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Technics

Media in the Digital Age

*Edited by
Nicholas Baer and
Annie van den Oever*

Amsterdam University Press

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1. Technics: An Introduction

Nicholas Baer and Annie van den Oever

Abstract

This introduction argues that contemporary developments in the digital age (e.g., algorithmic media, generative artificial intelligence) are fundamentally reconfiguring the relations between key terms in the study of technology: technē, technique, technology, and technics. Returning to Martin Heidegger and other thinkers who have formatively shaped our conceptual understandings of technology, editors Nicholas Baer and Annie van den Oever offer a renewed exploration of the semantic field and preview the essays, statements, dialogues, and roundtable discussions featured in the volume.

Keywords: technē, technique, technology, film and digital media, philosophy of technology, Martin Heidegger

When Martin Heidegger pondered whether “modern technology is something incomparably different from all earlier technologies,” he had in mind a technological landscape that may itself seem incomparably different from our own (Heidegger [1954] 1977, 14). Heidegger’s “The Question Concerning Technology” (“Die Frage nach der Technik”) juxtaposed machine-powered technology with traditional handicraft: the radar station versus the weather vane, mechanized agriculture versus conventional grain-sowing methods, the hydroelectric plant on the River Rhine versus the sawmill in a remote Black Forest valley. These juxtapositions are now seventy years old and we are thus compelled to raise a similar question as Heidegger: What is the mode of revealing of technology in today’s digital world? And, if digital technology is incomparably different from all earlier technologies, the follow-up one inevitably is: Has Heidegger’s essay, alongside other foundational writings on technology, reached its expiry date?

We are not the first to pose such questions or to feel tempted to believe that Heidegger maintained an allegiance to the older technologies rather

than the newer ones. Yet this assumption comes at a high price, as we will show – namely, a misassessment of his essay’s ongoing relevance and a misinterpretation of its central term, technics (*Technik*). In *Technē/Technology* (2014), volume 4 of our *Key Debates* series, Robert Sinnerbrink argued that, although Heidegger’s penchant for huts and *Holzwege* may have suggested a stance of nostalgia or even neo-Luddism, it would be wrong to assume that the philosopher simply dismissed new technologies: “Heidegger is at pains to insist that there is nothing to be gained by rejecting technology (as though that were possible) or denouncing it ‘as the work of the devil.’ The point is to understand our current relationship of enslavement and misunderstanding in order to better prepare for the possibility of a free relationship to technology” (Sinnerbrink 2014, 70).

For Heidegger, a free relationship involves opening our existence to technology’s essence. “The Question Concerning Technology” shows the untenability of common definitions of technology as an instrumental means or human activity, and instead identifies the fundamental characteristic of technology as revealing. For Heidegger, modern technology’s mode of revealing is a setting-upon or challenging based on the extraction and storage of energies, reducing nature to a mere standing-reserve. His essay ultimately arrives at enframing (*Ge-stell*) as the mode of revealing in which the essence of modern technology lies: “Enframing means the gathering together of that setting-upon which sets upon man, i.e., challenges him forth, to reveal the real, in the mode of ordering, as standing-reserve” (Heidegger [1954] 1977, 20). In Heidegger’s view, enframing conceals not only a prior mode of revealing, *poiēsis* or bringing-forth, but also its own fundamental characteristic of revealing – and, with it, the appearance of truth.

Animated by both ontological and ethical concerns, Heidegger’s essay offers numerous examples of the prevailing ordering of the real as a standing-reserve of potential resources – among them natural elements (e.g., coal, ore, uranium), human beings (“human resources”), and socio-technological creations, such as the airplane on the runway that ensures the possibility of transportation: “it must be in its whole structure and in every one of its constituent parts, on call for duty, i.e., ready for takeoff” (Heidegger [1954] 1977, 17). Updating Heidegger’s examples for our own time, we would also need to consider the digital media technologies that place us permanently “on call” and define us as algorithmic ensembles of information, quantifiable desires, and instrumental actions; artificial intelligence (AI) as a new form of predictive coding and data mining; and, not least, the ongoing climate catastrophe driven by the literal extraction and exploitation of natural resources, rendering the planet increasingly

uninhabitable. In light of these examples, it is easy to see why Heidegger's essay is still relevant today.

