



REVIEW ESSAY

The New Frontier of Power: Human or Machine?

The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power by Shoshana Zuboff, Profile Books, London, 2019, 702pp, ISBN 9781781256855, index, price £10.99

Reviewed by Sofia Johansson

Pasteleria Dulce occupied a cramped mediaeval building tucked into a tiny square. The Montes family took special care that the passing decades had no visible effect on their cherished bakery. Each morning, they lovingly filled sparkling glass cases with crisp sugar-coated churros, delicate bunuelos filled with vanilla custard, tiny paper ramekins of strawberry flan, fluffy magdalenas and Great-Grandmother Monte's special flao, a cake made with special milk cheese laced with Spanish lavender, fennel and mint. Most was as it had been served to Queen Isabella. An old ceiling-fan circled slowly, nudging the perfume of honey and yeast into every corner of the ageless room.

In 2011 the Montes family faced a tough dilemma. With the economic crisis, 47 per cent of Spanish young people faced unemployment, and overall unemployment was at 27 per cent – the highest in Europe. The pressure was high for them to sell the building and let the future swallow La Dulce. However, with true human spirit that has much been disregarded (and manipulated) by 'venture surveillance capitalists', Old Montes said:¹

the future will need the past. It will need these marble floors and the sweet taste of my gypsy cakes. They treat us like figures in a ledger, like they are reading the number of casualties in a plane crash. They believe the future belongs only to them. But we have our story. We have our life. The future is our home too.

Then they got busy, figuring out the most ethical way to survive the crisis. They would work on expanding La Dulce's sales with new home-delivery and catering options. Everyone would take a pay cut, but no one would have to leave. For Old Montes, his family's right to anticipate the future as their home demanded continuity for some things that are elusive, beautiful, surprising, mysterious, inexpressible and immaterial, but without which, they all agreed, life would be mechanical and soulless.

Enter a 'brilliant' group of scientists, engineers, musicians and artists reconceiving the world through the lens of Google search in order to 'master reality itself'. A 250-acre marsh with hundreds of sensors that measure and record everything from tree sap flow, wind, sound, light motion, chemical levels and more, via 'inertial sensors' that track and compute complex

movements. Make-up and tattoos have electronics attached directly to the skin, while fingernails and wrists are transformed into computational interfaces that can read finger gestures, even in the absence of hand movements. Sensor tape and stickers can adhere to inaccessible surfaces and building materials, where they can be ‘wirelessly interrogated’.

Why are they doing this, one might ask? To develop a virtual sensor environment in order to produce what Professor Joseph Paradiso calls ‘digital omniscience’, which is a pervasive-everywhere, augmented-reality environment which will become an extension of ourselves, rather than an embodiment of an ‘other’. Professor Paradiso and his group of ‘brilliant’ anticipate that this new ‘mastering of reality’ will become so much a part of us that the boundaries of the individual will become very blurry.

Who is this Professor Paradiso? Some character out of a sci-fi novel? What kind of ‘Paradiso’ is he working to produce that is so far different from the reality that Montes’ family has lived in and shared with many for over a century? Professor Joseph Paradiso is actually a man of our time, and he is working hard with the ‘brilliant’ at MIT University to create a ‘seamless nervous system that will cover the planet with the goal to merge the rapidly evolving “omniscient” electronic sensoria on to human perception’. The fact that Paradiso is just one of the many players – I mean, ‘scientists or experts’ in Zuboff’s extraordinary book of 525 pages (excluding footnotes and references) revealing disturbing developments and serious considerations for our future is enough to make one either want to get out of the playground and get seriously tucked into her book while a human future is still possible, or might cause one such disturbance that one wishes to slip back into tech as entertainment, letting denial again take hold, rather than facing that which is terribly uncomfortable.

In any event, what Zuboff’s book reveals is that while the majority of people have been using the rapidly changing new technologies for ‘connection’ and entertainment, a minority of

well-funded, powerful initiatives have been hard at work mastering not just how to predict people’s behaviour, but to ‘tune’, ‘herd’, ‘replicate’ and – most uncomfortable of all – to go beyond controlling it, but actually *produce* it – our behaviour, that is! These ‘economies of action’ are achieved by setting up *choice architecture*, which notion refers to ways in which situations are already structured to channel attention and shape action – *our attention, and our actions*. Most of these are designed to operate outside of our awareness. There are terms like ‘nudging’ to get someone to act in a way they would not normally do, or ‘herding’, which is controlling key elements of a person’s immediate context which ‘herds’ them into a commercially or other desired behaviour. As one software developer in the programme of the internet of things (IoT) says, ‘we are learning how to write the music, and then we let the music make them dance’.

