

When a new work of note is published early reviews appear in quality publications, followed by a longer 'tail' of reports elsewhere. Before long many such works fade into obscurity, becoming accessible mainly to students and scholars. In this case an early review favourably compared *Homo Deus* to the works of Lewis Mumford. Which caught my attention. Four-and-a-half decades ago as young teacher in Bermuda I was perplexed as to why this tiny sub-tropical paradise would allow itself to be transformed into a teeming, stressful mid-ocean metropolis. How could this be explained? Mumford's panoramic view of human history, his grasp of how we became human in the first place and his rigorous dissection of oppressive power structures that he called 'megamachines' provided food for thought and a variety of starting points for enquiry (Mumford, 1971).

I wanted to find out for myself if the book lived up to this exacting comparison. So I read a review copy during an intense week before Christmas, leaving the following weeks to mull over implications. The more I worked my way into the text, the more concerned I became. If Harari's thesis were to be taken seriously then the bulk of humanity was on the verge of becoming redundant. Moreover, an extreme high-tech Dystopia was only just around the corner. Over time, my views shifted and re-formed around two broad responses. First, that it'd be a mistake to dismiss what he is saying merely because it is deeply unattractive. His central point - that our collective futures are indeed under more extreme existential threat than is commonly appreciated - is certainly valid. Second, however, there are many aspects of his account that are, depending on your point of view, plain wrong, incoherent or contradictory. It took me some time to understand what I'd read. Yet, the more I reflected on it, the more it became clear where vital material had been overlooked, ignored or misunderstood *en route* to a deeply threatening conclusion. As a result the book's initial narrative power steadily drained away. I concluded that *Homo Deus* is best regarded as an ill-grounded provocation. Any lasting value it has arises from the way that it can help shake us out of any remaining complacency about what the near-term future may hold for *Homo sapiens*.

Overview

Homo Deus begins with a 70-page introductory, stand-alone, chapter called The New Human Agenda in which the author argues that the age-old scourges of humanity - famine, war and pestilence - while not fully vanquished, are all in decline. Consequently, since 'history does not tolerate a vacuum' we should expect 'new projects' to emerge. One of these will be to 'protect humankind and the planet from the dangers inherent in our own power.' He acknowledges that 'growth destabilises the planet in myriad ways (since) humans always crave more' (Harari, 2015, p, 20). Oddly enough, however, little more is said about these crucial topics as the book proceeds. A great deal more is said about other projects among which are 'up-grading' certain people, eliminating death and pursuing the right to happiness. In summary he states that 'we can be quite certain that humans will make a bid for divinity because humans have many reasons to desire such an upgrade and many ways to achieve it' (Harari, 2015, p, 48). The book is full of confident assertions like this.

The author then asks if we can 'hit the brakes' but offers two reasons for answering in the negative. One is, in effect, that no one can find them (i.e. fully understand the system); the other is that the economy would not tolerate any real slowdown and would likely collapse. Already, therefore, in the very first chapter, significant gaps or blind spots emerge. They include lack of insight into systems views of the world and little or no awareness of 'solutions in waiting' such as 'steady state' responses to 'growthist' economic thinking. These two of many key areas of action, choice and design where others have found significant human agency, social capability and innovative potential. What impressed me briefly as the chapter proceeded is the author's recognition of the paradox of knowledge (essentially, the more you know the less useful this becomes because it makes the future more unstable, not less). Some equally significant caveats are provided that readers should keep fully in mind. One is that 'all the predictions in *Homo Deus* are no more than an attempt to discuss present day dilemmas, and an invitation to change the future' Similarly, 'the future described here is merely the future of the past...The real future might be completely different' (Harari, 2015, p, 64, 66). Amen to that.

The thematic progression of the book is well signposted by the section titles:

Part 1 *Homo Sapiens* Conquers the World;
 Part 2 *Homo Sapiens* Gives Meaning to the World; and,
 Part 3 *Homo Sapiens* Loses Control.

