

CONTESTING TECHNOSCIENCE FOR HUMAN FUTURES

By Richard A. Slaughter

One of the complaints heard frequently these days is that “things are moving too fast.”

In almost any domain, you are likely to be confronted by a long list of changes that have surprised people, overturned traditional practices, and seem to be producing one revolution after another. Multiple innovations in so many areas have created an increasingly challenging environment that some have termed a [VUCA](#) world (Volatility, Uncertainty, Complexity and Ambiguity). It's long been understood, however, that people tend to resent having 'change' thrust upon them. It's hardly surprising that they, and the organizations around them, struggle with a never-ending torrent of uncertainty and change.

So, what to do?

Futurists and foresight practitioners have, of course, addressed this problem for a long time. Some years before Alvin Toffler coined the term 'Future Shock' French intellectual Bertrand de Jouvenel, creator of *La Prospective*, suggested that what he termed “the proof of improvidence” results in us “falling into the empire of necessity” by which time options and choices have diminished. In the decades following, those working within the disciplines of Futures Studies and Applied Foresight sought to develop a body of theory and practice intended to address this very dilemma and, in so doing, gain a better grip on what was occurring around them.

There does, however, come a time when the accepted paradigms, methods, 'ways of seeing' in any field or discipline seem to falter in the face of reality. Indeed, we know it can happen repeatedly as earlier work is

informed and refreshed by new voices and evolving methods. Now, however, we face levels of uncertainty and radical change at the global level that have disturbing implications.

Instead of looking forward to a world of peace and prosperity it's clear that our present, day-to-day world, is fractured, contested and, increasingly at risk. It's getting more difficult all the time to see our way beyond what appears to be a looming technological [Dystopia](#). One of the key drivers of this process is the way that IT systems, which initially seemed to promise freedom and democracy, have morphed into something more threatening and dangerous that facilitates the steady rise of cybercrime and [relentless attacks](#) on civil infrastructure.

Hence, it's reasonable to ask: "How did we get here? And, what can we do about it?"



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THE AGE OF SURVEILLANCE CAPITALISM

As futurists well know the view forward is informed by the view back. The careful integration of insights from past, present and the emerging future, when done well, leads to a broader, deeper decision context. In this case Shoshana Zuboff's magisterial work [The Age of Surveillance Capitalism](#) provides an essential guide that, among other things, reveals how early innovations by what later become the 'internet oligarchs' were carried out and patented in secrecy (Zuboff, 2019).

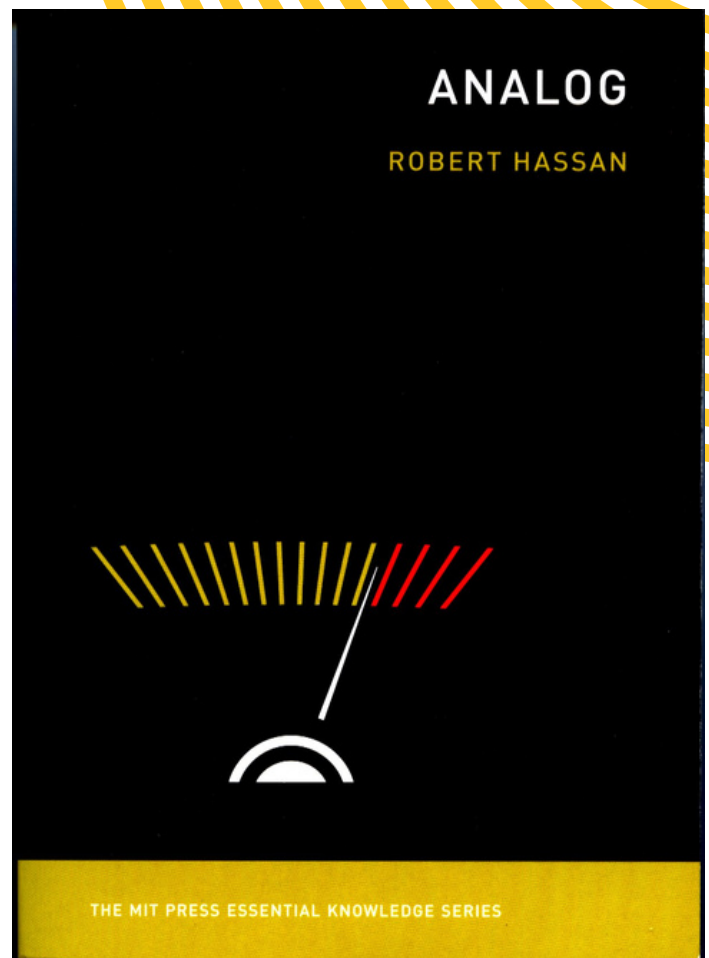
It's worth taking time to grasp the significance of [what happened](#). The underlying "worldview" or story is that of Neoliberal capitalism which, in turn, was based on basic, accumulative, mercantile values where private interests always triumphed over public ones. Had these early innovations been based on other values, other "stories," our present world would look and be, very different. A summary of what happened over the next 20 years can be found in [Deleting Dystopia](#). Two recent books, however, bring new clarity to this area and contribute insights that clarify what is at stake and, indeed, what can be done about it.