Entire economies are now being developed which trade on ‘predictive behaviours’ of people, and which even sell behavioural surplus accumulation. Zuboff includes a descriptive diagram of how this trading in ‘behaviours’ (yours and mine) works, which makes it clear that we are now the material being mined. She directly quotes people at the forefront of this ‘new normal’, and it becomes clear that self-awareness, autonomy, self-determination and freedom of will are all a threat to this new economy based on surveillance revenues. ‘The competitive necessity of economies of action means that surveillance capitalists must use all means available to supplant autonomous action with heteronomous action.’ Meaning, in layman’s terms, that good, *conscious, creative* people like Old Montes of La Dulce (also a genuine person in her book) are not allowed to be part of this new ‘capitalism’. Why? Because heteronomous action means *predictive behaviour* and *standardised* products (not unique, lavender-laced special milk cheese cakes made by hand)! What becomes obvious is that in this new world of surveillance capitalism, exposing our *feelings* and *emotions* make us extremely vulnerable candidates of behavioural modification, or worse – possible discarded carcasses of ‘cancel culture’.

Zuboff's well-researched and craftily written book documents our movement into what *could* be termed a 'third modernity'. She explains in interesting detail how Google supplanted our right to be part of this new modernity, and how it strives to keep a *digitised future* outside of the reach of our control – or anyone's control, including elected officials. Well before the current 'crisis' that has shut down the world (labelled Covid-19 of 2019), Google's leaders reflected their determination to retain their privileged control over the future; *our* future (CEO of Google, 2011).

With its 'wrap-around' digitised user agreements or contracts (you know, those things you always click 'Accept' to before being able to use your mobile phone), Google, Facebook and Apple have all managed to escape any kind of regulation. The very fact that the agreements are digitised means that they can be expanded upon, changed and adapted to constantly get more and more 'raw material' for their markets of Future Behaviour. Unlike the Industrial Revolution which saw Henry Ford (however imperfect) balance the rise of the second modernity of mass production with reciprocity in the social order, Google, Facebook and Apple have put speed and unchecked power and destabilisation of democracy at their centre.

Zuboff explains in detail, quoting several renowned philosophers, economists and industrial capitalist icons of our time, how new market forms are most productive when they are shaped by an allegiance to the actual demands and mentalities of *people*. Several direct examples are given demonstrating how Ford knew this, and therefore was able to make plenty of 'capital' for his investors, whilst also meeting the social and practical needs of average people. While the 'second modernity' of Industrialised Mass Production proved profitable for many elite, it also gave hundreds of millions of people access to experiences that had once been the preserve of a tiny elite.

The social contract of the founder of mass production, Henry Ford, meant that education, mastery of language and thought propelled us to create personal meaning, and the ability to form

and act on our own opinions. All of this gave us opportunities that increased our imaginative capabilities, and we moved into a new way of fortifying the legitimacy of personal identity over a priori social norms. For the first time, humanity was able to move beyond the chosen duty of our lives by our clan, or our family, and to begin to explore new frontiers of individualisation.

The first modernity suppressed the growth of self in favour of collective solutions. The second modernity gave us the skills to go on our own 'search' of exploration and self-creation. Unlike any other time, we had the freedom to stitch together our own lives. Nothing was given. We were able to learn through trial and error, seeing that everything had to be renegotiated, reconstructed and reviewed on the terms that made sense to us: family, religion, sex, gender, morality, marriage, community, love, nature, career, food....

Finally, the canon of principles and laws that confer inviolable individual rights and acknowledge the sanctity of each individual life had caught up with formal law. We were able to start making it *actual* in everyday life, and it is indeed this that summoned the internet. It allowed us to amplify our voices and to forge our own chosen patterns of connection. The internet marked the beginning of the third modernity. Thus, the 'dispossession' that the new surveillance capitalism is imposing on all average people does not have to be a necessary state of affairs for its investors, though sadly, at the moment, it is.

Little did we realise that institutionalised shifts in economic and social policies and practices associated with a neoliberal paradigm would lay the foundation for a few 'technocrats' like those in charge at Google, Facebook and Apple to work to *reverse* the beautiful wave of self-determination that the second modernity brought with it. In this new, far-reaching paradigm, Zuboff makes the case for how the 'shareholder value movement' would be enshrined as the ultimate source of imperative control; displacing democratic contest and deliberation with a people deliberately controlled, treated like

machines and sentenced to compete for scarce resources.

