

Richard Maxwell and Toby Miller

How Green is Your Smartphone?

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How Green is Your Smartphone? is a compact and accessible text written by professors Richard Maxwell and Toby Miller that addresses environmental risks associated with proliferating smartphone use. The text is published as part of Polity Books' Digital Future Series and written as much for a general audience as an academic one.

Maxwell and Miller engage research from climate and environmental science, political-economic and ethnographic social science. They argue that smartphone users are culpable for their device's myriad impacts, that they need to be aware of them and to minimise them for the benefit of individual and collective health. The text is split into three sections. The first details ways for readers to outsmart their smartphones and argues that it is necessary for smartphone users to do so for the benefit of their own health. The second section argues that the greenest smartphone is the one that an individual already owns. The third advocates for readers to deconstruct the propaganda put forth by the telecommunications and electronics companies and use the precautionary principle when engaging narratives about the effects of smartphones.

At the onset of the first section the authors urge readers to 'set your smartphone to Airplane mode and find a spot without WiFi transmitters nearby. If possible, read under natural light. We'll explain why these precautions can outsmart your cellphone'. Whether or not the reader chooses to heed their warnings, the authors make it clear that they are serious about outsmarting a device whose utility is endless and to which people are increasingly addicted. The book is quick to point out that users rely on smartphones to an extent that they're suffering from 'phantom vibration syndrome', and 'Nomophobia – short for no mobile phobia', two conditions entirely unique to the modern age.

After laying out the visible effects of smartphone addiction, the authors address the unseen ways human bodies interact with the radiofrequencies and electromagnetic radiation required for smartphones' functionality. The book points to a 2001 study of early mobile phones as evidence that the effects of phones on human bodies are exorbitantly beyond natural levels. The study found that a phone will provide a power density of radiofrequency radiation about two billion times greater than occurs naturally in the environment. It is surprising that the book leans on a study nearly two decades old since cellular technology, network size, transmitter power, and device usage have grown exponentially. Regardless, the worrisome effect of high radiofrequency dosages is that it reduces the ability for human cells to repair themselves – opening the door to damaged DNA, reduced sperm counts, oxidative stress, and impaired memory.

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Cancer is also discussed, but the question remains as how much cellphone radiation influences the development of cancerous cells. Since 2011, the International Agency for Research on Cancer (IARC) has described cellphone radiation as ‘possibly carcinogenic to humans’. Maxwell and Miller are aghast that this designation has not changed since a 2018 study found clear evidence that cellphone radiation causes cancer in rats. That study has since been replicated without issue. Neither study was widely reported, and the IARC designation remains unchanged. All of these documented effects of smartphones, from phantom vibration syndrome to the disruptive nature of cellphone radiation, compels the authors to push a precautionary principle in outsmarting smartphones. They believe ‘better safe than sorry’ is the primary way to promote safer, healthier living environments, yet they offer little guidance to outsmarting your device beyond the call for minor abstention at the beginning of the section.

When it comes to endorsing a green smartphone, the authors make a straightforward argument: while the production of every smartphone variety is carbon-intensive, by the time it reaches the consumer most of its carbon costs have been incurred. Therefore, it is ‘greener’ to hang on to the phone in your hand and resist the urge to trade up for a newer model every two years. Maxwell and Miller rely heavily on mining hazards, conflict minerals, manufacturing processes, and lack of e-waste regulations as evidence. They lay these realities equally at the feet of producers and consumers, and suggest that a blend of increased government oversight, right to repair laws, and demand for corporate responsibility stand to counteract the rate at which devices are produced, used, and discarded.

On the whole Maxwell and Miller are suspicious of the long-term effects of cell phones for human and environmental flourishing. Nowhere does this sentiment ring truer than in the last section of *How Green Is Your Smartphone?* where they encourage readers to ‘call bullshit’ on anti-science propaganda. According to Maxwell and Miller, anti-science propaganda is nearly as pervasive as the smartphone devices with which the rest of their text is concerned. They claim the CTIA (wireless communications trade association), the Federal Communications Commission (FCC), media conglomerates, conservative thinktanks, and hired ‘skeptics’ craft a narrative that is spun to promote misinformation and ambivalence in the minds of consumers. Maxwell and Miller again suggest that the precautionary principle, or ‘better safe than sorry’, is better than to blindly accept the prevailing narrative.

Though it would have been easy for the authors to conclude their work on a cellphone-bashing tirade, they chose an alternative ending. The authors empower consumers to demand healthier living environments, stringent cellphone regulations, e-waste solutions, and corporate transparency. They suggest consumers do this not only by heeding their calls in previous chapters, but also via their future purchases and at the ballot box. The extent to which these calls

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ought to be heeded is arguable, but the efforts of Maxwell and Miller here are worth visiting if readers are interested in looking differently at the devices that rule the world around us.

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