronous and continuous social interactions via messaging apps not limited to specific spaces or times. Messaging apps embody what Burchell describes as "the contemporary communication context of constant networked connection" (Burchell, 2015, p. 40). Networked communication practices take up time, attention, and energy of individuals, as they continuously need to devote background attention to their devices, platforms, and applications. Messaging app interactions are asynchronous and seem devoid of temporal boundaries. Yet messaging apps require real, situated, and time-consuming activities by individuals (Burchell, 2015).

The use of messaging apps can create intimacy, proximity, and security while it can also lead to anxiety, exclusion, obligation, and CO (Mascheroni & Vincent, 2016; Stephens et al., 2017). Using multiple communication channels and devices overwhelms individuals with information and piled up messages, while distracting them from the current situation. Mobile devices and messaging apps embody the expectations of others whereby they create responsibility and pressure to respond (Stephens et al., 2017). In contrast, networked practices can also reduce stress because they enable individuals to create flexible social arrangements and allow them to shift activities and interactions (Bittman et al., 2009). Futhermore, smartphones constantly trigger the user's attention via notifications such as alarms, blinking lights, alerts, and ringtones. These are often perceived as valuable, yet, they are disruptive by nature and can cause stress (Licoppe, 2010; Shirazi et al., 2014).

Moreover, within messaging apps, all conversations are located in the same digital space and there seem to be no tangible boundaries between different contexts. Conversations with family members are part of the same digital collection of messaging flows as group conversations with colleagues, and interactions with neighbors, friends, and other contacts. Messaging apps default to context collapse because the boundaries between different types of contacts are automatically flattened into one singular group

(Vitak et al., 2012). Notably, context collapse goes beyond online contexts because technologies also collapse offline contexts when the Internet is incorporated in daily practices (Pagh, 2020).

Managing boundaries around and within constant networked connections

The use of WhatsApp and other messaging apps collapses the boundaries between contacts in different contexts, as well as temporal and spatial boundaries between these contexts. Our study identifies and explores two forms of boundary management practices. The first focuses on creating boundaries between absence and presence. The second highlights practices to manage boundaries between different communicative contexts. These two forms of boundary management are further contextualized in the next sections.

Creating boundaries between absence and presence. The ability to have mediated interactions leads to connected relationships in which the boundaries between presence and absence become blurred (Licoppe, 2004). People are simultaneously absent and present in the lives of others when they are in continuous contact via messaging apps. Many people use multiple communication channels on their smartphone, such as messaging apps, social media, work email, and dating apps. Disconnecting can be a way to escape from digital interactions and the expectations these create. Mannell (2019) describes "disconnective affordances" which can be used to reduce distraction. These are opportunities to disconnect facilitated by the materiality and features of mobile platforms and devices. The most far-reaching affordance is "signal jamming," which creates unavailability on all channels by switching the phone off or by enabling airplane mode.

However, more often strategies to cope with the pressure of digital interactions are less absolute and take place against a backdrop of constant connection. Burchell (2017) describes how individuals actively construct unavailability on specific channels when they engage in purposeful practices of being absent. Individuals negotiate networked absence, a deliberate lack of engagement within networked connections. A distinction is created between being aware of interactions and engaging with interactions, and actively making this distinction provides control over the flow and organization of communication (Burchell, 2017). Purposeful practices of networked absence are exemplified by the other disconnective affordances that Mannell (2019) presents. The affordance "disentanglement" refers to loosening the ties between device, platform, and person by switching off particular notifications, or by placing the phone out of sight. Individuals can also "modulate" availability by blocking particular contacts or leaving group conversations. Via "delay" individuals postpone their responses, and finally, with "suggestiveness" minimal and curt messages are used to discourage extensive and detailed conversations (Mannell, 2019). This study builds on Mannell and Burchell's observations by considering how different relational contexts and specific features of messaging apps shape the way people negotiate boundaries between absence and presence.