At once pervasive and invasive, technological developments such as algorithmic media and generative AI are transforming our very mode of existence, raising a whole host of pressing issues explored by the twenty-eight contributors to this volume: ableism, access, agency, automation, geoeengineering, infrastructure, knowledge production, racial and gender bias and discrimination, surveillance, and warfare, among countless others. Far from marginal or obsolete, the Heideggerian question concerning technology – and especially the potential for a liberatory rather than oppressive relationship to technology – has gained great urgency. The argument of this volume is that the contemporary digital age is fundamentally reconfiguring the relations between *technē*, technique, technology, and technics. It is thus a crucial moment to reexamine the ideas of Heidegger and further thinkers who have shaped, challenged, and extended our conceptual understandings of technology, including Walter Benjamin, Ursula Le Guin, Bernhard Siegert, Gilbert Simondon, Bernard Stiegler, and Sylvia Wynter.

Media in the Digital Age: A Semantic Void

Returning to key terms in the study of media – *technē*, technique, technology, and technics – this volume offers a renewed exploration of the semantic field, clearing what Gregory Bateson called the “conceptual fog” created by hazily defined explanatory notions (Bateson 1972, xx). Already in *Technē/Technology* (2014), Benoît Turquety cautioned against the unreflective use of terms that had distinct meanings in the mechanical era, which is epistemologically different from the digital one. Where technology was once considered within a conceptual realm that often centered on the mechanical art of cinema, the digital age has shifted the general understanding of technology in the cultural sphere: “digital techniques – machineries and processes, apparatuses and workflows – are perceived as belonging to a slightly different conceptual structure than mechanics” (Turquety 2014, 63–64).

Etymologically derived from the Greek root *technē* (art, craft, skill, know-how) and the suffix *-ology* (branch of knowledge), the term “technology” entered the English language in the seventeenth century but did not gain broad currency until after the Second Industrial Revolution (ca. 1870–1914). Leo Marx attributes the term's popularization to the prevailing ideology of progress and to changes in the organizational and material matrix

(large-scale, complex sociotechnological systems), which together created “a semantic void, that is, a set of social circumstances for which no adequate concept was yet available” (Marx 1997, 967). The widespread adoption of the abstract, even indefinable concept of technology thus had a symptomatic value: it marked the inaptness of prior terms (e.g., machine, invention, improvement, the mechanic arts) in relation to the ambiguous developments in nineteenth- and early-twentieth-century society and culture.

With its vague and often contradictory meanings in both popular and academic discourse, the concept of technology comes with many hazards. Integrating a critique of capitalism lacking from Heidegger’s analysis, Marx warns that technology has become a reified term, “used as if it referred to a tangible, determinate entity – a kind of thing” (1997, 981). Ascribed an objective, autonomous agency, technology is seen as an external threat to the humans who created it, leading to mystification and a sense of fatalistic passivity. Moreover, inasmuch as the concept is commonly projected backward to encapsulate the full history of tools, it elides the social conditions for which technology once served as a historical marker. Where Marx ultimately doubts whether the concept allows for cogent, analytical thinking, we might also consider whether technology is still the best referent for the novel formations that characterize the reconfigured landscape of our own digital age.

In interrogating the concept of technology amid the semantic void in our own time, questions of cultural-linguistic context and intellectual genealogy become salient. For, if the term “technology” is shrouded in ambiguity and reified understandings today, this is also due to the peculiarities of its English usage. Where many European languages distinguish between *technique* (the object of study; the mechanic arts) and *technology* (the field of study; the *logos* or science of techniques), the English word “technology” has generally referred to the former since the turn of the twentieth century (with the notable exception of schools such as the Massachusetts Institute of Technology, established in 1861). Crucial distinctions are thereby lost in translation, particularly as cognates of both *technique* (*die Technik* in German, *la technique* in French) and *technology* (*die Technologie*, *la technologie*) can be rendered in English as “technology” (Schatzberg 2018, 8-13; see also Altman 1984).

In the first decades of the twentieth century, American social scientists such as Thorstein Veblen transposed German discussions of *Technik* into English deliberations on “technology.” Lewis Mumford, by contrast, rendered *Technik* as “technics” in his *Technics and Civilization* (1934), dividing the development of machine civilization into “eotechnic,” “paleotechnic,” and

“neotechnic” phases, yet his terminological efforts ran against the dominant trend. It was Don Ihde who would later re-embrace and popularize the word “technics” for its dual connotations of action and artifact. In his introduction to *Existential Technics*, Ihde wrote: “Technics stands in between the too abstract ‘technique’ which can refer to any set action with or without a material object, and the sometimes too narrow sense of technology as a collection of tools or machinery. Central to my understanding and use of technics is the sense of human action engaged with, through, among concrete artifacts or material entities” (1983, 1).

