

Reassessing the IT Revolution

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Mass surveillance is fundamental threat to human rights says European report (Harding, 2015).

Millions stolen as hackers hit banks (Yadron & Glazer, 2015).

We are moving into an era when 'smart' machines will have more and more influence on our lives (but) the moral economy of machines is not subject to oversight in the way that human bureaucracies are (Penny, 2017).

1. Literature Review and Key Issues

Two key assumptions:

- * Technology is not merely 'stuff' but the product of long-term social, cultural and economic processes.
- * New technologies are profoundly ambiguous yet warnings and costs are widely ignored.

Six views of the IT revolution ('insiders' and critics)

- * Mayer-Schonberger and Cukier's book *Big Data*.
- * Jaron Lanier's *Who Owns The Future?*
- * Astra Taylor's *The People's Platform*.
- * Misha Glenny's *Dark Market*.
- * Morozov's *The Net Delusion* and *To Save Everything Click Here*.
- * Douglas Rushkoff's *Throwing Rocks at the Google Bus*.

Plus scores of magazine articles and on-line sources. Also: Harari's *Homo Deus*.

Conclusion

If human societies wish to protect the wellsprings of life, culture and meaning they will need to limit the wealth, power and reach of the Internet oligarchs. Collective courage and resolve will be required to re-frame 'the Internet' and free the ubiquitous algorithm from their grasp. Ways in which it can be re-designed for more respectful and constructive uses are already beginning to appear (Hodson, 2016). This is quite obviously not a case of rejecting 'technology' wholesale but, as several authors considered above have suggested, of locating it within *a broader frame of understanding and value*.

2. Case Studies and Implications

We rely on technology for almost everything...and yet no society in the world has yet stood up to demand greater control over its digital destiny. No country has

committed itself to building a technology that is as fair as it is convenient (Fox, 2017).

The new technologies do not entail a radical reshaping of modes of doing things. A driverless car is still a car (Das, 2016).

The Internet of Things

The IoT is a good example of an innovation that no one is asking for. Rather, we are told that 'it's coming' as if it were an inevitable *fait accompli*. But it isn't. Hence: Morozov's view that 'the Internet' is a domain where numerous 'solutions' are offered for problems that currently do not exist – a phenomenon he calls 'solutionism.' The innovation 'push' model is certainly disruptive and I'd argue highly dangerous. Why? Because it constantly inserts poorly considered random elements into complex social systems. These are then *forced to adapt*, often at considerable cost. Reflecting on the 2016 US election one observer commented that:

We have fetishised “disruption”. Governments have stood by and watched it take down all industries in its path – the market must do what the market must do. Only now, the wave is breaking on its shore. Because what the last week of this presidential campaign has shown us is that technology has disrupted, is disrupting, is threatening to upturn the democratic process itself (Cadwalladr, 2016).

On the 'plus' side well-designed devices installed in robust networks with appropriate technical and exacting safety standards would have a variety of uses. A host of specialised applications can be envisaged in education, surgery, disaster management and so on. The elderly, disabled and sick could gain greater autonomy and enhanced capability to run their own lives. Potentially positive uses like these may well be unlimited. But the dangers and costs of the IoT as currently envisaged appear to outweigh these benefits.

The greatest weakness and enduring flaw in the IoT is this: *connecting devices together is one thing, but securing them is quite another*. We seem to forget that at the same time we've also acquired the Dark Net, Internet scams, widespread identity theft and of course, the threat of utterly unwinnable cyber wars.

My conclusion is that *the very last entities to entrust with the future of humanity and its world are those who make 'innovation' their ultimate value and selling their core profession*. High-tech promises based on pragmatic, utilitarian and commercial values would appear to have little or no chance of creating heaven on Earth - quite the opposite.

Goodbye to Driving? The Rise of Autonomous Vehicles

A strong case can be, and is, made in favour of AVs. It's claimed that the current system of independent vehicles driven by fallible humans is so expensive, dangerous and out-dated that it should be replaced. Such a system might well be more efficient, less wasteful and safer.

However, it also raises questions about long-term unemployment and loss of privacy. It fails to acknowledge the myth of perpetual Internet integrity (which can never be assured). Finally it overlooks the fact that this is a rich world fantasy. If you look at WHO tables for road deaths it's clear that those who 'need' AVs the most (the poorest countries) are the least likely to obtain them. Seen in this light it looks very much like a rich world fantasy.

Industry innovators, and those who speak for them, are preoccupied with technical issues. They don't view the structural decline in employment and its social consequences as any concern of theirs. However costs and disruptions can be moderated or prevented if they are detected and publicised in good time. This is obviously one of the key functions of high quality foresight work in the public interest. If and when the political will is found, more equitable solutions can emerge. An alternative to a full on 'big data' scenario would reflect the difference between artificial intelligence (AI) and Intelligence Amplification (IA). In the former case the goal is to *replace* human intelligence with machine equivalents, whereas in the latter it is to *augment* human capabilities.

