DIGITAL DISCONNECTION, THE BROKEN PROMISE OF ATTENTION, AND POTENTIAL FOR CRITICAL ENGAGEMENT: A CASE STUDY OF THE FOREST APP

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Introduction

In an era defined by the pervasive accessibility of mobile technology, the smart phone is deeply interwoven with everyday life and makes individuals constantly and permanently exist in the digital connection. Together with the background of an attention economy that underpinned the mobile technology and Internet industry (Eyal, 2014; Williams, 2018), the public become more concerned with the mobile industry's design of luring attention and the potential digital attention crisis brought by the smartphone use and digital overconnection (Baym, Wagman, & Persaud, 2020).

Given this concern, an emerging sector within the mobile app industry is burgeoning with the aim of tackling this issue. Ranging from meditation apps to screen lock applications and digital productivity tools, this sector asserts its goal of alleviating smartphone-induced overconnection, promoting sustained attention, and empowering individuals to regain control over their smartphone usage (Vanden Abeele, 2021). Despite practical differences between these apps, the discourse strategy advocated by the entire industry revolves around the contrast between distraction and concentration. Technology addiction is portrayed as the natural inclination toward distraction, with attention—aroused through effective app design—offered as an antidote to technology addiction when the design is properly implemented (Jablonsky, 2022).

While there is a widespread adoption of these apps to manage focused time, this industrial discourse has been criticized by multiple media and technology scholars. Some scholars think this discourse does not acknowledge the paradox and ambiguity inherent in digital connectivity and smartphone use (Vanden Abeele, 2021; Syvertsen, 2020; Ytre-Arne et al., 2020). Defining digital wellbeing as "a subjective individual experience of optimal balance between the benefits and drawbacks obtained from

mobile connectivity" (Van Abeele, 2021, p.938), Van Abeele (2021) advocates for research on digital wellbeing to move beyond simplistic cause-and-effect thinking and to understand it as a "dynamic construct" that, in addition to human factors, considers the influences of technology and context. Similarly, Büchi (2022) contends that digital media technologies should not be viewed merely as "antidote, poison, or scapegoat"; instead, future studies should focus on creative digital media practices and the social contexts in which they occur.

Some other scholars think about this issue from the sociotechnical arrangement of attention perspective, arguing that this industrial discourse frames "attention" as socially valuable and then extracting commercial value from user distraction (Paasonen, 2021; Syvertsen, 2020). Given that the contemporary discussion on the concept of attention is deeply intertwined with the evolution of mobile technology, Bucher advocates the examination of attention as "an emerging property of sociotechnical relations" (Bucher, 2012, p.4). To enrich the understanding of attention beyond its cognitive science and psychological dimensions, Bucher proposes the "technicity of attention" as an analytical framework that seeks to explore how attention is distributed, structured, and imbued with value within particular mediums and environments (Bucher, 2012, p.4).

This study responds the above research call by doing a case study of the Forest app, one of most popular digital productivity apps that employs gamified Pomodoro timer and screen lock mechanism to "help you stay away from your smartphone and stay focused on your work" (the Forest app website, n.d.). By looking into how the Forest app produces and instantiates modes of attention, how the users conceptualize their experiences and routines of the Forest app in real situations, and how the previous two together shape users' understanding of digital wellbeing, this study articulates the pitfalls of the Forest app's promise of attention, and more importantly, users' embracing of these broken promise of attention create conditions for them to reflect on their past smartphone use, and help them critically reflect their personal meaning of digital wellbeing --- raising future questions about whether we can turn the potential of failure experience into a critical intervention when designing digital wellbeing applications.

