

Introduction

When people recount unpleasant experiences with algorithms, they have a story to share. A fifty-year-old mother and practical nurse, whom I will call Maisa, described how one of her children broke an ankle, an event that she shared in a Facebook update. Later, by mischance, the same thing happened to her second child, and she wondered fretfully in an update how such bad luck could be possible. That same day, an insurance salesperson contacted her and asked whether she would like to obtain additional insurance coverage against accidents, “because an ankle may break.” Maisa pondered whether the insurance company had somehow learned about the accidents that she had shared online, thus highlighting the uncertainties connected to algorithmic operations.

The lack of certainty relates to the difficulty of knowing what algorithms and people behind them actually do. Typically, when interviewees describe their responses to algorithms, they are not on firm ground; even professionals with the practical skills to steer algorithmic operations are often perplexed when thinking about their organizational implications. Even if growing numbers of algorithms are open source, some of the most influential ones are treated as proprietary knowledge, veiled for reasons of

corporate and state secrecy. Professionals in cybersecurity or digital marketing, actively gathering up-to-date evidence about algorithmic operations, have to work with partial information. Google Search, for instance, is updated regularly, with consequences for the online visibility of companies and organizations around the world, yet organizational representatives argue that concealment prevents abuse via manipulation that might “game” the algorithmic system and jeopardize its functions. And they are, of course, not mistaken; there are many reasons for trying to game and influence algorithmic operations, if they are closely connected to monetary gains (Ziewitz, 2019).

In addition to the lack of certainty, Maisa’s story raises the question of the truth-value of algorithm talk. The story told about her children’s broken ankles and the subsequent call from the insurance company might not be strictly factual; even if it is, given current regulations, a Finnish insurer cannot use what people write on Facebook for personalized marketing (Tanninen et al., 2021). In interviews, people tell stories, including urban legends, to emphasize something of importance to them. Personal algorithm stories can fail to separate fact and misconception, and they might be based on wishful, erroneous, or fearful views of what is going on. Yet rather than treating algorithmic folklore as evidence of ignorance or misguided reliance on simplified cognitive heuristics, this book suggests a different approach. We will enter the realm of voices and knowledges of vernacular culture (Goldstein, 2015). Instead of concentrating on how people fail to comprehend algorithmic operations, the analysis takes the difficulty of uncovering algorithmic logics as its starting point. The not-knowing, or only partial knowing, explains why personal anecdotes have become such an important source of algorithmic knowledge. We

get to know algorithms by feeling their actions and telling stories about them.

Technically incorrect, imprecise, and unsubstantiated comments about algorithms can leave technology experts rolling their eyes. They might insist that we need to define what we are talking about: algorithms are recipes for technical operations, instructions for carrying out tasks and solving problems. Technically, the Google algorithm is not one algorithm at all but countless sub-algorithms, each of which carries out a specific task. Factually, algorithmic systems are characterized by a complex and dynamic interplay of multiple algorithms with different aims, assembled by various professionals and engineering teams. Personal algorithm stories, however, are occupied less with technical details than with expressing and translating algorithmic experiences. Nick Seaver (2019a, p. 419) defines algorithmic systems as “dynamic arrangements of people and code,” underlining that it is not merely the algorithm, narrowly defined, that has sociocultural effects, but the overall system. Remarkably, as Seaver (2017, 3) points out, many of his interlocutors in highly technical settings could offer technical definitions of algorithms, but they would also talk about various properties of a broader algorithmic system in vague and nontechnical ways. One of the engineers insists that “algorithms are humans too,” referring to the human-machine connections that algorithmic systems generate. What people think that algorithms are and what they connect and do matters more in terms of algorithmic culture than precise definitions, because those ideas become part of everyday understandings and personally felt experiences of algorithms. When we do not know the technical details of algorithmic systems, the way we react to algorithms and describe them becomes more crucial in terms of the feel of algorithms

than factual or balanced accounts. If we think that algorithms are humans too, we treat them differently than we would if we regarded them as merely parts of machines.

Data Is Power

It is no coincidence that Maisa thinks she might have been observed by the insurance company on social media. Personal algorithm stories resonate with broader shifts in society that have made questions of surveillance newly relevant. Across various domains, in fields from media to health, in political life and the private sphere, the tracking and surveillance of actions and activities is expanding and becoming ever more fine-grained (Pridmore & Lyon, 2011; Zuboff, 2019; Ruckenstein & Schüll, 2017). Jose van Dijck argues (2014, p. 205) that “dataveillance”—referring to modes of surveillance that monitor users through social media and online communication by means of tracking technologies—penetrates “every fiber of the social fabric,” going well beyond any intentions of monitoring individuals for specific purposes. Dataveillance is a product of the accumulation of data by the machinery of corporate marketing, including the harvesting of digital traces—likes, shares, downloads, and social networks—that have potential economic value (Zuboff, 2015). The capacity to analyze behavioral and geolocation data with the aid of algorithmic techniques and large volumes of quantitative data suggests “a new economic order that claims human experience as free raw material for hidden commercial practice of extraction, prediction and sales” (Zuboff, 2019).

