

Why You're Addicted to Your Cellphone

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STORY AT-A-GLANCE

- › The featured CBC Marketplace program, “Why You’re Addicted to Your Smartphone,” goes behind the scenes, talking to tech insiders about how cellphone addiction is manufactured, and the effects thereof
- › Internet addiction — the inability to unplug — has been shown to take a toll on cognition and focus, as it’s a constant source of distraction
- › The “Moment” app tracks the amount of time you spend on any given app, allowing you to see just how much of your life you’re frittering away
- › Silicon Valley companies use artificial intelligence and neuroscience to create more engaging and persuasive apps, maximizing the addictive potential of your smartphone
- › Commonly used habit-forming tools include pleasure hooks, variable awards, “the infinite scroll” and loss aversion techniques

Editor’s Note: This article is a reprint. It was originally published August 24, 2019.

This article will focus on the social addiction issue of cellphone use and does nothing to address the electromagnetic field (EMF) exposures, which I cover carefully in my next book “EMF’d,” slated for publication in early 2020.

As a lover of technology, it pains me to see what technological advancements are doing to the psychological health of so many, especially our youth. Children today cannot even

fathom a life pre-internet – a life where school work involved library visits and phone calls required you to stay in one spot (since the telephone was attached to the wall).

Children and parents alike now spend an inordinate amount of time on their smartphones, communicating with friends (and possibly strangers) via text, on Twitter and Facebook, and work to keep up their Snapstreaks on Snapchat.

Even many toddlers are proficient in navigating their way around a wireless tablet these days. Smartphones have changed the way people interact socially, especially teens, and this has significant ramifications for their psychological health.

This is a topic covered in-depth in Jean Twenge's book "iGen: Why Today's Super-Connected Kids Are Growing up Less Rebellious, More Tolerant, Less Happy – and Completely Unprepared for Adulthood – and What That Means for the Rest of Us."¹

A majority of teens' social life is carried out in the solitude of their bedroom via their smartphones, Twenge points out in a 2017 article² adaptation of her book, published in The Atlantic, and this lack of face-to-face interaction has a steep psychological price: **loneliness**. Internet addiction – the inability to unplug – has also been shown to take a toll on cognition and focus, as it's a constant source of distraction.

Your Cellphone – A Necessity or a Convenience?

The featured CBC Marketplace program, "Why You're Addicted to Your Smartphone,"³ goes behind the scenes, talking to tech insiders about how cellphone addiction is manufactured, and the effects thereof.

According to Marketplace, people use their cellphones for an average of three hours a day, and as shown in the footage, many are in the habit of perusing their cellphones while walking – completely oblivious to their surroundings.

Over their lifetime, teens will spend "nearly a decade of their life staring at a smartphone," CBC reporter Virginia Smart writes in an accompanying article.⁴ If you frequently feel you don't have enough time in the day to get more productive things

done, perhaps your cellphone usage is part of the problem, siphoning off valuable time from each day.

Still, most agree their phone has become a “necessity” rather than a convenience. Forgetting their phone at home, or losing it, is frequently described as a disaster.

“My entire life is on my phone,” one man says.⁵ “I don’t know where I’d be [without it].” Just how did we get to this point? “It’s part of a plan you didn’t even know you signed up for,” CBC correspondent David Common says.

Variable Rewards and Other Mind Tricks

To investigate real-world usage, CBC Marketplace enlists an Ontario family of five in an experiment: An app on their phone will track each family member’s usage over a two-month period. The app, called “Moment,”⁶ tracks the amount of time you spend on any given app, allowing you to see just how much of your life you’re frittering away.

Tracking the usage of all users, everywhere, is also being done by Silicon Valley companies in an effort to figure out how to make us use their apps even more. One of them is Dopamine Labs, founded by Ramsay Brown, which uses “artificial intelligence and neuroscience to track your usage, loyalty and revenue.”⁷

As explained by Brown, they use AI and the science of the mind to “make apps more engaging and persuasive.” In other words, they use science to maximize the addictive potential of your smartphone.

