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Shoshana Zuboff
The Age of Surveillance Capitalism. The Fight for a Human Future: at The New Frontier of Power, London, Profile Books, 2019, pp. 704

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Authors: Alexa, who is W. H. Auden?

Alexa: Winston Hugh Auden was a British American poet. Auden's poetry was noted for its stylistic and technical achievement, its engagement with politics, morals, love, and religion, and its variety in tone, form and content. By the way, you can now ask another question, without having to first say Alexa. Enable this feature by saying turn on follow-up mode.

It is not customary that books reviewed in an academic STS journal have been translated into 17 languages only one year after publication. Shoshana Zuboff's *The Age of Surveillance Capitalism. The Fight for a Human Future at the New Frontier of Power*, published in 2019 by Profile Books, is not a customary book. Zuboff's story is both personal – each chapter begins with an excerpt of W.H. Auden's poetry – and draws on her work as a scholar of social psychology, but the book is not a scientific publication. For that reason, we approach the book as a quasi-scholarly work and as an object-phenomenon that exists within the broader field of contemporary computing and those concerning science, technology and society. This makes it worth reading for STS scholars for reasons we will elaborate upon shortly.

Daily press reviewers have qualified *The Age of Surveillance Capitalism* as "a scaffolding of critical thinking" (Silverman 2019), offering "in-depth technical understanding and a broad, humanistic scope" (Bridle 2019) and that Zuboff's life-work and "merciless analyses peak"(Jakobs 2018) in this publication. But scholars whose areas of expertise are Organization Studies, STS, Law, and critical journalists have criticized the

book for not citing contemporary, relevant literature (Ellinger 2019), for circular argumentation (Morozov 2019) and for hyperbole (Cuéllar and Huq 2019). In what follows, we offer a summary of the almost 700 page "brick", critical reflections on Zuboff's arguments and the ways in which it presents as a social and material phenomenon in and of itself. We close with how we envision the kind of field that Zuboff carves out for scholars of science and technology studies.

Zuboff's central claim is that surveillance capitalism and its societal effects represent an unprecedented threat to Enlightenment values of humanity (p. 323). Zuboff begins with eight definitions for Surveillance Capitalism. The first is: "A new economic order that claims experience as free raw material for hidden commercial practices of extraction, prediction, and sales". The last is: "An expropriation of critical human rights that is best understood as a coup from above: an overthrow of the people's sovereignty". In what follows, we attempt to summarize her path of argumentation between the two.

Part I begins with a re-telling of a Marxist narrative in which assembly line workers are "individualized", having distanced themselves from the "traditions of village and clan"(p. 33). This leads us to neoliberalism, which "reverses (…) claims to self-determination" (p.37) and "thwarts our pursuit to effective life" (ibid). In this atmosphere and with the introduction of the internet, individual users' "data exhaust" could be seen as an untapped resource for tech companies, rebranding this as "the discovery of behavioral surplus"(p. 74). This holds the promise of an "advocacy-oriented capitalism", enabling consumers' search queries to be tailored to their interests. But the "dot-com bubble" at the dawn of the new millennium pushed budding tech companies to re-think their avenues to profit, leading first Google, then others, to the realization that "data exhaust" could be used to sell ads. This "mutation" (p. 76) saved the big tech companies financially, and according to Zuboff, kick-started surveillance capitalism. Referencing the well-worn capitalism-critical story about how "human life" came to be redefined as "labor" for capitalist endeavors, and "nature" to "real estate", Zuboff draws a line from Marx's notion of "primitive accumulation" and "original sin" (citing Arendt, p. 99), to David Harvey's "accumulation by dispossession", arriving at her own "digital dispossession". Thus, "human experience" becomes a source of profit, free to be taken by tech companies, repackaged as prediction products, and sold to advertisers (p.100). Having discovered this gold mine, Zuboff details how big tech companies protect their treasure with claims of "freedom of speech" (p. 106) and the seduction of a neoliberal state (the US) impressed by new surveillance capabilities in a post-9/11 era. This included deeply entangled relationships with state actors. Part I ends with the "division of learning", a contemporary riff on the division of labor (p.181), in which "a new priesthood" is lured away from academia to lucrative positions in big tech companies (p.189). Surveillance capi-

talists' power is consolidated because they now know a lot about us, but we know little about them.