While, as Ihde noted, North American thinkers had rarely focused on the role of technology in human life, European intellectuals had a more extensive tradition of the philosophy of technology, including Marxist, phenomenological, and existential schools. Ihde nonetheless wrote at a moment of heightened Anglophone interest in Continental philosophy – interest that has continued to be piqued by the publication of texts such as Michel Foucault’s *Technologies of the Self* (1988), Ernst Kapp’s *Elements of a Philosophy of Technology* (*Grundlinien einer Philosophie der Technik*, [1877] 2018), Bernhard Siegert’s essay collection *Cultural Techniques: Grids, Filters, Doors, and Other Articulations of the Real* (2015), Gilbert Simondon’s *On the Mode of Existence of Technical Objects* (*Du mode d’existence des objets techniques*, [1958] 2016), and Bernard Stiegler’s three-volume series *Technics and Time* (*La technique et le temps*, [1994, 1996, 2001] 1998, 2009, 2011). In the process, the English term “technics” has gained greater currency alongside the familiar “technique” and “technology.”

Translations of the past years have also underscored the often-ambiguous range of meanings of terms such as *Technik*. In an overview of German media theory, Bernard Dionysius Geoghegan notes that *Kulturtechniken* – which might be translated as “cultural techniques,” “cultural technologies,” “cultural technics,” or “culturing techniques” – was in fact a nineteenth-century term for agricultural engineering (2013, 67). Given this semantic history, it is no coincidence that Heidegger juxtaposed modern and traditional technics in the form of the mechanized food industry and older grain-sowing methods. Where Heidegger’s “Die Frage nach der Technik” has commonly been translated as “The Question Concerning Technology,” this title obscures the essay’s major themes and stakes, as Geoghegan contends: far from rejecting technology out of hand, Heidegger seeks to reunify technique, technology, and culture under the ancient Greek *technē* (2013, 74).

Advocating for a more differentiated set of terms, our volume not only heralds a shift from technology to technics, or from “The Question Concerning Technology” to “The Question Concerning Technics.” We also emphasize

the plurality of questions concerning technics today. Such questions, we insist, demand diverse theoretical, historiographical, and methodological approaches, as well as a global, intermedial, and multidisciplinary scope – including film and media studies, media theory, media archaeology, media infrastructures, science and technology studies, digital humanities, critical race theory, postcolonialism, feminism, critical disability studies, and the environmental humanities. In pursuing multiple lines of inquiry, our volume embraces a mix of textual forms, from essays and statements to dialogues and roundtable discussions. Exploratory in nature, the chapters in our volume map out the conceptual relations that, as we argue, are being fundamentally reconfigured by the digital era.

About the Book

We open the volume with a survey of the current field of thinking about media and technology through ten statements by scholars and artists: André Brock, Dominique Chateau, Beth Coleman, Shane Denson, Amanda Egbe, Yuriko Furuhashi, Tom Gunning, Jeffrey West Kirkwood, Laura Mulvey, and Jean-Christophe Plantin. This multidisciplinary and multigenerational group reflects on their past work, while also sharing their latest thoughts on issues such as algorithmic media, digital infrastructures, generative AI, and geoengineering. Additional topics of discussion include key thinkers, concepts, and approaches and the (geo)political stakes of contemporary inquiries into media devices and practices. These lines of inquiry are further pursued in subsequent chapters of the volume.

Part II focuses on philosophies of technology in the modern era. Allaying present-day anxieties regarding human displacement via automation and AI, Gertrud Koch argues for a more dialectical understanding of human-machine interrelation, which she elaborates via an intellectual trajectory extending from Karl Marx and Friedrich Nietzsche, through Max Weber and Ernst Cassirer, up to Friedrich Kittler and Jean-Louis Comolli. Amid ongoing concerns over technological warfare, Astrid Deuber-Mankowsky draws a sustained comparison with Kantian philosophy in examining Walter Benjamin's diagnosis of the crisis of perception (*Anschauung*) and experience wrought by the First World War. Much as Koch posits the aesthetic sphere as one of playful experimentation with technology, Deuber-Mankowsky contends that Benjamin's "To the Planetarium" sought to help construct a "room-for-play" (*Spielraum*) – one in which technology recalibrates the

relationship between humanity and nature, rather than serving as an instrument of domination and destruction.

