Temporal ambivalences in smartphone use: Conflicting flows, conflicting responsibilities

Brita Ytre-Arne
University of Bergen, Norway

Trine Syvertsen
University of Oslo, Norway

Hallvard Moe
University of Bergen, Norway

Faltin Karlsen
Kristiania University College, Norway

Abstract
This article explores implications of the central position of the smartphone in an age of constant connectivity. Based on a qualitative study of 50 informants, we ask how users experience and handle temporal ambivalences in everyday smartphone use, drawing on the concepts flow and responsibilization to conceptualize central dimensions of such ambivalences. The notion of conflicting flows illuminates how brief checking cycles expand at the expense of other activities, resulting in a temporal conflict experienced by users. Responsibilization points to how users take individual responsibility for managing such conflicting flows, and to how this practice is difficult and conflict-ridden. We conclude that while individual time management is often framed as the solution to temporal conflicts, such attempts at regulating smartphone use appear inadequate. Our conceptualization of temporal ambivalence offers a more nuanced understanding of why this is the case.

Corresponding author:
Brita Ytre-Arne, Department of Information Science and Media Studies, University of Bergen, P B 7802, 5020 Bergen, Norway.
Email: Brita.Ytre-Arne@uib.no
Keywords
Ambivalence, flow, media use, responsibilization, smartphone, time management

Introduction

This article analyses everyday experiences with the smartphone as an inroad to understand how people experience and manage time in an age of constant connectivity. Constant connectivity describes a situation in which digital, datafied, and intrusive media shape our everyday lives (Chun, 2017; Das and Ytre-Arne, 2018; Van Dijck, 2013), intensifying dilemmas about the management of time and technology in areas such as work, family, leisure, or mundane activities. The smartphone has emerged as key in this context, as a meta-medium and container of our datafied selves (Rettberg, 2014), a “digital companion” (Carolus et al., 2018), and the chosen harbinger for a “procrastination economy” (Thussey, 2018). The mobile phone is by now taken for granted (Ling, 2012) and woven into a range of everyday life practices (Richardson and Hjorth, 2017). It is both an emblem of transforming relationships with time in everyday media use, and a tool for managing these transformations.

Cultural discourses on the smartphone are marked by dichotomous positions, one heralding its value for on-the-fly task management, efficient social networking or ubiquitous entertainment, and the other cautioning against fragmentation of work and social life, warning of addiction and advocating detox and resistance (Syvertsen, 2017). Studies underline that ambivalence is a more realistic reaction than non-use, and that, user-phone relations are too complex to measure solely as stress or addiction (Carolus et al., 2018; Ribak and Rosenthal, 2015). Yet, the question remains as to how smartphone users balance between positions in their everyday lives. This question, we argue, points to fundamental concerns about how people experience and manage time in digital societies. Time is a fundamental structuring mechanism in interactions between individuals, social figurations, and societal institutions. It refers to shared standards enabling coordinated activity, but also to subjective experiences of how time progresses, or what is valuable uses of time (Hall et al., 2018; Jordheim, 2014). In this article, we consider time a universal, yet personal resource to manage, and approach it through media and technology as part of the everyday. Temporal dimensions have long been part of theorization of the cultural and social organization of media in everyday life (Morley, 1992; Radway, 1984; Scannell, 1996), but emerges as ever more central in the context of constant connectivity and devices such as the smartphone (Hall et al., 2018; Rauch, 2018).

Taking the conflicting discourses on smartphones and concerns over managing time as our starting points, our research question is the following: How do users experience and handle temporal ambivalences in everyday smartphone use? Our analysis highlights and investigates the notion of temporal ambivalence, which refers to contradictory feelings over how time should be spent. Although there is no evidence that people have less free time than in earlier eras, the experience of being pressed for time, and conflicts over time as a limited resource, appear to have increased with capitalism, cultures of modernity, and digital technology (Bauman, 1990; Ribak and Rosenthal, 2015; Wajcman, 2015). Temporal ambivalence combines time as a fundamental category with ambivalence as the co-existence of potentially clashing positions. Our analysis unpacks
temporal ambivalence in smartphone use, highlighting the relevance of the concept to broader debates on constant connectivity.

To achieve this, our analytical framework joins together theories of flow and responsibilization. Pertaining to flow theory, the notion of conflicting flows is used to discuss contrasts between flows that are experienced as joyful and wasteful, and between smartphone use and other activities. We particularly emphasize smartphone checking, demonstrating how checking cycles intended to fill time-gaps expand at the expense of other activities; so that filling time becomes connected with losing time. Pertaining to responsibilization theory, we use the notion of conflicting responsibilities to discuss how individuals struggle to manage time within contradictory cultural discourses and social norms, and explore strategies reported by users to handle the conflicts. Methodologically, this article is based on a large-scale qualitative study of cross-media use in Norway, involving in-depth interviews with 50 informants. In what follows, we discuss our theoretical perspective and methodological approach, before analyzing central dimensions of temporal conflicts, and concluding with theoretical and empirical implications.

**Theoretical perspectives: smartphones, flow and responsibilization**

The smartphone has been described as the ultimate meta-medium, involving an “exponential leap in the range of possible uses” compared to earlier media going mobile (Humphreys et al., 2018: 2793). There is extensive evidence of the growing global prominence of smartphones (Deloitte, 2018; Newzoo, 2018). Focusing on countries with high ICT penetration, 91% in our case, country Norway report access to a smartphone (MedieNorge, 2018). This figure corresponds to the United Kingdom where a study also finds that users spend more time on the Internet through the smartphone compared to other devices (Kuss et al., 2018). In the United States, 68% of Americans sleep with their smartphone next to their bed and 79% start using it within 15 minutes after waking up (David and Roberts, 2017). The Reuters Digital News Report, annually comparing news consumption across more than 30 countries, shows a steep overall increase in the use of smartphone for news, with 62% reporting such use on a weekly basis in 2018 (Newman et al., 2018: 27), while the corresponding figure for Norway is 70%.

