

Stay focused and grow a Forest

The design and paradoxes of gamified digital disconnection

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ABSTRACT

In this chapter, I explore the multifaceted gamified digital disconnection within the technology-driven context. Forest, as a productivity app pioneering a gamified approach to foster focused work, embodies a paradox of using apps infused with game design elements to aid users in their quest for digital disconnection. Employing the app walkthrough method, drawing on disconnection and gamification research, in this chapter I critically examine Forest's game design elements, and the paradoxical role disconnection plays in a hyperconnected context. Three primary game design elements – game feedback, social connectivity, and real-life contribution – are identified as facilitators of disconnective practices in the app. These game design elements encourage users not only to optimise their own disconnective experiences but to compete with peers and contribute to nature. The indicated work may, at times, seem to contradict the app's intended goals, making distractions, fostering social connections, and potentially greenwashing rather than blocking distractions, promoting individual disconnection, and greening the environment.

KEYWORDS: digital disconnection, gamification, paradoxes, productivity apps, Forest app

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Introduction

In 2018, Google introduced the Digital Wellbeing program for the Android system. This initiative aims to help users gain insight into their digital habits and offers features like app-limiting timers and modes for bedtime and focused work (Google, 2018). It marked one of the tech giant's earliest attempts to address concerns about excessive device use and promote healthier digital habits, as a response to techlash (Chia & Beattie, 2021). Other tech giants like Apple and Facebook followed this step and released similar features. However, before the tech giants ventured into the realm of digital well-being, a diverse array of activities and materials emerged in the late 2000s and early 2010s to help people grapple with the downsides of pervasive digital media and advocate for a digital break. Various campaigns, such as the Unplugging Day (Unplug Collaborative, 2009), Camp Grounded (Digital Detox, 2013), books like *The Digital Diet* (Sieberg, 2011) and *Reclaiming conversation* (Turkle, 2015), and tools like the Forest app (Seekrtech, 2014) gained attention and have been studied in the scope of digital disconnection (Huang et al., 2022; Sutton, 2020; Syvertsen & Enli, 2019). These resources offer tips and strategies for reducing people's screen time, managing technology use, taking breaks from devices, and reconnecting with offline life and nature.

One of the key motivations behind people's pursuit of digital disconnection is the desire to improve productivity (Syvertsen, 2020). This drive, coupled with a growing awareness of the need to disconnect from the digital world, made individuals and companies explore the integration of disconnective features into their solutions. Even before Google's Digital Wellbeing, smaller companies and independent developers had begun addressing these needs through apps and tools. For instance, Freedom, launched in 2011 by Eighty Percent Solutions, is one of the early apps designed to block distracting websites and apps, allowing users to schedule sessions during which access to selected websites and apps is blocked. Cold Turkey, created by Felix Belzile in 2011, is a Windows application that allows users to block websites, games, and apps on computers. Forest, launched in 2014 by Seekrtech, is one of the early apps that used a gamified approach to engage people to do focused work. Users could plant virtual trees that would grow during their work sessions (see Figure 9.1).

FIGURE 9.1 The home interface of Forest app



Comments: Forest's gamified timer interface, where users plant virtual trees during the focused work sessions, fostering productivity with visual incentives.

Forest's core functionality is centred around its gamified timer and blocker. Users can set a specific time for blocking the phone and plant virtual seeds within the app's interface. Each seed would gradually mature into a digital plant as users diligently attend to their tasks. Yet, if they are distracted by the phone and leave the app halfway, the plant will wither, providing a visual incentive to stay focused.

The allure of Forest goes beyond simple tree cultivation. Users who consistently nurture their virtual forests reap rewards in the form of virtual coins, new plant species, and achievements. The app further facilitates various focusing modes, time-tracking capabilities, and collaborative planting experiences for group productivity. Notably, it allows users to convert virtual earnings into real-world impact through a partnership with the non-profit tree-planting organisation Trees for the Future (TREES) (<https://trees.org>). According to the app, this collaboration has facilitated the planting of over 1.6 million real trees in Africa (as of 21 January 2024). Forest has reached over 40 million users globally, making it one of the top paid productivity apps (4.99 euro) in 136 countries, based on its description on the App Store.

While various apps or features like Space, Freedom, Cold Turkey, and Digital Wellbeing have been explored for their disconnective capabilities such as blocking distractions, practising meditation, improving well-being, protecting privacy, and so on (Beattie, 2020; Chia & Beattie, 2021; Ganito & Ferreira, 2020; Jorge et al., 2022), little attention has been directed specifically at disconnection-oriented game design or the complex paradoxes embedded in the intersection of games and disconnection. This paradox becomes particularly prominent in the game design of such apps, as they employ seemingly contradictory strategies by incorporating game design elements to aid individuals in their quest for digital detox. A prime example of this is Forest. Forest's transformation of focus into a virtual tree-nurturing game prompts critical questions about the effectiveness of gamified approaches in addressing the problems of digital distraction and phone addiction identified by the app. This paradox underscores the intricate interplay between technology and human behaviour, challenging us to navigate the nuanced landscape of digital disconnection in a world where our devices continue to exert a powerful allure.

By navigating the complexities inherent in the paradox of gamified disconnection, I aim to shed light on the promises and contradictions embedded in the app's claims and design, particularly the game design, which simultaneously contributes to and combats the very digital dilemmas they seek to address. As Gregg (2018) has pointed out, productivity tools may not merely help people manage their work, but may generate too many activities. By gamifying productivity, apps like Forest add another layer to users' tasks, turning work into play and rendering play work-like. In this chapter, I seek to critically dissect the game features of Forest and pay attention to the potential and limits of the game design, producing a nuanced understanding of the gamified digital disconnection technology and its implications. The research questions are the following:

- What are the game design elements of Forest that facilitate digital disconnection?
- What kind of work or activities are enabled by the game design of Forest, and how do they contribute to the paradoxical role of disconnection in a hyperconnected context?

Treating apps as sociocultural artefacts, I employ the app walkthrough method (Light et al., 2018) to collect empirical data about the app, and I critically analyse the technological mechanisms and embedded cultural meanings of the game design as well as the app context.

