Digital Wellness: The Tech Industry's Response to Tech Addiction

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"How do we consume as much of your time and conscious attention as possible?" This was the question guiding the development of Facebook according to a former president, Sean Parker (Allen, 2017). Over the last decade, the US tech industry has faced increasing scrutiny over the addictiveness of its products and its intentions in creating them. According to critics, common features in device software and consumer applications, such as push notifications, endless scroll, and auto play, and the use of bright colors, serve the latent function of keeping users engaged longer. Critics contend these strategies are efforts to monetize user activity. Addicted users generate more valuable data for ad targeting, making even free services such as social media platforms profitable. The harshest criticism has come from former tech employees who have exposed practices they consider exploitive. Facing the threat of consumer backlash, the tech industry was forced to respond.

The stakes are enormous. About 82 percent of Americans now own smartphones (Pew Research, 2019); American smartphone users spend an average of 3 hours and 10 minutes on their device each day, a 9-minute increase from 2018 (Wurmser, 2019). In a 2016 poll, Common Sense Media found that 50 percent of teenagers surveyed felt addicted to their mobile devices, while 59 percent of parents felt that their children were addicted (CSM, 2016). Mobile device overuse is associated with mental health conditions such as depression and anxiety, ocular diseases, musculoskeletal problems, and dysfunctions in daily life (Ding & Li, 2017). Public trust in the tech industry has been declining: 50 percent of survey subjects report believing that the industry is socially beneficial, down 21 percent from 2015 (Doherty & Kiley, 2019). Because excessive mobile device usage is a hazard to users and those around them, and trust in the industry has been declining, companies needed to respond.

Among the more influential ex tech employees is Tristan Harris, former Google ethicist and founder of the Center for Humane Technology, a nonprofit that favors enforceable standards in software design. Harris demands "new ratings, new criteria, new design standards, new certification standards" to prevent addictive software design (Bosker, 2017). Other social groups are also demanding action. The Campaign for a Commercial-Free Childhood, a nonprofit advocacy that opposes child-targeted marketing, has worked to reduce the time children spend on phones. Stanford Students Against Addictive Devices is a student-led group that pressured Apple to forego addictive design and introduce features that would combat device overuse. Some investors, to protect their own interests, are also acting. In response to accusations that they exploit tech addiction, tech companies have downplayed their role in overuse, presented the issue as the responsibility of individual users, and offered tools that help users limit device usage and that promote healthier usage of their products.

Review of Research

Researchers have shown how tobacco companies responded to claims that their products cause harm, thereby offering insights into how the tech industry has responded to claims that their products are addictive. Brandt (2012) argues that to promote doubt about research findings linking smoking and cancer, industry influenced research agendas, causing conflicts of interest. By producing scientific uncertainty, the companies undercut public health initiatives and regulatory interventions designed to reduce the harms of smoking (Brandt, 2012). Through similar tactics, large tech companies have undercut campaigns against excessive mobile device usage. Muggli et al. (2008) found that tobacco companies suppressed publication of their own internal research to limit the public's awareness of radioactivity in cigarettes from polonium-210.

The tech industry has also distracted attention from intentionally addictive design features by declaring them essential tools for communication, relationship building, and user-interfacing, among others.

The response of the fossil fuel industry to critics of its role in global warming is also relevant. Boon (2019) argues that the oil industry embraced sustainability in theory, but in practice it served growing demand for fossil fuels, leaving sustainability as the responsibility of consumers. The tech companies' "Digital Wellness" platforms are similar responses. Ferns, Amaeshi, and Lambert (2017) contend that European oil companies misled the public through myth-making to facilitate defensive responses.

The sugar and beverage industries' responses to critics of the health effects of sugar were similar. Kearns, Glantz, and Apollonio (2019) argue that the Sugar Administration countered its critics by reframing the sugar industry as a source of "true facts" on sugar, nutrition and health and by prescribing reductions in the frequency of sugar consumption not the overall amount. The tech industry's "digital wellness" platforms are similarly meant to inform users of their habits. Du et al. (2018) claim that the beverage industry, in response to a proposed sugary beverage tax, distorted established scientific evidence linking sugary beverages to obesity by funding research. Similar tactics have been used by the tech industry to discredit research linking social media use to depression and other mental health issues. This includes Facebook's assertion that these claims are anecdotal and ignore the benefits of the technology (Ginsberg & Burke, 2017). Facebook also promoted research correlating negative impacts to users to the way they used it, not the platform itself (Ginsberg & Burke, 2017).

Research on the attention economy also sheds light on tech companies' responses to claims their products are addictive. Economist Hebert A. Simon considered the problem of

attention scarcity nearly a half-century ago. Simon (1971) proposed that as information proliferates, attention becomes a scarce commodity. Today information and digital stimuli can overwhelm device users. Roda (2019) claims that those who see value in attracting people's attention have found that the "exogenous attentional processes" are particularly effective at targeting automatic attentional processes. This position is consistent with industry critics' claim that features of addictive technology are meant to trigger a response before the user has time to make a rational choice.

