

What Smartphones Are Doing to Our Minds

“The smartphone is unique in the annals of personal technology,” says Nicholas Carr in this *Wall Street Journal* article. “We keep the gadget within reach more or less around the clock, and we use it in countless ways, consulting its apps and checking its messages and heeding its alerts scores of times a day.” What makes the smartphone so captivating? “Imagine combining a mailbox, a newspaper, a TV, a radio, a photo album, a public library, and a boisterous party attended by everyone you know, and then compressing them all into a single small, radiant object. That is what a smartphone represents to us. No wonder we can’t take our minds off it.”

But smartphones can also foster anxiety and undermine performance. “[E]ven hearing one ring or vibrate, produces a welter of distractions that makes it harder to concentrate on a difficult problem or job,” says Carr. “The division of attention impedes reasoning and performance.” One study found that when a person isn’t able to answer a ring or vibration, blood pressure spikes, the pulse quickens, and problem-solving skills decline. Researchers have found negative effects in five areas:

- *Test performance* – In a 2015 experiment at the University of California/San Diego, 520 undergraduates took tests of fluid intelligence and available cognitive capacity. Subjects were divided into three groups:

- The first placed their cell phones in front of them on the desk.
- The second stowed their phones in pockets or handbags.
- The third left their phones in another room.

Students whose phones were in view got the lowest scores; those whose phones were in another room did best; and students whose phones were in their pockets or handbags scored in the middle. Interviewed afterward, almost all students said they hadn’t been distracted by or even thought about their phones while taking the tests – but that obviously wasn’t true for two-thirds of them. A similar study found that students with phones in sight made more errors on a test.

- *College lectures* – A study at the University of Arkansas found that students who brought cell phones with them to classes and exams scored a full letter grade lower (whether or not they checked their phones during classes) than those who left phones back in their dorms. Another study came up with similar results, and revealed that the more heavily students relied on their phones in their everyday lives, the greater the cognitive penalty when they tackled mentally challenging tasks. A researcher said the areas most affected were learning, logical reasoning, abstract thought, problem solving, and creativity.

“The evidence that our phones can get inside our heads so forcefully is unsettling,” says Carr, “Smartphones have become so entangled with our existence that,

even when we're not peering or pawing at them, they tug at our attention, diverting precious cognitive resources. Just suppressing the desire to check our phone, which we do routinely and subconsciously throughout the day, can debilitate our thinking..."

- *Personal connection* – A study at the University of Essex in the U.K. asked 142 participants to have private one-on-one chats for ten minutes. Half of the subjects had a phone in the room, half did not. Subjects were then given an assessment measuring affinity, trust, and empathy. "The mere presence of mobile phones," said the researchers, "inhibited the development of interpersonal closeness and trust" and diminished "the extent to which individuals felt empathy and understanding for their partners." The effect was most striking when a personally meaningful topic was discussed.

- *Memory* – Studies have found that ready access to information via Google and other search engines, plus how easy it is to jot ideas into our devices, leads us to make less of an effort to remember information because we can always look it up. But the fact that we are storing less information in long-term memory is a problem. In an 1892 lecture, William James said that "the art of remembering is the art of thinking." Carr agrees: "Only by encoding information in our biological memory can we weave the rich intellectual associations that form the essence of personal knowledge and give rise to critical and conceptual thinking. No matter how much information swirls around us, the less well-stocked our memory, the less we have to think with."

- *Gullibility* – In a 2013 *Scientific American* article, Daniel Wegner and Adrian Ward said we may be suffering from delusions of intelligence, confident that we know stuff because we can access it so quickly. When we can quickly find information, we feel as though we ourselves generated the information. "The advent of the 'information age' seems to have created a generation of people who feel they know more than ever before," said Wegner and Ward, even though "they may know ever less about the world around them." This may be why so many Americans believe lies and half-truths spread through social media by foreign agents and other bad actors. "If your phone has sapped your powers of discernment," said Ward, "you'll believe anything it tells you."

"When we constrict our capacity for reasoning and recall or transfer those skills to a gadget," concludes Ward, "we sacrifice our ability to turn information into knowledge. We get the data but lose the meaning. Upgrading our gadgets won't solve the problem. We need to give our minds more room to think. And that means putting some distance between ourselves and our phones."

"How Smartphones Hijack Our Minds" by Nicholas Carr in *The Wall Street Journal*, October 6, 2017, available to subscribers at <http://bit.ly/2y1EZsP>