Everyday algorithmic encounters speak to the intensifying logic of datafication, referring to “the ability to render into data many aspects of the world that have never been quantified before”

(Mayer-Schönberger & Cukier, 2013, p. 29). Datafication is related to digitalization, which promotes the conversion of analog content, including books, films, and photographs, into digital information. As new forms of datafication deal with the same sequences of ones and zeros as digitalization—information that computers can process—they are often discussed in similar terms. Datafication, however, is closely linked to political and economic projects, thereby setting the scene for more general trends and concerns in the current sociotechnical moment. The intensification of processes of datafication suggest that everything about life that can be datafied ultimately will be.

Nick Couldry and Ulises Mejias (2019) frame ongoing developments with the metaphor of “data colonialism,” which resonates with how local experiences are being subordinated to global data forces. Data colonialism introduces an extractive mechanism that works externally on a global scale, led by two great powers, the United States and China, but also internally on local populations in different parts of the world. The powerhouses of data colonialism, including Google, Microsoft, Apple, Facebook, and Amazon, aim to capture everyday social acts and translate them into quantifiable data, to be analyzed and used for the generation of profit. Hardware and software manufacturers, developers of digital platforms, data analytics companies, and digital marketers suggest that a growing range of professionals is taking advantage of the datafication of our lives in order to colonize them. Indeed, Couldry and Mejias (2019, p. 5) conclude that data colonialism equals “the capitalization of human life without limit.”

Given the informational asymmetries and economic pressures, it is not surprising that algorithms are associated with grim and dystopian predictions of the future. Further critiques

of algorithmic mechanisms address how biased algorithms favor privileged groups of people at the expense of others; algorithms discriminate, are not accurate enough, or fail to provide the efficiency they promise. The harms connected to algorithms are also associated with distorted and fragmented forms of self and sociality in families and in peer groups (Turkle, 2011). Natasha Dow Schüll (2018) argues that the intrusive nature of commercial activities can corrode our self-critical capacities and individualize us to the degree that the social becomes dissolved. She describes a vision of “frictionless living” that guides technology designers in their aims “to gratify us before we know our desires.” All these concerns are present when people reflect on and evaluate what algorithms do. Algorithmic technologies seek to become intimately involved in the everyday through a novel approach that treats life as minable potential, taking advantage of the monitoring of real-time behavior. Not only are people’s lives becoming a source of data, but that data is being used for economic and political purposes in ways that have not been possible before. Digital services, taking advantage of data and algorithms, combine the commercial and noncommercial, the intimate and surveilling tendencies of algorithms, and trigger questions about who is guiding and controlling whom and what needs regulation and protection.

Introducing Friction

Critical political-economic analysis explains shifts in power and profit-making strategies, but it deals only superficially with the question of why tracking technologies are tolerated and even embraced despite their larger political-economy context, privacy threats, and opaque forms of datafied power. This book introduces

people like Frank, a growth hacker, whose goal is to make digital marketing more effective. He is inspired by Alexa, Amazon's voice-controlled digital assistant that, ideally, learns what he wants after a few completed purchases and searches preemptively for the cheapest possible product options. What a relief it would be to have everyday necessities like detergent automatically procured! Frank would willingly give up the private information needed in order to outsource tedious everyday tasks to an automated domestic servant and get household goods delivered with little effort. He believes that the more information he provides about himself and his behavior, the more the digital system learns and the better the services and advertisements he receives.

The notion that digital services, boosted by data and algorithms, provide ease and convenience expresses long-standing thinking about the role of technology in society (Tierney, 1993). The historically rooted vision of machines speeding things up and taking over dreary errands that require little or no human skill is a notion commonly shared by professionals when anticipating algorithmic futures. Frank imagines how, by sharing data traces and being as informationally transparent as possible, we can benefit from algorithmic operations. He considers algorithms to be a necessary part of digital life, as they help to navigate vast amounts of information swiftly. Why should we be afraid of algorithms that support us at work and in hobbies, promote sociality by bringing like-minded people together, help us to catch the right bus, predict local weather conditions, and diagnose serious diseases?

If we want to understand the generative nature of algorithmic culture, it is not enough to conclude that Frank is a product of current neoliberal political-economic conditions, co-opted by company promises of data-driven convenience. Instead, we need to