

French Philosophy of Technology.

Review of Sacha Loeve, Xavier Guchet, Bernadette Bensaude-Vincent, eds., *French Philosophy of Technology: Classical Readings and Contemporary Approaches*, Springer 2018, 400pp.

It is a common lament among philosophers of technology world-wide that there is no tradition or institution of a proper field and subject-matter ›philosophy of technology‹. It is still notably absent, for example, from the list of topics of the popular *PhilPapers*, *PhilArchive*, *PhilEvents* website¹, in many dictionaries and handbooks of epistemology, but also in the granting scheme of the European Research Council (ERC) which includes a social science STS panel as well as ›history of science, medicine and technologies‹, but only ›philosophy of science.‹ To the extent that philosophy of technology today does exist in journals, academic societies, and a vibrant research community, it is thus forever young and new and off to a fresh start or braced for an uphill battle. Regarding these multiple beginnings and formations, very different national stories can be told – not only for Germany, the Netherlands, North America, and France.² If the Germans came up with the label ›*Philosophie der Technik*‹, they did so by putting in the place of an encyclopaedic *Technologie* or discourse on the mechanical arts a grossly substantivized, monolithic *die Technik* – hypostasizing a monstrous singular and creating a mass noun which does not exist in English or French and which remains characteristic of German philosophy (compare the Introduction, pp. 5f. in the volume under review). In contrast, Dutch philosophy of technology was born at and received its distinctive imprint from its Universities of Technology and the many philosophers working there – thus becoming predominantly a philosophy of engineering and design. In North America, the philosophy of technology is one parochial off-shoot among many but gave rise to the prominent and widely influential school of post-phenomenology.³

In the absence of a distinctive tradition, lineages, or institutions, and in view of the rather eclectic articulations of a philosophy of technology, one might change the

1 See www.philpapers.org as accessed and documented on July 25, 2019 – the day on which a query was launched to the website editors to suggest inclusion of the ›Philosophy of Technology.‹

2 Indeed, most interesting stories await to be told about Italy, Russia, or China and a host of countries with unique ways of considering the history and philosophy of technology.

3 Compare the *Kontroverse* with Don Ihde and the review by Sophie Loidolt in this volume.

perspective, though: How does the philosophy of technology benefit when it is not considered a field or a reflection *sui generis*, but when it is a pivot of sorts, a recurrent moment or tellingly blind spot just of philosophy as it is understood in a certain context? In that case, the special contribution of, say, French philosophy of technology would result entirely from how technology does or does not appear in the works of French philosophers or how it is woven into the fabric of French philosophy. This is where this excellent collection of essays sets in to expose not only the richness, but, systematically speaking, the centrality of the French tradition for the philosophy of technology – and of technology for French philosophy. This richness will not surprise in light of only some of the names and themes that come to mind even for the non-expert, starting with the 18th century discourse on ancient and moderns, technology and the arts, continued in the 20th century by Bachelard and phenomenotechnique, Bensaude-Vincent on technoscience and its discordant temporalities, Canguilhem regarding mechanism and organism, Dupuy's mechanization of the mind and enlightened doomsaying, Ellul's technological society, Latour's non-human actors, Lyotard's libidinal economy, Serres and his messages from mixed or mingled bodies, Simondon's concrete machines, or Stiegler on legibility and technological literacy. One can easily add to this list by insisting on LaMettrie and de Sade, Comte and Saint-Simon, Foucault and Deleuze, Barthes and Bourdieu, Virilio and Baudrillard.⁴

It is not this richness and diversity of approaches, however, or the sheer abundance of technological questions in French philosophy which define this volume.⁵ Instead, it makes a difference and enters contested territory by way of advancing, at least implicitly, a systematic argument regarding the question of how technology should be taken into consideration. Since the editors are too modest to claim this outright, this reviewer will have to do it for them: French philosophy of technology is *real* philosophy of technology because it is object-centered without isolating the artifact, because it is anthropological without postulating or naturalizing an immutable human character, because it shows how human (self-)understanding becomes articulated, technoscientifically, in a technological *milieu* – with all its implications for politics, the anthropocene, and the moral predicaments of contemporary societies.

What then might we learn from this book about ›real‹ philosophy of technology as opposed to philosophical considerations of technology that somehow miss out on technology as *poesis* but treat it somehow reductively in the philosophically famili-

4 Unsurprisingly, most of these names are considered and discussed in the volume at hand. The least notable absence is that of Paul Virilio, the most notable absence that of Michel Foucault (but see note 10 below).