The Giants of Silicon Valley - Facebook and Google

A whole literature of critique has emerged, some of which is of very high quality (e.g. Shoshana Zuboff on Big Other). There are also parallel studies where critique merges with depth understanding. I wanted to focus on the latter.

* Oreskes and Conway's *Merchants of Doubt* showed how the same strategies used earlier to ramp up denial of the effects of smoking were successfully extended (and financed) to create an entire infrastructure of climate change denialism.

* Similarly John Urry's *Societies Beyond Oil* (Urry, 2013) used his considerable talent in 'depth sociology' to understand how it is that 'carbon interests' became so powerful and the kinds of futures to which their continued dominance leads.

The point is that when credible efforts are undertaken to return some of these hidden interior phenomena back into the limelight there's no turning back. The hand of autocratic power is revealed. Motives, purposes and outcomes are identified and called into question. The knowledge so gained cannot be cancelled out. This is a legitimate way for societies to recover from multiple failures of governance and to regain from the oligarchs what was never theirs in the first place - their social licence to operate at all.

This is where Integral Futures or any comparable scheme of depth psychology comes fully into its own. In this work I've used:

- * the four quadrants (windows on reality)
- * four levels of worldview complexity (pre-con; con; post-con; Integral), and
- * six values levels from Spiral Dynamics.

Using this relatively simple method I've looked at three of Silicon Valley's finest: Mark Zuckerberg, Ray Kurzweil and Hal Varian (Google's chief economist). In summary each appears broadly ignorant of the LH quadrants and what they stand for (the human and social interiors). Hence 'within this diminished frame what is missing is any appreciation of the power and influence of the interior worlds individuals and of cultures.'

Example 1: an interview published in *Time* magazine clearly revealed elements of Zuckerberg's interior life. It showed, for example, that he is *dismissive of external opinion* and equates critique with 'turning the clock back'. *He denies that pervasive advertising is in any way 'out of alignment' with his customers and is 'concerned with nuance and subtle shades of meaning only to the extent to which they are useful to him.'* Within such a pragmatic and instrumental frame terms like 'values', 'human nature' and 'society' have little or no meaning.

Example 2: Shoshana Zuboff's standout work on Google uses her own framework of analysis to get inside the culture of the organisation. She notes that:

Google's tools are not the objects of value exchange. They do not establish productive consumer-producer reciprocities. Instead they are 'hooks' that lure users into extractive operations and turn ordinary life into a 21st Century Faustian pact. This social dependency is at the heart of the surveillance project. Powerful felt needs for an effective life vie against the inclination to resist the surveillance project. This conflict provides a kind of psychic numbing that inures people to the realities of being tracked, parsed, mined and modified - or disposes them to rationalise the situation in resigned cynicism. This ... is a choice that 21st Century people should not have to make (Zuboff, 2015, 82).

Conclusion

In summary, these examples suggest a broad default or collective profile of the sector, namely that it:

- Arises from ego-, and socio-centric outlooks that serve to privilege 'me, us and now.'
- Proceeds from a conventional level of complexity (with forays into post-conventional when it comes to, e.g., financial innovation and marketing);
- Expresses a range of values from 'red' (egocentric and exploitative); to 'orange,' (multiplistic and strategic) neither of which provides a sound basis from which to resolve the issues identified here.

- Largely address the lower right (exterior collective) domain of reality, with an occasional focus in the lower left (for social influence) and upper right (for persuasion and control).

It follows that if societies are to resolve some of these concerns expressed they will want to focus on ways to bring individuals and organisations at every level up and out of these diminished states of being. This is categorically not a question of promoting ever newer and more exciting technologies. It is indeed about understanding the roles of people and cultures in working toward HUMAN FUTURES. In this process we need to activate more comprehensive worldviews and more sustaining values.

3. Solutions and ways forward

Speculative fiction (background)

H.G. Wells, *The Time Machine*, 1895. E.M. Forster, *The Machine Stops*, 1909.
J.G. Ballard, *Vermillion Sands*, 1973. D. Suarez, *Daemon*, 2010.
D. Eggars, *The Circle*, 2014. (But also U. Le Guin, *Always Coming Home*, 1985)

Solutions-in-the-making (subject of a later paper)

- * Sam Alexander on Policies for a post-growth Economy (Alexander, 2016).
- * Rebecca Solnit's work on hope in a threatened world (Solnit, 2016).
- * Kate Raworth's work on Doughnut Economics (Raworth, 2017).

Government and community projects

Continuing attempts by the EC to rein in the IT giants (recognise human rights, limit tracking, pay appropriate levels of tax). Now also in Australia - Parliamentary enquiry proposed as last indep. press in near-terminal decline. The Rescope Project (Melbourne) - grew from the work of Frank Fisher.

Personal and family

Think before using any 'free' on line services or apps ('you are the product').
Ask yourself if you really need FB or Google.
Use a web browser that does not track your movements.
Pay for Internet services (such as email). Keep kids and young people safe on line.

Final comment - the good news

A multi-pronged pushback against the Internet oligarchs has started. We need to give it our full support, rein in the many excesses and turn the new technologies toward truly human ends.