

## *Introduction*

# Thinking Technicity

Now, since the soul is immortal and has come to be many times and has seen both the things here and those in Hades—in fact all things—there isn’t anything it hasn’t learned. As a result, its being able to recollect what pertains to virtue and other things is nothing to be wondered at, since it also knew them all previously. For, nature as a whole being akin and the soul having learned all things, nothing prevents someone, once he has recollected just one thing—what human beings call “learning”—to discover all else, if he is courageous and doesn’t grow weary in the search. For searching and learning as a whole are recollection [*anamnēsis*].<sup>1</sup>

In the *Meno* and other texts, Plato institutes a now infamous opposition between the Socratic “recollection” of the immortal soul, called ἀνάμνησις (*anamnēsis*), and the artificial or technical supplement to memory, called ὑπόμνησις (*hypomnēsis*). It is with this entirely unprecedented opposition that western metaphysics and, arguably, western philosophy

<sup>1</sup> Plato, *Meno*, 81c-81d, in *Protagoras and Meno*, trans. Robert C. Bartlett (Ithaca: Cornell University Press, 2004) 10. To be sure, Plato’s philosophy is too multifaceted to be condensed into a simple or monolithic idealism. It is only necessary to turn to the later *Timaeus* to find a kind of Platonic materialism: the Demiurge constructs the Forms out of an original and primordial matter through a series of—apparently contingent—acts of technē. In an intriguing move, the particular or arbitrary acts of creation undertaken by the Demiurge are only *subsequently* recognised to be, or transformed into, universal Forms that exist in an independent ideal realm (46d-48).

more generally, comes into existence. To Plato's way of thinking, thought is nothing other than the act of the immortal soul remembering itself once again. On the one side, then, we have thought, the infinite, the transcendental and something called "philosophy." On the other, however, we have artifice, finitude, the empirical and something called "technicity." Yet what happens to the finite world—with all its inherent contingency, variability and fallibility—when the immortal soul recollects itself? If thought is defined as the recollection of immortality, then finitude, contingency and technology are, as Bernard Stiegler has argued, thereby consigned to the darkness of the unthought: true *anamnēsis* apparently has no need of the sophistical or technical supplement that is *hypomnēsis*. What, though, might it mean to "think" this unthought, that is to say, technicity itself?

It is usually Aristotle, rather than Plato, who is credited with inventing the philosophy of technology in the modern sense of the term. As was the case with Plato, he institutes a hierarchy between theoretical (*epistēmē*) and practical thought or knowledge (*technē*): the *Metaphysics* and the *Nicomachean Ethics*, for instance, consistently distinguish between philosophical knowledge—which is an end in itself—and technical or craft-knowledge—which is merely a means to an end. However, Aristotle is also the first thinker to construct an *ontology* of the technical object. To Aristotle's eyes, *technē* is an essentially inert, neutral tool whose status is entirely determined by the use to which it is put by human beings.<sup>2</sup> If nature (*physis*) contains the principal of its own motion—an acorn will grow into an oak tree all by itself—the same is obviously not true for a technical or fabricated object: an oak table or bed frame requires an efficient cause (*causa efficiens*) such as an artisan to bring it into being. In this way, we arrive at an idea of technicity that has dominated philosophy for almost 3,000 years: *technē* is a prosthesis (*πρόσθεσις*: *pro-thesis*, i.e., an addition; what-is-

<sup>2</sup> Aristotle, *Physics*, trans. Robin Waterfield (Oxford: World's Classics, 1999) 33-6, 192b-193b.

placed-in-front-of) considered “in relation to” nature, humanity or thought; one that can be utilised for good or ill depending upon who or what happens to wield it.