In the two chapters of Part 1 Harari presents his idiosyncratic - not to say hugely reductive - version of what may be understood by the Anthropocene (or era of human effects) and the significance of (or rather the lack of) what he calls 'the human spark.' His account of the Anthropocene has its beginning centuries ago during the Agricultural Revolution when humanity transformed its relations with animals and the environment. He then takes one of the immense - and I would argue, unjustifiable - leaps that characterise this book by insisting on *the primacy of algorithms*, suggesting that, far from being a modern phenomenon, organisms and emotions, for example, can also be described as algorithms. He regards these as 'the most important concept in our world,' and as 'a methodological series of steps that can be used to make calculations, resolve problems and reach decisions...(adding that)...it's not a particular calculation but merely a method followed when making the calculation.' (Harari, 2015, p, 83).

Viewed positively one must admit that this is an original and possibly courageous stance for a work destined for a wide and informed readership. Yet, at the same time, the language and line of argument make it clear that reductionist thinking stalks nearly every line. So why take it seriously? Well, it takes the rest of the book to work this out. The following chapter on 'the human spark' certainly adds fuel to the fire, so to speak, as the author continues by arguing not only that humans lack a soul (uncontroversial these days) but also that there is no evidence of any other 'spark' or characteristic that would define them in relation to the rest of the natural world. Again, he treads a fine line in asserting that, while scientists have *no grasp at all* of the puzzle of consciousness,

it can be described as 'an emergent property of the complex brain system' and yet at the same time as mere 'mental pollution.' (Harari, 2015, p, 116-7). In this view he proposes that humans are intrinsically not that different from other animals such as dogs and rats. The rather obvious fact that the latter are not well known for composing operas or creating literature is simply ignored. Presumably they are merely algorithmic epiphenomena of little import. For him what does distinguish humans as a group is apparently their ability to connect to many others via language. The latter, in this view, is primarily a transactional medium that enables large groupings to get things done.

Somewhat puzzlingly at first Harari goes on to discuss what he calls the 'web of meaning' which he is at pains to define as neither subjective or objective but an intersubjective domain. Yet again, and in contrast to most other scholars, this is not seen as an incredibly rich medium for depth understanding and the co-creation of inter-generational symbolic meaning. Rather, it is seen as providing the grounds of shared illusions and mere stories about values, laws, ethics, money and so on. In this view 'the lives of most people have meaning only within the network of stories they tell each other' (Harari, 2015, p, 145). Moreover 'humans think they make history but history actually revolves around the web of fictional stories' (Harari, 2015, p, 155). What he calls 'thinking historically' is what gives power to the web of stories and, in this view, it will end up modifying human DNA over time. The author also suggests that 'the power of human cooperative networks rests on a delicate balance between truth and fiction' (Harari, 2015, p, 170). Yet the thrust of the argument stresses the latter at the expense of the former.

A subsequent chapter seeks to show how science and religion, the 'odd couple', benefit each other. For example science 'needs' religion to help create and maintain human institutions. In this view the primary interest of religion is to create order, while that of science is to achieve power. This lays the foundation for what he calls the 'covenant of modernity' which requires that 'humans agree to give up meaning in return for power.' Yet, at the very same time, he is aware that this generates 'enormous temptation coupled with a colossal threat' (Harari, 2015, p, 199-201). The alliance between scientific progress and economic growth has made capitalism the new religion. But its unlimited dynamism also presages ecological collapse. So the power of science is a double-edged sword that both facilitates and undermines civilisation. Moreover, 'the very power of science may increase the danger because it makes the rich complacent.' Similarly, 'greed comes easily to humans but capitalism has sanctified a voracious and chaotic system' Harari (2015, p, 209-15). It's in this context that the author repeats his earlier assertion that no one can understand what is happening or where we are going. The irony of writing those words in a book sub-titled 'a brief history of tomorrow' clearly escapes the author.