Sculpting permeable boundaries between different contexts. Due to the default collapsing of contexts within messaging apps, individuals are continuously available to different relational contexts. Boundary theory provides helpful tools to understand how people

construct, maintain, and modify boundaries between different contexts in their lives (for an overview of boundary theory see Jahn et al., 2016). According to Nippert-Eng (1996a, 1996b), boundaries can be seen as sociocognitive borders between cultural categories. These borders are permeable, which means that elements from one domain can enter other domains (Clark, 2000). People actively work to reproduce and challenge boundaries on a continuum from "integration" to "segmentation"—from no distinction between two contexts (e.g., work and private life) to a rigid separation of different segmented worlds (Nippert-Eng, 1996b). Objects, activities, and tasks reinforce the different territories put in place, for example, the use of keys differs across employees—employees who separate work from private life can have two sets of keys, while people who integrate the two contexts might have a large and mixed set of keys (Nippert-Eng, 1996a).

Boundaries are not rigid, but can be flexible depending on the demands from the domains which they separate (e.g., flexible work times determine particular temporal boundaries) (Clark, 2000). The use of technologies increases the permeability of borders between work and private life, because technologies such as smartphones can physically bring work into private domains (Olson-Buchanan & Boswell, 2006; Sayah, 2013). Notably, the use of social media also introduces personal content and personal communication into the workplace (Siegert & Löwstedt, 2019). High levels of flexibility and permeability can lead to a "blending" of contexts.

In order to deal with this blending of work and home contexts, people devise strategies. For example, they can decide to disconnect work technologies or to ignore them during weekends or holidays (Duxbury et al., 2014, Siegert & Löwstedt, 2019). Others set aside time to address work communication (Burchell, 2015), for instance, after their children go to bed (Duxbury et al., 2014). People also devise tactics around personal communication during their work day, such as checking social communication channels but postponing responses until after work (Burchell, 2017). Whereas these studies show the diversity of boundary work strategies for work and personal life, boundary sculpting practices become even more intricate when other contexts are also involved. Therefore, our study is based on interviews about everyday boundary work practices of Dutch WhatsApp users across different relational contexts.

Research approach and method

Boundary work is part of everyday actions. In order to make sense of everyday activities, our qualitative research design explores messaging practices. It is inspired by existing research focusing on practices, such as mobile phone practices in schools (Merchant, 2012), Facebook user practices (Van House, 2015), and interactions between individuals and the Internet (Carstensen, 2015).

Practice theory approach

We draw on practice theory as a useful approach for studying boundary sculpting activities. Practices can be understood as routinized forms of behavior consisting of interconnected elements: bodily and mental activities; objects; background knowledge; know-how; emotions; and motivations (Reckwitz, 2002). Shove et al. (2012) further

conceptualized these elements into three dimensions: first, *meaning* can be understood as the social and symbolic significance of participating in practices—such as mobile messaging; second, the *material* element refers to things—such as smartphones, digital interfaces, and bodies; and third, *competence* contains "know-how" and understanding (Shove et al., 2012). For messaging practices, this can include knowledge about particular functionalities, as well as familiarity with social norms. Practice theory forms an underlying basis for this study, and allows us to explore the interaction between the material elements of boundary work practices, technical know-how, and meaning.

WhatsApp as an example of messaging apps

The main focus in this study is WhatsApp, a messaging application introduced in 2009. WhatsApp allows individuals to send and receive images, video, audio, and location-based messages in one-to-one, one-to-many, or group conversations (Seufert et al., 2016). We chose to focus on WhatsApp because it is widely used in the Netherlands—80% of the Dutch population above 15 years old used WhatsApp in 2018 (Van der Veer, n.d.). The private nature and end-to-end encryption made WhatsApp popular for personal conversations, and individuals attribute a sense of community to the messaging app (Church & de Oliveira, 2013; Karapanos et al., 2016). By default, WhatsApp makes no distinction between different contexts—all conversations are accessible in the same location. Like most messaging apps, WhatsApp provides additional information, such as message delivery notifications (in the form of *blue checks*), when individuals are online, when they are typing, and when they last accessed the application (the *last seen* setting) (Church & de Oliveira, 2013). Due to its functionalities being similar to other messaging apps, WhatsApp practices can be seen as exemplifying messaging in general.

