

## Surveil and Control: A critical review of “The Age of Surveillance Capitalism”

Jan J. Zygmuntowski

*The most profound technologies are those that disappear.  
They weave themselves into the fabric of everyday life  
until they are indistinguishable from it.*

Weiser, 1991

*When the whole of society is reduced to the factory,  
the factory — as such — appears to disappear.*

Tronti, 1962

*Surveillance capitalism* has taken popular imagination by storm, and the scholarly world quickly followed. It is the *nom du jour* if one attempts to briefly describe the current regime of datafication for profit, and the power-hungry technology companies which increasingly dominate markets and societies. It serves as the intellectual backbone of Netflix’s *The Social Dilemma*, and that one necessary critical reference in articles across disciplines. But having read Shoshanna Zuboff’s “The Age of Surveillance Capitalism”, I suspect the concept has taken a life of its own, reinterpreted, expanded beyond Zuboff’s account of behavioural manipulation industry. It is a sign of a great *oeuvre* and a dazzling artist, but much less of critical accuracy.

A long-time student of managers and firms, Zuboff adopts a functionalist, positivist lens to portray the rise of a new mode of accumulation. Her narrative draws heavily from the companies’ own accounts, dozens of interviews with data scientists and other accessible materials on business development. With a far from apologetic stance, the Harvard Business School professor openly admits the failings of neoliberal dogma and draws from intellectual traditions of heterodox schools. Hayek, Friedman and Jensen receive no mercy when Zuboff unpacks their political economy as in fact stripping people of agency and subduing them to the market. Instead, the book is rich with Polanyi’s “fictitious commodities” and “double movement”, Marx-inspired “behavioral surplus” and Harvey’s “accumulation by dispossession”.

Big Tech’s “coup from above” (p. 463) is one of the book’s excellent metaphors, clearly pointing to the stakes of the conflict *en large*: the loss of human sovereignty, a precondition for collective action and social order. Zuboff warns of this danger to democracy and free will, and the alarm has since rung true, be it in the case of algorithmically amplified genocide in Myanmar, or people unable to take sound decisions thanks to COVID-19 vaccine disinformation. The book reads essentially as a manifesto of uncertainty-as-liberty, human unpredictability and possibility of other futures, although a viable proposal of *the* better future is missing from this picture. “The Age of Surveillance Capitalism” employs Arendt’s ideas on free will to battle the impossible vision of perfect information and full rationality, now powering the fanaticism of fully automated smart contracts.

In creating such a feeling of urgency and unmasking (mostly American) techno-financial elites Zuboff has been successful, maybe even vital for the recent regulatory efforts such as European Union's Digital Services package. Going further from here, however, will require overriding the critique of surveillance alone, starting with understanding of the complex set of social antagonisms bred by recent developments of cognitive capitalism. In search for a coherent theory of the existing digital economy of the XXI century, we need to explore the problems that "surveillance capitalism" is in fact riddled with.

The review mirrors the book's structure, which is divided in three parts: the origin of online surveillance, expansion to real-world spaces, and transformation into a hegemonic power. Leaving aside Zuboff's great contribution to the public debate, it argues successively that:

- 1) the concept of surveillance capitalism is unclear, and possibly distractive from alternative problem descriptions,
- 2) the book misreads data as a resource (in the "data is the new oil" logic), lacking in explanation how value is produced,
- 3) the predictions of instrumentarian power fall in line with companies' own accounts of almost God-like technological possibilities, and downplay the ongoing deployment of platform power.

These flaws prove to be fatal when Zuboff offers individualistic *panaceas*; a retreat rather than empowerment. However, a sustainable society needs both.

