

# Addiction, autonomy, and the Internet: Some ethical considerations

21

Anna Hartford<sup>a</sup> and Dan J. Stein<sup>b</sup>

<sup>a</sup>Brain-Behaviour Unit, Neuroscience Institute, University of Cape Town, Cape Town, South Africa, <sup>b</sup>SA MRC Unit on Risk & Resilience in Mental Disorders, Department of Psychiatry & Neuroscience Institute, University of Cape Town, Cape Town, South Africa

## Introduction

Concerns about “Internet addiction” have existed since the first years of its public use. In 1996 *The New York Times* ran an article headlined “The Symptoms of Internet Addiction,” in which they spoke of a self-described Internet addict who spent “more than 6 h a day online and more than an hour reading his email” (Belluck, 1996). Needless to say, nowadays this sounds unremarkable (if not restrained). The average American teenager now spends over 7 h a day on digital devices, not including school or homework (Common Sense Media, 2019). The anecdote serves to illustrate some of the difficulties in drawing boundaries between “normal” and “excessive” (or even pathological) behavior. These difficulties are exacerbated when it comes to new behaviors, such as those involved in our interactions with newly developed technologies, where the relevant understandings and frames of reference are in perpetual flux and development.

There are many reasons for caution. Social and moral panics regularly accompany the emergence of new technologies, which are often initially perceived as corrupting; it is, therefore, necessary to guard against this tendency, which has so often proved short-sighted and unduly conservative with hindsight (Hier, 2011). Nevertheless, as Internet use has proliferated across the globe and into all aspects of our lives, problematic behaviors with regard to Internet use have become an increasing source of concern both medically and socially, and certain governments have declared problematic Internet use a major public health issue. Estimates regarding prevalence rates vary widely (as do the criteria for inclusion) but it is now indisputable that there is a significant global population who engage with the Internet in a manner that fundamentally and chronically disrupts their other interests, life goals, and close relationships, and who experience enormous distress with regard to their level of use and their struggle to control it.

Of course, the vast majority of Internet users will not experience such pronounced difficulties. Nevertheless, many of us will be unsurprised by the lure to excessive use and the addictive qualities of the Internet. The compulsive checking of certain Internet platforms and the incessant engagement with smartphones have become facts of life in many

parts of the world. One report indicates that the average smartphone user checks their device over 70 times a day, and swipes and interacts with it thousands of times (dscout, 2016). While efforts to limit or reduce time spent on devices, even among “ordinary” users, can require significant self-control, and often results in failure (Deloitte, 2018).

Despite growing understanding of the addictive qualities of the Internet, and rising concerns about the effects of excessive Internet use on personal well-being and mental health, the corresponding ethical debate is still in its infancy, and many of the relevant philosophical and conceptual frameworks are still underdeveloped. Our goal in this chapter is to explore some of this evolving terrain, even if we are only able to touch the surface of these complex and multifaceted issues, which now permeate so many aspects of our lives and societies. We hope to thereby contribute to the growing (and very necessary) conversation reflecting on how we ought to develop and adapt these now ubiquitous technologies in order to better promote the well-being of those who use them.

There are immediate complexities to this ethical discussion: in the first place, as we have already indicated, there are unique ethical considerations that pertain to the formalization of a clinical disorder related to excessive Internet use. In “Distinguishing clinical and ethical debates” section, we will begin by briefly looking at some of these considerations. However, it is important to distinguish social and ethical debates about the addictive qualities of the Internet from clinical debates about the appropriateness of particular diagnostic categories (Hanin, 2020; Williams, 2018). Our ethical concerns (and indeed our mental health concerns) about whether certain technologies undermine well-being can and should be far broader than the debate concerning the formalization of a psychiatric disorder.

With this in mind, we proceed (in “The ethics of persuasive design” section) by exploring some of these broader ethical debates with regard to persuasive (and even coercive) digital technologies, particularly those which aim to maximize use or even encourage compulsion. In “The nature of the harm” section we consider the conceptual difficulty in articulating the harms involved in excessive Internet use, especially where such use has not led to functional impairment: are we merely being “distracted” by these technologies or, as some have argued, is our autonomy being fundamentally undermined by them? We will emphasize the spectrum between these extremes: we need not endorse “techno-determinism” in order to raise concerns about the effects of these technologies on our agency. Following these broader conversations, we will end, in “Ethical implications” section, by briefly considering some of the more practical ethical implications generated by the addictive qualities of the Internet, including the prospect of regulation on certain design features, concerns about growing inequalities in the burden of online services (where users reliant on free services are subjected to far more toxic and manipulative Internet environment than users who can pay), and whether there should be a “right to disconnect.”

## Distinguishing clinical and ethical debates

As it stands, no diagnosis has been formalized with regard to excessive Internet use, and debate continues concerning the appropriateness of such a diagnosis, as well as

its defining features. Some have contended that the Internet is merely an interface and that the focus should therefore be directed toward particular problematic behaviors, such as sexual preoccupations and social networking. There is also no end to what can be pursued online, including essential and otherwise worthwhile undertakings, and therefore no straightforward relationship between time spent on the Internet and excessive or pathological use. Within this debate, the terms “Internet Addiction,” “Internet Addiction Disorder,” “Internet Use Disorder,” “Pathological Internet Use Disorder,” “Maladaptive Internet Use,” and “Problematic Use of the Internet” (among many others) are in use (see chapter by Wegmann).

