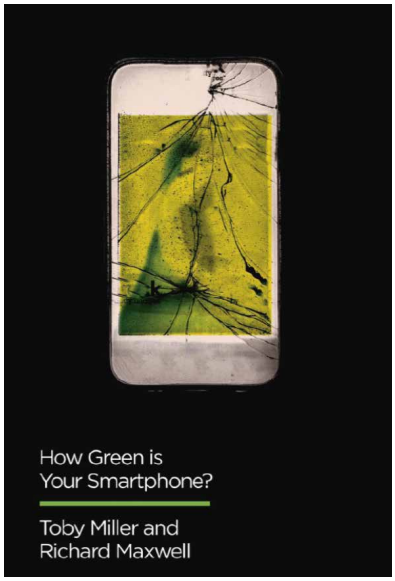
How green is your smartphone?

Richard Maxwell & Toby Miller (2020). *How Green is Your Smartphone?* Cambridge: Polity



Smartphones are part of daily life for most of the world's population, reaching penetration rates of over 95 percent of end-users in countries like the United States. The digital technology industry promotes this product as a sign of social development and financial wellbeing. Meanwhile, the environmental and social consequences of its overwhelming success are left out of public and academic debate. Richard Maxwell and Toby Miller reflect, from a communication sciences perspective, on the material and social impact of this technology with the conviction that small changes in our digital use can help build a framework of sustainable communication.

Smartphones have become an undeniable part of our daily lives, with both beneficial and adverse effects. Sociologists have mixed feelings when analyzing this device. On one hand, some consider them responsible for broadening communication channels, improving personal safety, facilitating cultural exchange and strengthening personal relationships. On the other hand, they may be responsible for increasing social division, polarization or causing forms of inequality. If you don't have one in your hands, access to the 21st century's new modes of sociability is quite limited, not to mention the psychological pressure caused by the need to be constantly connected.

In Spain, market share is 92 percent, surpassing the European mean, although Germany, Italy, France and the UK are not far from the leading rate of 95 percent of North Americans that have a cellphone. In addition, the International Communication Union (ITU) highlights the importance of this device for the economic development of Asia, the Arab States, Africa and Latin America.

The smartphone has been exalted as an emblem of technological progress and financial wellbeing for over a decade thanks to incessant advertising orchestrated by large manufacturing companies. In this sense, Richard Maxwell and Toby Miller's new work, *How Green is Your Smartphone*? critically analyzes the environmental and labor consequences that the device's overwhelming success has brought about, encouraging users *to be even smarter than their smartphones.*

Maxwell and Miller emphasize that the objective of this book is not to embarrass users or promote the disappearance of the smartphone, but rather explain the environmental and social risks associated to these devices and determine ways to reduce them. In summary, the idea is to define a new role for the smartphone within a framework of sustainable communication. The book was written based on the conviction that the way we reflect on the digital world can contribute to a new understanding of what, according to the authors, constitutes a full life: one that prioritizes the biosphere, ecology and, undoubtedly, the balance among human beings and natural systems.

How Green is Your Smartphone? is divided into three chapters and an epilogue serving as a conclusion, which discuss in detail the following topics: the first chapter, *Outsmart your smartphone*, alludes to the radiofrequency radiation generated by smartphones which, according to various studies, causes serious health risks. Mobile phones should not surpass radiation levels of 1.6 wats per kilogram, a limit that can be exceeded when the device is in contact with our bodies. The authors discuss the reasons for which the average user is unaware of this information and the difficulties that exist to access it. Secondly, the book discusses the addictions linked to these technologies and their effects, among which is the increase in traffic accidents in which cellphone use played a part.

The title of the second section is one of the basic pillars to promote sustainable use of smartphones: *The greenest smartphone is the one you already own*.

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This chapter focuses on the material impact of the CIT. It is also a section that explores the inherent dangers of the extraction of raw materials necessary to manufacture the devices, as well as the miserable work conditions to which industry workers are exposed. Afterwards, the chapter discusses the large demand of energy and natural resources for the manufacturing of mobile phones and the functioning of their applications. If you combine emissions coming from the manufacture and production of electricity needed to power networks and datacenters, smartphones and similar platforms would be responsible for 1.4 percent of worldwide greenhouse gas emissions.

While the environmental impact of manufacturing these devices is very high, battery consumption partially mitigates the effect, given that technological advances have brought smartphones to the market that consume less and less power. Therefore, the authors ask us to keep our cellphones as long as possible and only replace them when they can no longer be repaired.

On average, we replace our cellphone every two years, which means 2.8 billion people worldwide get a new cellphone in this short period of time. This high rate of hand-held device replacement has harmful effects on the environment and human beings not just in terms of manufacturing, but also at the end of their shelf-life: smartphones play an increasingly more important role in growing E-waste flows. They are estimated to represent 10 percent of this type of waste. Another important issue to consider is that much electronic waste is illegally shipped to poor countries disguised as second-hand goods and end up in uncontrolled landfills, causing irreparable damage to nearby populations and ecosystems.

Finally, the chapter *Calling bullshit on anti-science propaganda* discusses the public relations policies aimed at causing confusion about ecological and health problems that these technologies create. The industry is accused of using methods compared to communication strategies used previously by the tobacco industry, in which the latter minimized, and in many cases hid, the risks associated to tobacco consumption. In this sense, the authors recommend people put into practice the *cautionary principle* in terms of our use of smartphones. In other words, if we don't know whether a certain technology is harmful to us, it's best not to use it.

The epilogue is an overall review of the ideas proposed throughout the book and a starting point from which to design a more sustainable relationship with smartphones. With this purpose in mind, the book mentions *Fairphone*, a telephone product for consumers seeking more labor and environmentally-friendly technology. It is certainly a role model for large manufacturers. Maxwell and Miller call us to support organizations that fight for a more just electronic industry, such as the Center for Reflection and Action on Labor Rights in Mexico and Good Electronics in Amsterdam, among many others. Finally, authors suggest looking at the cellphone from a whole new perspective, one that considers this device's effect on the ecosystem and manufacturing workers. In summary, promoting a more sustainable consumption of smartphones contributes both to the development of a more equal society and necessary care for the environment.

How Green is Your Smartphone? is the most recent contribution of two renowned academic researchers that, in the realm of communication science, have been pioneers in the study of the material impact of CIT. Together, they have published numerous articles and research papers on this topic including *Greening the Media* (2012), a book that shows the material impact of the media industry based on historical, economic and environmental facts. While Greening the Media is possibly a less accessible book due to the abundance of data and diversity of subject matter, *How Green is Your Smartphone*? manages to be an entertaining read without losing a speck of intellectual acuity, suitable for all those interested in sustainable media consumption.

References

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