## The industry exposed?

It is in the very opening of the book that we face the ambiguous definition of "surveillance capitalism": it is an "economic order" and "logic", "a rogue mutation of capitalism" and "a movement" (p. 8). Although the focus is definitely on datafied human experience and behavioural modification, Zuboff also weaves concentrated "wealth, knowledge and power" as the results of surveillance capitalism at work. Such a definition: a host of definitions, even, shows the ambition of the new theory to explain both economics and politics, business and society. The narrative convincingly portrays the milestones in the discovery and further development of the surveillance industry, with its attempt to entrench every corner of human life and turn it into surveillance assets.

As Morozov brilliantly points out in his essay, Zuboff mostly assumes that surveillance and behaviour modification is the systemic, historical gamechanger and avoids engaging with other theories that attempt to prove otherwise (Morozov, 2019). But we can entertain many different ways to periodise the development of ICT, distinguishing the user-driven Web 2.0 from static server-client communication of Web 1.0, or Software-as-a-Service business model from on-premises software sold in boxes. Notions of cognitive capitalism (Moulier-Boutang, 2011) or platform capitalism (Srnicek, 2016) draw the line differently, and as such explain the troubling developments in a larger perspective, without the universal hammer of surveillance.

Collecting "behavioral data with permission and solely as a means to product or service improvement" according to Zuboff's description is outside the realm of surveillance capi-

talism, and falls in classic capitalism (p. 28). But in fact most companies claim to use data for constant improvement e.g. of personalised ads to the benefit (“relevancy”) of the consumer, thus blurring the line between the colonial declaration of *Requirimiento* and normal product development. Hence the ongoing debate on what constitutes informed consent, and whether adhesion contracts requiring surveillance to use the product should be legal. Non-behavioural data present an even larger problem, when we consider Google Maps, built in part by scanning real-world cities, and in part by people’s own input on locations and facilities. Although Zuboff paints Google Maps as surveillance, apart from the most intrusive practices, it presents a much more complex case.

Zuboff also casts the Google v Gonzales case on “the right to be forgotten” as an example of the fact that “the operations of surveillance capitalism and its digital architecture are not, never were, and never would be inevitable” (p. 60). But in fact all of the data in question were posted online, not harvested from users, so their appearance in search results comes from regular crawler activity. Similarly, the stunning “Carol Brady” moment of Google search (p. 76) had little to do with behavioural data; it was about the sheer amount of queries flowing to the crucial internet node that Google has become. It is as if the systemic change were not aims or terms of acquiring data, already exploited in the past by insurance companies and credit scores, but institutions and infrastructure capturing value of data.

Therefore, other forces are at play as well, ones that cannot be explained only by behaviour modification. When Google is characterised as “the first to conduct the entire commercial surveillance symphony, integrating a wide range of mechanisms from cookies to proprietary analytics and algorithmic software capabilities” (p. 87) there is a hidden answer there: the vertical integration of value chain and opaque algorithms allows for uncompetitive behaviour, such as deceiving publishers and advertisers about true prices (Srinivasan, 2020). The variables of network effects, gatekeeping or illegal conduct might actually hold larger explanatory power than surveillance itself.

Zuboff is right to say, as the new antitrust school continues to prove, that Google Search impedes competitors “not primarily to fix prices”, but is it really done to “protect the dominance of its most important supply route” (p. 131) of user behavioural data? It is ironic that in the Google and Alphabet v Commission case it was Google that claimed increase in traffic to Google Shopping was a result of greater data-driven relevance; but as the European Commission established, it was the anticompetitive practices against other comparison websites that lead to such results. Whether the motive was to get more user data, or just profit from another advertising service, should have been proved, not assumed.

Zuboff depicts Google as the first company that diverged from the “advocacy-oriented” path of Apple, and embarked on the surveillance project, soon followed by Facebook and other data harvesting companies. But why single out Apple? Although Zuboff admits the many failings of Apple, such as offshoring jobs to notorious Foxconn facility, tax avoidance or abuse of monopoly power, she insists that the company is outside the boundary of surveillance capitalism as it does not engage in behavioural manipulation. Since the misgivings of one of the largest tech companies in the world (the “A” in GAFAM) are all for the benefit of the consumer, Apple “opened the door to the possibility of a new rational capitalism able to reunite supply and demand by connecting us to what we really want in exactly the ways that we choose”. Zuboff juxtaposes the individualistic modernity of Apple with neoliberal political economy, which aims to “destroy the individual urge”, but little explanation is given how Apple’s view of individual consumer is different from the neoliberal one.