A range of unique ethical considerations pertain to the formalization of a psychiatric disorder, as well as to when it is appropriate to categorize someone as having a psychiatric disorder. On the one hand, insertion of a diagnosis into the nosology can encourage appropriate diagnosis and treatment, as well as research, and so formalization of a disorder may have real benefits to individuals and society. At the level of individual patients, there may also be consolation and validation in having their condition scientifically and medically recognized.

On the other hand, such a diagnosis may hold pejorative connotations that are potentially stigmatizing to individuals and can have long-term negative effects on both how someone perceives themselves, and how they are perceived within their communities. Where disorders are related to particular activities or behaviors—as in the case of excessive Internet use—there is a risk of stigmatizing not only individuals but also the relevant behaviors themselves (Aarseth et al., 2017; van Rooij et al., 2018). Furthermore, diagnosing too widely risks trivializes psychiatric disorders and undermines social recognition of the severity of psychiatric conditions. These points are related to fundamental concerns within psychiatry, including the legitimacy of psychiatric categories, and concerns about diagnostic overreach.

There are therefore good reasons for having appropriate evidentiary, pragmatic, and clinical grounds for the formalization of a new disorder, which warrant the extensive and ongoing debate this issue has elicited. But the mental health concerns, as well as the social and ethical concerns, associated with the addictive qualities of the Internet do not begin and end at the point of formal classification alone. This is an important point to emphasize because (as we will indicate throughout the chapter) these two conversations often get intertwined in both public and professional debates. In clinical debates it is sometimes assumed that diagnostic formalization is necessary in order to raise particular ethical concerns (i.e., regarding the need for government policy or regulation); while in public debates, it is sometimes assumed that ethical concerns are only warranted insofar as there is diagnostic formalization.

As we reflect on the effects of these increasingly ubiquitous technologies both for ourselves and for our societies and imagine the new ways that they could better serve us, it is important to uncouple these concerns and aspirations from the confines of clinical categories. As the growing ethical literature on digital well-being explores, the ethical justifications for our technologies should be aligned to much higher goals, including “the impact of digital technologies on what it means to live a life that is *good for a human being*” within our present societies (cf. Burr, Taddeo, & Floridi, 2020 for a thematic review). This is echoed in public health debates which emphasize the

spectrum between wellness and illness, and the need for public (mental) health which is concerned with the needs of the general population, in addition to those with clinically significant disorders (Patel, Saxena, Frankish, & Boyce, 2016).

One area which has generated considerable interest, in terms of the tension between certain digital technologies and human well-being, has concerned the proliferation of persuasive design features which endeavor to maximize use. While these features might sometimes be implicated in clinical cases of Internet addiction, the ethical concerns they raise apply far more broadly.

## The ethics of persuasive design

Broadly speaking, persuasive design is a process of creating technologies in order to generate behavioral change. One can distinguish between the intended and unintended effects of persuasive design (Verbeek, 2006), and also between persuasive design and outright manipulative, deceptive or coercive design (Bech, 2020; Fogg, 2003), though in many cases these distinctions will be vague.

The so-called “attention economy” that has come to dominate the provision of many online services has meant that success and profitability often rely on maximizing user engagement: the more often and the longer users engage with your product, the more data you are able to collect on them and the longer you have them as an audience for potential advertisers. In turn, the goal of many software developers has been to design products that generate habitual engagement and maximize use, even to the point of compulsion, drawing on techniques from applied psychology, neuroscience, and behavioral economics in their efforts.

Certain pervasive design features—such as “like” buttons (or the equivalent), push notifications, “streaks,” auto-play, and infinite scroll—have been especially successful in this regard, and have proliferated across platforms. Some of these features generate intermittent variable reward (Eyal, 2014), which has long been linked to compulsive behavior, and is also associated with the addictive quality of slot machines (Schüll, 2014). At the level of our neural reward system, an unreliable reward generates a more significant dopamine response than a reliable reward. On prominent Internet platforms, sophisticated machine learning technologies now endeavor to randomize rewards for each user.

Take the example of a search engine: usually, someone would consult a search engine because they have something specific to look up; this constitutes the user’s goal. But in many respects the search engine’s goal is to keep them online long after they have achieved these ends (or even to make them forget these ends altogether): perhaps by luring them in with a dropdown list of “trending searches” which invariably involve high arousal topics, or by populating the homepage with clickbait news, or by displaying search results which are algorithmically calibrated to generate more engagement; all the while having one’s use tracked, and being followed by targeted advertising.

Persuasive design is not necessarily unethical, and it can be used in beneficial ways: a wide range of health and wellness apps claim to do just that (though even these uses have been challenged, Cf. Verbeek, 2009; Sullivan & Reiner, 2019). The

ethical concerns about persuasive design largely turn on its extent and effectiveness, as well as the uses that it is put to. There is therefore an essential interplay between this section and the next in which we consider the sorts of costs and harms associated with excessive Internet use, or with extensive attentional loss; we will draw out these connections further in the next section.

