

BOOK REVIEW

## Eric Schatzberg, *Technology: Critical History of a Concept*

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Erik Schatzberg's seminal 2006 article '*Technik* comes to America' charted the transatlantic journey of a German word-concept that arrived in the anglosphere and, he contended, helped create a monster: the all-encompassing, ubiquitous, world-changing concept of technology. This book is his long-awaited expansion of that story and the first full-length account of its development, described as a 'critical history of a concept'. Given that the hold of technology over present-day discourse has only intensified between 2006 (the year before the iPhone) and 2024, with 'computation' now providing a dominant new sense for technology, it is extraordinary that no historian has previously attempted such a panoptic account.

The astonishing scope of Schatzberg's book helps explain why. He fleshes out his earlier work, which followed Leo Marx in posing what must rank among the most difficult questions in intellectual history: what is technology? Of the many possible approaches to this question, the book traces a millennia-long history of ideas: of discourses philosophical, techno-scientific and, in the modern period, institutional and bureaucratic. In seeking to clarify a twenty-first-century concept, defined as 'the set of practices humans use to transform the material world' (p. 2) and which today often signifies more broadly still as the totality of human activity, Schatzberg provides a hugely welcome analysis and elaboration. The book is also a polemic: 'the present-day pathologies in the concept of technology' arise because it has been riven by confusions and conflation, not helped by scholars themselves, who have played a 'unique and at times pernicious role in this history of this concept' (p. 5).

Schatzberg proposes a new distinction between what he terms 'instrumental' and 'cultural' viewpoints. The former have predominated among those thinkers to have considered the matter, equating technology with broader forms of instrumental rationality, of which it is a material instantiation. The latter have, instead, taken technology to be the product of human creativity and striving, which therefore embodies their values. Despite being commonplace among historians of technology and STS scholars, this 'cultural' view remains in the minority, and is the one Schatzberg advocates. Given the preponderance of existing concepts, tools and labels, one might ask whether historians and theorists need yet more categories. Indeed, the accumulation of conceptual baggage around the term 'technology' has led some to advocate abandoning the word entirely, on grounds of imprecision. Schatzberg rejects this idea, claiming that 'technology' retains its usefulness, and wants to reform our understanding by tracing these two trans-historical tendencies, whose use-value lies in their ability to unravel what he repeatedly

describes as a pitiful conceptual muddle. If society has struggled to reckon with its technology, claims Schatzberg, it is because of a lack of understanding of that concept's history, and if historians of technology 'can't figure out what it means, how can we expect others to do so?' (p. 7).

Schatzberg begins his attempt to make good this lack with two chapters on the ancient world, drawing on the work of Serafina Cuomo and others to explore the Greek and Latin notions of *technê* and *ars*: predecessors whose relations to our 'technology' are mapped by marking their extension and limits. Aristotle was the first to distinguish *technê* from ethics, with the profound consequence that it was seen to serve ends outside itself. This radical claim of moral neutrality broke from the moral ambiguity commonly attached to the arts of making, which were instead judged by the uses to which they were put.

Classical questions about relations between theoretical and technical knowledge persisted, in the Middle Ages and the early modern period respectively, when the divide between *epistêmê* and *technê* took new form in the Shapinian context of natural philosophy, exemplified in the reduced social status afforded to its artisan makers. The book hits its stride in Chapters 5 and 6, which develop Leo Marx's notion of a 'semantic void' that 'technology' would later fill, through a lively discussion of encyclopedias and the bifurcation of 'fine' and 'practical' arts in the nineteenth-century industrial context. Chapters 7–9 are perhaps the core of the book, where Schatzberg develops further his thesis about the importance of the German discourse of *Technik* in seeding the American concept of technology that would proliferate in the twentieth century.

Thorstein Veblen is the book's main protagonist in this regard, principally for his role translating between national traditions, but also thanks to his nuanced, 'cultural' view of technology. Veblen is set alongside leading thinkers including Karl Marx, Georg Simmel and Werner Sombart in a rich account of this German tradition of thinking about technology in relation to culture and politics. Chapters 10 and 11 concern the emerging social sciences (with readings of Talcott Parsons and William Ogburn) as they grappled with technological problems, such as war and unemployment in the mid-twentieth century, before Chapter 12 takes us beyond the Second World War into the period that saw the founding of the Society for the History of Technology and its venerable journal, *Technology and Culture* (in which Schatzberg's 2006 intervention appeared). The involvement of Lewis Mumford with Melvin Kranzberg's founding of *T&C* did little to address the continued ahistoricism surrounding its main keyword and is a story that will be of interest to readers of the *BJHS*. Chapter 13 brings us into the 1970s and the writings of anti-modern critics, whose laments were marred by their ignorant usage of 'technology' and their 'instrumental' and/or deterministic views of its character.

This précis cannot do justice to the profound depth and breadth of scholarship contained in this important book, which is nonetheless as compact as it is opinionated. Schatzberg's intense focus on developing his argument is strong evidence for the ongoing need to support such monographic projects, long in gestation. Critical students may nonetheless wonder at the importance granted to Veblen: Can the development of such a ubiquitous yet polysemous linguistic phenomenon be reduced to a single trajectory; or, is it overdetermined by a multitude of cultural flows? For readers of this journal in particular, what is the place of Britain in the story? At times Schatzberg treats Britain and the United States as interchangeable (linguistic) contexts, and at others not. Although several of the following are mentioned, a parallel history that gave weight to the tradition of critical and practical writing in English on mechanism, from the Romantics (who were largely Germanists) to Carlyle, Ruskin, Morris, Geddes and Humphrey Jennings, not to mention Britain's own engineering discourse and tradition of technical education (a key context for 'technology') would have a different flavour indeed, and would require another book (or several). Readers familiar with computational methods will grumble at the

use of Google Ngrams, while Chicago's insistence on endnotes and a separate bibliography creates unnecessary friction, especially for a text so rich in citations. However, Schatzberg has given us a landmark work that manages to be vast in scope, critical and pugnacious throughout.