ANALOG

The first is Robert Hassan's book simply called *Analog* (Hassan, 2022) that, in effect, explores two key ideas.

First, the author asks us, as it were, to pause for a moment and carefully consider how human life, society, learning, communication, and culture have, for some five millennia, occurred within the analogue domain. It is, in a sense, our natural home, the place, or state, in which we stay in direct contact with the materials out of which our civilization is collectively fashioned.

Second, he asks us to consider the "shift to digital" as something far more significant than a move from one type of technology to another. It is, rather, an epochal transition that we don't see clearly or begin to understand. According to Hassan, we're not merely "crossing a line" because digital technologies actively "colonize our personal and social spaces." They arrived "armed with promises of a bright future if we adapt to the needs of what was (and still is) a business revolution." (Hassan, 175). Unsurprisingly, this has many implications. For example:



Mainstream media ... still tells stories about politics. It still writes narratives in which the social world should make sense to readers and writers... But digital communication functions differently from analogue. Platform-owned algorithms are formed on a specific business model, whose code is a closely guarded secret. These algorithms filter, profile, select and distribute these stories, these facts, in ways that have served to distort the political process we call Liberal-Democratic. (Hence)...the greatest challenge of the digital age is that facts and knowledge, and the politics that depend on these for their legitimacy, are all wrapped up in a new and negating communication paradigm. (Hassan, pg. 202-3. Emphasis added).

HERE BE MONSTERS

There's a great deal more in this short, but eminently readable, book. However, Richard King's [Here Be Monsters](#) takes the argument to a new and deeper level by focusing both on the nature of the new technologies in play and, crucially, on their underpinnings in what he terms "technoscience" (King, 2023). In so doing, two influential claims are explored and put to rest. One is that "technologies are neutral;" the other is that new "platforms" comprised of increasingly advanced and powerful technologies are, overall, supportive of the human project. Hence, much depends on our ability to understand and resist what are, in effect, influential technoscientific fallacies propagated by an elite group of [powerful organizations](#).

King's critique of technoscience is helpful for many reasons not least because we begin to notice how such received ideas serve to blur our vision and prevent us from appreciating the actual social, economic and political conditions under which innovation occurs. Turning that on its head, King suggests that we adopt a more active and critical role. For example, we can 'interrogate technical developments as incubators of a worldview that allows technology hubris to reproduce and spread' (King, 22). Similarly, with science itself, its characterisation as 'disinterested discovery, disguises its social and economic underpinnings and keeps critical humanistic reflection at bay' (King, 125).

Given this context, the unthinking rush to bring forward ever more powerful systems makes little sense. King comments:



“As tech has gained in power and reach, our sense of its significance in human affairs has not undergone a similar expansion; in some respects we are even less likely to question its role than we were in the past. ...The situation is also dangerous: only a society awake to the reality of technological transformation can hope to exert some modicum of control over the tools that now exert control over us.” (pg. 181).

Again, in response to the question, “Do artifacts have politics?” King offers:



Yes, in that they attest to and reproduce a particular form of power. It removes from human beings an outlet for their creative agency in a way that goes against the grain of their nature. The principal problem of capitalism is that it is bound to seek high private returns rather than high social ones. ... It is the special contribution of the algorithm to have dimmed the lights as never before on our way through the world of things. Our broad trajectory is toward opacity.” (King, pg. 193)

Clearly, human agency is repressed and compromised in an over-technologized world. However, there are numerous ways to push back against what King calls “authoritarian technics.” A sample of strategies suggested in the book is provided below in a condensed form.