5 Indeed, the editors are not concerned to include everyone – many familiar ›big‹ names are discovered and interesting, ›new‹ ones introduced.

ar idioms of theory and practice?⁶ The editors highlight in their Introduction the three mentioned special features of French philosophy of technology and structure the book around these (pp. 8-13). They do not use the Aristotelian categories of *theoria*, *praxis*, and *poesis* to set this tradition off against any other. And yet, a comparative view suggests itself. Take Hacking-style philosophy of experiment and laboratory practice, for example, that showed how technology is instrumental for but still subservient to the purely intellectual aim of representing the world – subservient even when used to create and stabilize laboratory phenomena. Similarly, SCOT was not primarily concerned with technological objects or with building and making, but with the processes of developing, accepting, and rejecting technologies somewhat in analogy to theories.⁷ Finally, most work in the epistemology of technology is framed as an epistemology of engineering and design, that is, concerned with realizing, modeling, or testing technical functions. This agrees with Paul Forman's observation of a lack of nerve when it comes to fully acknowledging and appreciating even extant, well-known theories of the priority of technology over science.⁸ And it agrees with Martina Heßler's diagnosis that histories of technology have told us a great deal about the development of machines and hardly anything about the development of the human being – even as ›human-machine‹ relations have assumed such a prominence in our culture.⁹ Having framed the problem in a variety of ways, let us take a glimpse of what the book provides on its own terms.

The 22 chapters of this volume result from a workshop and writing process that was meant to consolidate and strengthen the philosophy of technology in France, and to this end primarily, a shared ancestry and tradition was constructed. Its figureheads are François Dagognet (1924-2015), Gilbert Simondon (1924-1989), André Leroi-Gourhan (1911-1986), Bernard Stiegler (b. 1952) – and prior to all of

6 Of course, any appeal to ›real philosophy of technology‹ is asking for trouble. So here is the same claim, more carefully put: This volume does justice to the expectation that the philosophy of technology must not begin from the vantage point of the Cartesian subject's representations and interventions but must take as its starting point how *homo faber* in the processes of building and making and thinking is always already implicated in a technological milieu or in *Technik als Medium*.

7 See Alfred Nordmann: Essay review of Léna Soler, Sjoerd Zwart, Michael Lynch, and Vincent Israel-Jost, eds., *Science after the Practice Turn in the Philosophy, History, and Social Studies of Science*, Notre Dame Philosophical Reviews. *An Electronic Journal*, <https://ndpr.nd.edu/news/science-after-the-practice-turn-in-the-philosophy-history-and-social-studies-of-science/> (26.6.2015). See Alfred Nordmann: »Changing Perspectives: The Technological Turn in the Philosophies of Science and Technology,« in Maarten Franssen, Pieter E. Vermaas, Peter Kroes, Anthonie W. M. Meijers, eds., *Philosophy of Technology after the Empirical Turn*, Berlin 2016, pp. 107–125.

8 See Paul Forman: »The Primacy of Science in Modernity, of Technology in Postmodernity, and of Ideology in the History of Technology,« *History and Technology* 23.1/2 (2007), pp. 1–152.

9 See Martina Heßler: »Menschen – Maschinen – Mensch/Maschinen in Zeit und Raum. Perspektiven einer Historischen Technikanthropologie,« in Martina Heßler and Heike Weber, eds., *Provokationen der Technikgeschichte. Zum Reflexionszwang historischer Forschung*, Paderborn 2019, pp. 35–68.

them Henri Bergson (1859-1941). From among these, at least two names will be unfamiliar to international readers, and one of the achievements of this volume is to acquaint us with Dagognet, Leroi-Gourhan, and to estimate their significance and influence. And if this list appears all too stereotypically all male, one should add co-editor Bernadette Bensaude-Vincent (b. 1949). Her agile mind, engaging presence, and major intellectual influence on this dynamic group of writers and thinkers can be felt throughout the book.