The *double movement*, which was active during the industrial second modernity, and which worked to integrate a network of measures and policies designed to check the action of market relative to labour, land and money, was deliberately axed by the neoliberal economic paradigms set in place by the theories of Hayek and Friedman, which sought to destroy bedeviled governments and any external authority over markets. This led companies like Apple and Google to turn to the language of disruption and an obsession with speed, rather than seize the reins on developing the consistent, comprehensive social and institutional processes that would have elevated the iPod's promise to an explicit market form, as Henry Ford and Alfred Sloan had once done.

The checks and balances that developed with Ford and Sloan enabled both *profit* and a *human future full of promise and creativity*. Was it that Ford and Sloan realised that humans have intrinsic value, and that their creativity is essential for a desirable world and healthy planet, *or* were they pressurised by activists to ensure that the checks and balances for the social good were incorporated into their second modernity of industrialisation? While we cannot know for certain, Zuboff leans towards acknowledging that it was *both*. Ford and Sloan seemed to have the vision of a profitable promise for their investors, while also providing resources for humans to learn and thrive. The design also needed people *on the shop floor* to actively fine-tune the shortcomings; sometimes leading to loggerheads and union strikes, but nonetheless creating an interplay that kept the progress of industrialisation *by humans, for humans*. It was also not operating under a neoliberal paradigm of institutional destruction.

The human good that it enabled was so great, in fact, that Detroit – the centre of Ford's brain child of mass production – was the first and only city in the world where 90 per cent of its occupants *owned* their own *homes*. Not flats, but *homes*. The individuation and self-actualisation that this afforded hundreds of thousands of

people cannot be underestimated; nor can the fact that many of the new home owners were African American grown children of former slaves. To say that this was a legendary achievement that married financial and mechanical progress with human progress is an understatement. The rich culture that ensued, from humans who had their chains freed from mere existence and/or family/clan expectations, resulted in outstanding centres of art (the Detroit Institute of the Arts), outstanding and creative music (the Detroit Symphony Orchestra, Motown, techno and a unique form of jazz and blues), and a rich architectural and sports scene unrivalled in cities elsewhere.

However, this new beast of unchecked speed and destruction embraced by Silicon Valley's digital giants has led to market action that has gone far beyond our control, and where we are not even essential. We have become 'human natural resources', and it is our behavioural data and our 'herded and predictable' behavioural *actions* that are the products. We have become like native peoples whose self-determination has vanished from the maps of our own existence.

Zuboff informs us of how we are 'mined' for our data, how our actions are predicted, sold and actualised in markets, and how even *right of sanctuary* has come under threat. Her detailed explanations of how human experience is mined makes one aware that being in a room where there may be 'smart' phones, 'smart' watches, nest alarm systems (security alarms or even fire alarms), and openly *sharing one's emotions* or *pouring one's heart out*, can be dangerous. We have entered a world where honest and open human interaction could not only expose us to 'herding', but could result in our behaviour ultimately being modified beyond our awareness or control.

In communist times of the past, people had to guard their true thoughts and feelings from their neighbours, and even sometimes from their families, as they were at risk of being annihilated for 'thought crimes'. Now, we are entering a dangerous regime where certain forces or techno-elites are pushing programs that involve installing devices into our very infrastructure

(through ‘Green New Deal’ upgrades, etc.) that will listen, record and upload our human data. This data then creates individual profiles for the machine, which then works to ‘standardise’ us into certain behaviours desirable for its ‘investors’. The desired standardisation is also one in which they can not only predict, but control not just our present, but also our future behaviour. Being in a room and sharing with others, even friends, becomes a dangerous act in this new paradigm of unbridled surveillance capitalism. \

Programmes and programs which push for ‘sustainable or green’ upgrades can also be dangerous, as much of the upgrade equipment (electric heaters, electric smoke alarms, ‘smart’ thermostats, ‘smart’ meters etc.) are designed not only to analyse our usage patterns, but also to ‘listen in’ to our very sacred spaces of sanctuary. Our spoken thoughts as well as our behavioural rhythms are recorded, added to the data of our individual profile and then analysed, used, sold in markets that already exist; and worse, this data can be used to modify, control or ‘cancel’ us. Our homes, once invaded by these new technologies, will no longer be the sanctuaries they should be. Already, every home or room with a smart-phone is compromised, but that seems not to be enough. The technocrats want every electrical device to deliver data to feed the AI (Artificial Intelligence) systems that will both analyse, control and predict our behaviour, and also *learn* from it.