Extensive smartphone use can be explained by versatility and usefulness. The smartphone is a social hub and navigation tool, used for communication and micromanagement of daily life (Thorhauge, 2016), as a preferred device for news, and a platform for entertainment such as location-based gaming (Frith, 2013) and music streaming (Nag, 2018). Importantly, the smartphone and its apps are designed to capture and hold on to users’ attention. Through gamification features such as badges, levels and points, and behavioral stimuli including likes and notifications, smartphone apps are made to stimulate frequent use and loyalty (Alter, 2017; Walz and Deterding, 2015). These insights indicate how smartphones can impact time in daily life. To highlight the temporal ambivalences embedded in smartphone use, we mobilize the concepts flow and responsibilization.
Flow theory

The flow concept is used in different ways, both within and outside media research. In the context of media production, flow relates to the sequencing of content into an order that stimulates continued use. The use of the concept emerged in the 1970s as a keyword in television studies (White, 2003), describing scheduling practices across consecutive programs, to hold on to viewers’ attention (Williams, 2008 [1974]). Television scholars have further developed this concept in the face of channel proliferation, for instance, to describe the total output of all TV channels as a “super flow,” compared with flows on individual channels and the specific flows created by each viewer (Jensen, 1992).

A different flow concept with some overlapping features has been employed to describe interactive media technologies. Early research found that web surfing could facilitate experiences of “optimal flow” where users became completely absorbed in activities like chatting or searching for information (Chen et al., 2000). In game studies, flow has similarly been used to describe players getting into “the zone.” While this refers to user experiences, the flow is contingent upon design features. To successfully keep the player immersed, the activity must be designed not to be too demanding or too simple (Juul, 2005: 112). A direct inspiration is the framework developed by psychologist Mihaly Csikszentmihalyi in the 1970s: To him, flow is a mental state characterized by an intense focus on a skill-demanding activity with clear goals, giving a sensation of exercising control, and positive emotional rewards (Csikszentmihalyi, 1990). The state of flow can be reached through activities like sports, work, and play (Csikszentmihalyi and LeFevre, 1989), like the example of a rock-climber focusing on how to traverse safely, oblivious to the rest of the world. One important aspect of flow is that self-awareness is lost as it merges with action: “he is aware of his actions but not of the awareness itself” (Csikszentmihalyi, 1975: 38). Sense of time may be altered, either appearing to drastically slow down, or to pass faster, and there is “little distinction between self and environment, stimulus and response, or between past, present, and future” (Csikszentmihalyi, 1975: 36).

Consequently, the flow concept can describe an enjoyable experience, but also refer to mechanisms designed to keep users hooked and distort their sense of time. The latter understanding is important in studies emphasizing negative consequences of excessive Internet use, and online addiction (Griffiths, 2005; Petry et al., 2014; Young, 1998). A core concern is how the flow experience might come in conflict with other needs, and compromise the overall ability to manage life (Chen et al., 2000: 264). This is also an emerging concern in psychological studies of the smartphone (Billieux et al., 2015; Kuss et al., 2018). A common topic is how smartphone design creates a flow experience where the user loses track of time and spends more time on the device than planned. This research hypothesizes that experiences of time distortion are associated with smartphone addiction (Kwon et al., 2013; Salehan and Negahban, 2013). This again refers to two of Csikszentmihalyi’s (1975) criteria for experiencing flow, that is, altered sense of time and loss of self-consciousness, without necessarily implying a positive flow experience. As smartphone use can give rise to flow experiences that users may not necessarily
enjoy, and which are experienced as conflicting with other aspects of life, it is relevant to explore how users handle such conflicts. To do this, we turn to responsibilization.

**Responsibilization theory**

As a concept from governmentality theory, responsibilization denotes increased individualization of the responsibility for dealing with social risks and problems (O’Malley, 2009). It refers to processes where individuals are expected to take on more of the burden of managing risks and living a healthy life. As Lemke (2001: 201) describes it:

> The strategy of rendering individual subjects “responsible” [...] entails shifting the responsibility for social risks [...] and for life in society into the domain for which the individual is responsible and transforming it into a problem of “self-care”.

Crucial in the responsibilization literature is the reliance on self-discipline mechanisms. For example, health policy documents envisage citizens to monitor and regulate their lifestyle (Galvin, 2002: 111), and health apps use gamification to stimulate activity (Munson et al., 2015).

In media research, responsibilization describes the tendency toward allocating more responsibility to individuals through measures such as media literacy (Livingstone, 2007; Uusitalo, 2010). Historically, Europe has an extensive tradition of societal responsibility in media policy, and there has been a strong legacy of co-regulation by state and media businesses in the Nordic countries (Syvertsen et al., 2014). Governments and businesses are still expected to take responsibility in areas such as audiovisual content, protecting minors or combatting fake news (Milosevic, 2017). However, shifting the focus from potentially harmful content, toward the overall pressure of digital technologies on people’s time, we find that individual time management is constructed as the key solution. Time management is the dominant recipe in self-help advice directed at media overuse, and also in the promotion of apps and software presented as solutions (Karlsen and Syvertsen, 2016; Syvertsen and Enli, 2019). Google’s Android and Apple’s IOS include software to stimulate users to monitor and set time limits, and to restrict notifications.

We can thus identify a potential conflict between allocating responsibility to regulators, to media industries, and to individual users. Likewise, the pervasiveness of media in digital society implies that responsibilities for managing media use are not easily allocated to one particular sphere of life. Trnka and Trundle (2014) ask for studies of “competing responsibilities that reveal how neoliberal ‘responsible’ subjects exist within a matrix of dependencies, reciprocities, and obligations.” Their analysis of care relations is particularly relevant to smartphone use, since caring for others involves responsibility that is not merely grounded in the autonomous individual. The notion of conflicting responsibilities refers both to discourses of individual versus societal responsibilities and to the different roles in which people enact these responsibilities.
In our analysis, we draw on the concepts of conflicting flows and conflicting responsibilities to explore two dimensions of temporal ambivalences in smartphone use, asking how ambivalences are experienced by users and how they can be explained.