The common theme of these and associated thinkers is their consideration of the relation and interdependencies of technogenesis and anthropogenesis (chapter 2 by Gérard Chazal, p. 27), where priority is given in a ›thing turn à la française‹ to the *longue durée* of technogenesis and thus also to their disparate temporalities:

»[T]he post-phenomenology framework remains overly anthropometric in the sense of a man-measure of all things. The French emerging community is by contrast kin to investigate how technology relates to non-human entities in the world. A nanomachine for instance is much more than an artifact that mediates human-world relationships: it comes into being in the material world and interacts with other material entities at a length-scale out of reach of direct human perception and action. Plastics interfere with temporalities that extend far beyond their life-times as human commodities.« (Editors' Introduction, p. 12; see chapter 17 for Bernadette Bensaude Vincent's reflections on the multiple temporalities)

If the example of the nanomachine appears a bit strained, these remarks nevertheless point to a crucial aspect of the ›technical *milieu*‹, which was discussed by Leroi-Gouhan in 1943 and figured prominently in Gilbert Hottois' 1976 definition of technoscience¹⁰ – the technological *milieu* consists of technologies that are calibrated to support and agree with one another and with human habits of action. A second example from nanotechnology can underscore that point: For the most part, discussions of microscopy take human sight as their paradigm and seek to appreciate its instrumental modulations and mediations, its distortion, correction, or extension. But in the case of Scanning Tunneling Microscopy, the paradigm of sight is displaced by the affordance of visual and physical access through a robust system of mutually calibrated tools of measurement, intervention, and visualization.¹¹ This genesis of affordances in the technological milieu affords also, anthropogenetically speaking, a human actor who is situated within this milieu and engaged at the nanoscale – rather

10 Hottois reflects on the history of that concept in chapter 8, in the *Jahrbuch Technikphilosophie* see also Hottois 2014. For Leroi-Gouhan and his paleoanthropological interest in the technical *milieu* of early human cultures see chapter 13 by Charles Lenay. Chapter 6 by Victor Petit and Bertrand Guillaume moves »towards an ecology of the technical *milieu*«.

11 See Ian Hacking: »Do we see through a Microscope?«, *Pacific Philosophical Quarterly* 62.4 (1981), pp. 305-322; cf. Alfred Nordmann: »NanoTechnoScience for Philosophers of Science«, *Philosophia Scientiae* 23.1 (2019), pp. 99–119, here pp. 114–115.

than a human observer who is drawing technologically mediated inferences about an object of perception.

There is no need to turn to nanotechnology, however, to explore the encounters of people and things in the sphere of technology and art. This is philosophy of technology in the tradition of Diderot and Lessing, Simondon and Canguilhem, as a discourse on the fine and mechanical arts, one that seeks to appreciate machine culture without valorizing the engineer, without demonizing or celebrating ›*die Technik*‹ or ›*la technique*‹ (see chapter 3 by Vincent Bontems on Simondon).¹² A text nicely edited for readability, based on a 2002 lecture by Bernard Stiegler makes this point quite compellingly (chapter 18). It takes the critique of Adorno, Horkheimer, Marcuse of the industrialized mind and queries its underlying idealization of an autonomous individuated mind which has fallen out of step with the technogenesis of a distributed modern consciousness. Rather than critique what we have become and how we have become alienated from our original selves, it seeks literacy and begins to read our selves as technical artefacts which are as original as they get – in an industrial *milieu*. This is an anthropological project which might remind readers of Kapp or Gehlen. Where Kapp, however, views technologies as projections of our physical and mental make-up, prompting the self-discovery of the human through the detour of technology, Stiegler shows that technologies create the conditions of legibility, thus providing for all that might be called self-understanding, projection, realization. Xavier Guchet dramatizes this difference in his discussion of ›exteriorization‹. In the tradition of Hegel, Marx, and Kapp, ›exteriorization (*Entäußerung*)‹ stands for the division between self and world and the ways in which we recognize ourselves or not in the products of our labor and in our technological manifestations. For Stiegler and Simondon and, most explicitly, Guchet ›exteriorization‹ refers to the fact that as living beings we biologically live outside our bodies. Accordingly, technology refers not primarily to a separate sphere of intentionally created artefacts but to the mode of existence of technological objects which ties nature into the operations of exteriorization. It is the consideration of *poiesis*, then, which leads Guchet to call for a ›biological-grounded analysis of humans-technology relationships, paving the way for further investigations of how technology ›exteriorizes‹ humans‹ (chapter 15, pp. 237–256).¹³

12 See also Martina Heßler: »Gilbert Simondon und die Existenzweise technischer Objekte – eine technikhistorische Lesart,« *Technikgeschichte* 83.1 (2016), pp. 3–31.

13 See also François-David Sebbah's contribution on »Lyotard on the (In)Humanity of Technoscience« (chapter 10, 167): »Let us insist on this: this thought of the ›always already‹ of the continuity of living beings with the technical – far from thinking the tool as a ›projection of the organ,‹ as the continuation of the living body that would invest it with its abilities – thinks the living being as the always already of the (its) prosthesis.« Cf. Xavier Guchet: »Nature and Artifact in Nanotechnologies«, *HYLE--International Journal for Philosophy of Chemistry* 15.1 (2009), pp. 5–14.