Interviews about smartphone practices

An in-depth understanding of mobile messaging practices and everyday boundary work requires a qualitative research approach. Hence, we interviewed 43 respondents in 27 semi-structured interviews and three focus groups (FGs). With the goal of maximizing the diversity of contexts in the study, we used snowball sampling and purposeful sampling (Patton, 1990). Respondents were recruited via public messages on LinkedIn and Twitter, and via our personal networks and the networks of our respondents. This approach allowed us to cover a variety of workplaces and neighborhoods across the Netherlands—we interviewed respondents in 14 workplaces and in 14 different neighborhoods (see Table 1). The semi-structured interviews, on average, took 70 minutes and the FG interviews lasted approximately 90 minutes. The interviews were conducted in Dutch and fully transcribed (we translated relevant quotes into English for this article).

We chose to analyze a broad range of boundary negotiation practices rather than to look for context-specific practices (which we would not be able to provide representative data about). We engaged in open conversations about respondents' practices—drawing on a practice theory approach by asking how instead of why respondents use messaging apps. We used two different topic lists which overlapped partially. The topic list for the WNCP interviews and FGs included a section about WNCP activities (discussed in Mols

Table 1. Respondent Overview.

Neighborhood respondents			Workplace respondents		
Pseudonym	Identifies as	Neighborhood type	Pseudonym	Identifies as	Workplace type
Pauline	Female	City	Ciara	Female	Start-up
Bas	Male	City	Lara	Female	Graphic design agency
Dave	Male	City	Tom	Male	Multinational
Marian	Female	Suburb	Jay	Male	Start-up
Marc	Male	Suburb	Michael	Male	Multinational
Arnold	Male	Town	Lea	Female	Hotel
Lenny	Male	Town	Erik	Male	Software company
Kai	Male	Town	Victor	Male	Government
Saskia	Female	Suburb	Marcus	Male	Start up
John	Male	Village	Lauren	Female	Mail company
Sven	Male	Town	Andrea	Female	Consultancy
Klara	Female	Town	Mark	Male	Municipality
Harold	Male	Village	Kenneth	Male	Zoo
Bert	Male	Village	Emily*	Female	Restaurant
Ron	Male	Village	Sarah*	Female	Restaurant
Louise	Female	Village	Jennifer*	Female	Restaurant
Theo*	Male	Village			
Chrissy*	Female	Village			
Vera*	Female	Village			
Betty*	Female	Village			
Lucia*	Female	Village			
Rick*	Male	Suburb			
Henry*	Male	Suburb			
Bianca*	Female	Suburb			
Bram*	Male	Suburb			
Daniel*	Male	Suburb			
Emma*	Female	Suburb			

Note. * these respondents were part of one of the three focus group conversations.

& Pridmore, 2019) whereas the topic list for work interviews included a section on communication technologies for work purposes. The two topic lists overlapped in sections about everyday messaging practices, availability, notifications, the use of specific settings, reaction speed, and the use in different contexts.

Our analysis of the interviews is based on a three-stage inductive coding procedure inspired by (constructivist) grounded theory (Charmaz, 2014; Corbin & Strauss, 1990; Lincoln & Guba, 1985). The work and neighborhood interviews were loaded into one Atlas.ti file, in order to analyze them together. In the first phase of open coding we created a collection of 354 verbatim descriptive codes (such as "phone not in bedroom"),

whereby we directly copied or paraphrased statements of the interviewees. The codes were then organized in mutually exclusive conceptual categories via axial coding. These conceptual categories were based on relations between codes. For instance, the codes "phone not in bedroom," "enable do-not-disturb mode," and "vacation less online" are all examples of strategies to limit the presence of the phone in private time, and therefore these were placed in the cluster "protecting personal time." Our research followed an iterative procedure as we started coding during the interview phase and we recoded sections of earlier interviews during the coding of the later interviews. Ultimately, many codes occurred often in different interviews and fewer new codes emerged, an indication that we reached theoretical saturation (Given, 2008). In the final stage, broader patterns were identified which signify the boundary work practices across different relational contexts that are presented in the next section.

Results

When using messaging apps, individuals deploy strategies to, on the one hand, manage the boundaries between being simultaneously present and absent. On the other hand, they devise tactics to integrate or separate messaging flows from different contexts. In this results section, we highlight how these two forms of boundary management revolve around digital and material functionalities of smartphones and WhatsApp, and how they are integrated into everyday relational contexts.