Rethinking disconnection and gamification

In this section, I briefly introduce existing discussions on the paradoxes of (dis)connection in media studies and clarify my use of the terms paradox and digital disconnection. This is followed by a review of current research

on the commodified and technological forms of disconnection, especially productivity apps, and how they may complicate the paradoxes and generate more work to be done. At last, I discuss what role gamification could play in the context of digital disconnection and introduce design elements or patterns in game studies that can be useful for understanding the design of a disconnection game.

Paradoxes of (dis)connection

Influenced by digital divide studies (e.g., Wills, 1999), disconnection in media studies was often framed in opposition to connection, especially to the Internet, technology use, and the digital environment (Beattie, 2020). The dichotomies of online/offline spaces or digital/physical practices have contributed to the binary framing of (dis)connection as well as the paradox of “beating technology with technology”. Many digital disconnection products or services have perpetuated this binary narrative by promoting disconnection as a means to break free from “toxic” digital technology, reconnect with the physical world, and reclaim an “authentic” life, as commonly seen in self-help materials (Syvertsen & Enli, 2019).

Scholars increasingly eschew oversimplified notions of (dis)connection and binary thinking, focusing instead on the nuances of disconnection within the context of connection. They explore the paradoxes and ambiguities of (dis)connectivity based on various contexts and perspectives. For example, Light (2014) paid attention to the “disconnective practice” that exists within and beyond social networking sites. He argued that various modes of human and non-human disengagement, enabled by social networking sites, entangle with forms of connection and sit in relation to our experiences in the virtual and physical world. Disconnection, in this view, is not just the act of severing connections, but it exists in its own right, offering possibilities in relation to connection. Hesselberth (2018) further specified the “gesture” toward disconnectivity, signifying voluntary withdrawal from mediated forms of connectivity. This gesture can create an “outside” to the contemporary culture of connectivity, potentially fostering transformation. Additionally, Fast and Enli shed light on the challenges that individuals, particularly professional workers such as politicians, face when attempting to limit their connectivity in a digitalised society like Norway. As the politicians’ efforts to disconnect are considered largely futile, they suggest exploring how individuals navigate the spatial and moral distances from the connective media and norms of connectivity (see Fast & Enli, Chapter 7 in this volume).

Beattie (2020) criticised the paradox for unnecessarily framing disconnection in binary terms and black-boxing the technological side of disconnecting. Debates surrounding technological paradoxes are not novel in media studies; the discourse on the liberating or constraining influence of media technologies, particularly the Internet and smartphones, has been ongoing for quite some

time (Syvertsen, 2017). Building upon Jurgenson's (2012) critiques of digital dualism, Beattie (2020) pointed out that the framing of (dis)connection as a paradox can be misleading, as it reinforces the binaries of non-use/use, online/offline, and disconnection/connection. He underlined that this rigid separation of physical and virtual spaces can mislead people to view all digital or mediated practices as unhealthy or solely standing for connective behaviour. The technological solutions for disconnection, such as apps, may be paradoxical by requiring people to further connect to disconnect; yet, paradox can be an instructive notion to go beyond the surface of pros and cons of using technologies and create chances for analysing the new modes of relations that paradoxes can generate (Beattie, 2020; Bucher, 2020; Karppi et al., 2021).

In this chapter, following Beattie (2020), paradox is only used as a sign of the ambiguous nature of disconnection and a reminder for looking into what people are genuinely disconnected from – and connected to. Inspired by the existing discussion on the paradoxes and ambiguity of (dis)connectivity, digital disconnection here serves as an indicator of the multifaceted cultural phenomenon, encompassing efforts to “distance” oneself from the digital in various forms and degrees (see Fast & Enli, Chapter 7 in this volume). Productivity apps with disconnective features, such as blocking the phone, are thus included in the umbrella of disconnection apps. This inclusive perspective accommodates the seemingly paradoxical realm of app-based gamified disconnection, enabling the examination and discussion of its nuances in a commercial and hyperconnected context.

Commodified technological disconnection and productivity apps

Current research on the impact and possibilities of disconnection in a commercial and datafied context adds another dimension to the discussion of the disconnection/connection paradox. Some scholars criticise disconnection apps as commodified solutions for temporal individualised disconnection that have little political impact on the always-on culture and attention economy (Kuntsman & Miyake, 2019; Natale & Treré, 2020). They regard the technological and commodified disconnection, like lifestyle services and self-optimisation apps, as representing a form of digital solutionism for digital withdrawal (Kuntsman & Miyake, 2019), in line with the ethos of technological solutionism that places great value on tech-based solutions but may overlook underlying problems and, in some cases, even exacerbate them (Morozov, 2013).

The consumer-driven digital disengagement can be another site for digital consumption and production (Kuntsman & Miyake, 2022). As shown in the case study of digital detox influencers (Jorge & Pedroni, 2021), social media disconnectivity is constructed as a strategy to recalibrate users and keep them engaged. Influencers are exploited by the platform power, and meanwhile ex-

exploit the audiences' attention and data. As Bucher (2020) argued, in a datafied and algorithmic world, actions of both use and non-use contribute to generating data that may be commercially and politically exploited in unknown future places. Machine learning and algorithmic arrangements also make the argument for individualised voluntary disconnection naïve, since we can't escape others or machines while the human and machine agency are often intertwined (Sundar, 2020). Productivity apps, cultivated in the contemporary knowledge economy, create a “fantasy” where individuals could control their life's unpredictability by deploying technological infrastructure (Gregg, 2015).

The commercial and technological nature of disconnection apps, especially productivity apps, also contributes to the ambiguity, in terms of intended consequences. According to Gregg (2018), productivity apps are solutions prioritising the process (how) rather than the content (what and where). Gregg (2018) suggested an “ascetics” to time management to block temptations and give them a morally good feeling (see also Turkle, 2015). To make the app more habitual, app designers try to translate the productivity methods into an embodied, daily practice, for example, through intuitive design like a user-friendly interface and combining minimalist approaches (Newport, 2019). Gregg (2018) argued that the design of productivity apps frequently cultivates an “aesthetics of activity” that transcends mere ascetic values. Instead, it elevates the imperative of “getting things done” to an art form, emphasising the seamless and, perhaps most significantly, aesthetically pleasing accomplishment of tasks. In doing so, it provides users with a profound sense of efficiency and pleasure in their interactions with these apps.