The secret is rather simple. Apps that trigger pleasure become addictive. As noted by CBC Marketplace, it’s rather telling that the two leading creators of the smartphone revolution, Bill Gates and Steve Jobs, both admitted limiting their children’s use of their revolutionary devices — probably because they knew something the rest of us didn’t.

“We’re not really designing software anymore,” Brown says. “We’re designing minds.” Just how is this done? Some of the most commonly used habit-forming tools include:⁸

- **Pleasure hooks** – This could be a notification of “Congrats!” or “Good job!” or a high-five icon after you’ve completed an action, for example. On social media platforms, getting “Likes” accomplishes the same thing. The ability to collect followers is yet another hook.
- **Variable rewards** – As explained by Marketplace, a key method used to trick your mind into addictive behavior is known as “variable rewards.” In a nutshell, it means you’re never sure what you’re going to get. How many “Likes” will your post garner? How many followers or points can you get? How long can you maintain a streak?

As with other types of gambling, this uncertainty coupled with the prospect of a pleasure reward is what feeds the compulsion to keep going.

- **The infinite scroll** – Another “hook” perfected by social media is that never-ending stream of content and commentary that can keep you going indefinitely.
- **Loss aversion** – While starting out as a pleasurable activity, at a certain point, your continued usage morphs into a prison of your own making – you “can’t” stop using the app, or you’ll experience let-down and disappointment. Snapchat’s snapstreak is a perfect example of how apps cash in on loss aversion.

“**Brain hacking**” techniques such as these have led to 6% of the global population now struggling with internet addiction, according to a 2014 study,⁹ rivaling that of illicit drug use.¹⁰

The problems with overuse and abuse of cellphones lead to sleep disturbances, anxiety, stress and depression,¹¹ as well as an increased exposure to electromagnetic field radiation, which also places your health^{12,13} and mental¹⁴ well-being at risk.

Internet Addiction Is on the Rise

Marketplace interviews Lisa Pont, a social worker at the Canadian Centre for Addiction and Mental Health, where people are now coming into the program because their smartphone usage has become a problem.

“Research is starting to show that technology has an impact on memory, concentration, mood, [causing] anxiety and depression; it has an impact on sleep, it has an impact on overall well-being,” Pont says.

Children, Pont stresses, are particularly vulnerable due to their innate lack of self-control, and really need parental guidance and limits on their device usage. “It’s too tempting at that age to mitigate their own use,” Pont says, pointing out that children’s brains are not fully developed, hence they lack impulse control and the ability to foresee the consequences of their behavior.

Cellphone Use and Depression

As noted by Twenge in her article¹⁵ “Have Smartphones Destroyed a Generation?” rates of teen depression and suicide have dramatically risen since 2011, and data suggest spending three hours or more each day on electronic devices can raise a teen’s suicide risk by as much as 35%.¹⁶

Spending 10 or more hours on social media each week is also associated with a 56% higher risk of feeling unhappy, compared to those who use social media less, and heavy social media users have a 27% higher risk of depression.¹⁷

“It’s not an exaggeration to describe iGen as being on the brink of the worst mental-health crisis in decades,” Twenge writes,¹⁸ adding that “Much of this deterioration can be traced to their phones ...

There is compelling evidence that the devices we’ve placed in young people’s hands are having profound effects on their lives – and making them seriously unhappy.”

How Much Time Are You Spending on Your Phone?

After tracking Jackson, age 8, for two months, his average daily screen time came out to five hours and 32 minutes, but on some days, he spends nearly 11 hours on his tablet –

basically the whole entire day. At his current pace, his projected lifetime screen time amounts to a whopping 15 years.

His mother admits being worried about her young son's screen time, especially as she's noticed he typically prefers spending time on his tablet over all other social interactions and activities. Meanwhile, the family's 16-year old, Emily, trades her sleep for social media. She admits getting caught up in the infinite scroll; before she knows it, hours may have passed.

As noted by in Twenge's Atlantic article,¹⁹ sleep deprivation among teenagers rose by 57% between 1991 and 2015. Many do not even get seven hours of sleep on a regular basis, while science reveals they need a minimum of eight and as much as 10 hours to maintain their health. Twenge writes about the habits of the teens she interviewed:

"Their phone was the last thing they saw before they went to sleep and the first thing they saw when they woke up ... Some used the language of addiction.