Demarcating absence and presence

The most straightforward way to create absence by disconnecting is "signal jamming" (Mannell, 2019), by switching off the phone. However, as Burchell (2017) describes, negotiating between absence and presence is often less absolute than fully disconnecting. And indeed, most respondents told us that they never switch off their phone, yet, they use specific settings to deal with the pressure caused by being always available.

Activating silent mode for temporary absence. For many respondents, activating silent mode forms a strategy to avoid the pressure and distraction caused by notifications (Licoppe, 2010; Shirazi et al., 2014). For instance, Kenneth (manager in a zoo) uses silent mode to limit distractions during his workday: "Often my phone is in my pocket and eh, it doesn't buzz, so I don't get a signal that I received an app [message]. Otherwise, I'd go crazy". Similarly, WNCP moderator Ron wants to be informed but he does not want to be interrupted by notifications: "My phone's never off, it is always on. But I don't hear or see everything. Yet, it's always on, often on silent mode . . . I like to know what's happening." Kenneth and Ron want to remain present for all their contacts when they are physically absent (Licoppe, 2004), but prefer not to be constantly distracted.

Notably, strategies to create temporary absence are motivated by the meaning attached to different communication channels and contexts. WhatsApp provides an additional communication channel in work contexts, whereas it forms the main (and in most cases only) means of interaction in WNCP groups. The smartphone is the only tangible object of a WNCP group, so being unavailable means not being part of safeguarding practices,

and potentially "failing" to meet neighborhood expectations. Being available and informed has thus another meaning and other consequences in neighborhoods than in work contexts. WNCP moderator Bert does not mind the distractions because he feels he needs to be up to date about what happens in his neighborhood. Though, there are limitations to his availability: "When you have your phone on, a WhatsApp message will come in, beep beep. Well, that's fun in the middle of the night. You'll be wide awake, thinking: What's happening!?" In order to prevent this from happening, Bert activates silent mode during the night.

Being visibly present: The last seen setting. WhatsApp (as well as other messaging apps) includes a particular feature to check when people have been active on the application. For each conversation, this setting is by default indicating "*last seen* on . . ." with the last time the contact was online. This feature amplifies the notion of presence and absence on WhatsApp because it allows individuals to form expectations based on the last moment a respondent was active on WhatsApp. If this is just a few minutes ago, being absent might be conceived as "less absent" than when the respondent has not been active on WhatsApp since the day before. This feature has been seen to lead to strong expectations and social pressure (Pielot et al., 2014), but it can also form an indicative object of individuals' boundary negotiation practices. The *last seen* setting can only be disabled for all contacts at once, and works reciprocally—users who choose to disable this feature are unable to see the *last seen* setting of others. Thus, WhatsApp allows individuals to use the *last seen* setting as a purposeful practice of being absent (Burchell, 2017), yet they are constrained by the reciprocal nature of the setting.

For some respondents, the *last seen* setting is a useful feature. In one of the FGs about WNCP messaging, Emma mentioned that she checks how late her WhatsApp contacts were *last seen* online: "I check if he or she is still awake." In response, Bianca, another participant, stated to Daniel: "You switched it off!" Upon which Daniel replied: "Nobody needs to see when I'm online. If they need me, they can call me. And if I don't answer, I don't answer." Emma's practices show that she has a clear purpose, combined with knowledge about WhatsApp affordances. In contrast, Daniel's attitude shows that he is not hesitant to use the "delay" tactic; he answers when he wants to (Mannell, 2019). He disables the *last seen* setting for the purpose of maintaining boundaries between absence and presence. Clearly, there are different orientations towards what contacts can and should see.

Marian (WNCP group moderator) disabled the *last seen* setting in order to maintain the boundaries between her personal life, neighbors, family, and friends: "Sometimes, I am awake in the middle of the night, and then someone will tell me: 'Jeez, were you online at 2:45?' I really do not want everyone to know." For Marian, the *last seen* setting served no purpose and its use had a negative meaning because it invaded her carefully segmented life. She felt the *last seen* feature invaded her privacy by displaying information about her WhatsApp use to all her contacts. To disable this feature, she needed specific knowledge about WhatsApp's settings and how to change them. Moreover, she first needed to develop the self-awareness that the setting was bothering her before she could disable it. She then used it to thicken the boundaries between herself and her WhatsApp contacts. For Erik (account manager), the *last seen* setting has a different connotation.