Gregg also pointed out that productivity apps with ever evolving capabilities can cause these apps to become sources of additional tasks or work, consuming time and energy. Productivity apps with disconnection capabilities may not be exceptions. As Fast (2021) argued, the “disconnection turn” affects our understandings and practices of work: Disconnection is multifaceted, which could be utilised *at* work and *for* work, and more importantly, can exist *as* work, reshaping the landscape of digital labour. This transformation could give rise to new forms of empowerment and exploitation in the context of disconnection, thus highlighting the complexities inherent in this evolving digital or post-digital landscape.

Gamification and game design for disconnection

Concerning screen use, digital games and gamification have been critiqued for fostering addiction, distraction, and other unhealthy patterns (e.g., Alter, 2017; Karppi, 2018; Syvertsen, 2020). One of the prevailing criticisms in disconnection studies about techlash and social media pertains to the extractive-addictive design of the platforms, especially the gamification strategy. The design is often used to enhance users' engagement and sustain their online attention, making social media sticky and making users become addicts or

potential addicts (Alter, 2017). The behavioural architecture built on game elements, such as points, badges, and levels, fosters deep immersion and flow, causing users to lose track of time and space and become ambivalent about disconnection (Syvertsen, 2020). Yet, there are few explorations of the potential and limits of applying gamification to disconnection-oriented design.

Gamification, as defined by Deterding and colleagues (2011), is the use of game design elements in non-game contexts. These game design elements are “characteristic” rather than “specific” to games: They are features or principles that are readily identified and associated with games, shared by most but not necessarily all games, and found to play a significant role in gameplay. Depending on their own practices, designers, marketers, consultants, and scholars have different opinions on the impact of gamification, either as a way to invite full engagement with daily life and invent the future actively and creatively (McGonigal, 2011), or a consulting style employed by marketers and consultants to sell products and services (Bogost, 2014), or a practical approach to engage users and solve problems (Zichermann & Cunningham, 2011). In this chapter, I pay equal attention to the potential and limitations of gamification and focus on the game design indicated by interface design elements, such as levels and badges, that are commonly employed to foster user interaction, build communities, or address known problems within a context (Crumlish & Malone, 2009) and the paradoxical relations it may generate.

What if gameful activities become less “engaging”? Game design scholars have challenged the stereotype that all games are supposed to be “fun”. Instead, games can be intentionally designed to “harm” players physically, socially, and aesthetically (Jørgensen & Karlsen, 2018). According to Wilson and Sicart (2010), abusive game design, as an aesthetic approach, criticises the normative player-centric game design and casts light on the dialogic relation between the player and designer. There are different modalities for abusing the player, such as physical punishment (e.g., burn, electric shock, or lash), unfair design (e.g., extremely hard levels), sense assaulting (e.g., audiovisual tricks), and disturbance of social relations (e.g., long-lasting anger towards fellow players). Due to players’ negative feelings, the play becomes de-instrumentalised, and intersubjective, appealing the player to understand the designer instead of simply mastering the game, creating aesthetic experiences.

If players are not aware of, or agree to, what will happen in the game, the abuse becomes dark and unethical. Dark game design patterns – against players’ best interests and likely to happen without their consent – are created and used intentionally by designers to evoke the players’ intense negative emotions (Zagal et al., 2013). For example, temporal dark patterns such as grinding, as “a way of coercing the player into needlessly spending time in a game for the sole purpose of extending the game’s duration” (Zagal et al., 2013: 3), makes players feel like they are wasting time. Despite powerful design patterns, the

abuse or darkness depends on how the patterns are used and experienced – and the context. The game can be unethical and boring for one but acceptable and fun for another; it is the interdependencies between the game design and the player literacy that decides the gameplay (Zagal et al., 2013).

The abusive or dark design patterns may give some hints of how a game could aid disconnection or disengagement. Undoubtedly, how to find the balance between annoying players to the breaking point and keeping them hooked requires the designers' wisdom. As the design and implications of the gamified digital artefacts that serve disconnection are not fully explored, in this chapter, drawing upon gamification studies and disconnection studies, I uncover the possibilities and restraints that game design brings for disconnection.

Method and data

To get richer data about the game design elements and its implications, Forest, a productivity app that practises the idea of gamification to the extreme, has been selected as an example for the qualitative empirical analysis. As a digital timer or stopwatch, Forest spares no effort in forming its core function based on the game mechanism, and thus blurs the boundaries between productivity apps, digital well-being apps, and digital games.

The app walkthrough method, developed by Light and his colleagues (2018), was used to collect the app data and critically access which game elements are incorporated into the app design of Forest. Different from the walkthrough for software design in human–computer interaction and videogames (Grimes, 2015; Lewis et al., 1990), app walkthrough is tailored as a critical approach for app studies – that is, a way that a researcher with analytical eyes directly engages with an app's interface to examine its technological mechanisms and the embedded cultural meanings to understand how an app influences users (Light et al., 2018). When seeing the app as a material artefact and site of cultural struggle, the sociocultural processes around it can be identified.

The app walkthrough method includes two parts: the contextualisation of the expected use environment by identifying the app's vision, operating model, and governance; and a technical step-by-step walkthrough of various stages of app registration and entry, everyday use, and discontinuation of use. Thus, the empirical data consists of two parts: the promotional materials that help reveal the context, including information on the official websites of the app and its company, descriptions on app stores (App Store and Google Play), as well as their posts on social media accounts (Facebook, Instagram, Twitter, and Weibo); and the within-app data, mainly screenshots and notes, collected from the step-by-step observation and documentation of Forest's interfaces, features, functions, and flows of activity on smartphones. To explore the friending function and the mode of Plant Together, two user accounts on two

phones were created and made interactions. The data were collected from December 2021 to January 2022 on iPhones. Since apps are often subject to changes, I have also followed up on the app development to the latest version 4.73.1 (accessed 21 January 2024) and tracked important updates of features (e.g., launching new species based on Tiny TAN, the animated characters of the K-pop band BTS) and figures (e.g., the increasing number of real trees planted by users).