How Tech Companies Downplay Their Role in Tech Overuse

To contain public backlash, major tech companies have denied claims that in product design they strive for maximum usage. On the subject of tech addiction, Apple CEO Tim Cook claimed "Apple never wanted to maximize user time," saying "we've never been about that" (TIME, 2019). Former Instagram CEO Kevin Systrom echoed this message in an interview: "I think the idea that anyone inside here tries to design something that is maliciously addictive is just so far-fetched" (Thompson, 2017). Tech companies have also opposed claims that their products promote dopamine feedback loops, a mechanism introduced by former Facebook executive Chamath Palihapitiya: "The short-term, dopamine-driven feedback loops that we have created are destroying how society works: no civil discourse, no cooperation, misinformation, mistruth" (SGSB, 2017). In a congressional hearing, Mark Zuckerberg of Facebook responded to a question about claims that dopamine feedback loops make products more addictive: "That's not how we set up our product teams," adding "we want our products to be valuable to people, and if they are valuable, people will use them" (Washington Post, 2018). Twitter CEO Jack Dorsey, asked about the platform's supposed triggering of dopamine feedback loops, offered a

similar response: "we certainly didn't have that intent." He blamed addictive use of Twitter on "a general addiction, independent of Twitter" (Hiatt, 2019). A clear pattern has emerged in public statements from tech industry CEOs: that rising tech overuse was an unintended consequence of the use of their products.

Although these prominent CEOs deny accusations that they design technology to addict users, statements by prominent former tech employees contradict these statements. Sean Parker claims that Facebook and Instagram executives knew of techniques intended to addict users: "It's a social-validation feedback loop, exactly the kind of thing that a hacker like myself would come up with, because you're exploiting a vulnerability in human psychology" He added that "it's me, it's Mark [Zuckerberg], it's Kevin Systrom on Instagram, it's all of these people — understood this consciously. And we did it anyway" (Allen, 2017). Tim Harris shared a similar account about his time at Google: "As much as we wanted to make life better for people and explain things to people, at the end of the day, it was about capturing attention" (NPR, 2017). Such accounts from former tech employees cast doubt on executives' defenses of the industry.

Industry executives have suggested that tech addiction is an effect of consumer choice, and therefore consumers' responsibility. Asked about a study showing that people touch their device screen thousands of times a day, Tim Cook replied: "you shouldn't be doing that," adding "If you're looking at your phone more than you're looking at people's eyes, you're doing the wrong thing" (TIME, 2019). Facebook CEO Mark Zuckerberg made similar remarks in a Facebook post: "research shows when using social media to connect with people we care about, it can be good for well-being" and that "passively reading articles or watching videos may not be as good" (Zuckerberg, 2018). Executives claim that tech companies' products are good for users when used correctly. The industry has thereby deflected responsibility for tech addiction.

Tech Companies Present Device Overuse as a Responsibility of the User

Some tech industry executives argue that users have a responsibility to set healthy device usage habits. In a memo released on Facebook's internal network and leaked to the *New York Times,* Facebook executive Andrew Bosworth suggested that "like all things," Facebook "benefits from moderation," and that "each of us must take responsibility for ourselves" (Bosworth, 2020). Tim Cook agreed: "we made the phone to make your life better" and that "everybody has to decide for his or herself what that means" (CBS, 2019). These statements reflect the executives' position that tech overuse is the responsibility of the consumer.

In their public statements, some tech executives comment on their own experiences with device overuse and on their responsibilities to their children and families. The technique lends credibility to the executives as tech consumers themselves, while assigning to consumers responsibility for their device habits. Tim Cook confessed: "when I began to get the data, I found that I was spending a lot more time than I should" (CNN, 2018). In an interview, Bill Gates explained: "we don't have cellphones at the table when we are having a meal" and "we didn't give our kids cellphones until they were 14" (Retter, 2018). Cook shared restrictions he put on his family: "I have a nephew that I put some boundaries on. There are some things that I won't allow; I don't want them on a social network" (Gibbs, 2018). Google CEO Sundar Pichai said that "at home, our television is not easily accessible" and that his 11-year-old son "still doesn't have a phone." By contrast, 40 percent of U.S. children have their own cell phone by the age of 10 and nearly 70 percent of parents say that cell phones benefit their child's development (SellCell, 2019).

Tech Companies Responded with Consumer Products to Promote Consumer Wellbeing

Responding to growing criticism of its practices, tech companies released tools to address device addiction. While similar third-party apps had long existed, only after significant public and investor pressure did large tech companies implement such features themselves. In a letter to Apple, CalSTRS and JANA partners, which together own about $2 billion in Apple shares, told the company: "we have reviewed the evidence and we believe there is a clear need for Apple to offer parents more choices and tools to help them ensure that young consumers are using your products in an optimal manner" (Sheehan, 2018). They asserted that on iOS, existing tools were "limited largely to shutting down or allowing full access to various tools and functions" (Sheehan, 2018). In similar circumstances Google responded following a year of criticism by former design ethicist Tristan Harris for its focus on "grabbing attention" (NPR, 2017). Facebook responded after former president Sean Parker accused the company of "exploiting a vulnerability in human psychology" (Allen, 2017).