He values his time off and does not want to feel work pressure outside of work hours. Erik therefore disabled this feature "because it can create expectations. . .that someone says: 'I can see that he's been online, but he didn't do anything with my message yet.'" Disabling the *last seen* setting enables Erik to keep his work life integrated in his personal life while minimizing the pressure this integration can bring.

Response accountability: Blue checks. The *blue checks* feature of WhatsApp provokes similar responses. When a message is sent, one gray check symbol is visible—once this message is delivered, a second check appears; and finally, when the receiver opens the message on his device, the gray checks turn blue. These *blue checks* are an indication to the sender that his/her message has been read. Again, WhatsApp amplifies the experience of presence and absence in interactions, because when the *blue checks* appear, the purposeful practice of being absent becomes visible to the respondent. Without the *blue checks*, individuals can make a distinction between being aware of interactions and actively engaging in interactions (Burchell, 2017). The *blue checks* form the material embodiment of this decision process because the sender can directly see when the respondent is aware of the message, but has chosen not to actively engage in the conversation—at least not yet. Notably, this feature can only be disabled for one-to-one interactions and not for group conversations.

This can be particularly precarious in WNCP conversations when expectations might be based on the fact if a person read a message (e.g., when a neighbor asks for help and others read the message but do not respond). In one of the FGs, it became clear that this feature also allows the sender to see which participants read their message at what time. WNCP moderator Betty explains: "When I post a message in the app [group conversation], when I do this [swipes over her phone], I can see who read my message. I discovered this! Look [shows WhatsApp conversation on her phone], 17 past 10, 27 past 10. . . You, Vera, you read it at 13:50 and your husband even a day later." The other respondents react surprised—they did not know about this feature. The fact that some respondents are not aware of this possibility displays a divide in technical knowledge among participants of WhatsApp group conversations. Moreover, for unaware participants this feature creates a potential privacy invasion that remains invisible until action is taken as a response to the *blue checks*.

Overall, our interviews revealed different attitudes towards the *blue checks*. Whereas many respondents actively use it, Victor disabled the *blue checks* feature:

> Because I find it really annoying, and I've experienced this, that people message me: 'Why don't you react on WhatsApp, you opened my message at that particular time'? So that constraints my freedom. I do not feel like justifying why I didn't react. Why should I justify myself that I do not immediately respond to someone who enters my privacy, eh, private sphere? (Victor, government official)

While Victor explicitly creates boundaries by disabling the *blue checks* to protect his privacy, Lenny (WNCP group moderator) feels less able to follow Victor's strategy. His boundary management practices are the result of social negotiations: "For me, *blue checks* are visible because my wife makes me, ha ha. I switched them off [the *blue*

checks], but eh she cannot handle that, ha ha. She said: 'I want to know when you're online, why did you switch off the *blue checks*?'" Lenny and his wife both attach a different meaning to WhatsApp's *blue checks*. Whereas Lenny likes to maintain boundaries between different relational contexts and wants to disable the *blue checks*, his wife wants to be able to tap into her family context while she is apart from him. This disagreement leads towards a forced blending of boundaries (Clark, 2000), providing an example of how online contexts are integrated into offline contexts (Pagh, 2020). The collapsing of Lenny's personal offline context with his personal online context became tangible when he discussed the *blue checks* with his wife.

Lara (graphic designer) uses the *blue checks* feature to monitor the responses of her contacts. However, at times, she does not want her contacts to know that she read their messages, and for those instances she devised a tactic: "But there's a trick, you know? If you put your phone on airplane mode, you can just open WhatsApp and read all your messages and they will not get *blue checks*." Lara makes a deliberate distinction between contacts she wants to be able to see that she read their message, such as her mother and her best friends, and other contacts that she wants to hold off on, such as colleagues. Such granular boundary sculpting practices require technical knowledge. Lara's advanced knowledge about the functioning of WhatsApp and her smartphone influences her messaging practices. Greater levels of technical savviness lead to more advanced boundary work practices. (A lack of) knowledge is known to influence human–computer interactions (Carstensen, 2015), and proves to also influence messaging app interactions and related boundary management practices.