Combining inductive and deductive thematic coding (Rivas, 2012), I interpreted the functions and features of Forest into codes, categorised them, and generated themes guided by literature of gamification and disconnection studies. For example, codes like “collecting coins” and “unlocking badges” were categorised into “rewards” and helped form the “game feedback” theme. Inductively, codes like “blocking apps” and “creating app allow lists” helped generate the “paradox of blocking or making distractions”. The data were eventually grouped into two themes (with categories): game design (game feedback, social connectivity, and real-world contribution); and paradoxes (blocking or making distractions, disconnecting or connecting people, green-ing or greenwashing).

Analysis I: The game design of disconnection

Forest attempts to turn the process of staying focused on tasks or people that matter into a game. In this section, three game design elements of Forest – game feedback (rewards and punishment), social connectivity (competition and collaboration), and real-life contribution (environmentalism and sustainability) – are identified and analysed regarding their aid for digital disconnection.

Game feedback: Rewards and punishment

Rewards and punishment are two key components of the feedback system in games, and they are ubiquitous in games and gamified applications (Zichermann & Cunningham, 2011). They are often represented by points, currencies, badges, levels, or statuses. As focusing is gamified as a tree-planting or species-collecting game by Forest, the main rewards are grown plants, expanded forest, collected coins, unlocked species, new badges for achievement, high rankings on the leaderboard, and more. These incentives are strategically designed to make users hooked and wanting to constantly achieve their focused goals and avoid failure.

The rewards are meticulously designed to be diverse and visually compelling. For example, some achievements or badges, like “Novice Planter” (4 focused hours in total), are easily attainable to intrigue users at an early stage, while others, like “30 Days in a Row” (planting healthy trees 30 days in a row), require extra or long-time commitment or follow a special event like “2022 Make your New Year’s resolution” (staying focused for 2,022 minutes to

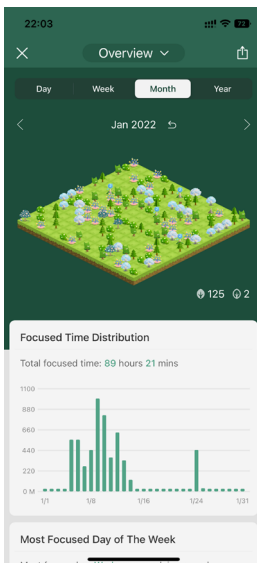
get the event-limited tree). To make the virtual plants appealing and keep players hooked, avatars of species are crafted in a blend of realism and imagination. Beyond traditional flora, they encompass an array of elements, from festivals such as Christmas to events like Earth Day, and even real-life human figures such as K-pop stars BTS. In this case, user engagement is expected to be extended beyond the pursuit of a digital break, to become a form of interaction with the real-world occurrences, mirroring fan-like support and appreciation for these elements.

In addition to the visual design of plants, the status of plant and forest plays a key role in the feedback system, as it measures, quantifies, and visualises the outcomes of one's gaming endeavours and detoxing efforts. Success and failure are represented by the icons of healthy and withered plants (see Figure 9.2), respectively, which serve as tangible markers of users' diligence: The harder you work, the more rewards you get and the lusher your forest becomes.

FIGURE 9.2 A grown tree and a withered tree



FIGURE 9.3 An overview of one's forest



Comments: Two icons and forest overview visually display one's focus endeavours and time data.

The avatars, with the focused time data, are shown and analysed in the overview of one's own forest (see Figure 9.3), to remind people how long and on what they have been focused, as well as how many times they have succeeded and failed. Different types of charts including columns, lines, and pies, are also generated to represent the focused time, trends, timelines, tags, and favourite tree species, transforming a large database of numbers and codes into comprehensive and visually appealing representations.

Social connectivity: Competition and collaboration

Social connectivity, an integral aspect of game design, plays an important but tricky role in Forest, giving rise to semi-social dynamics. Within the realm of game design, competition and collaboration are two fundamental mechanics associated with the aesthetics of challenge and fellowship (Hunicke et al., 2004). In the Forest app, competition and collaboration are manifested by two features respectively – the Global leaderboard and the Plant Together Mode – making focusing competitive and collaborative work.

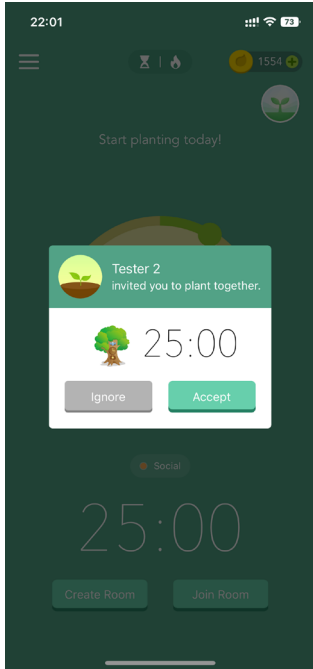
In Forest, the Global leaderboard (Deep Focus Ranking) (Figure 9.4) shows the weekly Top-100 focus rankings of users in the same server on the leaderboard. The username, number of grown and withered plants, and the total focusing time of the week are shown on the board. The data about the users' focused time and their forest is accessible by clicking their profiles. The weekly mode of success ensures that the leaderboard data is fresh and dynamic for users, as everyone starts from zero in a new round.

The leaderboard encourages users to work harder and spend more time focusing with the aid of Forest. Since only focused time in the Deep Focus Mode contributes to leaderboard rankings, users must adhere rigorously to the game rules, refraining from using the App Allow List and staying within the app during the designated periods to increase their Deep Focused Time and enhance their rankings. This dynamic subjects users to the pressure of keeping their positions or ascending higher.

FIGURE 9.4 Global leaderboard



FIGURE 9.5 A co-planting invitation



Comments: The Global leaderboard encourages competition while the co-planting mode invites collaboration, revealing the social dynamics in the Forest app.

As shown in Figure 9.4, the top-3 users spent around 150 hours a week planting, meaning they used Forest for over 21 hours per day on average, from working to sleeping. In this case, their smartphones were not used as multifunctional smart devices but reduced to hard-core “tree-planting” machines. This presents an unconventional approach to the gamified pursuit of digital disconnection through apps.

There is no instant messaging channel in Forest, but users are encouraged to socialise by adding friends and co-planting. The app offers users the opportunity to not only connect with friends but also interact with strangers, fostering competition and collaborative work. Adding friends can be achieved through either e-mail invitations or sending requests to the top users visible on the Global leaderboard. Once connected, users have access to join co-planting sessions in dedicated rooms.