The recent developments of Apple policy show why the concept of surveillance capitalism is not enough to describe the “wealth, knowledge and power” of contemporary tech companies. It was precisely “Apple’s legacy of privacy leadership” (Apple, 2021) that led the company to introduce App Tracking Transparency, which decreased third-party data sharing: but allowed native Apple Search Ads to grow dramatically. Overall, ATT decreases surveillance, but at the same time the company increases revenue by concentrating even more gatekeeping power. Similarly, a shift of business focus from ads to cloud infrastructure: visible in the growing importance of Amazon’s AWS, Google Cloud, Microsoft’s Azure and the struggle over data localisation, should point to lesser interest in surveillance, but at the same time greater dependence on the largest vendors.

## Surplus without labour

Although “The Age of Surveillance Capitalism” seems to put humane values, our rights and freedoms at the very centre, the theory actually leaves little space for agency. Behavioural surplus is the “data exhaust” seen through the lens of Zuboff’s political economy: the extra data that can be processed, a leftover of our online doings. She specifically defies Marx though, when she declares that “instead of labour, surveillance capitalism feeds on every aspect of every human’s experience”. If it is not labour, then what is it? “We are the objects”, declares Zuboff “from which raw materials are extracted” (p. 93). But what really happens is we produce data by our actions, actively interacting with interfaces and sensors. We are no passive bodies to mine, but active engine of this “accumulation by dispossession”, regardless if it is swiping through social media, running with wearables or setting a smart washing machine. To get more data, tech companies go as far as to addict users by preying on human brain vulnerabilities. The wealth of behavioural data comes from cognitive, informational and emotional labour, and thus it exhausts humans, effectively draining their attention and capacity to focus, or lowering social trust through technological alienation. A rich scholarship studied and supported this finding, from Autonomist Marxists’ “immaterial labour” (Hardt, Negri, 2005) to Christian Fuchs “information labour” and “playbour” (2016).

It might seem like a minor theoretical difference, but it has large practical consequences. Just think about the idyllic situation of parents taking a photo of their infant child. Does the value come from the child’s body, autonomically, or from the parents action of taking the picture? What if the light is too dim and the parents switch the lights on to make the photo brighter, and in the end, machine readable: – is it again a vague “human experience” of having a body that creates value, or the lights-switching photo-taking action turning to labour when monetised by a tech company? Zuboff frames humans as objects of surveillance, whereas we truly are just as much subjects of data production.

What was known to radical scholars was as well of interest to technologists and business consultants. Zuboff never engages with the notion of Web 2.0 (not a single mention in the book), which was pioneered exactly at the time of the birth of “surveillance capitalism”. Web 2.0 was all about “harnessing collective intelligence” through “architecture of participation” that allows for user co-creation by lowering the barrier of entry for content generation like microblogging, uploading and interacting with others (O’Reilly, 2007). It was Web 2.0 that

invited us, the Crowd 2.0, to produce all these data. And in fact Google was the prime example O'Reilly gave to show how firms should grow with unpaid user labour.

Page and Brin, Google founders, very well knew that their search engine harvests the fruits of labour of “tens of thousands of Webmasters”, as they wrote in the seminal paper (Brin & Page, 1998). The crawling search engine “involves interacting with a fair number of people” after all, some of them asking sincerely “You looked at a lot of pages from my Web site. How did you like them?”. Already in 1998 Google was not just any innocent enterprise, but an apparatus capturing the value of what we deem important as collective, general intellect (Pasquinelli, 2009). Once the cognitive microlabour of hyperlinking has been exploited, and the engine consequently attracted massive network of users, the new enclosure of the commons followed. The challenge was to monetise the network, and that was achieved via fees for circumvention of sound results (advertisements) and capture of further data left by visitors.