Segmenting smartphone contexts and sculpting WhatsApp boundaries

The second form of boundary management described by our respondents regards the active sculpting of boundaries between different contexts. From rigid segmentations to integrated contexts (Nippert-Eng, 1996b), respondents use smartphone affordances and WhatsApp functions to manage the presence bleed (Walden, 2016) from WhatsApp conversations into different contexts.

Do not disturb mode for context segmentation. A mobile phone brings elements of other contexts into the current context and enforces permeable boundaries (Clark, 2000) and context collapse (Pagh, 2020). Most smartphones include a *do not disturb* mode which can be activated to block phone calls and notifications. This mode can be used as a disentanglement strategy in order to disconnect temporarily from most contacts (Mannell, 2019). Many respondents put up temporal boundaries to protect themselves from distraction and pressure, and to be fully present in one context and absent in all others. Most of them use the *do not disturb* mode to protect their private context. For example, Erik (account manager and volunteer scout leader) wants to spend his personal time without interference from other contexts such as his work or scouts' group: "After 9PM, I do not feel the need to, eh, to immediately, that thing [mobile phone], when something comes in, to respond immediately." The *do not disturb* mode functions as a digital lock on his availability. The use of this mode is motivated by the purpose of protecting private time, and requires knowledge about smartphone affordances.

Key to the *do not disturb* setting is that individuals can make exceptions for contacts that can ring through. This form of modulation (Mannell, 2019) allows users to create segmentations in their social contexts. For instance, Jennifer created a distinction between contacts that she blocks and specific contacts that can reach her any time:

> At night, I always put it [smartphone] on *do not disturb*, but the sound is on, and it rings when my favorite contacts call me. My best friend and my parents are in that group, because I have the feeling that when they call me during the night, it is about something important. And then I want to be there for them. (Jennifer, server in restaurant)

Similarly, Lea (manager in a hotel) also created a list of people who can reach her when she activated the *do not disturb* setting: "My children, the father of my children, my father, my sister, my partner, my best friends. That's it. A short list." Jennifer and Lea sculpt a boundary between contacts that have to be able to reach them at all times and contacts that they prefer to be unavailable to. This segmentation enables them to tune out of conversations with most contacts but to remain available for a selection of important people from their closest social context.

Prioritizing contexts while managing CO. Many respondents experience stress because of the large amounts of messages from different contexts they have to process on a daily basis. They have to deal with CO (Stephens et al., 2017). For instance, Ciara (consultant for start-ups) is ambivalent about the use of WhatsApp: "It's the worst and the best thing at the same time." In general, she likes WhatsApp, but when she receives messages from her work context late at night it becomes a stress-factor: "So that is really this double edging, in a way, it is overloading." Respondents express concerns about excessive amounts of messages that they receive from their family, colleagues, friends, neighbors, and other contacts. They actively sculpt boundaries between more and less important contexts by using WhatsApp settings to manage all their conversations, and to create material distinctions between contacts from different contexts.

"Unread" and archiving to organize messaging overload. In order to cope with CO, respondents devised several strategies. Mark (municipal official) tries to maintain a grasp on all his conversations by marking important conversations as *unread*: "So that I know: 'Oh, yes, I need to do something with that message." Another strategy was explained by Erik (account manager), for whom a WhatsApp inbox full of conversations creates unrest. In order to shut off particular contexts, Erik archives all complete or inactive conversations. WhatsApp enables users to move conversations to the *archive* which makes them invisible. Conversations will be visible again as soon as a new message is sent or received (or if they are manually moved back to the inbox). Practices such as archiving and marking messages as *unread* enable individuals to manage messages in a way that fits their needs and to prioritize conversations from particular contexts. This is a clear example of how WhatsApp provides specific means to enable users to exercise control over if, how, and when they address particular interactions (a strategy also described by Burchell, 2017). WhatsApp app not only enables users to create order in messages from different contexts, but also to create material distinctions by muting conversations or by changing notification sounds.