Yet, as the essays in this collection will show, it is precisely this concept of technicity—as tool, instrument or prosthesis—that now most urgently needs to be re-thought. It is something of a cliché—but no less true—to say that developments in contemporary technology have radically transformed our understanding of what it is “to be human.” As the disciplines of artificial intelligence, genetic engineering and information technology continue to develop at a bewildering pace, the ontological boundaries between the human and the technological constantly need to be re-drawn: what we used to think of as the defining properties of human being—mind, agency, affect, consciousness, the very operation of thought itself—are revealed to be inextricably bound up with complex, quasi-mechanical and technically replicable processes. Man today is less *homo cogitans* than what Hans Holstein termed *homo cyberneticus*.<sup>3</sup> To put it crudely, technology in this way appears less an *instrumentum* of an a priori “reason,” than an ontological *state*. Consequently, technicity names something which can no longer be seen as just a series of prostheses or technical artefacts—which would be merely “supplemental” (or supernumerary) to our nature—but the basic and enabling condition of our life-world. From the watch we wear to the server we log into, we exist pros-thetically, that is to say, *by putting ourselves outside ourselves*. If the classical opposition and hierarchy between thought and technology can no longer be sustained from this perspective—such that what Plato calls *anamnēsis* may be nothing other than a complex repertoire of motor functions, cybernetic loops and self-replicating hypomnesic systems—then it is clear that this insight poses a new and urgent task for any philosophy of technology. In other words, the question arises as to whether it is possible to *think*

<sup>3</sup> See Hans Holstein, *Homo Cyberneticus* (Uppsala: Sociographica, 1974).

something that is nothing less than the basic *condition* of thought itself.

To be sure, modern philosophy of technology has supplied many different answers to this question—from Marx, through Nietzsche, Freud, Bergson, Husserl, Benjamin, Simondon, Deleuze and Guattari, to Derrida and Stiegler—and this conceptual debate forms the backdrop to many of the essays that follow. It was Kostas Axelos who argued that the title of the first “*penseur de la technique*” belongs to Karl Marx: historical materialism, he suggested, set in motion the critique of the Aristotelian concept of *technē* as an essentially inert, neutral prosthesis.<sup>4</sup> In a crucial sense, the very idea of an historical materialism inverts the Platonic order between thought and technics: consciousness is condemned to play a futile game of catch-up with a set of material conditions that are always running ahead of it. However, Marx’s radical insight into the sheer *irreducibility* of technicity—its utter resistance to any attempt to boil it down to a simple object that exists *for* a thinking subject—is also pressed into the service of a new materialist anthropology. For Marx, it is clear that technology can never simply be *opposed* to humanity because it is something that is essentially coterminous with our “nature”: we are what we do, and what we do is labour with tools or instruments. What Marx defines as the “labour process” in Chapter 7 of *Capital* is nothing less than an originary interface between humanity and technology whereby each invents and constitutes the other across time.<sup>5</sup> If Marx’s insight into the

<sup>4</sup> Kostas Axelos, *Marx, penseur de la technique: De l’aliénation de l’homme à la conquête du monde* (Paris: Minuit, 1967).

<sup>5</sup> Karl Marx, *Capital*, trans. Samuel Moore and Edward Aveling (Oxford: Oxford University Press, 1995). In Chapter 7, Marx offers the following description of the labour process: “Labour is, in the first place, a process in which both man and Nature participate, and in which man of his own accord starts, regulates, and controls the material re-actions between himself and Nature. He opposes himself to Nature as one of her own forces, setting in motion arms and legs, heads and hands, the natural forces of his body, in order to appropriate Nature’s productions in a form adapted to his own wants. By thus acting on the

mutual implication of the human and the technical is undoubtedly a radical step, it could nevertheless be argued that his political critique of machine capital (whereby the unalienated human subject can emancipate itself from domination by technology) still implicitly assumes the Aristotelian concept of a pre-technological causality without which *technē* itself would merely be inert matter. In other words, we might argue that—for all his undoubted radicality—Marx still remains beholden to the metaphysical philosophy of technology: something—a collective human subject or essence—still exists *outside* technicity.

It is Martin Heidegger who here takes the more radical step in asserting that the “question concerning technology” (die Frage nach der Technik) must be posed on an *ontological* level, framed within a critique of the metaphysics of presence: what begins as an anthropology or social science thus comes to reflect nothing less than the very “science of being.” Accordingly, and to a certain degree by way of Marx, this *scientia* or τεχνολογέω also implies a deconstruction of the logic of presence that has underwritten classical ontology hitherto. The thinking of being by way of technicity, as an operation of technological becoming, brings into view a certain distancing and mechanical iterability that invests presence, as it were, from the outset. This means that ontology, as a reflection upon being, is above all involved not only with a cognitive object that may be described as technical, but with an operation of reflexivity that could even be described as the very *apotheosis* of technicity.