The following two chapters spotlight thinkers who have gained prominence in the Anglophone world thanks to recent translations. Engaging with Gilbert Simondon, Benoît Turquety locates the instructional manual at the interface between human and machine, viewing the user's guide as a manifestation of the technicity of media devices such as Bolex cameras. Ranjodh Singh Dhaliwal stages a conversation with Bernhard Siegert, who has elaborated the aforementioned concept of cultural techniques (*Kulturtechniken*). Delineating the terms *technē*, technique, and technology, Dhaliwal and Siegert discuss issues of etymology and semantic change, of historicism and anachronism, and further address the relations between mediation and techniques, and between cultural techniques and institutions.

Part III features novel interventions in the field of media theory. Where Francesco Casetti conceives of media as forms of protection against external dangers, allowing humans to reconnect with the world on more secure terms, Yijun Sun and Bernard Dionysius Geoghegan draw from Ursula Le Guin to advance a carrier bag theory of media, which they exemplify through the vacuum tube. Interweaving their scholarly trajectories and embodied experiences, Neta Alexander and Jonathan Sterne reflect on technology through a disability-informed lens and emphasize the persistence of ableism in media studies. All three chapters challenge Marshall McLuhan's famous understanding of media as "extensions of man" – whether for overlooking the sheltering function of media, perpetuating masculinist and phallogentric ideologies, or assuming able-bodiedness and treating prosthesis solely as a metaphor.

Media archaeology moves to the fore in Part IV. With her hands-on, material, and playfully experimental approach to media archaeology (recalling Benjamin's "room-for-play"), Wanda Strauven explores the emergence of the smartphone and its varied terminology across European languages, with anecdotes from her family life and excursions into the history of candies, plastics, emojis, and games. Similarly focused on children's media, Doron Galili studies the contemporary case of the "Makrentz'ik," a toy magic lantern marketed to the Jewish ultra-Orthodox (Haredi) community. Inasmuch as the magic lantern is often regarded as obsolete, the Makrentz'ik's coexistence with digital devices complicates established narratives about old versus new media technologies. Strauven's and Galili's chapters illustrate the nonlinear temporalities of media archaeology – known for its deep time, palimpsestic layers, cyclically recurring topoi, and Foucauldian ruptures

and discontinuities – while also extending the field to a more personal domain and to underexamined contexts of media practice.

Revisiting film against the backdrop of today's rapidly changing media environment, Part V investigates the specific techniques of framing, split screen, and montage. Ariel Rogers contributes to debates about “immersive” media such as 3D cinema and virtual reality, tracing a genealogy of theories of the frame and framing in cinema – from classical film theory up to recent work on race as technology. Likewise transhistorical in their scope, Catherine Grant, Malte Hagener, and Katharina Loew discuss the varied uses of split screen in film and media history, including examples from the nineteenth century (e.g., picture postcards, lantern slides) and the present-day mediascape (e.g., video essays, multichannel art installations). Kartik Nair considers the affordances of digital editing software programs such as Adobe Premiere Pro, arguing that the verse jumping in *EVERYTHING EVERYWHERE ALL AT ONCE* (Daniel Kwan and Daniel Scheinert, 2022) lends allegorical expression to the shifting terrain of editorial labor.

As the volume's chapters indicate, digital technologies have inaugurated a paradigm shift in film and media culture. In Part VI, Malte Hagener focuses on the ramifications of digitization for film studies, engaging with recent scholarship on infrastructures and reflecting on questions of access, metadata, and method. With a similar attention to the political economy of digital knowledge infrastructures and institutions, Annie van den Oever leads a conversation with Andreas Fickers on epistemic virtues in the digital humanities. Structured around Italo Calvino's *Six Memos for the Next Millennium* (1988), their conversation covers the latest topics of debate in the digital humanities, including the geopolitics of knowledge and the problems of epistemic inequality and injustice. Much as Hagener lays out individual, collective, and political spheres of action, Fickers ultimately calls for a new “style of reasoning” characterized by epistemic, political, and ethical virtues. Taken together, the chapters in this volume thus pursue crucial questions concerning technics, providing cutting-edge reflections on media and technology for the contemporary digital age.

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