Different sounds for different contexts. By default, there is no distinction between different types of WhatsApp conversations. However, individuals can use particular settings to create tangible distinctions between different contexts. These boundary management strategies require detailed knowledge about WhatsApp functionalities. When it comes to neighborhood safety, WNCP group messages are perceived as more urgent than other conversations. A WNCP message can, for instance, warn neighbors about a house break-in, in which case immediate action is desirable. In order to distinguish a message from a particular context from other conversations, people can install distinctive notification sounds. For instance, Saskia (WNCP group moderator) uses a different sound for WhatsApp messages in the WNCP group: "So I can check directly." Similarly, Harold (WNCP group moderator) has particular settings for the WNCP group: "Yes, this is the only WhatsApp group. . .that immediately shows the message on my screen and that also has a different notification sound." Moderator John explains what type of specific sound he installed for his WNCP group: "a special tone, like a foghorn." A special notification sound makes that the conversation stands out—this embodies how the meaning of a WNCP group conversation differs from other WhatsApp interactions. Namely, WNCP groups focused on safety are perceived as more urgent than other conversations. Other respondents also installed specific notification sounds for different contacts and contexts. For instance, Harold (WNCP moderator) indicates that messages from his daughter sound differently than other messages.

Moreover, group conversations can also stand out because of the use of a profile picture. Individuals can upload a profile picture to WhatsApp which becomes visible as the thumbnail for one-to-one conversations (in the main interface of WhatsApp). For group conversations, participants can change the profile picture ("group image"). During the interviews about WNCP, multiple respondents showed us the group conversations on their phone. For many of them, the group image was a logo or image of their group. Moderator Ron proudly explains: ". . .We needed a professional logo, and that, together with the municipality, I designed this whole concept." By changing the group image, people can make visual distinctions between different contexts. These adjustments in the visible and audible appearance of WhatsApp conversations form material proof of boundary sculpting practices.

Muting particular groups. In contrast to emphasizing the importance of particular contexts, users can also reduce the prominence of WhatsApp conversations by *muting* particular (group) conversations. Each conversation offers the opportunity to mute notifications for eight hours, one week or one year, and this setting can be disabled at any time. When muted, the only indication of new messages is a number badge that becomes visible when WhatsApp is opened. Many of our respondents use the *muting* setting to manage CO and to create boundaries between different (groups of) contacts. Some choose to mute their work WhatsApp group, for instance, Sarah works in a restaurant and mutes the group conversation on days that she is not working. In contrast, Tom (human resources manager) never mutes his work WhatsApp conversations, but mutes his family group. He explains: "when a picture of my niece is shared again and everyone reacts, I'll easily receive 15, 20, 25 messages. . . And it so annoying when my phone is buzzing for

half an hour." Even though one-to-one conversations can also be muted, our respondents only mute group conversations because these can more easily create CO.

Notably, in the WNCP context, muting the WhatsApp group has a detrimental effect on the effectiveness of crime prevention activities. The goal of the groups is to safeguard the neighborhood by keeping an eye out, and by assisting law enforcement when suspicious activities or emergencies occur. This only works effectively if all participants respond fast, and WNCP moderator Kai explains: "You want to prevent that people mute the [WhatsApp] group, because then it doesn't work in case of an emergency."

When dealing with CO, individuals devise organization tactics and install distinctive sounds and visuals to visibly and audibly carve out different relational contexts. These practices are all guided by the purpose of reducing pressure while remaining available for particular contexts. However, again, particular knowledge about the functionalities of WhatsApp is required in order to devise messaging management strategies that help individuals to reduce pressure from different contexts. Material barriers function as tools to protect their freedom and autonomy and to prevent an overload of messages from overloading their minds (and lives).

Discussion

This study explores a variety of boundary work practices within WhatsApp use, and contributes to boundary work literature which aims to understand how individuals deal with technology in managing boundaries between work and personal life (e.g., Duxbury et al., 2014; Jahn et al., 2016; Sayah, 2013; Siegert & Löwstedt, 2019). Our research expands beyond this professional/personal binary and provides an in-depth overview of boundary management strategies in more nuanced relational contexts with children, partners, friends, neighbors, and colleagues. We show how people use WhatsApp features to carefully sculpt boundaries between different contexts and to manage absence and presence within these contexts on a granular level. Boundary sculpting practices are the result of an interplay between knowledge, meaning, and material elements. Our analysis presents three conclusions revolving around these dimensions.

