

already extremely rich, persuasive, solid, and driven by gargantuan research work. It bears witness to the authors' remarkable ability to deal with the extraordinarily inexhaustible subject of carbon, one which still leaves much to be said, as Lee Bae's charcoal reminds us.

References

- Serafin, A. (2019) *Lee Bae's fascination with charcoal continues to burn bright*, in "Wallpaper", November the 22nd 2019 (<https://www.wallpaper.com/art/lee-bae-exhibition-galerie-perrotin-new-york>)
- Hessen, D.O. (2018) *The Many Lives of Carbon*, London, Reaktion.
- Hazen, R.M. (2019) *Symphony C: Carbon and the Evolution of (Almost) Everything*, New York-London, W. W. Norton & Company.
- Malm, A. (2016) *Fossil Capital, The Rise of Steam Power and the Roots of Global Warming*, London, Verso.
- Renn, J. (2020) *The Evolution of Knowledge, Rethinking Science in the Anthropocene*, Princeton, Princeton University Press.

* * *

Felix Tréguer

L'Utopie déchuée. Une contre-histoire d'Internet, XVe-XXIe siècle. [The Fallen Utopia. A Counter-History of the Internet, from the 15th to the 21st Century], Paris, Fayard, 2019, pp. 350

Julien Rossi *Université Catholique de l'Ouest*

A few decades ago, the Internet was heralded by many as a new frontier, a promised land where freedom would reign. It would bring the world together in a global village, end conflicts, and challenge monopolies of old. Today, the Internet has become almost frightening, and definitely highly contentious. For example, end-to-end encryption has become more and more widely accessible, but it regularly comes under attack by law enforcement and intelligence agencies. Social media are accused of depriving their users from their privacy and of facilitating the spread of dangerous "fake news" and terrorist propaganda, fuelling calls for "content moderation" mechanisms that amount to a restoration of censorship under a new name.

These debates all seem rather new because the technology at play is new. *L'utopie déchuée* (in English: *The Fallen Utopia*), a book derived from the author's doctoral dissertation in political science, thus surprises us with its subtitle: *Une contre-histoire d'Internet, XVe-XXIe siècle* (in English: *A*

Counter-History of the Internet from the 15th to the 21st Century). By announcing from the onset that it is going to narrate the History of the Internet from the 15th century onwards, this book reminds us that debates that are framed as being about the Internet as a technology are actually the continuation of a much older discussion on the level of freedom that should be afforded to the public sphere, defined as the socio-technical assemblage (or *dispositif*) through which members of a society discuss political matters. This debate has been ongoing for centuries, and predates both computers and the Internet.

Félix Tréguer, the author, is now a post-doctoral research fellow at the Centre de recherches internationales at Sciences Po Paris, and is also affiliated to the newly created Centre Internet et Société of the CNRS. He is also known for his involvement in La Quadrature du Net, an NGO he is a founding member of, which advocates for the protection of human rights on the Internet. This NGO has close historical ties to the free software movement.

L'Utopie déçue is a title that reflects a feeling of disillusion felt by many activists close to the hacker and the free software culture. It is divided in four sections, and fourteen chapters, not including the introduction and the conclusion.

While digital utopias born in the 1970's brought an immense enthusiasm to the idea that computers could become a tool for emancipation, many are beginning to question these beliefs in light of the development of the platform economy, digital labour exploitation, pervasive surveillance, algorithmic control and the establishment of enclosures controlled by global tech corporations. What went wrong?

To answer this question, section 1 of the book, “Genèse (XV^e-XX^e siècle)” (in English: “Genesis 15th-20th Century”) starts off by reminding readers of the link between surveillance, censorship and the census, which were all the responsibility of two elected officials called censors in the Roman Republic. He then tells the tale of a century-old struggle between the state's tendency to establish control over the public sphere, and attempts to subvert it. When the printing press allowed the spread of new ideas, monarchies across Europe drew from new theories on sovereignty and the “*raison d'État*” (in English: state interest) to invent new modes of surveillance and censorship of the public sphere. This same scenario played out at the invention of the radio, when states struggled to contain the expansion of amateur and privately-owned radio stations. By the mid-20th Century, liberal democracies, while guaranteeing freedom of speech, provided fertile ground for corporate control aligned with state interests over the public sphere.

In section 2, called “Informatisation (1930 - 1980) (in English: “Digitisation (1930 - 1980)”), the author recounts the invention of computers and of the Internet. In the next section 3, called “Subversion (1980 - 2001)”, he tells how computers, first seen as the ultimate artefact of industrial social

control embodied by the corporate culture and image of IBM, turned into a promise of emancipation and of a free, democratic and borderless public sphere freed from the influence of the state and from mass media oligopoly. This new utopia is described as having also led to many practical realisations, like the personal computer or the World Wide Web. These practical realisations heralded a new era of freedom and challenged the gate-keeping powers of an oligopolistic cultural and media industry. They threatened the equilibrium between freedom of expression and control of the previous era, and section 4, called “Reféodatisation (1990 – 2020)” (in English: “Reverting to feudalism (1990 – 2020)”) describes how a strong response from states has led to what Félix Tréguer, quoting Shoshana Zuboff (2018), describes as surveillance capitalism: a system which tends towards total surveillance and where humanity, translated into data, becomes the subject of capitalistic accumulation.