Persuasive design focused on maximizing use has come under particular scrutiny in recent years. Public interest about the effects of these designs on our behavior, and on our mental health and well-being, has grown significantly, informed by a public conversation featuring tech-insiders (notably the former Google design ethicist Tristin Harris), policy-makers, health specialists and educators, among others. Harris, in particular, has argued that widespread persuasive design features have crossed over from acceptable methods to those which undermine agency and generate compulsion. “They are shaping the thoughts and feelings and actions of people,” he said in an interview with Anderson Cooper. “They are programming people” (quoted in [Aswad, 2020](#)).

The concept of addiction has played a significant part in this public debate, where these design features are sometimes presented as transforming us all into powerless addicts, or mindless zombies. This perspective of “techno-determinism” has been criticized for giving altogether too much credit to the powers of software design, and altogether too little credit to the human capacities for self-control and deliberation, and indeed to our own complicities within our use ([Seymour, 2020](#)). Despite the effects of persuasive design and targeted content, most of us routinely disengage our attention (we get bored or fed up, or we are drawn away by those things we value more and consider more important).

But, importantly, concerns about autonomy can be more nuanced, and exist on more of a continuum, than these strict binaries presume: our autonomy can be threatened, and even compromised, without being defeated. And the burden of having to exert self-control, or having to assert deliberative control, against powerful competing forces is not itself insignificant.

Some have argued that the increasing sophistication of persuasive digital technologies, and its personalized nature, makes them a far deeper and more considerable threat than more longstanding and familiar forms of persuasive design ([Williams, 2018](#)). Another distinguishing aspect is the scale of the effect: there are ever more countries in which the vast majority of the population own these devices and interact with these platforms and services (and where, in many cases, their use is almost mandatory; a point to which we will soon return).

As we have already noted, a central factor in appraising persuasive design features is to consider the uses they are put to. Where design encourages behavior that we would reflectively endorse, for instance, it seems altogether more justifiable than where it does not, even if it is extremely effective and takes place at a significant scale. To this end, some have suggested the concept of trust as the crucial feature by which to distinguish ethical and unethical uses of persuasive design, where unethical design betrays or erodes trust ([Brennan, 2020](#)). So what is the nature of persuasion when we are being encouraged to spend ever more time online? Are these ends that we might reflectively endorse (do we often share these goals of high engagement?), or are they not? Exploring these questions is intimately tied to how we understand the potential harms implicit in excessive time online.

## The nature of the harm

Implicit in these calls for concern is the idea that there is some sort of harm involved in excessive time online, especially time which far exceeds the user's deliberative aims, goals, and intentions. But here we hit ill-articulated terrain: for what is the harm, if any, in directing your time and attention to one place rather than another? There are many ways to live a life, and being on the Internet is one of them; there is nothing about that, on its own, that makes it a less worthwhile or meaningful life than the alternative.

Unlike various substance addictions which have clear deleterious effects on physical health and brain function, there is no straightforward relationship between excessive Internet use and physical harm. The main physical effect associated with excessive Internet use is sleep disturbance and deprivation (Choi et al., 2009). And unlike behavioral addictions such as pathological gambling, there is also no straightforward relationship between excessive Internet use and financial harm; indeed, many of the Internet services associated with problematic use are free. (Naturally, this excludes online gambling and monetization schemes in video games, such as "loot boxes"; there may also be a financial opportunity costs even to "free" services, in the form of lost income).

When exploring these questions not only at the extreme end of the continuum of excessive use but in a broader range of cases, the nature of the harm is more evasive still. At the point of functional impairment, one can easily point to the damaging consequences of excessive use within an individual's life: from failed degrees to lost jobs to ruined relationships. But there are many other users who feel distressed or dismayed at how much time they spend online, or alienated from the sorts of things they pursue there, who nevertheless manage to function adequately. Is there any harm in these more prevalent cases? And if so, what is it?

A first consideration is that there might be emotional harms involved with excessive time online. Research has indicated a relationship between increased Internet use (particularly social media) and increased anxiety and depression, as well as decreased well-being, although disagreement remains about the significance of these findings (Kross et al., 2013; Lin et al., 2016; Sagioglou & Greitemeyer, 2014; see Orben & Przybylski, 2019 for a skeptical take). Internet addiction has also been associated with a range of psychiatric disorders, including depression (Carli et al., 2013). The research is currently inconclusive with regard to the causal relationships: the extent to which depression leads people to spend more time online, and the extent to which more time online leads people to experience depression (or the interplay of both). Some have argued that panics about disordered use are misguided and that our first efforts should be to address the underlying circumstances and conditions that might lead people to excessive online behavior in the first place (van Rooij et al., 2018).

Aside from potential emotional harms, we might endeavor to explore the ill-articulated terrain with regard to attention itself, and what it matters (if it matters) to spend one's attention one way rather than another. As we explored in the previous section, the present nature and omnipresence of the Internet has made it an extraordinary draw on human attention, which has been amplified by design and commodification.