**Methodological and analytical approach**

Our analysis is based on qualitative data from a comprehensive project on media use in Norway (Moe et al., 2019; Nærland, 2019; Ytre-Arne, 2019). The aim of this study was to investigate cross-media use (Schrøder, 2011) and public connection (Couldry et al., 2010) through an open, informant-centered approach taking the perspective of users. In 2016, 50 informants were recruited to mirror the Norwegian population, considering age (18+), gender, occupations, education levels, minority, and urban/rural representation, and asked to participate in two rounds of in-depth interviews and a media diary. This article draws on the first round, designed as a semi-structured in-depth interview about media use in the context of work, family, interests, leisure, local communities, routines, and habits. For instance, informants were asked to describe an ordinary day in detail, including which media they used in different situations.

The study was neither designed with a pre-defined focus on smartphones, nor with temporal ambivalences as a pre-defined analytical problem. However, the “day in the life”-approach (see also Groot Kormelink and Costera Meijer, 2019) is particularly relevant to investigate temporal aspects of media use, as it builds from the idea of an ordinary day as a recognizable timeframe to situate different experiences within. Further, initial analyses of the material, and subsequent analysis of news use and citizen ideals (Ytre-Arne and Moe, 2018), placed smartphones at the very center of informants’ media experiences and uncovered ambivalent emotions. These findings merited dedicated in-depth analysis as is provided in this article through an integrated theoretical and analytical approach, in which we explain smartphone use through the notion of *temporal ambivalences*.

Our analysis of the interviews combined different approaches. In order to explore experiences of smartphone use, we drew on impressions from an initial analysis of the material and further conducted a systematic overview of all responses to questions about an ordinary day with media. We found that statements pertaining to temporality and ambivalence came up frequently in the material overall, and were discussed extensively by many informants, without particular demographic bias in terms of who these were. This was later confirmed by searches in NVivo for a series of relevant keywords. We focused in more detail on informants who explicitly articulated—although in varying manners and to different degrees—temporal ambivalences concerning smartphone use. Our main purpose was not to assess how typical these experiences were, but rather to investigate the characteristics of the phenomenon. In order do this, we apply theories of flow and responsibilization, as accounted for above, to identify and explain key dimensions. Hence, our discussion of two such dimensions—temporal ambivalences as conflicting flows and conflicting responsibilities—is based on dynamic interchanges between readings of these theoretical perspectives and interpretation of our empirical material.
We have already established the prominence and versatility of smartphones, but how is this experienced by users in the context of everyday life? When asked about an ordinary day, almost all 50 informants placed the smartphone at the center of their media use, integral to daily routines. This also included older informants; the only exceptions being a woman in her 80s who did not have a smartphone, and a woman in her 60s whose smartphone use was limited. Our informants used smartphones for a variety of purposes, of which the most important were messages and personal communications, news and social media, and practical micro-management of everyday life. In addition to reporting a high frequency of use (smartphones are used all the time) and pervasiveness (smartphones are used in a range of different situations), people expressed how practical and necessary the smartphone was for organizing life. However, they also reflected a polarized societal discourse as they expressed concerns about their dependence on the smartphone.

Prominent narratives found in our material reflect how smartphone use in only a few years has permeated a range of practices. In contrast to the spatiotemporal specificity of many other forms of media use, there is no singular place or time for using the smartphone. Smartphones embody constant connectivity, and this seeming lack of boundaries leaves users with the task of appropriately situating the smartphone in everyday life (see also Lomborg, 2015; Thorhauge, 2016). Different forms of ambivalence have been associated with mobile phone experiences (Sørensen, 2006: loc 772), including how mobile technologies afford greater flexibility in navigating work and family, but at the potential price of feeling invaded (Mark, 2015). This resembles a “connectivity paradox” (Fonner and Roloff, 2012; Ter Hoeven and Van Zoonen, 2015) outlining how digital technologies are experienced to both save and take time in working life. Following this perspective, we argue that the ambivalence detected in our material can be characterized as *temporal*.

Temporal ambivalences refer to co-existing contradictory notions about how time should be managed, are situated within the time structures of everyday life, and experienced by individuals in this context. We note that this phenomenon, and the conceptualization of it, is typical of, but goes beyond, the smartphone. Overall, accounts of being busy and not having enough time was a central theme in how people talked about their lives with media, particularly prominent not only among informants with children and full-time work, but also found among others. While many informants talked explicitly about time spent and wasted on smartphones, as we will outline below, others uttered vaguer statements hinting at the significance of time, such as “there is so much information now” or “there is no time for everything.” A more detailed conceptualization of key dimensions of temporal ambivalence is, therefore, useful to understanding smartphone use, but also relevant to experiences of constant connectivity more broadly. We will discuss two such dimensions by drawing on the concepts of conflicting flows and conflicting responsibilities.

**Conflicting flows: filling and losing time**

The notion of conflicting flows refers both to how flow experiences can be more or less joyful and riveting, and how they may come into conflict with flows embedded in other
activities. We use flows in the plural to indicate that the smartphone as a meta-medium can be characterized through the idea of multiple flows, but co-existing flows is also a broader characteristic of everyday life across social domains. A key affordance of the smartphone is to enable simultaneous engagement in or disconnection from many flows at once (Mannell, 2019), which has been noted to create temporal overloads (Burchell, 2015). In our material, evidence of these conflicting flows emerged predominantly as informants talked about acts of smartphone checking.