The innovation of digital platforms is precisely this: capturing and extracting the socially produced value and by the power of network effects becoming a rentier entity (Zygmuntowski, 2018). Much like natural monopolies of the past, the platforms are the key infrastructure of social production, but not without a “cost of connection” borne by data colonialism (Couldry & Mejias, 2019). This leads to real subsumption, reshaping social relations to fit the capitalist business model. Surveillance is not a “rogue mutation” of a properly working capitalism as Zuboff claims; it is a system working as designed, commodifying new phenomena and capturing new reservoirs of value production.

What we face is a network factory, in which the surplus value comes from both sides of supply and demand, social relations and communication mediated by platforms-network overseers. The industrial factory was a mode of production in a market society of the steel and electricity era; whereas network factory is the mode of production in a market society of the information age. This mode of production is not limited to surveillance infringing personal autonomy, as Zuboff sees it, but spans an increasing array of activities including the highly platformised gig economy and platform workers. Facing algorithmic management and the regime of data-driven productivity, they truly are the ones to be “automated”.

## Automate to control

When Zuboff proclaims that technology companies aim to “automate us”, she mostly speaks about the disturbing behavioural science of Skinner and its novel incarnations of neoliberal nudging (Thaler) and gamification. The endpoint of behaviour modification is reduction of all uncertainty, and the means is not only surveillance but much rather conditioning. Installing behaviours makes them fully predictable, therefore better for a business model reliant on proper predictions of our actions. For the clarity of argument, imagine “Collateralised Ad-Words Obligations”, a financial product based on online sales achieved thanks to spending on ads attracting users to an e-commerce store. If one wants such a product to persist despite unpredictability of user actions, reduction of free will-related risk is only reasonable. But the ads served to us are far from being that effective, and instead of creating “guaranteed outcomes” and unaware puppets, they might just as well lead to a bubble and its “sub-prime attention crisis” that scholars already describe (Hwang, 2020).

It is tech companies that actually project this image of “God’s view”, as Uber managers called their special data surveillance feature. It is the occult of mind manipulation once again, used to claim product supremacy and deflect public scrutiny. There is no better marketing than accusations of holding power to choose American presidents. What happens behind the scenes however is price-gouging by Google and Facebook, plus forgery of publisher data. Not to mean platforms have no influence: the case Zuboff evokes of nudging to vote in elections are proof enough they do, but the problem is less with the ads and intended business aims than with unintended consequences of business means. Polarisation, botnets, algorithms amplifying hate and astroturfing campaigns are the pollution and toxic waste of the dominant business model, an externality much more harmful than Skinner’s supposedly perfect “conditioning”.

Instrumentarian power is real I suspect, but not in the exact sense Zuboff sees it. When aiming her critique at corporate vision of turning public spaces into smart cities, she describes rentier behaviour: vendor lock-in to Google Sidewalk’s systems or extraction of “maximum fees from citizens” (p. 219). Similarly, Pokemon Go describes using game popularity to force users to visit sponsored location, taking a cut from urban landscape and rents real estate owners get. These are less stories of surveillance and rather of power, dependence, control over infrastructures and thus sovereignty. What they lead to is not a subtle behaviour modification by the means of nudging, but an explicit regulatory regime of orders and bans. To what extent it shapes free will is less clear than how it shapes possibilities, processes and outcomes, regardless of the will itself.