The Plant Together Mode encourages users to invite people from their contact list and create focused workspaces (see Figure 9.5). Non-friends can also join the room by entering a designated room code. This co-planting mode introduces an element of peer pressure and underlines the importance of trust and mutual responsibility. Here, mutual surveillance serves as a mechanism to help people regulate themselves (Albrechtslund, 2008; Andrejevic, 2004). By inviting friends or strangers to plant trees together during the agreed period,

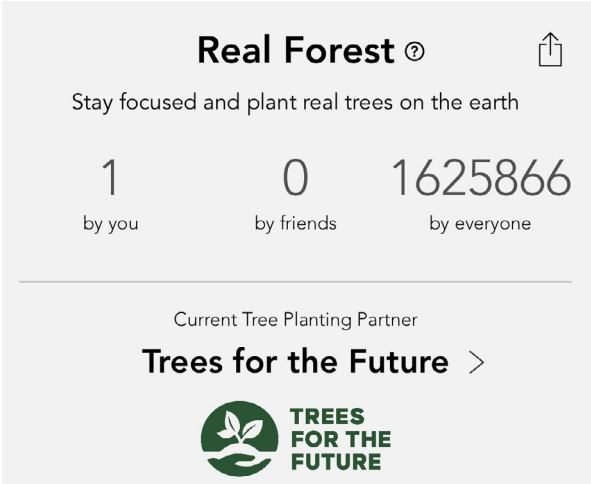
users expect to be surveilled and disciplined by not only themselves but also others, whether familiar or unknown. When planting a healthy tree becomes a common goal, focusing becomes not merely an individual task but groupwork, even though the participants may remain unacquainted and are performing different tasks at different locations in reality. In this case, Forest functions as a “semi-social” media app – distinct from typical social-networking apps – steering users to establish virtual connections to facilitate digital detoxification.

Real-life contribution: Environmentalism and sustainability

Digital disconnection can be associated with environmental and climate issues on a global level and plays a role in sustainability (Moe & Madsen, 2021; Rauch, 2018). Forest strategically intertwines the act of distancing from one’s phone with real-world environmental impact. This integration is evident from the app’s name, Forest, the predominant green theme colour, the incorporation of plant symbols, and the functionalities involving seed collection and plant growth, all of which are designed to evoke a connection to nature.

Central to the integration is the feature of Real Forest (see Figure 9.6), symbolising Forest’s commitment to environmentalism and sustainability in the physical world. According to the app’s rules, a real tree will be planted in Africa if a user accumulates 2,500 virtual coins through focused time or in-app purchases. It takes about 20 days to save enough coins to plant a real tree if someone focuses 6 hours a day (earning 130 coins) and uses the app every day. Yet, through in-app purchases, users can shorten the process by getting triple coins after planting trees in the following period (0.99 euro for 1 week and 1.99 euro for 3 weeks).

FIGURE 9.6 Real Forest



Comments: The Real Forest feature symbolises the app’s environmental commitment, as it allows users to plant virtual trees to contribute to real tree planting in Africa.

As the app claims, in collaboration with non-profit organisation TREES, their team aims to allow users around the world to contribute to planting a real forest, and they have planted over 1.6 million trees (as of 21 January 2024). This initiative serves as a potential motivator for people to start their digital detoxification journey and seems to be a tangible reward for those with a commitment to environmental sustainability.

The logic of real tree planting via Forest lies in the app's pledge to donate to its nonprofit organisation partner and execute planting orders whenever people use their virtual coins to plant real trees. Echoing serious games encouraging pro-environmental behaviours (Morganti et al., 2017) and green gamification as a type of designed persuasion (Froehlich, 2014), gamification in Forest is expanded as an entertaining digital strategy for bigger collective challenges. As shown in the app, the initiative of TREES is to revitalise degraded lands, improve the livelihoods of impoverished farmers, and address the global environment. In this case, they also try to relate to other United Nations Sustainable Development Goals, such as the eradication of poverty and hunger. Forest thus reveals the ambition to evolve from a mere gamified productivity app addressing mobile distractions to a platform that aspires to serve a broader sustainability agenda.

Analysis II: Paradoxes of gamified disconnection

The app-based gamified disconnection raises important questions about how many activities are actually enabled by the app design, and what paradoxes it may generate regarding the relationships between users, technologies, and nature, complicated by Forest. In this section, I present three paradoxes illuminated by Forest's game design – blocking or making distractions, disconnecting or connecting people, and greening or greenwashing – requiring various work to be done by oneself, with others, and for nature.

Blocking or making distractions?

Forest's gamified approach to disconnection raises a paradox regarding whether it effectively blocks distractions or inadvertently creates new ones. Fundamentally, the app seeks to assist users in maintaining focus by discouraging the use of distracting applications. However, a nuanced contradiction emerges, as the act of nurturing virtual trees within the app itself potentially becomes a source of distraction. This paradox prompts the question of whether the app genuinely enhances productivity or simply replaces one type of distraction with another.

Furthermore, Forest's approach to establishing screen-free intervals introduces complexities within the realm of screen (dis)engagement. On the one hand, it tries to create screen-free times through the feedback mechanism, limiting one's physical interaction with the screen during designated times;

that's why leaving Forest during these periods and using other apps by clicking, scrolling, swiping, dragging, and so on, are deemed "wrong" and are penalised by the game. On the other hand, disengaging with the screen by engaging with the Forest app does not guarantee the process and outcome of phone blocking. Whether the designated detox time is completely screen-free is ambiguous, largely dependent on users' adherence. For instance, during the so-called screen-free periods, users are still granted access to their screen by checking the growth status of their trees. Forest itself then may become a paradoxically significant source of distraction, undermining its own mission.

Additionally, Forest provides options allowing more freedom or flexibility during one's digital detox, which may, to some extent, contradict the app's goals of curbing digital distractions and combating phone addiction, intensifying the tensions within Forest's design. For example, the App Allow List gives users an option to use apps that they want to maintain access to during their detoxing period. Using these apps then won't destroy the growth of virtual plants. Also, switching off the Deep Focus Mode allows people to freely engage with other apps and it won't affect the growth of the tree, as long as Forest runs in the background. These customisable features grant users choices between strict detoxification and a more lenient and enjoyable approach, and moreover, places more responsibility on individual users. The customisation requires cognitive labour, as users must navigate the complexities of configuring the app to align with their specific needs and goals (Gregg, 2018). This self-imposed responsibility adds another dimension to the paradox – one where users both contribute to the distraction and take on the duties of personalising their digital environment, further complicating the intricate interplay between Forest's design, individual agency, and the quest for enhanced productivity.