- We need to revise how we understand and think about technology. Specifically, that all have an “essential duality,” which means, in turn, that no technology can be entirely good or bad.
- Proposed technical innovations need to be subjected to profound questioning and foresightful reflection by entities informed by positive human values.
- It is helpful to interrogate the products and proposals of Silicon Valley as incubators of a worldview that unconsciously promotes technological hubris.
- Based on evidence to date there’s a strong case to question if there is any useful connection between so-called ‘social media’ platforms and democracy.
- It’s also important to resist the temptation to be distracted by ‘cool stuff’ and to focus more purposefully on ideas and assumptions.
- It would be helpful to gain greater clarity regarding the important differences between harnessing natural forces and reconstituting nature. The latter should be approached with far greater caution tinged with humility and long-term horizons.
- Notions of “a new holism” should be carefully considered. Especially for the way that they challenge reductionist accounts of human society.
- Attention needs to be paid to the fact that new techniques are so powerfully transformative that they need to be retained within the public sphere. Appropriate forms of social ownership are required to avoid dystopian futures.
- Careful thought needs to be devoted to the awkward fact that only a society alert to the reality of technological transformation will be able to exert greater control over the tools that now seek control over us.

- It is an unfortunate fact that unreflective notions of 'progress' can act as "conceptual shredders." Among their hidden functions is the tendency to eliminate from the human story the struggle between cultures, ideas and people and to replace it with dehumanised, purely physical accounts of energy flows and increased complexity.
- In light of the power and penetration of new and emerging technologies, notions of freedom that fail to engage fully with, and promote, human agency are inadequate.
- Understanding that technologies are inherently political makes it easier to push back.

Reflecting on *Here Be Monsters* reminded me of one of the most incisive criticisms of the long-standing tendency in the United States to regard technology as a key driver in building the future. The issue was again clearly identified by Mohsin Hamid when he noted that that America has for many years unreflectively operated out of what he calls "*a sense of techno-optimism ungrounded in any profound understanding of technology*" ([Hamid, 2022](#)). The works considered here suggest otherwise. They represent an indicative sample from an area of writing and research that urgently needs to be brought into the Futures arena, consulted, critiqued and, where appropriate, applied.

It's time to set aside the notion that technology is, in any way, *neutral*. Clearly that's not the case. Similarly, it should be standard practice to consider technical (and other) developments in their wider contexts.



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We should be asking: Whose interests are involved? What values are driving the activity and from within what kind of worldview are they operating?

Most useful at this point is the rise of integrally informed, neo-Humanist perspectives that are more openly explicit about these very questions. The view that new high-tech developments and the organizations from which they emerge are necessarily helpful needs to become the focus of intense [critical attention](#).

Indeed, that's exactly the case of a work that appeared as this review was being finalized. Just as critical theory in general has long been productively applied to futures problems and issues, so too can it be applied to IT in general and AI in particular. In what may come to be regarded as a kind of 'break-out' text, digital sociologist [Simon Lindgren](#) proposes that AI be regarded as "an empty signifier." That is, "an abstract concept addressed as a concrete thing." He continues:

“AI reification may lead us to forget its socially constructed character, and instead see it as something with a life of its own beyond our control. AI is not unknowable or inscrutable by humans. Far from being 'magic' it is a constructed machine that can be deconstructed.” (Lindgren, 2023).

From here, a vital step is for insights such as these to permeate the awareness of all those involved in high-tech innovation, particularly those concerned with IT and extensions thereof. Equally, those who are

currently developing new rules and regulations to rein in dangerous or 'non-legal' innovation urgently need to get beyond vested interests and naive techno-optimism.

Pathways toward “Futures Beyond Dystopia” were never going to be straightforward or easy. Yet, as the human prospect continues to darken, they require greater care and attention. They need to be explored by practicing futurists who understand why the present is as it is and, crucially, where the levers of change toward more humanly desirable outcomes can be found and applied by people of intelligence and good will.

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