In the context of French philosophy of technology, *poesis* thus goes beyond ›theory‹ and ›practice‹ not only by attending generally to ›bringing forth‹ but specifically to ›bringing forth the technological subject‹ – reminding us of Friedrich Schiller’s »The arts are nature’s accomplices. The latter made creatures, the former human beings (*Kunst ist die rechte Hand der Natur. Diese hat Geschöpfe, jene hat Menschen gemacht*)«.¹⁴ Without dwelling at all on the strained relation of technology and art, this anthropological project takes techno-logy as a complement to aesthetics, where ›techno-logy‹ is the ›study of technics‹ and ›aesthetics‹ the ›study of sensation and feeling.‹ Taken together they can »question the technically enabled distributions of the sensible«: »designers would have to ask *what* should be rendered sensible and *why*, to make *intelligible* the *ways* in which the sensible is technically operated and partitioned, and to render these partitions problematic, debatable, and perhaps reversible« (Sacha Loeve in chapter 22, pp. 381f.).

Where other anthologies on the philosophy of technology obligingly include a concluding section on ethics, the conclusion by Sacha Loeve suggests that ethical and political concerns flow immediately from the technoaesthetic approach to technology which is neither concerned with the functions nor with »ethical, legal, social implications« of technologies (Editors’ introduction, p. 7; chapter 19, pp. 327f.). This is underscored by a remarkable survey of »The Role of Philosophy of Technology in French-Language Studies of Video Games« by Mathieu Triclot, and in reflections on »Ethics of Technology in France« by Jean-Yves Goffi (chapters 7 and 19, pp. 101-118, 317-330). Goffi notes a familiar tension between humanist or *geisteswissenschaftliche* and engineering approaches to ethics. This tension, he argues, is resolved in the French tradition

»by philosophers who, following Bergson, have articulated philosophy of technology with philosophy of life. Whether technology is threatening life (understood as biological, spiritual, social, psychological or whatsoever) or is an expression of life is perhaps the great unifying question in the debate.« (p. 318)

Cutting across the question of negation or expression and exteriorization of life is Loeve’s concern with the »distribution of the sensible« – as are Lyotard’s and Dupuy’s anti-Heideggerian reflections on the (in)humanism or antihumanism of cybernetics and technoscience (chapters 9 and 10, pp. 139-168).

»The world of objects, which is immense, is eventually more revealing of the mind than the mind itself.«¹⁵ With this quote from François Dagognet, Gérard Cha-

14 Friedrich Schiller (1783): *Die Verschwörung des Fiesco zu Genua*, act 2, scene 17. Cf. Heßler: »Menschen – Maschinen – MenschMaschinen in Zeit und Raum: Perspektiven einer Historischen Technikanthropologie,« pp. 35–68.

15 From a 1993 interview with *Le Monde* which was reprinted as part of *Le Monde*’s obituary of Dagognet on October 4, 2015: Roger-Pol Droit: »Mort du philosophe Francois Dagognet,« *Le Monde* (2015).

zal summarizes the technoaesthetic understanding of French philosophy of technology and thus of this stimulating and important collection of papers:

Beginning perhaps in the eighteenth century with Diderot's passion for both technology and fine-arts, this tradition of object-oriented philosophy culminated in Gilbert Simondon's works in the mid-twentieth century. Besides Simondon and in the French-speaking world, I should cite for this type of approach that rejects any disregard for technical practices as well as the clash between two cultures, François Dagognet, Jean Claude Beaune, Daniel Parrochia, Jean-Pierre Sérís, Gilbert Hottois, Bernard Stiegler, Franck Tinland ... and the next generation of young philosophers who pursue this tradition in a very inventive way, many of which have contributed to this volume. (Chazal, chapter 2, pp. 24f.)¹⁶

16 Chazal characterizes this French tradition by listing among its distinctive features the idea that humans construct themselves through the technical artifacts and practices of a historical period, and »the connection between Techniques and Arts« (chapter 2, p. 25). He briefly suggests that this differs from a Foucauldian approach. Foucault was a historical epistemologist, after all, with intellectualist epistemology writ large even as he exposes the power-effects of knowledge regimes, of which technology is only a part and, indeed, rather traditionally, a means.