The value of our attention—our ability to direct our attention in meaningful ways, and our capacity for sustained attention—is, as yet, underexplored and undertheorized territory (Hanin, 2020; Williams, 2018). But as the power of digital distractions reach such staggering scales, and as our ability to focus our attention on our own considered ends erodes even further, the need to understand and articulate what is at stake has become pressing. Yet the necessary ethical frameworks (and even vocabularies) for understanding the significance of these forces are underdeveloped.

A similar lack of articulation attends discussions on neuromarketing, which also draws on how we process reward and other aspects of our decision-making in order to affect behavior. As Adina Roskies (2016) writes, exploring the question of “cognitive liberty” with regard to neuromarketing: “The precise threats posed by understanding the neural mechanisms of decision-making have yet to be fully articulated. Is neuro-marketing being used merely to design products that satisfy our desires more fully or is it being used to manipulate us? Depending on how you see it, it could be construed as “good or evil.”

The same framing can be applied to the debate at hand, and the question of using persuasive design to maximize engagement. Construed as a good, we might think that the draw on attention is indicative of interest and worth (or at least pleasure and satisfaction). Call this the hedonic defense. From this perspective, one might argue that targeted content and persuasive design enhance preference satisfaction, by helping you find just what you like. Insofar as this is so, it might encourage behavior which (though subject to persuasion) we would nevertheless reflectively endorse.

Construed as an evil, we might think that these forces pose a serious threat to agency and personal autonomy. Taking the latter position, Williams writes: “To date, the problems of ‘distraction’ have been minimized as minor annoyances. Yet the competition for attention and the ‘persuasion’ of users ultimately amounts to a project of the manipulation of the will. We currently lack a language for talking about, and thereby recognizing, the full depth of these problems. At individual levels, these problems threaten to frustrate one’s authorship of one’s own life” (2018). Amplifying this sentiment Daniel Dennett has said that “this is perhaps the greatest risk to human political freedom that we’ve ever seen,” and that “an agent who controls your attention controls you” (Dennett, 2020).

Some philosophers, drawing on Susan Wolf, have emphasized the importance of the construction of worth and meaning to human well-being, and argued that persistent distraction undermines the pursuit of these goals (Sullivan & Reiner, 2019; Wolf, 1997). Others have drawn on Martha Nussbaum’s capabilities approach—which asserts the moral importance of the freedom to achieve well-being, and understands well-being in terms of individual capabilities—to argue that the harms of excessive time online undermine the human capabilities central to human dignity (Bhargava & Velasquez, 2020).

These vying frameworks of good and evil are both prevalent within public debates endeavoring to understand the relationship between engagement and worth. Responding to criticism of persuasive design, Nir Eyal (the author of *Hooked: How to Build Habit-Forming Products*) said that “you can’t sell something to people if they don’t want that thing” (quoted in Schulson, 2015); Eyal and other proponents of persuasive design have been careful to say these techniques should be used for the good.

On the face of it, this point has normative significance: while coercing people to do what they *do not want* seems straightforwardly morally suspect (including potentially undermining their autonomy and agency), providing people with what they *do want* seems closer to a service. That is to say: where an individual's engagement is construed as indicative of what they value, then there seems to be little moral concern in generating more of that engagement. However, if there is a more complicated relationship between engagement and worth (where we can engage obsessively even with what we do not value) then the grounds for moral concern become far more substantive.

What we mean by "wanting" is an interesting question, both within philosophy and psychiatry. After all, we can find ourselves wanting what we do not want to want. Our lower-order wants can clash fundamentally with our higher-order wants; a recovering alcoholic might simultaneously really want a drink, while also never wanting to drink again (Frankfurt, 1988). Williams draws on Harry Frankfurt to argue that the persuasive lures to maximize time online further undermine our ability to "want what we want to want"; an ability central to living the lives we want to live (Frankfurt, 1988; Williams, 2018).

The question of "wanting" has also been important within addiction research. In some respects, we think of "wanting" something interchangeably with liking and valuing it. But in other respects, they are clearly distinct, and the relevant neurological distinctions have now been explored extensively (Berridge, 2009). Understanding addiction in terms of dopamine and reward cycles has often led to assumptions about its hedonic nature, where dopamine corresponds to "liking" some reward. But a variety of findings have contested this association: Berridge and Robinson's research points to the fact that dopamine does not produce "liking" so much as to generate "wanting" (Berridge & Kringelbach, 2015; Robinson & Berridge, 2008). You can want something you do not like; you can even want something while knowing you do not like it, and you can be driven by those wants while deriving no sincere satisfaction from the source of your desire.

While animal models of wanting and liking are clearly relevant to substance use, they may also be applicable to behavioral addictions (Holton & Berridge, 2013). People with addictive disorders might experience wanting without liking to particularly high degrees, with regard to certain substances or behaviors. But once again, these findings are not only relevant at the point of clinical addiction alone. If behavioral addictions are conceptualized as one extreme on a continuum, many people might be deeply adversely affected by the same psychological-neural processes, even if they have not passed the thresholds for clinical diagnosis. While these thresholds are rightly stringent (including for the reasons we discussed in "Distinguishing clinical and ethical debates" section), they do not limit the scope of our ethical concerns, nor our concerns regarding mental health and well-being.

