

When Big Brother gets smart

This book by Jathan Sadowski examines the social and economic implications of smart tech and warns that even the most mundane technology in our cities and homes collects private data that can be used to our disadvantage. Sadowski's descriptions dance between reality and potentiality, illustrating how this predicament already affects the most disadvantaged people in our society and alluding to even worse consequences for a wider swath of people going forward. The analysis considers the interactions between certain aspects of smart-tech innovation and the various scales at which it occurs in order to build 10 theses about the design, effects, beginning, and implications of digital capitalism. Sadowski ends the book by recognizing that his stories may seem hyperbolic, but he assures the reader that they occur in our daily lives. He suggests that although the benefits and costs of smart tech are not evenly distributed, its users can help reshape the system by "deconstructing capital, democratizing innovation, and demanding data."

Sadowski breaks the objectives of smart-tech innovation into three aspects: interests, imperatives, and impacts. The architects of any technology have certain objectives in mind, and they build their smart devices to serve their own interests and bottom lines. The traditional market-clearing actions of consumers and producers are too streamlined to accurately describe the relationship between tech companies and the users of their technologies. Instead, argues Sadowski, the secondary market for consumer data must be considered. The interests of tech producers involve not only maximizing profits, but also maximizing the scope and volume of data that they can collect. Consumers are no longer just end users of smart devices, but by using them, they generate data that producers can harvest to increase profits, either by selling those data to a third party or by using them themselves.



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A tech producer's interest in maximizing both data and profit leads directly to the imperatives of smart tech. The first imperative is collection, driving tech companies to extract “all data, from all sources, by any means possible.” The second is control, whereby tech companies use the information gleaned from their collection activities to “monitor, manage, and manipulate the world and its people.” Once again, the one-directional relationship between smart-tech producers and consumers breaks down when the data collected by the former are harnessed for their benefit. The data amassed by producers about consumers can be used to advertise to them, to influence their behavior, to predict their future actions, and to reward them for expected behaviors.

The imperatives of data collection and control dictate a design of smart-tech systems that furthers the interests of producers, while frequently neglecting the impact on the users of such systems. Sadowski gives many examples of the potentially negative consequences of using smart technology. His examples include the following:

- An electronically controlled entrance gate to a fancy apartment building that regularly malfunctions, leaving tenants stranded in the rain.
- A leased smart vehicle on the highway whose engine suddenly shuts off and steering wheel locks up because the vehicle has been remotely repossessed.
- Handheld scanners that, by calculating the speed with which warehouse pickers complete high-demand tasks, determine a worker's pay and place within the workforce.

The impact of smart tech can be small and easily ignored, as would be the case, for example, when an advertisement for shoes targets people who talked about needing new running shoes in proximity to their cell phones. But the impact can also be significant and beyond the control of the people it affects. One example given in the book is a case in which the city of New Orleans quietly installed Palantir, a smart policing system that monitors people's movements, payments, interactions, and social media presence, drawing connections between their activities. This system makes it possible for the police to access information not just about criminals but also about the everyday lives of law-abiding citizens.

The application of smart tech happens on several scales, which Sadowski terms the smart self, the smart home, and the smart city. Each of these scales involves stated benefits and hidden costs to citizens. For instance, a fitness tracker collects an individual's health statistics and progress toward a health goal, but these data may be used by healthcare providers to determine health insurance premiums and coverage. Likewise, a home's smart thermostat records the living-room or bedroom temperature desired by a family, but it also monitors electric load statistics that a utility company may consider in determining when to charge more for energy use. And finally, a smart city's cameras might record the perpetrator of a crime running from the crime scene, but the city's police force might install cameras more frequently in economically disadvantaged communities, skewing the crime statistics it collects. In each of these cases, a smart system's stated objective is to ostensibly benefit the smart self, the smart home, or the smart city, but it also has the less obvious objective of furthering the interests of the designer or secondary user of the data gleaned from that system.

By considering whose interests are reflected in the collection and control of user data—and what impact that has on society as more people, homes, and cities become “smart”—Sadowski outlines his 10 theses of digital capitalism. The first three theses deal with how society is shaping smart tech while also being shaped by it. The hawkers of interconnected things bring with them all the assumptions and power dynamics that come with their positions in a given society, thereby “maintaining the same essential features of exclusion, extraction, and exploitation” inherent in that society. Sadowski argues that the capitalistic instincts of the tangible world are being

programmed into the digital world because the architects of both worlds are essentially the same. He suggests that when we think about smart tech, we should conjure in our minds not just fitness wristbands but also surveillance systems and location trackers. Then we should think not just about the companies creating those technologies and collecting data from them, but also about the people whose information is being collected and how their lives might be affected when they relinquish control of that information.

Sadowski's fourth, fifth, and sixth theses attempt to set a new standard for how we think about the extraction of our data. First, collecting data from consumers whenever they participate in the market should be regulated. Data about an individual should be that person's property rather than the property of a large corporation. Second, the extraction of personal information from its rightful owner for use against him or her should be unacceptable. Distilling a person down to a few statistics nullifies that person and can have adverse individual consequences. Third, digital platforms currently operate like landlords, leasing access to our own information while profiting from that control in the market for that information. Some companies construct smart objects that are difficult to use without a subscription to the software that controls them, thereby maintaining partial ownership of those objects.

The seventh thesis pinpoints the moment when digital capitalism began supplanting physical capital and financial markets as the drivers of the economy. The Great Recession of 2007–09 redirected investments from real estate and tangible goods toward smart-tech companies and service-based digital platforms, rearranging markets and market power.

In the last three theses, Sadowski outlines how the objectives of smart-tech companies have constricted what we think is possible in the future. This has been achieved by shaping the language of tech to be “solution-based” and by making smart tech the solution to every problem, whether or not that problem previously existed. The companies' vision of a connected society that uses smart tech to achieve ever greater efficiency becomes deterministic and seemingly inevitable. Sadowski's last thesis admits that no one person's actions can confront this digital predicament and widen the possibilities for the future. Only through collective action can citizens regain control of their own digital lives and expand the scope of options for the next era.

Finally, while acknowledging that his chosen examples of digital tech are extreme, Sadowski makes the case for why and how our society should demand better from our smart selves, smart homes, and smart cities. He argues that the problem is not with innovation itself, but with allowing it to negatively affect our welfare. He encourages collective innovation from workers and users of smart tech, rather than top-down production requirements. To make technological development more democratic, workers, who are an “untapped well of novel ideas and possess the skills needed to organize production for socially useful outcomes,” could be involved in the selection, design, production, and distribution of the smart tech brought to market. Lastly, by demanding oversight of how data are collected, stored, and used, governments can regulate large tech companies and the ways in which they use collected data. Sadowski suggests that personal information should be treated and protected as private property, and the ability to opt out of its collection should not preclude smart-tech users from participating in the market.

Too Smart was a difficult read, not because of the prose (Sadowski's examples are well articulated and breathe life into the topic) but because so much of my life is already enmeshed in the digital wires described in the book. My phone, alarm system, car, computers, and city are all collecting my personal data, and this situation seems far too complex to solve or escape. I recommend this book to anyone who wants a more clear-eyed view of how our

interconnected version of modernity might not be as benevolent as it is presumed to be at the annual Consumer Electronics Show.