Methodology

First, I employed the walk-through method (Light, Burgess, & Duguay, 2016) to conduct a critical reading of the affordances implicated in shaping the "technicity of attention" within the Forest app. At this stage, I also did a comprehensive review of the online materials (e.g. news articles, the app store introduction, and advertisements) related to the conception and promotion of the Forest app. Then I did 14 in-depth interviews with the Forest users that had been actively use the Forest app for more than 6 months paying attention to differences in gender, age, geography, major, education background and duration (based on the app's user report profile). As the interviews went, I found a recurring discourse (13 out of 14 interviewees talked about that) of failure experience, for example, how the app's promise of attention fell short, though this was not being initially prioritized in the semi-structured interviews. And I explored what meanings, feelings, and practices are invoked in this discourse. Also due to this recurring discourse, I used the abductive coding analysis technique (Tavory & Timmermans 2014) to use the existing concepts as I mentioned above while finding new insights of

this failure experience directly from the interview data. Additionally, I avoided using abstract terminology such as "digital wellbeing" during my interviews. Instead, I used a more detailed description for these terms.

Findings

The first part of my key findings outlines the Forest app's sociotechnical arrangements of attention and their impact on user conceptualization and perception of attention. On one hand, the "technicity of attention" within the Forest app shares similarities with the techniques used in the social media and internet industry to induce distraction and lure attention. The Forest app employs the rewarding mechanisms (earning tokens and growing virtual trees by using the app to lock their phone) and gamifications (unlocking new species of the virtual trees) as stimuli replacement mechanism to give users freshness and thus get motivated to keep using this app to lock their screen. On the other hand, the application fosters dependency and compulsive use (Klobas et al., 2018), with some users reporting that they have reached a point where they are unable to concentrate on work or study without it. Additionally, some interviewees admitted to prolonged use of their smartphones after discontinuing the app, engaging in what they called "revenge smartphone use" as a reaction to the disconnection. Even worse, some interviewees find themselves get trapped in the app's representational mechanisms (the virtual forest they grow by using the app) (Gross et al., 2017), leading them to take cheating tactics such as exploiting system bugs to covertly use their smartphones while using the app. They justified their actions by convincing themselves that their unrecognized distraction by the app equates to staying focused. These findings reveal that the app's sociotechnical arrangements of attention replicate the oppositional relationship between dependency and agency, as critiqued by Schüll (2012). In her study of the co-production of gambling addiction, Schüll highlights how self-regulatory behaviors and the desire for self-control are central to addiction therapy. However, this dynamic creates a paradox: the very process of therapy, aimed at fostering self-control, can inadvertently perpetuate dependency.

The second part of findings highlights the interviewees' shared experiences of failure while engaging with the Forest app. Participants vividly described instances of failure or frustration, and the insights gained from these moments, which emerged as a recurring theme during the interviews despite not being a focus of the initial semi-structured interview plan. While following the app's guidelines, interviewees reported that they often failed to realize the app's promise of "staying focused". Despite the Forest app's failure to deliver on its promise of enhancing attention, these experiences led users to reassess their smartphone use, reconsider digital connectivity issues, and reflect on the nature of attention and digital wellbeing (although they did not explicitly use these terms). Most interviewees, originally seeking a solution for smartphone overuse hindering their focus on work or study, recognized that ineffectiveness of attention arrangements on this app is similar to those found in the internet industry and identified the phone not as the primary issue.

Drawing on Thrift's concept of the "technological unconscious" (2004) and Menkman's insights on glitches (2011), this research proposes that these failure experiences reveal the hidden sociotechnical attention structures and provoke critical thinking among users.

The technicity of attention employed by the internet industry operates within invisible sociotechnical frameworks, tricking users into "a flow of certain expectation" (Menkman, 2011: 340) and forming the "technological unconsciousness". Thus, the failures encountered with the app can be interpreted as "glitches" that interrupt this flow and make the normally concealed structures of attention discernible. By highlighting the discourse surrounding these failure experiences, the study implies that such experiences hold value for evolving more nuanced analysis of sociotechnical attention mechanisms. It also raises an intriguing question for future scholars and industry designers: Is it useful to transform user failure experiences into critical interventions for the design of future wellbeing applications? If so, how might this be achieved? If not, what are the alternatives?

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