A dilemma of a different sort arises when Harari declares that 'as of 2016 there is no serious alternative to the Liberal package of individualism, human rights, democracy and the free market' (Harari, 2015, p, 267). Clearly there has to be since we've already been told (albeit very briefly) that the latter is running riot across the planet with devastating results. But the author then takes aim at

Humanism itself which he sees as underpinning both science and capitalism. In his view the 'Humanist Revolution' initiated a 'great reversal.' Whereas previously the cosmos was seen as the dominant power, now subjective human experience, feelings and needs have taken centre stage. Unfortunately, however, humanism then split into several competing schisms all of which are ripe to be 'dissolved from within' by the power and reach of new and emerging technologies. This is where the account becomes irredeemably Dystopian. We learn that 'in the twenty-first century those who ride the train of progress will acquire divine abilities of creation and destruction, while those left behind will face extinction.' Unfortunately, 'traditional religions offer no real alternative' in part because they have 'nothing to say about genetic engineering.' Then 'attempting to realise the Humanist dream will undermine its very foundations by unleashing new post-human technologies' (Harari, 2015, p, 273, 277). In other words this is yet another version of the highly controversial, not to say provocative, Singularity thesis (Wikipedia, 2017).

In a sense the foregoing is all prologue for Part Three: Homo Sapiens Loses Control. Harari quickly disposes of notions of 'freedom' which he regards as 'an empty term with no discernable meaning.' A rhetorical question follows - 'If humans are free, how could natural selection have shaped them?' (Harari, 2015, p, 282-3). Yet this assertion is problematic since evolutionary structures and processes are widely understood to have provided the biological foundations that give rise to 'emergent qualities' over time - 'degrees of freedom' is arguably one of these. But his account lacks any notion of how ontological developments arise over time and create new realities. He continues in a similar vein by arguing that there is 'no inner self,' merely a kind of interior tug-of-war between different impulses that are given a false presence by what he calls the 'narrating self.' This 'tries to impose order on chaos ... by spinning a never-ending story' (Harari, 2015, p, 305). Such statements are, however, little more than etiolated fictions themselves. Having sought to reduce humans to this rather pathetic and diminished status he is then ready to argue that, broadly speaking, they will soon become redundant. He anticipates what he calls a 'great decoupling' as 'intelligence' separates from 'consciousness' (which, we recall, remains undefined and elusive throughout). Moreover, intelligence is seen as 'mandatory' while consciousness is merely optional and therefore dispensable. Here is how he depicts this tectonic shift.

1. Humans will lose their economic and military usefulness, hence the economic and political system will stop attaching much value to them.
2. The system will still find value in humans collectively but not in unique individuals.
3. The system will still find value in some unique individuals, but these will be a new elite of upgraded superhumans rather than the mass of the population (Harari, 2015, p, 307).

Consequently 'humans will no longer be autonomous entities directed by the stories their narrating self invents. Instead they will be part of a huge global network' (Harari, 2015, p, 338). With this new world in prospect the 'most interesting place' is nothing other than Silicon Valley! Which must surely qualify

as one of the most egregious fallacies of the entire work. To see the latter as merely 'interesting' he fails to evaluate its 'story,' its 'fictions' or, indeed, its highly controversial consequences, some of which are profoundly regressive (Zuboff, 2015). This is another significant oversight. Nevertheless he continues by speculating that two new religions could emerge within this environment - 'techno-humanism' and 'dataism' - neither of which are good news for humans. The most obvious explanation is that the author has become so caught up in his own story / fiction / fantasy that he fails to grasp the implications of what he is saying. Having simplified and flattened so much of human and cultural value it's easy for him to produce quite facile statements such as 'technical progress ... doesn't want to listen to our inner voices. It wants to control them.' In this unequal contest 'technical progress' acquires 100% agency, humans, little or none. Again in relation to humans, "Inner voices' and 'authentic wishes' are 'nothing more than the product of biological imbalances and neurological diseases' Harari (2015, p, 364).

There's more on 'dataism' and the inability of democratic structures to cope with 'big data' or compete with complex systems under the control of remote AIs, yet only the briefest mention of the need to evaluate the core features of a new high-tech metasystem that bows to the god of 'control'. Similarly, the book ends with a barely credible whimper when on the penultimate page we read that 'this book traces the origins of our present-day conditioning in order to loosen its grip and enable us to think in far more imaginative ways about the future' Harari (2015, p, 396). Yet the author has reified his own particular story and overlooked countless other plotlines and resources that suggest quite different pathways into the future (Alexander & McLeod, 2014).