Our systematic review of informants’ accounts of an ordinary day with media revealed that more than half explicitly mentioned “checking the smartphone” as part of their morning routine: waking up by the phone alarm clock, reaching for the smartphone before getting out of bed, checking it while having breakfast, taking the smartphone into the bathroom, or all of the above. Others who preferred radio or newspapers in the morning included smartphone checking in their narratives as they talked of leaving the house for work. Checking was intended as a quick way of orienting oneself toward social, local, or global events:

When I wake up, I usually check Facebook and Instagram and Snapchat, to see if something exciting has happened . . . if I have the time before I take a shower, I also check . . . the internet, you know, different discussion sites where something interesting could have happened overnight. (Sindre, aged 22, student)

I take a quick look at my phone . . . I have set up notifications from BBC news, so that they send me news in the morning. And then I check local news, just quickly, to see if something has happened. [. . .] Or traffic notifications, is there a jam somewhere? Just really quick. (Sissel, aged 36, works in administration)

We see here that grabbing the smartphone and assuring oneself that the world still stands is a way of framing daily activities. From then on, smartphone checking appears to be part of everything that happens. One informant said she checked Facebook “an insane number of times” during an ordinary day, even though she rarely sat in front of a computer screen—it was the smartphone that enabled the practice. Another compared his online news reading habits before and after the smartphone:

So, you actually had to physically walk over to that computer and sit there and read the news. If you wanted to. Maybe you did that once a day, as opposed to a hundred times a day [Laughter]
It is actually that often if you start doing the math . . . or maybe 50 times, then, that you pick up your phone to take that little round. (Magne, aged 40, works in shipping)

Informants used the smartphone to keep up to date while working and talked about it as integral to taking a break. Some stories derailed, as informants shifted from talking us through their day to just talking about smartphone checking. And, as one informant observed, “before bed you take a round there, of course.”

With these patterns of use, informants engaged in a series of smartphone checking cycles, a distinct user pattern defined by Costera Meijer and Groot Kormelink (2015) as quick sessions to check the latest updates from multiple sources and “stay on top of all that happens in your personal life and the world at large” (p. 670). A checking cycle starts
by picking up the phone to scan through notifications, messages, news, social media or practical information. In the flow of daily life, checking cycles suit the purpose of filling time—of occupying small time-gaps between more attention-demanding activities. In line with other studies, checking is something that “comes across” in moments of leisure (Boczkowski et al., 2018), and a presumably pleasant, if not particularly intense, way to transform “passive time into active time” (Thorhauge, 2016: 65). Checking cycles are associated with breaks, waiting periods, down time, and transitions, and are intended to be quick. However, our findings underline that the smartphone as a meta-medium, and the gamification and design of apps, encourage users to continue once they have started, or to return to checking very soon again. The result is a temporal uncertainty in the extent and delimitation of checking cycles. This uncertainty is the root of conflicting flows.

Our informants described to us that when picking up the phone, notifications and messages on the lock screen were often checked first, and immediately, if they appeared while checking something else. Several informants talked of how sounds, “those red circles,” or other notification design features, were decisive as to whether they had to check:

You don’t feel that you actually decide to sit down to do it, but still spend all this time without thinking . . . it is there on your phone; you get notifications. (Stig, aged 32, works in the military)

I really don’t like it when the phone goes “ding” all the time. Now they have added a sound to Messenger . . . I mean, before the phone could be quiet for days. (Unni, aged 50, on disability benefits)

These quotes illustrate that notifications were instrumental in starting or prolonging checking cycles. Notifications were an unpredictable factor, coupled with other factors such as new content loading in the feed, or the variability of interesting links to follow or communicative exchanges to engage in. This implied that the duration and pattern of checking cycles became fundamentally difficult to control. Users did not know how much time it would take, specifically or overall, to check the smartphone. Some informants had no choice but to end checking cycles abruptly, as for instance a taxi driver who had to put his phone down when new customers entered, or parents of infants waking up in need of urgent attention. Without such external circumstances, ending the cycle was more difficult than starting it.

In a study of magazine reading in everyday media use, Hermes (1995) argued that magazines were made meaningful as “easily picked up and put down,” mundane but with seamless integration into fragmented everyday life. In contrast, smartphones are easily picked up but not easily put down. While seemingly inviting a brief, not too immersive glance, smartphone affordances encouraged users to continue checking once they had started. However, the integration of these expanding checking cycles into the temporal structure of everyday life became lagging and filled with tensions. Conflicts arose between the external flows of everyday life, into which smartphone checking was integrated, and the internal flow of the smartphone checking cycle. Referring to Csikszentmihalyi’s (1975) flow concept, we found that smartphone checking partly
corresponded with the characteristic of a continuous yet predictable order of actions. Users could habitually follow the stream of content by scrolling or switching between apps, potentially losing self-awareness and sense of time in the process.

Drawing on a different aspect of flow, we further note that smartphone checking was not generally associated with particularly rewarding experiences or a positive state of flow. Checking could feel immersive, but was described as a fairly empty activity, with phrases such as “there is nothing there, really” or “waste of time”:

There is hardly any down time any more. Whenever you have to wait for something . . . you were on the phone waiting for me, right? The fascinating thing is that you completely disappear, mentally, into the unit. So, you can type away for half an hour, and then it is . . . gone. (Victor, aged 37, consultant)

In describing the time spent on checking as “empty” or “gone,” informants conflated the different activities they engaged in on the smartphone into one practice that was not highly valued, and replicated notions of an online/offline-divide, which has been problematized in research (e.g. Baym, 2015; Jensen, 2011; Wajcman, 2015). Earlier studies of mobile phone checking have highlighted more social micro-coordination throughout the day (e.g. Ling and Campbell, 2009). Importantly, our informants also made numerous mentions of the smartphone as practical and useful but did not necessarily articulate that such positive values were realized through the practice of checking. This seeming contradiction speaks to a subjective experience of lost time. The temporal ambivalence was accentuated as the intention of filling time resulted in experiences of losing time. The lost time referred both to time designated to checking, and to the extra time that the checking cycle had infringed upon as it expanded.