These findings are relevant to ethical debates which endeavor to understand the relationship between engagement and subjective worth, including those concerning persuasive design. While it might often be the case that engagement is indicative of subjective worth, there is no necessary connection here, and high engagement can be compelled by forces that are utterly distinct from sincere preference-satisfaction or assessments of value. If this conception is accurate, then the hedonic defense for endeavoring to generate maximum engagement is undermined.



## Ethical implications

With this broader discussion in place, we would now like to consider more practical ethical questions which arise from the addictive qualities of the Internet, and concerns about the negative effects that excessive use can have on mental health and well-being.

### *Regulation on design*

Even if we can agree that something needs to change in our relationship with these technologies, it is not clear who ought to change it, or how. Is it up to individuals to better control their use? Is it up to technology companies to change the nature of their services so that they are less likely to generate excessive use? Or is it up to governments to intervene with laws, policies, and regulations? How do we justify any of these alternatives?

Some have argued for technology-based solutions, contending that “the same design principles that create addiction could be leveraged to mitigate it” (Purohit, Barclay, & Hozer, 2020). Such interventions could potentially use design to reinstate deliberative engagement in the same way that design has been used to forestall it. For example, the design might generate friction instead of lowering it, provide feedback and reminders on use, and shift default settings to those which reduce rather than amplify use (Purohit et al., 2020).

In some quarters this tech-solutionism, and the ethos of “ethical design,” is gaining momentum. Recent iPhones now allow greater control over time spent on the device and specific apps. Elsewhere, new apps and plugins are proliferating to help users control their time online, or to undermine the default designs which facilitate extended, nondeliberative engagement [though sometimes these habit-breaking apps are rejected from app stores (Aswad, 2020)].

Others are more cynical about tech solutionism, especially when it is ultimately left up to the humanist or ethical impulses of technology giants (Mackinnon & Shade, 2020; Sullivan & Reiner, 2019). From this vantage, if these companies start grudgingly paying lip service to “ethical design” and “time well spent,” it is only to preserve their reputations, positions, and profits in the face of growing public scrutiny.

Another prominent suggestion is that change ought to be forced through regulation (see chapter by King). Although the focus of government regulation on technology has mostly been on other areas (including data privacy, national security, electoral manipulation, and false information), the question of regulation has also arisen with regard to certain design features which exacerbate excessive use.

All debates about regulation must contend with concerns about paternalism, restricted liberty, and undue interference. In this context: does the imposition of regulation with regard to design and other features constitute an undue restriction of freedom and choice from either individual users of online services, or their corporate produces?

Antipaternalists contend that it is up to individual users to make their own choices about how to engage with digital platforms and devices, just as they ought to make their own choices with regard to a range of other behaviors and pastimes, including those which might have associated risks or ill effects.

The debate is complicated by the fact that persuasive design features are sometimes intended precisely to forestall or undermine deliberative choice. With this in mind, some have argued that when undertaken appropriately regulation can be choice enhancing rather than choice diminishing (Schulson, 2015). Others have drawn on Thaler and Sunstein's notion of "libertarian paternalism," which endeavors to balance the freedom to make the widest range of choices, while still facilitating better choices (and "better" not only objectively but also as judged by themselves) (Thaler & Sunstein, 2008).

Another factor in this debate is what has been called the "indispensability thesis" (Hanin, 2020). The all-purpose nature of digital devices (which include a range of essential and work-related functions) means that the use of such devices is increasingly becoming a requirement in our both personal and professional lives. Having ready access to the Internet has become central to many of life's activities, including school, work, communication, civic administration, hailing a taxi, banking, ordering food, job-hunting, following current affairs, or finding a home. In response to antipaternalists, some have suggested that this indispensability undermines full-fledged consent to the risks and deleterious effects of such engagement, given that there is increasingly no realistic alternative (Hanin, 2020).

The question of design regulation again evokes parallels with the machine gambling industry, where regulation has been implemented or recommended in various countries (Schüll, 2014). Clinical conceptions of addiction played into regulatory debates with regard to machine gambling. According to Natasha Schüll, representatives of the machine gambling industry seized on psychiatric diagnosis as a defense strategy. She writes: "By the mid-1990s, the gambling industry had already grasped (as the alcohol industry had some decades earlier) that a medical diagnosis linked to the excessive consumption of its product by some individuals could serve to deflect attention away from the product's potentially problematic role in promoting that consumption, and onto the biological and psychological vulnerabilities of a small minority of its customers" (Schüll, 2014).

These conversations regarding regulation have scarcely begun when it comes to prominent Internet platforms, apps, and services. There are immense practical and other limitations to regulate online services, which are rapidly changing and available on a global scale. A further concern is whether regulatory interventions will be equal to the task, especially insofar as the broader incentive structures remain the same. Given that these persuasive technologies are intractably intertwined with the economic structure of online services—which will remain incentivized to keep users engaged for as long as possible—it is hard to see how any small-scale regulations and design modifications will have a truly meaningful effect. However, if we endeavor to address the problem of these broader structures, we are not merely posing something as modest as "regulation," but rather a full restructuring of the nature of many online services.