First, everyday practices to demarcate absence and presence are shaped by the meaning attributed to particular relational contexts. In order to deal with constant networked connections, people engage in purposeful practices of networked absence (Burchell, 2015, 2017), whereby they make use of disconnective affordances (Mannell, 2019). Our research exemplifies how our respondents do this in their WhatsApp use, whereby the role of relational contexts proves to be crucial. For instance, signal-jamming is often used by respondents in order to be temporarily unavailable for work communication. Yet, this strategy is less often used by WNCP moderators because their safety-focused conversations demand constant attention. The meaning attributed to work conversations (being available professionally) is completely different from the meaning of WNCP groups (safeguarding). Moreover, our respondents use silent mode and WhatsApp's *last seen* setting and *blue checks*, whereby different relational contexts require different boundary sculpting tactics to manage presence and absence.

By focusing on boundary work within the use of messaging apps, our research revisits the concepts of permeability, integration, and segmentation (Clark, 2000; Nippert-Eng, 1996a, 1996b). Within WhatsApp, the borders between different contexts are fully permeable and the default is a full integration of contexts. This can be problematic because continuous messaging flows from different contexts cause experiences of stress and CO. Our respondents engage in boundary work and decrease permeability between contexts by segmenting messaging flows on a granular level. Individuals put boundaries in place by enabling and disabling particular functionalities and by changing settings for different conversations. More specifically, boundaries materialize in the form of muted conversations, particular sounds, and groups of contacts exempted from the *do not disturb* mode. These practices require detailed knowledge about WhatsApp features and settings. Thus, our second conclusion indicates that experienced WhatsApp users have more sophisticated opportunities to sculpt boundaries and to manage CO than less tech-savvy users.

Third, our research highlights how boundary work practices in messaging app use revolve around more than the aim to separate work from private life. Namely, the ongoing contradictions of messaging practices—always available but always negotiating that availability—affect privacy, freedom, and autonomy in significant ways. WhatsApp functionalities currently default to visibility in all interactions. For example, they provide information about when users are online and when they read messages. This infringes individuals' privacy, especially if they are not aware of these functionalities (which proved to be the case for some WNCP group participants). Moreover, people are constrained in their freedom when they experience pressure and expectations from the never-ending flow of messages in collapsed contexts (Pagh, 2020; Vitak et al., 2012). More than ever, people are constantly tied to their phones by messaging apps. People can adjust messaging features and tinker with settings, yet, they are limited by the inadequate options offered by messaging apps (particularly for group conversations). This reiterates a crucial point: the default settings of messaging apps take away the user's autonomy to effectively deal with an overload of messages and the collapsing of relational contexts they cause. People would benefit from clearer options for active boundary-sculpting in one-to-one interactions as well as in group conversations in order to safeguard their privacy, freedom, and autonomy.

Limitations and suggestions for further research

The aim of our study to maximize diversity in contexts helped in highlighting overlapping practices and strategies, yet, also meant that we were not able to zoom in on specific groups. For instance, students might employ different strategies and have different reasoning behind their practices than pensioners, or parents of young children. Future research should integrate more contexts, or focus on particular groups. Finally, our results highlight a variety of practices which is not conclusive. For instance, none of our respondents use dual SIM (subscriber identity module) smartphones which might also form an effective tool in boundary work practices.

However, the popularity of messaging apps and other communication services is at present far from waning. In contrast, this research was done before the COVID-19 crisis (ongoing from early 2020), which has only accelerated the merging of contexts

via technologies. The global lockdown situations caused people to work, educate their children, maintain social ties, and engage in other activities from their homes. It is crucial to understand the effects of blurring boundary practices, because they will become increasingly difficult to sustain and maintain in a post-COVID-19 society. It is likely that the connected flexibility afforded by the use of messaging apps and new communication tools for work, communities, families, and social lives will increase. This suggests that more focused research is needed to fully understand user practices and the boundary work ever present in the use of messaging apps.

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