The timing of this review essay was not planned, and it comes after a few elite seem to have ‘shut down the world’, and digital giants (who are not even doctors) like Bill Gates are involved in the design, creation and distribution of mega-profitable ‘vaccines’. On the radio it is announced that people’s freedom (i.e. ability to engage in their community as a social human being) will be directly correlated to how ‘well-behaved’ they are, which is indicated by how many are wearing face-masks.

Basically, we are the providers of human experience which Amazon, Alexa, Google, Skype (possibly Zoom), WhatsApp, Facebook, etc. are turning into data which acts both like a

fortune-teller of our future actions/behaviour, but which also provides machine learning which can in turn be used to direct our lives and our actions outside of our control. We will possibly *believe* we are in control, but it is highly likely that will not be the case. Zuboff’s book clearly demonstrates how democracy threatens surveillance revenues. What is also made clear is that self-awareness and having a set of principles also threaten surveillance revenues, as awareness threatens the larger project of behaviour modification. To quote Zuboff: ‘surveillance capitalists must use all means possible to destroy autonomous (self-aware) action with heteronomous action (group and determined/designed) action.’

I am writing this review essay while living on an island called the United Kingdom or Great Britain. We have been in a state of ‘lockdown’ for nearly a year now. Schools are closed, children are being given smart-phones and laptops to ‘do their lessons online’. Businesses are told to operate digitally from home as much as possible. Small businesses have suffered, but have got creative with a ‘click and collect’ system in an effort to stay alive in a digitised, online takeover. Is it coincidence that in Zuboff’s book, tech giants are quoted as saying how it would be ideal if they could be given complete access and control to a ‘state’ or ‘island’ where they could concentrate their theories and gather as much ‘raw material’ (our data and human experience) as possible?

Is it possible that the very essence of our children’s creativity, liveliness, randomness and rich human experience is being collated, uploaded into machines to both learn how best to ‘herd’ and ‘condition’ future people to ensure the profitability of future markets of the few elites, and also to provide machine learning so that possibly (and sooner rather than later – remember, Silicon Valley is obsessed with speed) the machine will make the human no longer necessary? Why must all learning be done online rather than by a few mobile tutors who have super-immunity? If this was actually all based on a ‘pandemic’, surely there would not be an obsession with the digital where only those

who work at places like Amazon are allowed to move about freely.

Re-reading this book to write this review essay has opened my eyes to what could possibly be at the root of all this anti-human over-reaction to a virus. The more I see beautiful young people committing suicide, becoming overweight and despairing over a soulless, non-existent future, the more I think of Old Mr Montes of Pasteleria La Dulce and his determination to fight for a human future that is beautiful, surprising, mysterious and soulful.

The mechanical (instrumentation) movement of the third modernity based on a materialistic belief system needs to be rational capitalism – bound by its reciprocities with its populations through democratic institutions. Yet our politicians have fallen apart. Those trying to hold on to a human future have been attacked via the media, most of which is controlled by technology in our current day and age. Elected officials have been ‘banned’ from speaking to the public who elected them. Whether or not we like what our politicians have to say, they should be allowed to ‘tweet’ whatever they need to in order to reach us. Our mechanisms of communication should not fall under the control of a few elite heads of tech companies who, by their very design which is based solely on efficiency, prediction and control, have become a threat to not only a human future, but a future that is ‘for life’.

Zuboff uses quotations and examples from the technocratic trillionaires who state the ultimate goal to be that the machine (or Super Computer) becomes God, and the majority of remaining humans are happy but stupid worker-bees for the Queen Machine. Is it any surprise that Oxford University actually has a department which debates whether or not there is a legitimate case for a *human* future? I can hear my technocratic friends explaining that the world is a mess, and humans are mainly stupid ‘dumb debtors’ who *want* to be controlled. While I cannot help but acknowledge that the majority have easily succumbed to ridiculous and illogical demands whilst waiting for the next set of ‘rules’ levied by an obviously incompetent set of ‘leaders’, I

do *not* agree that machines whose sole purpose is to become more and more efficient through the gathering and analysis of data are the better solution.

Machines are built from a mineral kingdom, and these machines do not breathe air, and create progressively more radiation which will destroy *all* living things. Technocrats need a *balancing human force*. All power, when unchecked and unaccountable, becomes destructive. In my view it is up to humanists, like you and me, to rise up to help them (or force them) to reign in technology, slow down the race, and ensure it serves a *human* future – a future that supports *living and breathing creatures*.

I asked myself as I wrote this review essay, what would Shoshana Zuboff say now that we are in this data-centred lockdown? Part of me thought she might say, ‘I warned you loud and clear to steer clear of smart-phones/devices and not to get Facebook, nor use any engines that collect and sell your data like Google, Amazon, etc. I told you that they are not really “free”. They are designed to mine you for all you’re worth, and then discard you much like an elephant is killed for its tusks.’