Dystopian futures are not inevitable

Homo Deus is likely to be welcomed by those who eagerly anticipate the 'Singularity' and its empire of machines. It may be useful to those who are prepared to work though it insofar as it outlines an extreme, but plausible pathway to Dystopian futures where *homo sapiens* becomes redundant. This is, of course, a well-trodden path for those immersed in futures and science fiction. Those who find such futures unacceptable will draw on other cultural resources, other ways of knowing and being, other options that are omitted in this particular narrative. Foremost among the latter is a depth appreciation of 'the social.' It's startling to note that there's virtually *no sociological insight anywhere in this work*. Indeed, it is framed within what Habermas called the 'technical interest' which, in a sense, opens the door to machines but closes it to humans. *Homo Deus* therefore contains no awareness of, no space for, what Habermas meant by the 'communicative interest,' let alone the 'emancipatory interest', both of which are essential for adjudicating the very issues raised here (Habermas, 1971). For a different view we could also turn to Ulrich Beck's work on what he called 'world risk society' about which he had the following to say: 'Risk society is not an option which could be chosen or rejected in the course of political debate. It arises through the automatic operation of autonomous modernisation processes which are blind and deaf to consequences and dangers' (Beck, 2000, p. 73). Put this way it's obvious that the issues raised here require

sturdy human and social responses rather than passive, superficial acquiescence. Unfortunately such considered responses are more difficult to achieve now than two or three decades ago. At that time 'technology assessment' meant something in part because that very capability was embodied in purpose-built institutions created to brief decision makers on emerging issues. Yet, with the neo-Liberal ascendancy's ideological preference for 'market-led' solutions, many of these valuable entities became 'collateral damage' and were abandoned.

Equally, for Harari 'wisdom' is just another pointless story, another variety of 'mental pollution' that he'll set aside in favour of the new wave of technical marvels. Yet he overlooks the fact that this very act would qualify as just as great an historical reversal as anything else proposed here. Wisdom is obviously many things to many different people but it can be seen as the insights passed down to us over many generations that we ignore at our peril. To look at the lives and work of outstanding historical figures is to discover not only rich worlds of meaning and significance but pathways beyond the post-modern trap (Alexander & McLeod, 2014). As noted above Hariri makes brief mention of the dangers of modernity but the work moves inexorably toward Dystopia of a very specific kind. Yet if AIs were to take over and re-create the world in their own image then biological existence per se may be terminally compromised.

Then, just as 'the social' is crammed into a 'flatland' view so are the hidden depths within people. The review copy lacked an Index so it was not possible to check to see if the term 'worldview' was used anywhere. If it was then I missed it. What's clear, however, is that in overlooking 'depth' issues in one domain after another Harari has a 'thin' and reductive view of reality. I do not mean to malign the author when I say that some aspects of this text - especially its lack of empathy - reminded me of trying to communicate with an autistic individual. So I conclude that the work should be treated with care. It's unclear if the publisher appreciates or understands the book's subversive message. The review copy came with a front cover emblazoned in large red type: *What made us Sapiens will make us gods*. Yet, as I have shown, the book does nothing of the sort. What the author does suggest is that a few exceptionally rich, highly privileged and shamelessly augmented humans could emerge with undreamed of powers including, perhaps, something approaching immortality. But it's also brutally clear that, in this account, most of 'us' are destined for extinction.

The last and perhaps most egregious omission is that while the author purports to be helping us to understand the present, the better to guide our way into the future, he appears entirely ignorant of the ways that people have already undertaken that work for well over a century. Is it therefore reasonable to argue that there are 'no brakes', that no one understands the global system? While no one understands it in its entirety, reliable knowledge has been generated over recent years providing clear and unambiguous guidance about the basic rules for administering planet Earth. Works such as Steffen's *Global Change and the Earth System*, and its later elaborations, should be required reading for all those who think that Silicon Valley is the place to watch (Steffen, 2004). Nor should the collective work of the futures field and its members be summarily ignored. Their absence from this book suggests that the author is unaware that this is indeed

well travelled ground where many others have walked before him. Hence many more positive ways forward are simply overlooked.

At the end of the day Hariri's book falls far short of the standards set by Mumford and others. Its story contains some useful provocations but they are likely to fade more quickly than those with a richer grasp of humanity, civilisation, and the shifting conditions of our turbulent path ahead.

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