'I know I shouldn't, but I just can't help it,' one said about looking at her phone while in bed. Others saw their phone as an extension of their body – or even like a lover: 'Having my phone closer to me while I'm sleeping is a comfort.'"

Emily is no different, admitting that checking her phone is part of her morning and evening routines. It's the first thing she does upon waking, and the last thing she does before bed. For Emily, a large part of her day revolves around Snapchat. She uses the app continuously to keep in touch with her friends – even when they're sitting right next to her.

As mentioned, Snapchat uses a technique known as "loss aversion" to keep their users using. Emily has a Snapchat streak that has been going for nearly two years, and now she feels compelled to not break it, which is what loss aversion is all about.

On many days, Emily's phone stays in use for nearly 7.5 hours. The Moment app clocked her picking up her phone up to 100 times a day during the monitoring period. On

average, she spends 30% of her waking hours on her phone. Her parents are not far behind, each averaging about 21%.

Symptoms of Internet Addiction

Symptoms of internet or cellphone addiction are similar to other types of addiction, but are more socially acceptable. As noted in one study, internet addiction (IA) is:²⁰

"[G]enerally regarded as a disorder of concern because the neural abnormalities (e.g., atrophies in dorsolateral prefrontal cortex) and cognitive dysfunctions (e.g., impaired working memory) associated with IA mimic those related to substance and behavioral addiction. Moreover, IA is often comorbid with mental disorders, such as attention deficit hyperactivity disorder and depression."

According to Psycom.net, conditions that can increase your risk of internet addiction or compulsion include anxiety, depression, other addictions and social isolation or awkwardness.²¹ Common emotional symptoms of internet addiction include:

Boredom with routine tasks	Dishonesty and defensiveness	Feelings of guilt, fear or anxiety; mood swings
Experiencing euphoria while online	Procrastination; inability to prioritize tasks or keep schedules	Avoidance of work

Physical symptoms of internet addiction disorder can include:²²

Backache, headache, neck pain	Carpal tunnel syndrome	Dry eyes and other vision problems
Insomnia	Poor nutrition; weight gain or weight loss	Poor personal hygiene

Notifications Take a Significant Toll on Your Cognition

If you're like most, you probably have an array of notifications set on your phone. According to Marketplace, these notifications concern experts, who warn the constant pinging, beeping and buzzing actually has significant consequences for your cognition.

Marketplace correspondent Commons visits Western University, where a lot of cognition research is being conducted. He participates in a test to evaluate his ability to focus, and to see how distractions from his phone affects his attention and cognition.

First, Commons performs the attention test without his phone. For the next round of testing, his phone is left on, nearby. And, while he can't see it, he can hear it – incoming phone calls, texts and the pinging of incoming social media notifications.

For the third part of the test, Commons has to recall numbers being texted to him. “It reflects how we normally interact with our phones,” the researcher explains. You might text details to a coworker, for example, or your spouse might ask you to buy milk on the way home.

Commons admits the distractions caused by his phone significantly interfere with his ability to concentrate on the task at hand. Even vibration without sound causes problems. Just how big of a problem? Commons' verbal comprehension declined by nearly 20% when phone distractions were allowed.

One simple step that can eliminate many of these distractions is to simply turn off all notifications. Still, simply having your phone nearby can be enough to take your mind off what you're doing.

A study²³ using a group of more than 50 college students found that performance in complex tasks was worse when the participant could see a cellphone present, whether it was the study leader's phone or their own, as compared to the performance of tasks when no cellphone was visible.

As noted by Brown, smartphones are here to stay, and app developers are getting increasingly sophisticated at capturing your attention. Smartphone users therefore need

to become savvier, and learn to make conscious choices about how they use their devices.

The question is, “Who do we want to be?” Brown says. Modern technology really requires you to shape yourself (or be shaped by software developers), and to use your devices in a way that helps you rather than hinders you from living your best life.

Sources and References

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