Throughout his book, he talks from a Foucauldian perspective where the “state” is not so much an institution as a type of governing rationality where power is not centralised but may be distributed across a variety of actors (see: Foucault, 1998 [1976]). The level of entanglement between private and public in Internet Governance, especially surveillance, makes this approach relevant. It is also unspecific enough that it can be applied to several eras through which the actual institutional setups of states have greatly evolved. The main shortcoming of this book is that this conception of the state at times tends to lack sociological finesse. It does not matter, however, as the aim of *L’Utopie Déchue* is not to provide an in-depth socio-political analysis of specific public policies in a given domain of state intervention. Instead, it situates contemporary debates on Internet governance, online censorship and surveillance into a long-term account of a centuries-old struggle, that has remained defined by the same fundamental divides despite, or maybe regardless of the evolution of the technical elements that co-constitute a public sphere it defines as a socio-technical *dispositif*. Seen from this angle, censorship and surveillance are two sides of a same coin. And although they are exercised on and through socio-technical means, Félix Tréguer convincingly shows that the topic of contention is not the computer or the Internet (or any other artefact) as such, but the politics of public speech, human rights and the relationship between citizens and the state.

Yet in the concluding chapter of the book, Félix Tréguer leads his reader through a sharp turn to the infrastructure, and ends up questioning the very existence of computers on political grounds. He argues that maybe these *should* become the topic of contention as such. The very title of this concluding chapter, “Arrêter la machine?” (in English: “Should we stop the machine?”), sounds like a provocation. Current decision-makers are committed to growth through perpetual, preferably permissionless, innovation. Even privacy advocates who defended the General Data Protection Regulation (GDPR) usually presented their demands as a way to build

"trust" in the digital economy, not as a means to stop the construction of such an economy or at least forbid some of its potential innovations. For many years, policy and even scholarly discussions on topics such as digital copyright, dataveillance or informational privacy has been focusing on regulating the *use* of technology through various legal, political and market constraints and incentives. What Félix Tréguer tells us is that this is important, but perhaps not sufficient, and that this insufficiency could explain the failure of activists to effectively challenge the power structures of surveillance capitalism.

L'Utopie déçue ends on a reference to the work of Jacques Ellul, who was an influential political philosopher and sociologist, as well as a protestant theologian, who has published many books offering a critical analysis of what he dubbed the "technological society." Arthur Miller's *Assault on Privacy*, which was quite influential in the early debates that led to the adoption of contemporary privacy and data protection legislation, was published in 1971. It opened with a long quote of Jacques Ellul's *Technology Society*, followed by a socio-political analysis of computers in society, a discussion of the right to privacy as part of a strategy to mitigate harmful effects of information technology, before concluding on yet another quote of Jacques Ellul.

In 1964, Lewis Mumford had written about the opposition between "authoritarian" and "democratic" techniques. Ivan Illich published *Tools for Conviviality* in 1973, quoted by Félix Tréguer in his book, which pleaded for a radical change in the theory and practice of human technology. These normative and moral reflections on technology were not just philosophical discourses limited to a restricted audience of contemplative thinkers, but made their way into practice, and influenced the movement in favour of personal computers in the 1970's and 1980's, as those were seen as a way to steer away from authoritarian computing (embodied by companies like IBM) towards a more democratic system. They were also influential in the shaping of public decision-making. Since then, however, there has been an intellectual shift from attempting to regulate artefacts, to regulating their uses.

Science and Technology Studies (STS) have been studying the role of socio-technical controversies in the social construction of technology for a long time. This approach has led, in the field of Internet Governance studies, to a "turn to the infrastructure" in which sociologists and political scientists study the material layers of the Internet to unbind the relationships between the material, the technical, and the political (Musiani et al. 2016). Such studies usually take a non-normative approach.

Félix Tréguer's concluding interrogation, coming from the field of political science, is more radical because it is the product of engaged action-research by someone who has long been a prominent human rights activist. It calls for more than mere legal or even technical patches on a digital socio-technical ensemble of networked computers that may be fundamentally

authoritarian in nature. This is why he speaks about a need to “stop the machine” (p. 308). In questioning whether we should accept the existence of computers, in a way, he appears to suggest that the problem would be solved if we got rid of computers. By doing so, it could be argued that Félix Tréguer falls into the trap of some kind of reverse technological solutionism (Morozov 2014). His provocative suggestion, however, should rather be understood as a call to reflect, and to make us look once more at technology itself, not only its uses or its controversies, through a moral and political lens.

References

- Foucault, M. ([1976] 1998) *The History of Sexuality: The Will to Know*, London, Penguin.
- Illich, I. (1973) *Tools for Conviviality*, New York City, Harper and Row.
- Morozov, E. (2014) *To Save Everything, Click Here: The Folly of Technological Solutionism*, New York, Public Affairs.
- Mumford, L. (1964) *Authoritarian and Democratic Technics*, in “Technology and Culture”, 5(1), pp. 1-8.
- Musiani F., Cogburn D. L., DeNardis, L. and Levinson N. S. (2016) *The Turn to Infrastructure in Internet Governance*. New York, Palgrave Macmillan US.
- Zuboff, S. (2018) *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*, New York, Public Affairs.

* * *

Julia Watson

Lo-TEK. Design by Radical Indigenism, Köln, Taschen, 2019, pp. 417

Andrea Botero Aalto University

The wetlands of my home town Bogotá (or *humedales* as they are called in Spanish) are one of the most biodiverse ecosystems of the city and its surrounding plateau. Today they are at the center of many development pressures and controversies, as well as numerous conservation efforts. From politicians, urbanists, designers, to activists, almost everybody has an opinion about how these patches of “nature” should be either preserved or dried out in the name of progress. However, few have said about how we could work with the wetlands to thrive together. In contrast, research efforts in the recent decades have uncovered that these wetlands are not just the outcomes of the particular natural ecological conditions of the area,