To counter the problem of lost time, managing time became a key dimension of smartphone use. However, in attempting to manage time, users experienced the second key dimension of temporal ambivalence: conflicting responsibilities.

Conflicting responsibilities: time management, strategies, and social norms

After establishing that experiences of conflicting flows are central to temporal ambivalences, we now turn to the empirical material in search of attributions of responsibility for the problem. Just as the individual flow of smartphone checking cycles may be experienced as conflicting with the social flows of everyday life, we find that individual responsibilization situates informants in a landscape of conflictual norms and practices. Some informants presented their individual behavior as faulting, while others appeared to reject such views. However, they appeared to accept and take for granted that they, individually, had to deal with the consequences by managing time better. When discussing how to handle conflicting flows, they neither pointed to manufacturers, content providers, social media platforms, nor to regulatory authorities, but rather placed the responsibility on their own shoulders:

It steals time. A lot of small chunks of time in-between just get lost to social media. If one wanted to be more efficient with one’s time, thinking through that would be the way to go. (Stig, aged 32, works in the military)
I have tried, I will bring a book with me [on the bus to work]. But then I think I am just going to check the phone, and suddenly half the bus ride has passed, and I cannot bother to pick up the book. I get frustrated by wasting time. (Synne, aged 37, social worker)

In these quotes, two informants describe the problem of losing time to smartphone use, partly pointing to causes beyond the self (“It steals time”), but indicating potential solutions (“be more efficient with one’s time”, “I have tried . . .”) that place responsibilities at the individual level. Whether adopting to a jargon of efficiency, striving to find time for cherished activities, or considering cultural discourses about how boredom can foster creativity, strategies of time management emerged as instrumental to take control. While such strategies found in the material were diverse, they all originated in the allocation of individual responsibility; hence, fitting the thesis of responsibilization theory. We will draw on this theory to explain different strategies of time management concerning smartphone use.

For some informants, time management through self-regulation relied on willpower as the sole strategy: deciding, repeatedly, to not (extensively) use the smartphone, and then do as decided, every time. However, many appeared to subscribe to the view, described in other studies, that willpower does not suffice to control digital media use (Guyard and Kaun, 2018). They, therefore, added different supplementary strategies: managing settings describes doing something with the smartphone to make it less intrusive, such as turning off notifications. To impose spatiotemporal constraints, however, implied to do something about user patterns in everyday life, particularly to enforce rules to create time pockets where smartphones could not infringe. This also pointed to the necessity of social negotiations with others, for instance, within the family. Table 1 presents these strategies found in the material, and further details how each involves three phases—awareness, actions, and habits—as users recognize the problem, act to resolve it and seek to establish new routines. Each strategy was thus enacted over time.

The degree to which informants recognized these phases as part of their strategies, succeeded in moving from one to the next or even articulated the existence of strategies, varied considerably. However, when talking of their experiences with trying to do
something, it was clear that these experiences were fraught with frustrations. Several had observed that managing smartphone settings was not done once and for all, as relentless changes in software implied temptations to slip back. Victor, the consultant, quoted earlier, was an example of someone who tried to actively manage settings, without succeeding in eliminating all distractions. He had slipped into a habit of allowing notifications—even vibrations—from Facebook, and compared Facebook to the “Furby” toys his children played with: pet-like technological creatures that entice you by responding to your attention. He had fed the Facebook creature by allowing notifications on his phone, and the result was that it ate his time.

An example of someone who relied on spatiotemporal constraints was the hairdresser and mother Aina, who said that “the phone is, of course, used more than I want it to be.” She talked extensively of the rules she had set, such as not using the smartphone while her child was awake, and how she struggled to follow these principles while managing work, family, and household chores, aiming to make the most of time in a busy phase of life. Real estate developer John, whose work pushed toward an always-on mode, shared a similar experience:

It has become so bad that my son says “oh, you are on the phone all the time.” So that made me think. We are talking about . . . how to formulate some kind of plan, for putting the phone aside when we get home. But it is difficult. (John, aged 33, real estate developer)

This latter example points to another aspect of responsibility, namely responsibility for others, and the difficulty of social negotiations. While informants attributed the responsibility for handling problems to themselves, they had to formulate and exert potential solutions within the social contexts of their lives. This involved further management of responsibilities when allocating one’s time and attention. As noted by Trnka and Trundle (2014), care logics may imply competing responsibilities, as social actors move between different moral, ethical, and affective valences of what it means to be responsible subjects. Informants’ lives were complicated by insecurity about prevailing norms in light of rapid technological change. In The Culture of Connectivity, Van Dijck (2013: 19) points out how norms pertaining to sociality have changed: “Patterns of behavior that traditionally existed in offline (physical) sociality are increasingly mixed with social and sociotechnical norms created in an online environment, taking on a new dimensionality.” Two problem areas defined by our informants were how to navigate new norms for smartphone use in social situations and balance conflicting norms for parental responsibility.

Regarding social situations, informants in different age groups articulated fears that valuable forms of sociability were threatened by intrusive smartphone use:

I try to limit it . . . I do not really feel that I need to do it . . . but then it is a bit difficult just to sit there and watch people who sit there with their phones instead of talking to each other, so . . . I don’t like the direction we are heading, putting it that way. (Ove, aged 33, cargo handler)

I just think it is rude . . . people sit there in a party and say they have to respond to a message! They should be able to do that when they get home. But I guess they are so scared of missing out. (Ellen, aged 81, retired)
These quotes illustrate tensions between different norms for phone use. The statement by an older informant on young people’s impoliteness and FOMO (Fear-of-missing-out) corresponds with research on elderly non-use and smartphone etiquette norms (Kadylak et al., 2018; Lüders and Gjevjon, 2017). However, as the younger informant shows, reacting to what is seen as impolite behavior is not only a problem for the elderly, and influences from others can be difficult to resist.