### ***New "digital divides": Growing socioeconomic inequalities***

Access to the Internet has increasingly become a necessity for economic, civic, and social participation, as well as an indispensable educational tool. In turn, there has been long-standing and warranted concern about "digital divides" which generate or

exacerbate social inequalities. Initially, research on these digital divides focused predominantly on the question of access or nonaccess to the Internet. But as access has widened, and as the field has developed, it has become clear that more complex and multidimensional analysis of digital inequalities are necessary.

Questions of inequality also pertain to the concerns we have raised within this chapter. The potential burdens of online access (including the psychological, attentional, and self-regulatory burdens we have been exploring) will be very differently felt by different Internet users, depending on their device, their digital literacy, and their ability to pay for premium apps and services.

The ability to afford a more expensive smartphone, for instance, provides a far higher degree of data privacy, and greater control over which apps and services can be removed from a device, or controlled within it, including those that someone might find distressingly habit-forming. A parent who can afford to buy their child an iPhone is therefore given a far greater range of control over their child's time on their device, and other use limits, than a parent who cannot (Mackinnon & Shade, 2020). Android phones (which cost a third of iPhones) have also been reported to collect 10 times as much personal data (Schmidt, 2018). This increased data collection generates a vicious cycle in which data can be deployed to better maximize use (through AI-driven personalized recommendations and randomized rewards), which in turn allows more data to be gathered (Hanin, 2020).

Socioeconomic inequalities in the burdens of attentional harms are liable to increase in coming years, as divisions emerge concerning who is aware of these harms, and as wealthier Internet users buy their way out of some of the more noxious aspects of the online attention economy (Castro & Pham, 2020). In considering ways to move away from the attention economy model, the most obvious suggestion is to pay for services. In recommending regulations on persuasive technologies, Williams suggests that “companies could be expected (or compelled, if necessary) to give users a choice about how to ‘pay’ for content online—that is, with their money or with their attention” (Williams, 2018). Aspects of this choice are already prevalent online, with the distinction between “free” and “premium” services. As Kevin Roose writes: “today’s Internet is full of premium subscriptions, walled gardens and virtual VIP rooms, all of which promise a cleaner, more pleasant experience than their free counterparts” (Roose, 2019).

In societies that have largely overcome inequalities with regard to Internet access, socioeconomic vulnerability is sometimes correlated with more rather than less time on certain platforms, including social media and digital gaming. Research has also suggested that lower socioeconomic status is a risk factor for developing Internet addiction (Müller, Glaesmer, Brahler, Wolfling, & Beutel, 2014; Rumpf et al., 2014). In some quarters “tech-lite” environments are becoming the ultimate privilege: take the much-reported fact that many Silicon Valley insiders send their children to a deliberately tech-lite school (Richtel, 2011). Motivating for government-provided “tech-lite” environments, Hanin emphasizes that “poor and rich alike should have access to such settings, which may otherwise risk becoming a luxury for the few” (Hanin, 2020).

Those societies still addressing earlier digital divides should do so with cognizance of these emerging complexities, and new stratifications, with regard to the potential attentional costs and burdens of access. That is to say: the most empowering forms of

connectivity we can provide are those which also empower us with strategies and effective methods to *disengage* and *disconnect* when we recognize—and are enabled to recognize (Castro & Pham, 2020)—that time online is impeding, rather than serving, our own considered ends.

### ***A right to disconnect?***

Ordinarily, someone struggling with addictive or otherwise excessive behaviors would be advised to stay away from environments and circumstances which serve as triggers: a gambling addict, for instance, should stay away from casinos. But it is near impossible to implement similar advice with regard to the Internet. As we introduced with regard to the “indispensability thesis,” with the proliferation of the Internet through our societies and our educational and professional lives, it has become increasingly ordinary to expect others to have ready access to the Internet and to even consider such access a requirement.

The current nature of the Internet seems to exacerbate this difficulty: you cannot keep only the “essential” Internet on you (the parts you need to function); you must always have access to the whole thing, including those parts that might be sources of compulsion, angst, and regret. As Hanin (2020) puts it: “Whereas no sane adult must smoke, use drugs, consume sugary foods, or gamble as a precondition to leading a fulfilling life or excelling in a profession, many sane adults have no practical way of avoiding often prolonged entanglement with digital ecosystems in the workplace and their personal lives. This entanglement poses formidable psychological challenges for self-regulation.”

Growing understanding of the potential burdens of constant Internet access leads us to recognize that expectations of constant connectivity warrant reconsideration. This is most pressing for people who exhibit pathological use (or who are at risk of developing it), but it is also relevant for anyone who finds constant access to the Internet an impediment to the attainment of their own goals, or to the parts of their lives from which they derive lasting meaning.

As we explored above, most often when rights are evoked with regard to the Internet it is with regard to the right to have access (and given how essential the Internet has become to social and economic participation, this argument has immense strength). But should there also be a right to *disconnect*? A right not to have the Internet in your home, or in your pocket? This question is particularly relevant with regard to employment requirements, but it could also be relevant in other contexts (for instance, a requirement that certain essential services and opportunities remain available offline). In the employment context, the right to disconnect has recently been asserted in French Labor Law, as a measure against growing expectations to be available online after hours (Rubin, 2017). Insofar as particular ethical concerns emerge, or are exacerbated by, the increasing indispensability of the Internet, there might be considerable value in resisting or at least limiting this indispensability.