In 2018, Google responded by releasing tools to inform users of their device habits, purportedly to empower them to make healthier usage decisions and thereby promote "digital wellness." Announcing Google's suite of features named Digital Wellbeing, CEO Sundar Pichai explained it would help users in four ways: "we want to help you understand your habits, focus on what matters, switch off when you need to, and above all, find balance with your family" (Google Developers, 2018). The initiative stressed user responsibility. On its official Digital Wellbeing site, Google explains that: "The first step toward digital well-being is often understanding more about how you interact with technology in the first place" (Google, 2018). Digital Wellbeing offers a dashboard to show them how often a device is unlocked, daily hours

spent per app, and other statistics. Users can impose daily app limits, pause distracting apps, and enable wind down mode to limit distractions at night (Google, 2018).

Like Google, Apple released tools to curb tech overuse. With Apple's Screen Time users can access real-time reports about time spent on their device and set usage limits for specific apps. According to Apple's senior vice president of software engineering, Craig Federighi, with Screen Time Apple is "offering our users detailed information and tools to help them better understand and control the time they spend with apps and websites, how often they pick up their iPhone or iPad during the day and how they receive notifications" (Apple, 2018). Apple highlights features parents can use to regulate their children's device usage: Screen Time "can be especially helpful for kids and families," and "parents can access their child's Activity Report right from their own iOS devices to understand where their child spends their time and can manage and set App Limits for them" (Apple, 2018). Screen Time was a response to critics' accusations that Apple was not doing enough to protect children using their devices.

To quiet their critics, social media companies have introduced features that inform users of their habits and promote more meaningful interactions. In a Facebook Post, Mark Zuckerberg announced changes to the platform's news feed: "you can expect to see more from your friends, family and groups" and "less public content like posts from businesses, brands, and media," encouraging more meaningful interactions (Zuckerberg, 2018). This method to address excessive use of Facebook was based on research that the company claims: "suggests that it's about *how* you use social media that matters when it comes to your well-being" (Ginsberg & Burke, 2017). Facebook and Instagram have released similar time management features similar to Apple's and Google's: "we are announcing new tools to help people manage their time on Facebook and Instagram: an activity dashboard, a daily reminder and a new way to limit

notifications." To device makers and social media platforms, the remedy to device addiction is an informed user.

Must Tech Companies Do More?

While tech companies have been praised for addressing tech addiction, their fiercest critics demand more. In an interview, Tristan Harris likened the responses by Apple and Google to "band-aids": "we set off a race to the top for who can build a better chart of where you spend your time on your phone," adding "that's a pathetically small, insufficient race." Adam Alter, a professor at NYU and the author of *Irresistible: The Rise of Addictive Technology and the Business of Keeping Us Hooked* (2017), argues of digital wellness platforms "these are band aids … instead of actually producing tech that's good for us, these tools basically suggest that the tech itself can't be improved, so we're stuck with trying to discourage or curb usage" (Kim, 2018).

While critics argue that more is needed to fight tech addiction, most users largely agree with the tech industry's approach. In a national poll, Morning Consult, found that while most adults agree that tech addiction is a problem among adults (81 percent) and children (90 percent), 74 percent believed it is the user's responsibility (Sabin, 2018). Among users in the 18-29 age group 52 percent believed that the tools provided by tech companies would help curb device usage (Sabin, 2018). In response to Apple's Screen Time announcement, Stanford Students Against Addictive Devices praised the company for addressing "one of our major asks of Apple since we first visited Cupertino in March" (SSAAD, 2018). Before tech companies released the new self-management features, the most vocal critic of the tech industries' addictive products, Tristan Harris said that the public must recognize their own vulnerabilities to "curate

their own lives," and that companies must acknowledge the "vulnerable minds" of their users, and feed our "lizard brains" less (Keen, 2017). By these standards, tech companies have since met some of their responsibilities.

Conclusion

When industry whistleblowers revealed the techniques tech companies employ to hook their users, the industry faced a difficult challenge. With public trust in the industry already in decline due to other scandals, accepting full responsibility for addictive tech risked cementing the perception that the companies did not have the user's best interest in mind. Moreover, because many companies depend on targeted ads for most or all of their revenue, they would not consider reforms that would threaten this business model. Instead, the tech industry saw an opportunity to dampen criticism and deflect responsibility by providing users with tools that can inform their decisions without depriving them of their decisions. "Digital wellness" features have been a credible response that invokes personal autonomy, and that have no effect on the status quo for most users. Industries that market consumer products can dampen criticism without constraining their markets. While critics of the tech industry's addictive technology targeted addictive design, tech companies appear to have convinced most of the public that the issue is one of user responsibility.

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