The second problem area, discussed extensively by several informants, was parental responsibility. Informants who were parents of small children and teenagers described serious personal dilemmas over regulating their own and children’s smartphone use in a multitude of situations. As parents, they felt responsible for children’s access to digital technologies, balancing hopes of pedagogical outcomes with fears of negative effects. They further faced overall responsibility for the totality of their children’s schedules and felt obliged to ensure that wholesome pursuits were not pushed aside for less valuable uses of time. In this context, phones and other mobile devices appeared, in the words of one informant, as “a treasure chest that you have to force shut as soon as you have opened it.”

These experiences can be interpreted as accentuating each family’s responsibility, but also as a route toward placing the problem within a societal context. Some blamed social change for placing them in a difficult situation:

The way I was raised was that when the weather was nice we should be outside. The kids cannot sit inside surfing on their phones, it’s dinner and homework, and then go out. Football, hanging around with friends, finding something to do. But kids today don’t know what it is to play anymore; they get bored so quickly. If you take away their phones, they are bored; they cannot have social interaction, they say. (Astrid, aged 43, secretary)

This informant allocated responsibility for the problem to conflicting discourses of childhood. She did not, however, accept the situation, but saw it as her role as a parent to reclaim childhood experiences that were otherwise lost, through enforcing rules of digital detox. Her narrative continues,

Over the holiday they got to use the phone two hours a day, choosing for themselves when that would be, and that was horrible. You really see how addicted they are. My daughter did not know what her friends were doing, she was a loner and an outsider, she said. But then a few days went by, and towards the end of the holiday, they did not ask for the phones at all! So, it is addictive, and for adults too. All the time . . . you have to check your phone, right? (Astrid, aged 43, secretary)

Astrid’s description confirms to the discourse of responsibilization, as she as a parent took responsibility for imposing constraints, yet she did not accept that the root of the problem lay solely in individual actions. Raising concerns about young people’s everyday lives in an age of constant connectivity enabled people to discuss smartphone use as a cultural and social—if not political—concern, however, mostly as a lamentation about how social change had complicated their lives and made time management more urgent and difficult.
Conclusion

The smartphone is a meta-medium designed for joining together and shifting between multiple purposes. Many of these purposes can be meaningfully realized very quickly, but in sum, the smartphone invites pervasive and adaptive uses, in-between and intersecting with other activities. Reflecting a steep increasing in use, the integration of smartphones in everyday life is fraught with ambivalences. We have analyzed user experiences of this phenomenon, based on data from a qualitative study of 50 informants. Understanding time as a fundamental dimension of media use, we have argued that the concept *temporal ambivalence* captures essential aspects of everyday experiences with the smartphone, and thereby of time management in digital society.

We have developed the concept temporal ambivalence drawing on theories of flow and responsibilization, to further explain two dimensions of the phenomenon. The first dimension, *conflicting flows*, pinpoints contrasts between smartphone use and other flows in everyday life, and between experiences of flow as rewarding or wasteful, particularly emphasizing the temporal insecurity of smartphone checking cycles. The second dimension, *conflicting responsibilities*, outlines the difficulties users face when managing conflicting flows, as strategies are exerted within everyday timeframes with its diverse demands, and through individualized attempts at solving a problem that goes beyond the self. Through our discussion, we consistently point to the complexities of everyday smartphone use. It is no easy matter to just spend less time on the phone.

Even in Norway, described as a “media welfare state” (Syvertsen et al., 2014), we find that a “welfarist” construction of the problem is not prominent. Instead, users reiterate the problem definition that is most often promoted in corporate discourse, that time is a personal resource to manage. Management techniques beyond sheer willpower involve updating smartphone settings, introducing spatiotemporal constraints and conducting social negotiations. Users describe how the regulatory efforts never end, as constant updates and competing social norms imply that measures must constantly be renegotiated. Given the patterns of smartphone use that we have described, intertwined in everyday life, as part of routines and in small time-gaps, often with low levels of attention and awareness—such self-regulation appears extremely difficult.

We can, therefore, conclude that while individual time management is often framed as the solution to temporal conflicts, such attempts are not experienced as sufficient, and for a good reason. With the ubiquity of smartphones, emblematic of an age of constant connectivity, it seems ever more important for media research to contribute contextualized empirical analyses and further development of theoretical concepts, balancing hyperbolic views in public debate and yielding a better understanding of how this media technology matters for everyday life and society.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The authors received funding from The Research Council of Norway (grants no. 247617 and 287563) and from the Norwegian Media Authority.

ORCID iD

Brita Ytre-Arne [https://orcid.org/0000-0003-4452-6007](https://orcid.org/0000-0003-4452-6007)
References

Alter A (2017) *Irresistible: The Rise of Addictive Technology and the Business of Keeping Us Hooked*. New York: Penguin.

Bauman Z (1990) Modernity and ambivalence. *Theory, Culture & Society* 7: 143–169.

Baym N (2015) *Personal Connections in the Digital Age*. Cambridge: Polity Press.

Billieux J, Maurage P, Lopez-Fernandez O, et al. (2015) Can disordered mobile phone use be considered a behavioral addiction? An update on current evidence and a comprehensive model for future research. *Current Addiction Reports* 2(2): 156–162.

Boczkowski PJ, Mitchelstein E and Matassi M (2018) “News comes across when I’m in a moment of leisure”: understanding the practices of incidental news consumption on social media. *New Media & Society* 20(10): 3523–3539.

Burchell K (2015) Tasking the everyday: where mobile and online communication take time. *Mobile Media & Communication* 3(1): 36–52.

Carolus A, Binder JF, Münch R, et al. (2018) Smartphones as digital companions: characterizing the relationship between users and their phones. *New Media & Society* 21(1): 146144818181707.

Chen H, Wigand RT and Nilan M (2000) Exploring web users optimal flow experiences. *Information Technology & People* 13(4): 263–281.