## **Conclusion**

This chapter has briefly surveyed some of the ethical terrains that correspond to our growing understanding with regard to the addictive qualities of the Internet. We

touched on a few of the complexities implicit in this debate, as well as some of the potential ethical implications although there are many considerations we were not able to address here. Our hope has been to contribute to the growing conversation reflecting on how we can and should intervene in order to better align digital technologies with human well-being.

While there was a great deal of utopian promise (some of it realized) in the early years of the Internet, the last several years have ushered in an era of reckoning, as we grapple with some of the unintended consequences of these new interfaces and forms of engagement. This reckoning is a moment of great opportunity, in which we might be able to better preserve the many beneficial aspects of these technologies, while still finding ways to mitigate against their more harmful aspects. Finding the right ways to understand and intervene in these complicated interactions is one of the great public health challenges of our time.

Persuasive technologies, as we have seen, can exploit our psychological biases. Another bias we suffer from is the tendency to accept as inevitable certain features of the status quo: to feel that because things are a certain way, they could never be otherwise. And although so many of these technologies, and the forms they have taken within our societies, are incredibly new, we nevertheless often feel that they are too entrenched to alter. But the mere fact that something is a certain way does not generate a moral reason to preserve it; these reasons must appeal to worth in a much deeper sense and must contend against many possible alternatives. In this respect, it is crucial to encourage public conversation that allows us to recognize that we are able to, and capable of, intervening in these technologies in ways that allow them to better serve us as individuals and as societies, and in ways that acknowledge and respect both our human strengths and our human weaknesses.

## References

- Aarseth, E., Bean, A. M., Boonen, H., Colder Carras, M., Coulson, M., Das, D., ... Van Rooij, A. J. (2017). Scholars' open debate paper on the World Health Organization ICD-11 gaming disorder proposal. *Journal of Behavioral Addictions*, 6(3), 267–270.
- Aswad, E. M. (2020). Losing the freedom to be human. *Columbia Human Rights Law Review*, 52.
- Bech, C. J. (2020). The need for focused research on coercion, deception and manipulation in persuasive use of social media. In *Paper for conference Persuasive Technology 2020*.
- Belluck, P. (1996). The symptoms of internet addiction. *The New York Times*. 1 December. Retrieved from: <https://www.nytimes.com/1996/12/01/weekinreview/the-symptoms-of-internet-addiction.html>.
- Berridge, K. C. (2009). Wanting and liking: Observations from the neuroscience and psychology laboratory. *Inquiry*, 52(4), 378–398.
- Berridge, K. C., & Kringelbach, M. L. (2015). Pleasure Systems in the Brain. *Neuron*, 86, 646–664.
- Bhargava, V. R., & Velasquez, M. (2020). Ethics of the attention economy: The problem of social media addiction. *Business Ethics Quarterly*.
- Brennan, J. (2020). Trust as a test for unethical persuasive design. *Philosophy & Technology*. <https://doi.org/10.1007/s13347-020-00431-6>.
- Burr, C., Taddeo, M., & Floridi, L. (2020). The ethics of digital well-being: A thematic review. *Science and Engineering Ethics*, 26(4), 2313–2343.

- Carli, V., Durkee, T., Wasserman, D., Hadlaczky, G., Despalins, R., Kramarz, E., ... Kaess, M. (2013). The association between pathological internet use and comorbid psychopathology: A systematic review. *Psychopathology*, *46*(1), 1–13.
- Castro, C., & Pham, A. K. (2020). Is the attention economy noxious? *Philosophers' Imprint*, *20*(17), 1–13.
- Choi, K., Son, H., Park, M., Han, J., Kim, K., Lee, B., & Gwak, H. (2009). Internet overuse and excessive daytime sleepiness in adolescents. *Psychiatry and Clinical Neurosciences*, *63*(4), 455–462.
- Common Sense Media. (2019). *The common sense census: Media use by tweens and teens*. Retrieved from <https://www.commonsensemedia.org/sites/default/files/uploads/research/2019-census-8-to-18-full-report-updated.pdf>.
- Deloitte. (2018). *2018 Global Mobile Consumer Survey: US Edition*. Retrieved from: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-global-mobile-consumer-survey-exec-summary-2018.pdf>.
- Dennett, D. C. (2020). Herding cats and free will inflation. In *Romanell lecture delivered at the one hundred seventeenth annual Central Division meeting of the American Philosophical Association, Chicago, February 28th, 2020*.
- dscout. (2016). *Mobile Touches: dscout's inaugural study on humans and their tech. Research Report*. Retrieved from: [https://blog.dscout.com/hubfs/downloads/dscout\\_mobile\\_touches\\_study\\_2016.pdf](https://blog.dscout.com/hubfs/downloads/dscout_mobile_touches_study_2016.pdf).
- Eyal, N. (2014). *Hooked: How to build habit-forming products*. Portfolio.
- Fogg, B. J. (2003). *Persuasive technology: Using computers to change what we think and do*. Morgan Kaufmann.
- Frankfurt, H. G. (1988). *The importance of what we care about: Philosophical essays*. Cambridge University Press.
- Hanin, M. L. (2020). *Theorizing digital distraction*. Philosophy & Technology.
- Hier, S. (2011). *Moral panic and the politics of anxiety*. Routledge.
- Holton, R., & Berridge, K. C. (2013). Addiction between compulsion and choice. In N. Levy (Ed.), *Addiction and self-control: Perspectives from philosophy, psychology and neuroscience* Oxford University Press.
- Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D. S., Lin, N., ... Ybarra, O. (2013). Facebook use predicts declines in subjective well-being in young adults. *PLoS One*, *8*(8), 1–6.
- Lin, L. Y., Sidani, J. E., Shensa, A., Radovic, A., Miller, E., Colditz, J. B., ... Primack, B. A. (2016). Association between social Media use and depression among U.S. young adults. *Depression & Anxiety*, *33*(4), 323–331.
- Mackinnon, K., & Shade, L. R. (2020). 'God only knows what It's doing to our Children's brains': A closer look at internet addiction discourse. *Jeunesse: Young People, Texts, Cultures*, *12*(1), 16–38.
- Müller, K. W., Glaesmer, H., Brahler, E., Wolfling, K., & Beutel, M. E. (2014). Prevalence of Internet addiction in the general population: Results from a German population-based survey. *Behaviour & Information Technology*, *33*(7), 757–766.
- Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, *3*, 173–182.
- Patel, V., Saxena, S., Frankish, H., & Boyce, N. (2016). Sustainable development and global mental health—A Lancet commission. *The Lancet*, *387*(10024), 1143–1145.
- Purohit, A. K., Barclay, L., & Hozer, A. (2020). Designing for digital detox: Making social media less addictive with digital nudges. In *Extended abstracts of the 2020 CHI conference on human factors in computing systems*.