Disconnecting or connecting people?

Forest's primary goal is to encourage individual users to disconnect from their digital devices and unnecessary use of social media and immerse themselves in focused work. However, the app also offers features that enable competition and collaborative tree-planting challenges, allowing users to engage in these activities with friends or colleagues. This paradox underscores the inherent tension between promoting individual disconnection and simultaneously fostering social connections through gamified networking. It raises fundamental questions about striking a balance between personal productivity and the innate human desire for social engagement in an increasingly digitally connected world.

Despite Forest's emphasis on reducing social interruptions within the app, it is important to acknowledge that the semi-social features may increase people's digital engagement. While Forest lacks the communication channels found on traditional social media platforms, it actively encourages users to invite others to join the game, creating shared spaces for focused work. The

app's friending function and the Plant Together mode enable individuals interested in forming groups to unite and contribute to a common goal, all without the need for direct verbal or textual communication within the app, but possibly involving interactions outside the app on other social platforms, for instance, recruiting people to join a co-planting room. This semi-social approach aligns with the idea that a more social form of disconnection can emerge when relationships or activities are integrated into the disconnection process (Beattie, 2020).

Additionally, Forest's sharing function complements the friending feature by encouraging users not only to invite others but also to share their progress when achieving specific milestones or completing daily check-ins on their social media or messaging services. These shared updates can reach a broad audience, including friends, family, strangers, and official Forest channels. The act of sharing their digital detox data, on the one hand, can serve as a potential motivator for users to nurture their digital forests, while also providing an avenue for them to express their identity and affiliations with specific communities. On the other hand, it prompts reflection on the true impact of Forest on users' networking behaviours. Forest may not necessarily limit users' networking but could influence them to manage their existing social networks and potentially create new relationships and communities, aligning with the app's objectives. Nonetheless, the semi-social features are integral to Forest's business strategy, aiming to attract more users and extend its reach. It is worth contemplating whether these semi-social features genuinely facilitate digital detox or merely redirect smartphone engagement and online interactions to different platforms, thus calling into question the app's core purpose.

Greening or greenwashing?

Forest's design incorporates elements of environmental awareness by tying virtual tree growth to focused work sessions. This paradox centres on whether the app genuinely fosters ecological awareness and sustainability or if it offers users a superficial illusion of making a meaningful environmental impact. It prompts reflection on whether gamification can effectively motivate users to engage with nature and sustainability efforts or if it risks trivialising environmental concerns through token gestures.

Amid the commendable efforts of Forest to promote environmental consciousness and foster a connection with nature, it is crucial to address potential pitfalls. Still, it remains unclear whether users' efforts are genuinely translated into meaningful environmental impact and are aligned with Forest's representations. The line can be blurred between genuine environmental stewardship and greenwashing, a form of selective discourse that highlights positive information about a company's environmental or social performance while concealing negative information on these dimensions in order to keep a

good corporate image (Lyon & Maxwell, 2011). Green claims can be vague, ambiguous, missing the necessary information to evaluate its validity, false, or even outright lies (de Freitas Netto et al., 2020).

In the case of Forest, two key concerns arise. First, the app lacks transparency regarding donation details. As stated in Forest, their collaborator TREES does “not have additional resources to track every single tree they plant”, as they “use many of their resources to help local farmers set up sustainable farming lands and offer them training on farming skills”. Forest’s team has claimed to have visited TREES in Africa and documented the planting project on their official Facebook page. However, the responsibility for information verification and responding to queries falls on users and TREES, as Forest encourages users to visit their website and contact them via e-mail with inquiries.

Second, Forest raises questions about the actual impact of tree planting on real-world environmental challenges. While the acts of planting virtual trees and contributing to the planting of real ones may be symbolically potent, they may inadvertently perpetuate the debatable concept of carbon offsetting (Lovell et al., 2009). The reduction of one’s carbon footprint through digital means might paradoxically encourage the continuation of carbon-intensive practices elsewhere. Whether planting a real tree can effectively counterbalance the emissions generated by the app is vague. What if people’s media consumption inadvertently exacerbates environmental issues, for instance, in cases of maintaining and developing digital infrastructure like global servers and data centres (Holt & Vonderau, 2015)? Not only the environmental footprint of the media product, but its distribution and consumption should be critically examined (DeCuir, 2021). This dilemma underscores the broader challenge faced by digital technologies – how to balance their digital offerings with tangible contributions to sustainability while avoiding the pitfalls of merely symbolic environmental gestures.

Concluding discussion

In examining the Forest app’s gamified approach to digital disconnection, this chapter has illuminated the multifaceted landscape of contemporary disconnective experiences in a commercial and hyperconnected context. Three key game design elements within Forest – game feedback, social connectivity, and real-life contribution – have facilitated users’ engagement with disconnection practices while simultaneously engendering paradoxical dynamics. The paradoxes underscore the complexities surrounding the use of gamified disconnection apps like Forest, shedding light on the complicated relationships between users, technology, and nature within the context of productivity and disconnection.

Following Fast’s (2021) argument that disconnection is not only used for work but *becomes* work requiring labour, I identify three paradoxes

embedded in Forest, encompassing work done by oneself, work carried out with others, and work directed toward nature. This work complicates tasks for improving one's productivity and disconnective practices. First, the paradox of distraction-blocking or -making questions the efficacy of Forest in blocking distractions while highlighting the potential for the app itself to become a source of diversion. Users, in their quest for boosting productivity, may paradoxically be trapped in the engaging process of nurturing virtual trees, raising fundamental questions about the app's impact on actual work. Second, in the paradox of (dis)connecting with others, the tension between individual disconnection and collaborative engagement, is apparent. While Forest encourages social connections through gamified challenges, it simultaneously seeks to reduce social interruptions. This paradox underscores the challenges of balancing personal productivity with the desire for social interaction in a digitally connected world. Third, the paradox aroused by Forest's work for nature centres on whether Forest genuinely fosters ecological consciousness and contributes to the sustainability goals, or merely offers users a feel-good illusion of environmental impact. Questions arise about the transparency of Forest's environmental commitments and the potential for greenwashing, raising concerns about the actual influence of virtual tree planting on real-world environmental challenges.