Chun WHK (2017) *Updating to Remain the Same: Habitual New Media*. Cambridge, MA: MIT Press.

Costera Meijer I and Groot Kormelink T (2015) Checking, sharing, clicking and linking. *Digital Journalism* 3(5): 664–679.

Couldry N, Livingstone S and Markham T (2010) *Media Consumption and Public Engagement: Beyond the Presumption of Attention*. Basingstoke: Palgrave Macmillan.

Csikszentmihalyi M (1975) *Beyond Boredom and Anxiety: Experiencing Flow in Work and Play*. San Francisco, CA: Jossey-Bass Inc.

Csikszentmihalyi M (1990) *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.

Csikszentmihalyi M and LeFevre J (1989) Optimal experience in work and leisure. *Journal of Personality and Social Psychology* 56(5): 815–822.

Das R and Ytre-Arne B (eds) (2018) *The Future of Audiences*. London: Palgrave Macmillan.

David ME and Roberts JA (2017) Phubbed and alone: phone snubbing, social exclusion, and attachment to social media. *Journal of the Association for Consumer Research* 2(2): 155–163.

Deloitte (2018) *Globale Mobile Consumer Trends*. 2nd ed. Available at: www2.deloitte.com/global/en/pages/technology-media-and-telecommunications/articles/gx-global-mobile-consumer-trends.html

Donner KL and Roloff ME (2012) Testing the connectivity paradox: linking teleworkers’ communication media use to social presence stress from interruptions organizational identification. *Communication Monographs* 79(2): 205–231.

Frith J (2013) Turning life into a game: foursquare, gamification, and personal mobility. *Mobile Media & Communication* 1(2): 248–262.

Galvin R (2002) Disturbing notions of chronic illness and individual responsibility: towards a genealogy of morals. *Health* 6(2): 107–137.

Griffiths M (2005) A “components” model of addiction within a biopsychosocial framework. *Journal of Substance Use* 10(4): 191–197.

Groot Kormelink TG and Costera Meijer IC (2019) Material and sensory dimensions of everyday news use. *Media, Culture & Society* 41(5): 637–653.

Guyard C and Kaun A (2018) Workfulness: governing the disobedient brain. *Journal of Cultural Economy* 11(6): 535–548.
Hall JA, Johnson RM and Ross EM (2018) Where does the time go? An experimental test of what social media displaces and displaced activities’ associations with affective well-being and quality of day. New Media & Society 21(1): 146144481880477.
Hermes J (1995) Reading Women’s Magazines. London: Polity Press.
Humphreys L, Kornowski V and Pape TV (2018) Smartphones as metamedia: a framework for identifying the niches structuring smartphone use. International Journal of Communication 12: 2793–2809.
Jensen KB (1992) Channel Flows, Audience Flows, and Super Flow: A Study of Danish Viewers’ Reception of Television as Flow. Copenhagen: University of Copenhagen.
Jensen KB (2011) New media, old methods—internet methodologies and the online/offline divide. In: Burnett R, Consalvo M and Ess C (eds) The Handbook of Internet Studies. Oxford: Blackwell, pp. 43–58.
Jordheim H (2014) Forum: multiple temporalities. Introduction: multiple times and the work of synchronization. History and Theory 53: 498–518.
Juul J (2005) “Half-Real.” Video Games between Real Rules and Fictional Worlds. Cambridge, MA: MIT Press.
Kadylak T, Makki TW, Francis J, et al. (2018) Disrupted copresence: older adults’ views on mobile phone use during face-to-face interactions. Mobile Media & Communication 6(3): 331–349.
Karlsen F and Syvertsen T (2016) You can’t smell roses online: intruding media and reverse domestication. Nordicom Review 37: 25–39.
Kuss DJ, Harkin L, Kanjo E, et al. (2018) Problematic smartphone use: investigating contemporary experiences using a convergent design. International Journal of Environmental Research and Public Health 15(1): 142141–142116.
Kwon M, Lee J, Won W, et al. (2013) Development and Validation of a Smartphone Addiction Scale. PloS ONE 2013(8): e56936.
Lemke T (2001) “The birth of bio-politics”: Michel Foucault’s lecture at the Collège de France on neo-liberal governmentality. Economy and Society 30(2): 190–207.
Ling R (2012) Taken for Grantedness—The Embedding of Mobile Communication into Society. Cambridge, MA; London: MIT Press.
Ling R and Campbell S (eds) (2009) The Reconstruction of Space and Time: Mobile Communication Practices. New Brunswick, NJ: Transaction Publishers.
Livingstone S (2007) Media literacy and the challenge of new information and communication technologies. The Communication Review 7(1): 3–14.
Lomborg S (2015) The Internet in my pocket. In: Bechman A and Lomborg S (eds) The Ubiquitous Internet: User and Industry Perspectives. New York; London: Routledge, pp. 36–53.
Lüders M and Gjevjon ER (2017) Being old in an always-on culture: older people’s perceptions and experiences of online communication. The Information Society 33(2): 64–75.
Mannell K (2019) A typology of mobile messaging’s disconnective affordances. Mobile Media & Communication 7(1): 76–93.
Mark G (2015) Multitasking in the Digital Age. San Rafael, CA: Morgan & Claypool.
MedieNorge (2018) Statistics smartphone use. Available at: www.medienorge.uib.no/statistikk/aspekt/tilgang-og-bruk/388 (accessed 1 October 2018).
Milosevic T (2017) Protecting Children Online? Cyberbullying Policies of Social Media Companies. Cambridge, MA: MIT Press.
Moe H, Ytre-Arne B and Nærland T (2019) Between ritual and information: three phases of Norwegian news audiences’ sense-making of the election of Donald Trump. Journalism. Epub ahead of print 23 October. DOI: 10.1177/1464884919883103.
Morley D (1992) Television, Audiences & Cultural Studies. London: Routledge.
Munson SA, Poole E, Perry DB, et al. (2015) Gamification and health. In: Walz SP and Deterding S (eds) The Gameful World: Approaches, Issues, Applications. Boston, MA: MIT Press, pp. 597–624.