In Part II, Zuboff painstakingly and convincingly documents the history and methods with which "ubiquitous computing" (p. 199) moves from exclusively online fora (defined as "virtual") to public and private physical spaces (consistently referred to as "real"). The introduction of Internet of Things (IoT) technologies ushers in the goal of "digital omniscience" (p. 207-208). Zuboff identifies developments in "telemetry" or animal tracking devices, as the beginning of this trend, implying that they are the inspiration for "wearables" and other devices that move with us through the physical environment, documenting – and later, modifying – our behavior. Leaning on metaphors of territorial conquest, Zuboff argues that, with these connected and "smart" devices, surveillance capitalists conquer our "still wild spaces" (p. 238). This includes details such as facial expressions, social media posting patterns, voice recognition, personality traits, floor plans of a home and "block-by-block map data" (p. 317) detail, including your backyard. Under the guise of "personalization and customization"(p. 256), Zuboff explains that innovators wish to create products that "nudge" the citizen toward certain behaviors, often using "gamification" tools (p. 313) in a "living laboratory" (p. 312), generating a market utopia with "guaranteed outcomes"(p. 214). These innovations are presented as intentionally misleading, likening them often to the Trojan Horse. Surveillance capitalists make strategic use of "lawless space" because technology tends to develop faster than the regulations meant to govern them (p. 105). Zuboff shows how "consent" is a Kafkaesque exercise in futility, privacy and anonymization are moving technical and legal targets, and these changes are framed as inevitable anyway. Technology giants like Google and Facebook use their power to redefine social norms, to dodge privacy activists and to pay off government officials. For Zuboff, nothing less than free-will and democracy are at stake.

In Part III, Zuboff outlines her theory of the power that underpins the age of surveillance capitalism, and the consequences it has for human society and social relations. The vision of surveillance capitalism, according to Zuboff, is that machine processes replace human relationships so that certainty can replace social trust and democracy. She dubs this power "instrumentarian", and defines it as "the instrumentation and instrumentalization of behavior for the purpose of modification, prediction, monetization, and control" (p. 352). Using it as a foil, she explains that totalitarianism worked through *ideology*, seeking to gain and modify souls; it was a political project that operated through the means of violence. Instrumentarian power, in contrast, does not seek to modify souls but human behavior; "to achieve its own unique brand of social domination", Zuboff locates the roots of instrumentarianism in the intellectual field of "radical behaviorism", pioneered by the psychologist Barrhus F. Skinner (p. 353), whose classes Zuboff followed at Harvard when she was

a young graduate student. Skinner held that human behavior could be studied, known and even engineered through thorough observation of external action. For the behaviorist, the human could be objectively observed as "the Other-One". Here, the human was seen as an organism, with no free will to make choices. Freedom was considered an illusion, and thus also democracy. Big Other is the name that Zuboff gives to this instrumentarian form of power. As a hybrid concept that brings together Big Brother – that fictional character and figure symbolizing totalitarian power from Orwell's dystopic novel *1984* – with "the Other-One" from radical behaviorism. Zuboff warns that surveillance capitalism is breaking down the walls of our homes as sanctuary, and, ultimately, risks the right to a human society in which we are free to decide our future, threatening the very right to a "future tense"(p. 329).

As should be clear, Zuboff is outraged. The text is maddeningly repetitive, and we miss more detail and reflection about her role and research methods. Almost no contemporary, critical work in this field are cited, such as that of Paul Dourish, Mary Gray, Ian Lowrie, Nick Seaver, Lucy Suchman, Peter-Paul Verbeek and many more.

In addition, Zuboff's analysis is highly US-centric. In fact, she situates herself as a product of the immigrant, capitalist American Dream, where hard work can earn you "the good life"(p. 34), including physical comforts, education, the arts, and civic engagement. This is perhaps why she is so enamored of the poet W. H. Auden. We prefaced this review Alexa's explanation of Auden's work, because Zuboff's prose can, despite her critique, read as manipulative as the prodding of a digital assistant.

But perhaps we are not the audience meant to be nudged. In a review in *Surveillance and Society,* Kirstie Ball suggests that "this book was not written for us. It is intended as a wake-up call for the educated business reader to recognize the massive power of the tech platforms" (Ball 2019, 253). As a professor emerita from Harvard Business School, Zuboff's critique comes from within this community, not as an outsider.

If Zuboff's intended audience is "the educated business reader", then it may be useful for STS scholars to think about this tome as an event, a material phenomenon and a public debate. Despite the book's shortcomings, Zuboff makes surveillance capitalism a dinner table conversation, rather than an esoteric realm reserved for math geeks. We understand that this dinner table is likely located in a wealthy, white, suburban one-family house, and that might be the point. The wide-spread use of contact tracing apps in connection with the current Covid-19 pandemic suggests that engagement with broader publics about surveillance capitalism and digital trust (Bruun et al. 2020) are timely. Thus, the book's physical presence and its language can be re-positioned as boundary objects, tools, and powerful actors and interlocutors. This is an approach inspired by Annelise Riles's (1998, 378) suggestion to consider documents as "aesthetic objects", where form itself has meaning. Continuing in this vein,

what insights might be won by interacting with *The Age of Surveillance Capitalism* as an event and gift, as a performance of relations (Sansi and Strathern 2016) at the dinner table? Zuboff's work may also inspire an inward dialogue (Kumar 2019) with our own sociotechnical tools. *The Age of Surveillance Capitalism* will exhaust you, but it does not exhaust all that there is to be said. On the contrary, it is a public door to debate through which STS scholars should enter with our detailed, nuanced and in-depth analyses of the digitization of social relations and its consequences.

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