Forest's design elements are entwined with seemingly contradictory objectives, balancing users' productivity needs and their entertainment desires while taking the company's profit motives and social responsibilities into consideration. This paradoxical design adds complexity to the discourse on (dis)connection and prompts reflection on the core issue of what individuals truly disconnect from when using or not using digital technologies in a post-digital era (see Beattie, 2020; Fast, 2021).

In conclusion, Forest's gamified approach to digital disconnection runs at the intersection of disconnection and connection, offering flexible modes of disengagement within a commercial and hyperconnected context. It highlights the transformative potential of disconnection as a catalyst for users to manage their relationships with technology and engage in boundary work (Huang et al., 2022). While Forest has its own limits, it prompts critical questions about users' digital habits and broader consequences. Further production and reception studies are essential for understanding the intentions and the (un)intended consequences of technological disconnection solutions, and how people engage with gamified disconnection technologies, understand the paradoxes, and construct meaning from their experiences.

Compared with games with clear rules and goals, everyday life is more complicated and ambiguous. Rather than establishing boundaries between the physical and digital world, and between productivity apps and digital games, Forest reminds us of the openness and ambiguity of digital disconnection, as well as the potential of and problems caused by gameplay. By shedding

light on the application of gamification in technology-assisted, disconnective design, this chapter contributes to understanding various forms of “everyday friction of resistance” (Chia & Beattie, 2021) and the discussion of possible, diverse coping tactics and survival strategies in a hyperconnected world.

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References

- Albrechtslund, A. (2008). Online social networking as participatory surveillance. *First Monday*. <https://doi.org/10.5210/fm.v13i3.2142>
- Alter, A. L. (2017). *Irresistible: The rise of addictive technology and the business of keeping us hooked*. Penguin.
- Andrejevic, M. (2004). The work of watching one another: Lateral surveillance, risk, and governance. *Surveillance & Society*, 2(4). <https://doi.org/10.24908/ss.v2i4.3359>
- Beattie, A. (2020). *The manufacture of disconnection* [Doctoral dissertation, Te Herenga Waka – Victoria of University of Wellington, New Zealand]. ResearchArchive–Te Puna Rangahau. <https://doi.org/10.26686/wgtn.17151578.v1>
- Belzile, F. (2011). *Cold Turkey* [Windows feature]. Cold Turkey Software, Inc. <https://getcoldturkey.com/>
- Bogost, I. (2014). Gamification is bullshit. In S. P. Walz, & S. Deterding (Eds.), *The gameful world: Approaches, issues, applications* (pp. 65–79). MIT Press.
- Bucher, T. (2020). Nothing to disconnect from? Being singular plural in an age of machine learning. *Media, Culture & Society*, 42(4), 610–617. <https://doi.org/10.1177/0163443720914028>
- Chia, A., & Beattie, A. (2021). Ethics and experimentation in the light phone and Google digital wellbeing. In A. Chia, A. Jorge, & T. Karppi (Eds.), *Reckoning with social media* (pp. 127–146). Rowman & Littlefield.
- Crumlish, C., & Malone, E. (2009). *Designing social interfaces: Principles, patterns, and practices for improving the user experience*. O’Reilly Media.
- DeCuir, G. (2021). *Green(ing) media (studies) – NECSUS*. <https://necus-ejms.org/greening-media-studies/>
- de Freitas Netto, S. V., Sobral, M. F. F., Ribeiro, A. R. B., & da Luz Soares, G. R. (2020). Concepts and forms of greenwashing: A systematic review. *Environmental Sciences Europe*, 32(1), Article 19. <https://doi.org/10.1186/s12302-020-0300-3>
- Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining “gamification.” *Proceedings of the 15th International Academic MindTrek Conference on Envisioning Future Media Environments - MindTrek ’11*. <https://doi.org/10.1145/2181037.2181040>
- Digital Detox. (2013). *The camp grounded*. <https://www.digitaldetox.com/experiences/camp-grounded/>
- Eighty Percent Solutions Corporation. (2011). *Freedom* [App]. <https://freedom.to/>
- Fast, K. (2021). The disconnection turn: Three facets of disconnective work in post-digital capitalism. *Convergence*, 27(6), 1615–1630. <https://doi.org/10.1177/13548565211033382>
- Froehlich, J. E. (2014). Gamifying green: gamification and environmental sustainability. In S. P. Walz, & S. Deterding (Eds.), *The gameful world: Approaches, issues, applications* (pp. 563–596). MIT Press.