Zuboff is right that tech capitalists think “we should be more like machines” (p. 388). It is most visible in Amazon’s factories, where data-gathering serves the goal of constantly measuring and increasing the productivity of labour with means of Digital Taylorism. Surveillance is hence means to algorithmic management, which is the power to control and protect profits. Whether it is a digital platform controlling users, sellers, gig workers, or a company controlling workers, this immense power is felt and seen even if misunderstood. No wonder that state actors are in the midst of curbing Big Tech: and in response imperialist projects of virtual expansion to the fully-controlled Metaverse are declared.

## Finale: the collective future we need

In describing why surveillance capitalism was successful, Zuboff claims that “neither the pursuit of privacy regulations nor the imposition of constraints on traditional monopoly practices has so far interrupted the key mechanisms of accumulation” (p. 188). Ironically, her own calls for the “right to sanctuary” and the “right to future tense” are based on the same foundation of individualism as privacy regulations are. There is nothing inherently wrong about it: they are very much needed, but not sufficient according to her own words. Whereas the critique of antitrust is completely misguided. Rather, we have seen a decline in merger halts and lack of adequate sectoral regulation preventing the most unfair practices, not to mention zero attempts to socialise or nationalise platform infrastructure: as often happened in energy, rail or utility industries.



According to Zuboff, surveillance capitalists are masters of rapid practice, with the theory lagging behind. But the many accounts of C-level speeches and think pieces she analyses show that the theory and practice are simply disconnected; what is done is other than what is said. When idealistic visions of an optimised, AI-powered world are dreamed, the profit motive pumps money and directs business development along different lines, ones of concentration, control and dependency. Zuboff is right to call out the “puppet masters” for evoking “unavoidable actions and consequences (...) to erase the fingerprints of power and absolve it of responsibility”. Inevitability of certain developments of technology – IoT, AI, web3 – is indeed a false narrative. But focusing on personal ethics of managers obfuscates that it is precisely capitalist, extractive and exploitative economic regimes that lead them to choose “automating” over “informing” speaking in the dialectics of Zuboff’s theory. The forces are structural, and so even new rights and ethics are just the foundation upon which a deeper democracy has to built. To achieve this, it cannot be restricted to political, parliamentary representation, but transform ownership and decision-making from exclusive to egalitarian and inclusive.

The path paved by the platform co-operativism movement (Scholz & Schneider, 2017) leads to collective empowerment and further democratisation of the new geopolitical mega-structure of the technological Stack (Bratton, 2015). Once the stakeholders are in control, the drive to surveil and algorithmically manage them(selves) will cease, and the costs of externalities will be likely to be internalised in the co-op budget. The point is to control the Fairbook Co-op together as 3 billion users, instead of coping with Facebook’s control over us by retreating to “sanctuary”. The quite short experiment of social economy and economic democracy has been impeded by the costs of co-ordination and low trust levels; conditions that we can overcome thanks to the very technological developments that allowed network factories to emerge. Thus, the mode of production does not automatically imply the regime of accumulation; it is a societal choice.

In Zuboff’s theory of surveillance capitalism, we are mined for data, and then it is weaponised to further strip us of agency. However, she does that as well, twice in fact. The first time, by removing cognitive labour as the true source of wealth and portraying data as mere “raw material”; the second time by offering more individual rights as a viable solution while dismissing the power we have to socially engineer our own society. Once we realise that, we can reach for collective, democratic control over our own data and infrastructures. Instead of worrying that any type of social predictions or economic planning is Pentland’s “social physics” and tyranny, we should leverage the planetary collective intelligence to rapidly tackle the problems of Anthropocene: climate change, loss of biodiversity, emerging biothreats, inequity and instability of our civilization which produce suffering and conflicts.

In summary, surveillance capitalism was always about having knowledge to gain power. The total equation is more complex than surveillance alone, and it is a consequence of the legacy capitalist economy and novel ICT technologies. Unless we change the former, the latter will be made in its image. In achieving that, the questions raised by Zuboff on the power to know, decide, and decide on deciding are crucial. The answers however are to be found outside “The Age of Surveillance Capitalism”.

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