However, her compassion comes through in her book, and I don’t think she would be so pretentious. Instead, I quote her directly, imagining her with tears in her eyes:

Please remember that ‘search’ has meant a daring existential journey, not a finger tap to already existing answers; that ‘friend’ is an embodied mystery that can be forged only face to face and heart-to-heart, and that ‘recognition’ is the glimmer of homecoming we experience in our beloved’s face, not ‘facial recognition’. It is important for our children to be told this and to let them know it is NOT normal to have to hide in your own life. We are not meant to be herded through the future tense for the sake of someone else’s profit – this is *not normal*. These things are brand new. You should not take them for granted because they are not OK.

It is unprecedented and it is up to us to turn it around and create the *double movement* that

supports a measured, conscious approach to the digital, and which does not allow any regime to force us to transact our lives through an internet that is recording and capitalising and seeking to determine and shape our every move. We are not meant to be herded: the second modernity of industrialisation was coupled with social reciprocities practised by the innovators of people like the aforementioned Henry Ford, enabling us to free ourselves to become creative and self-determining. There must be a similar double movement now, and we must create it before it is too late. Our children should not be turned over to these surveillance capitalists (via the computerised learning into which they are forcing them), and nobody should allow us to be locked away in our own homes, forced on to screens just for mere survival.

There are no lavender-scented Flao cakes in the machine/computer/smart-phones taking over our lives. Zuboff makes it clear in her book that a grave impending danger is on the rise (remember, her book was written pre-Covid-19) that will be exacerbated, and perhaps only possible *because* of the rise of the smart-phone. The smart-phone and ‘wearables’ as well as digitised money and machines in the IoT (Internet of Things) that work in the shadows to record and analyse our every transaction, and even every movement, could be our undoing if we do not stop using them, for they are allowing the unbridled markets of Behaviour Surplus and Future Action to grow at warp speed. Zuboff makes a strong case for how to live and survive just fine without them, as well as defining how we just might *not* survive if we keep using them. Perhaps the only way to slow down the speed of addicted Silicon Valley surveillance capitalists is to get rid of (recycle) our smart-phones, refuse to be engaged in their ‘surveillance, data-oriented practices’, and instead embrace once more the face-to-face.

Perhaps by just having wired internet and one family computer as well as using open-source apps and search engines and emails that value encryption and privacy as well as operating systems like Linux with software designed *not* to collect our human experience via shadow data (Fedora being one example amongst many), we

can manage to slow their race down sufficiently to create the double movement with democratic checks and balances, and where *we* ensure that the future includes the human; the wonderful, mysterious, magical and creative human.

‘Saving the Planet’ is not encased in the happy ‘devices’ we are being told will help to reduce carbon, nor is Skyping instead of flying. The irony is that the CO₂ (carbon) footprint of all things ‘smart’, including the IoT, far outweighs the oil and gas industry, and is unlike anything we have ever experienced before. Unfortunately, these calculations are not being shared. This is not even to mention the toxic amounts of radiation with which all these devices and their delivery systems pollute our air and environment.

If we really care about our planet, and indeed our very *humanity*, we need to begin to look at the grave cost of this new modernity. If you don’t read Zuboff’s book, at the very least watch the documentary interview conducted with Zuboff in April 2020² so you can begin to understand the layers of shadow operations that are going on. These ‘conveniences’ we have come to rely upon might be our very undoing if we do not step up to the plate and quickly put the brakes on. We cannot rely on algorithms or machines to do it for us; *we* must step in to ensure the double movement which will bring balance and ensure life for both ourselves and our fellow creatures with whom we share the planet; they are counting on us.

Notes

- 1 Text taken directly from the book is interwoven into this review essay.
- 2 See Shoshana Zuboff on surveillance capitalism / VPRO Documentary, available at <https://tinyurl.com/y5aoq3xw> (accessed 21 January 2021).

About the contributor

Sofia Johansson, Mpsych, MBPsS, T.E.A.C.H.H., CADC has relentless passion for a future balancing new tech with principles that enhance, not destroy,

life. She has lived, studied and worked internationally in eight different countries with visionaries like Grace Lee Boggs (*The Next American Revolution*) and Prof. Frithoff Bergman (*New Work, New Culture*). In addition to a rich, multi-cultural education, her direct experience enhances her understanding of the vital need to ensure a human future at our New Frontier of the Digital Age. Sofia encourages all those willing to assist in such a project to contact her via the editor of this magazine.