- Ganito, C., & Ferreira, C. (2020). Managing the flow of time: Disconnection through apps. In A. Kaun, C. Pentzold, & C. Lohmeier (Eds.), *Making time for digital lives* (pp. 175–195). Rowman & Littlefield.
- Google. (2018). *Digital wellbeing through technology* | Google. <https://wellbeing.google/>
- Gregg, M. (2015). Getting things done: Productivity, self-management, and the order of things. In K. Hillis, S. Paasonen, & M. Petit (Eds.), *Networked affect* (pp. 187–202). MIT Press. <https://doi.org/10.7551/mitpress/9715.003.0016>
- Gregg, M. (2018). *Counterproductive: Time management in the knowledge economy*. Duke University Press.
- Grimes, S. M. (2015). Little big scene: Making and playing culture in Media Molecule's LittleBigPlanet. *Cultural Studies*, 29(3), 379–400. <https://doi.org/10.1080/09502386.2014.937944>
- Hesselberth, P. (2018). Discourses on disconnectivity and the right to disconnect. *New Media & Society*, 20(5), 1994–2010. <https://doi.org/10.1177/1461444817711449>
- Holt, J., & Vonderau, P. (2015). “Where the internet lives”: Data centers as cloud infrastructure. In L. Parks, & N. Starosielski (Eds.), *Signal traffic: Critical studies of media infrastructures* (pp. 71–93). University of Illinois Press. <http://www.jstor.org/stable/10.5406/j.ctt155jmd9.7>
- Huang, D., Liu, C., & Yang, R. (2022). 弹性断连、专注力管理与数字化时代的自我边界工作 [Flexible disconnection, focus management, and self-boundary work in the digital age]. *News and Writing*, 6, 14–26.
- Hunicke, R., Leblanc, M., & Zubek, R. (2004). *MDA: A formal approach to game design and game research*. AAAI Workshop - Technical Report, 1.
- Jorge, A., Amaral, I., & de Matos Alves, A. (2022). “Time well spent”: The ideology of temporal disconnection as a means for digital well-being. *International Journal of Communication*, 16, 1551–1572. <https://ijoc.org/index.php/ijoc/article/view/18148>
- Jorge, A., & Pedroni, M. (2021). ‘Hey! I’m back after a 24h #DigitalDetox!’: Influencers posing disconnection. In A. Chia, A. Jorge, & T. Karppi (Eds.), *Reckoning with social media* (pp. 63–83). Rowman & Littlefield.
- Jurgenson, N. (2012). When atoms meet bits: Social media, the mobile web and augmented revolution. *Future Internet*, 4(1), 83–91. <https://doi.org/10.3390/fi4010083>
- Jørgensen, K., & Karlsen, F. (2018). *Transgression in games and play*. MIT Press.
- Karppi, T. (2018). *Disconnect: Facebook’s affective bonds*. University of Minnesota Press.
- Karppi, T., Chia, A., & Jorge, A. (2021). In the mood for disconnection. *Convergence: The International Journal of Research into New Media Technologies*, 27(6), 1599–1614. <https://doi.org/10.1177/13548565211034621>
- Kuntsman, A., & Miyake, E. (2019). The paradox and continuum of digital disengagement: Denaturalising digital sociality and technological connectivity. *Media, Culture & Society*, 41(6), 901–913. <https://doi.org/10.1177/0163443719853732>
- Kuntsman, A., & Miyake, E. (2022). *Paradoxes of digital disengagement: In search of the opt-out button*. University of Westminster Press.
- Lewis, C., Polson, P., Wharton, C., & Rieman, J. (1990, March). Testing a walkthrough methodology for theory-based design of walk-up-and-use interfaces. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 235–242. ACM Digital Library. <https://doi.org/10.1145/97243.97279>
- Light, B. (2014). *Disconnecting with social networking sites*. Palgrave Macmillan. <https://doi.org/10.1057/9781137022479>
- Light, B., Burgess, J., & Duguay, S. (2018). The walkthrough method: An approach to the study of apps. *New Media & Society*, 20(3), 881–900. <https://doi.org/10.1177/1461444816675438>
- Lovell, H., Bulkeley, H., & Liverman, D. (2009). Carbon offsetting: Sustaining consumption? *Environment and Planning A: Economy and Space*, 41(10), 2357–2379. <https://doi.org/10.1068/a40345>
- Lyon, T. P., & Maxwell, J. W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. *Journal of Economics & Management Strategy*, 20(1), 3–41. <https://doi.org/10.1111/j.1530-9134.2010.00282.x>
- McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. Jonathan Cape.
- Moe, H., & Madsen, O. J. (2021). Understanding digital disconnection beyond media studies. *Convergence: The International Journal of Research into New Media Technologies*, 27(6), 1584–1598. <https://doi.org/10.1177/13548565211048969>

- Morganti, L., Pallavicini, F., Cadel, E., Candelieri, A., Archetti, F., & Mantovani, F. (2017). Gaming for Earth: Serious games and gamification to engage consumers in pro-environmental behaviours for energy efficiency. *Energy Research & Social Science*, 29, 95–102. <https://doi.org/10.1016/j.erss.2017.05.001>
- Morozov, E. (2013). *To save everything, click here: Technology, solutionism and the urge to fix problems that don't exist*. Allen Lane.
- Natale, S., & Treré, E. (2020). Vinyl won't save us: Reframing disconnection as engagement. *Media, Culture & Society*, 42(4), 626–633. <https://doi.org/10.1177/0163443720914027>
- Newport, C. (2019). *Digital minimalism: Choosing a focused life in a noisy world*. Portfolio.
- Rauch, J. (2018). *Slow media: Why slow is satisfying, sustainable and smart*. Oxford University Press.
- Rivas, C. (2012). Coding and analysing qualitative data. In C. Seale (Ed.), *Researching Society and Culture* (3rd ed.) (pp. 367–392). Sage.
- Seekrtech. (2014). *Forest* [App]. <https://www.forestapp.cc/>
- Sieberg, D. (2011). *The digital diet: The 4-step plan to break your tech addiction and regain balance in your life*. Harmony.
- Sundar, S. S. (2020). Rise of machine agency: A framework for studying the psychology of Human–AI Interaction (HAI). *Journal of Computer-Mediated Communication*, 25(1), 74–88. <https://doi.org/10.1093/jcmc/zmz026>
- Sutton, T. (2020). *Digital re-enchantment: Tribal belonging, new age science and the search for happiness in a digital detoxing community*. University of Oxford.
- Syvetsen, T. (2017). *Media resistance: Protest, dislike, abstention*. Springer Nature.
- Syvetsen, T. (2020). *Digital detox: The politics of disconnecting*. Emerald.
- Syvetsen, T., & Enli, G. (2019). Digital detox: Media resistance and the promise of authenticity. *Convergence: The International Journal of Research into New Media Technologies*, 26(5-6), 1269–1283. <https://doi.org/10.1177/1354856519847325>
- Turkle, S. (2015). *Reclaiming conversation: The power of talk in a digital age*. Penguin Press.
- Unplug Collaborative. (2009). *Global day of unplugging*. <https://www.unplugcollaborative.org/gdu-home>
- Wills, M. (1999). Bridging the digital divide. *Adults Learning*, 11(4), 10–11.
- Wilson, D., & Sicart, M. (2010). Now it's personal: On abusive game design. *Proceedings of the International Academic Conference on the Future of Game Design and Technology - Futureplay '10*, 40. <https://doi.org/10.1145/1920778.1920785>
- Zagal, J. P., Björk, S., & Lewis, C. (2013, May 14–17). Dark patterns in the design of games. *Foundations of Digital Games Conference, Chania, Greece*.
- Zichermann, G., & Cunningham, C. (2011). *Gamification by design: Implementing game mechanics in web and mobile apps*. O'Reilly.