- Richtel, M. (2011). A Silicon Valley school that Doesn't compute. *The New York Times*. 22 October. Retrieved from: <https://www.nytimes.com/2011/10/23/technology/at-waldorf-school-in-silicon-valley-technology-can-wait.html>.
- Robinson, T. E., & Berridge, K. C. (2008). The incentive sensitization theory of addiction: Some current issues. *Philosophical transactions of the Royal Society of London Series B, Biological sciences*, 363(1507), 3137–3146.
- Roose, K. (2019). Online cesspool got you down? You can clean it up, for a price. *New York Times Magazine*. 13 November. Retrieved from: <https://www.nytimes.com/interactive/2019/11/13/magazine/internet-premium.html>.
- Roskies, A. (2016). Neuroethics. In *Stanford Encyclopedia of Philosophy* (Spring 2016 Edition).
- Rubin, A. J. (2017). France lets workers turn off, tune out and live life. *The New York Times*. 3 January. Retrieved from: <https://www.nytimes.com/2017/01/02/world/europe/france-work-email.html>.
- Rumpf, H. J., Bischof, G., Bischof, A., Besser, B., Glorius, S., de Brito, S., ... Petry, N. M. (2014). *Applying DSM-5 criteria for Internet Gaming Disorder to Different Internet Activities*. Manuscript draft Lübeck, Germany: University of Lübeck.
- Sagioglou, C., & Greitemeyer, T. (2014). Facebook's emotional consequences: Why Facebook causes a decrease in mood and why people still use it. *Computers in Human Behavior*, 35, 359–363.
- Schmidt, D. C. (2018). *Google data collection*. Retrieved from: <https://digitalcontentnext.org/wp-content/uploads/2018/08/DCN-Google-Data-Collection-Paper.pdf>.
- Schüll, N. (2014). *Addiction by design: Machine gambling in Las Vegas*. Princeton University Press.
- Schulson, M. (2015). User behaviour: Websites and apps are designed for compulsion, even addiction. Should the net be regulated like drugs or casinos? *Aeon*. 24 November. Retrieved from: <https://aeon.co/essays/if-the-internet-is-addictive-why-don-t-we-regulate-it>.
- Seymour, R. (2020). *The twittering machine*. Verso.
- Sullivan, L. S., & Reiner, P. (2019). *Digital wellness and persuasive technologies*. Philosophy & Technology.
- Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth and happiness*. Penguin.
- van Rooij, A. J., Ferguson, C. J., Carras, M. C., Kardefelt-Winther, D., Shi, J., Aarseth, E., ... Przybylski, A. K. (2018). A weak scientific basis for gaming disorder: Let us err on the side of caution. *Journal of Behavioral Addictions*, 7(1), 1–9.
- Verbeek, P. P. (2006). Persuasive technology and moral responsibility: Toward an ethical framework for persuasive technologies. In *Paper for conference Persuasive Technology 2006* Eindhoven University of Technology.
- Verbeek, P. P. (2009). Ambient intelligence and persuasive technology: The blurring boundaries between human and technology. *NanoEthics*, 3(3), 231–242.
- Williams, J. (2018). *Stand out of our light: Freedom and resistance in the attention economy*. Cambridge University Press.
- Wolf, S. (1997). Happiness and meaning: Two aspects of the good life. *Social Philosophy and Policy*, 14(1), 207–225.