Nærland T (2019) From pleasure to politics: five functions of watching TV-series for public connection. European Journal of Communication 35(2): 93–107.

Nag W (2018) Music streams, smartphones, and the self. Mobile Media & Communication 6(1): 19–36.

Newman N, Fletcher R, Kalogeropoulos A, et al. (2018) Reuters Institute Digital News Report 2018. Report, University of Oxford, Oxford, 14 June.

Newzoo (2018) Global mobile market report. Available at: https://newzoo.com/insights/articles/newzoos-2018-global-mobile-market-report-insights-into-the-worlds-3-billion-smartphone-users/

O’Malley P (2009) Responsibilization. In: Wakefield A and Fleming J (eds) The SAGE Dictionary of Policing. London: SAGE, pp. 276–278.

Petry NM, Rehbein F, Gentile DA, et al. (2014) An international consensus for assessing internet gaming disorder using the new DSM-5 approach. Addiction 109(9): 1399–1406.

Radway JA (1984) Reading the Romance: Women, Patriarchy, and Popular Literature. Chapel Hill, NC: University of North Carolina Press.

Rauch J (2018) Slow Media: Why Slow Is Satisfying, Sustainable, and Smart. Oxford: Oxford University Press.

Rettberg JW (2014) Seeing Ourselves through Technology. Basingstoke: Palgrave Macmillan.

Ribak R and Rosenthal M (2015) Smartphone resistance as media ambivalence. First Monday 20(11). DOI: 10.5210/fm.v20i11.6307.

Richardson I and Hjorth L (2017) Mobile media, domestic play and haptic ethnography. New Media & Society 19(10): 1653–1667. DOI: 10.1177/1461444817717516.

Salehan M and Negahban A (2013) Social networking on smartphones: when mobile phones become addictive. Computers in Human Behavior 29(6): 2632–2639.

Scannell P (1996) Radio, Television & Modern Life. Oxford: Blackwell.

Schroeder K (2011) Audiences are inherently cross-media: audience studies and the cross-media challenge. CM Communication Management Quarterly 18(5): 5–28.

Sørensen KH (2006) Domestication: the enactment of technology. In: Berker T, Hartmann M and Punie T (eds) Domestication of Media and Technology. Maidenhead: Open University Press, pp. 40–61.

Syvertsen T (2017) Media Resistance. Protest, Dislike, Abstention. London: Palgrave Macmillan.

Syvertsen T and Enli G (2019) Digital detox: media resistance and the promise of authenticity. Convergence. Epub ahead of print 16 May. DOI: 10.1177/1354856519847325.

Syvertsen T, Enli G, Mjøs O, et al. (2014) The Media Welfare State. Ann Arbor, MI: University of Michigan Press.

Ter Hoeven CL and Van Zoonen W (2015) Flexible work designs and employee well-being: examining the effects of resources and demands. New Technology, Work and Employment 30(3): 237–255.

Thorhauge AM (2016) Balancing the flows: cross-media communication in an everyday life context. In: Sandvik K, Thorhauge AM and Valtysønn B (eds) The Media and the Mundane: Communication across Media in Everyday Life. Gothenburg: Nordicom, pp. 59–73.

Thussey E (2018) The Procrastination Economy: The Big Business of Downtime. New York: New York University Press.

Trnka S and Trundle C (2014) Competing responsibilities: moving beyond neoliberal responsibilisation. Anthropological Forum 24(2): 136–153.
Uusitalo N (2010) Constructing media literacy as civic competence. In: Kotilainen S and Arnoldsgranlund S-B (eds) *Media Literacy Education—Nordic Perspectives*. Gothenburg: Nordicom, pp. 69–80.

Van Dijck J (2013) *The Culture of Connectivity: A Critical History of Social Media*. New York: Oxford University Press.

Wajcman J (2015) *Pressed for Time: The Acceleration of Life in Digital Capitalism*. Chicago, IL: University of Chicago Press.

Walz SP and Deterding S (2015) *The Gameful World: Approaches, Issues, Applications*. Boston, MA: MIT Press.

White M (2003) Flows and other close encounters with television. In: Parks L and Kumar S (eds) *Planet TV: A Global Television Reader*. New York: New York University Press, pp. 94–110.

Williams R (2008 [1974]) *Television: Technology and Cultural Form*. London: Routledge.

Young K (1998) *Caught in the Net: How to Recognize the Signs of Internet Addiction and a Winning Strategy for Recovery*. New York: John Wiley and Sons.

Ytre-Arne B (2019) Media use in changing everyday life: how biographical disruption could destabilize media repertoires and public connection. *European Journal of Communication* 34(5): 488–502.

Ytre-Arne B and Moe H (2018) Approximately informed, occasionally monitorial? Reconsidering normative citizen ideals. *The International Journal of Press/Politics* 23(2): 227–246.

**Author biographies**

Brita Ytre-Arne (PhD) is professor of media studies at the University of Bergen. Her main research interests are audiences, citizenship, and media and technology in everyday life. She is editor of *The Future of Audiences* (Das and Ytre-Arne, Palgrave, 2018).

Trine Syvertsen (PhD) is professor of media studies at the University of Oslo and has published widely within media policy, history and digital media. She is author of *Media Resistance: Protest, Dislike, Abstention* (Palgrave, 2017), and chair of the project *Intrusive media, ambivalent users and digital detox* (*digitox*) funded by the Norwegian Research Council.

Hallvard Moe (PhD) is a professor of media studies at the University of Bergen. His research interests include media use and democratic participation and the uses of online media for public debate.

Faltin Karlsen (PhD) is professor of media studies at Kristiania University College in Oslo. His research interests concern media users, computer games, game culture, and public discourses about media and media effects.