In Heidegger’s writing, it thus becomes necessary to regard Marx’s account of the alienation of humanity under capital (as a mode of distancing) less as an historical materialist process and more as a techno-ontological condition: the human becomes the site of a specific destining or disclosure of being as

external world and changing it, he at the same time changes his own nature. He develops his slumbering powers and compels them to act in obedience to his sway” (115).

such.<sup>6</sup> Heidegger's reading of *technē* dates back to his earliest works and goes through a number of important developments across his career.<sup>7</sup> In his later writings, for instance, the "essence" of technology has nothing to do with ontic or empirical technology itself so much as with what he calls the *Gestell* or "Enframing" that constitutes the dominant revelation of Being in the epoch of technoscience: everything—including humanity—is disclosed as a "standing reserve" (Bestand) of energy to be liberated and stockpiled.<sup>8</sup> However, even Heidegger's radical attempt to ontologise technics still retains an idealist or metaphysical residuum, at least according to such thinkers as Derrida. If Heidegger consistently seeks to maintain the ontological priority of an essence of technology—which is only tangentially connected to any ontic or empirical technology—then the danger is that his thought re-establishes the Platonic opposition between the infinite and the finite, the transcendental and the empirical, thought and technology, that it otherwise does so much to place in doubt: "it maintains the possibility of thought that questions, which is always thought of the essence, protected from any original and essential contamination by technology" Derrida writes.<sup>9</sup> The consistent appeal to a dogmatically non-technological essence (Wesen) of technology that remains to be thought arguably deprives technology *itself* of any role in the constitution of thought. This would appear to leave empirical technology in the same inert,

<sup>6</sup> Martin Heidegger, "Letter on Humanism," trans. Frank A. Capuzzi, *Basic Writings*, ed. David Farrell Krell (London: Routledge, 1978) 217-65; 243.

<sup>7</sup> As is well-known, Heidegger's earliest explorations of the Aristotelian concept of *technē* as craft-knowledge take place in the 1920s in such works as the 1925 lecture course on Plato's *Sophist*. The '30s essay "The Origin of the Work of Art" introduces the new concept of *technē* as *poiēsis*. In "The Question Concerning Technology" and the other essays of the '40s, Heidegger introduces the concept of *technē* as *das Gestell*.

<sup>8</sup> Martin Heidegger, "The Question Concerning Technology," *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York: Harper, 1977) 33-35; 15.

<sup>9</sup> Jacques Derrida, *Of Spirit: Heidegger and the Question* trans. Geoffrey Bennington and Rachel Bowlby (Chicago: University of Chicago Press, 1989) 10.

undynamic state of passivity—mutely awaiting that which will give it meaning—to which Aristotle originally consigned it in the *Physics*. In this sense, Heidegger, too, still posits an “outside” from which technology itself might be thought.

After Heidegger, the most influential recent philosopher of technology, within the continental tradition, is Jacques Derrida. It is with the advent of deconstruction that we perhaps encounter the most radical attempt to articulate what Derrida calls our “*technological condition*,”<sup>10</sup> and this attempt provides the impetus for a number of essays in this collection. From its seminal explorations of archē-writing in *Of Grammatology* to the later meditations upon tele-technology in *Archive Fever* and *Echographies of Television*, deconstruction can, with hindsight, be seen to represent a career-long attempt on Derrida’s part to question what he calls the metaphysical “dissociation between thought and technology.”<sup>11</sup> According to the deconstructive logic of the supplement (of recursion and metonymy), any attempt to oppose something technical to something non-technical (up to and including Heidegger’s distinction between technology and the so-called “essence” of technology) is automatically rendered problematic. This is what Derrida has referred to as the “paradoxical logic” of the relation of essence and supplement—as, for example, technology and the technological, technics and technicity, or indeed (although in a different sense) technē and physis, logos, etc.—echoing the “topological” contiguity named by Heidegger’s ontic-ontological difference, whose terms each come to operate as though they were “the detached fragment of a software more

<sup>10</sup> Jacques Derrida, “The Rhetoric of Drugs,” *Points...Interviews, 1974-1994*, ed. Elizabeth Weber, trans. Peggy Kamuf (Stanford: Stanford University Press, 1995) 244-5.

<sup>11</sup> Jacques Derrida, *Memoires for Paul de Man*, trans. C. Lindsay, et al. (New York: Columbia University Press, 1986) 108.

powerful than the other, a part larger than the whole of which it is a part.”<sup>12</sup>

For Derrida, technics must be already installed at the heart of whatever we understand under the concepts of “nature” (physis), “life” (both *zoē* and *bios*) and “thought” (logos, psyche, *anamnēsis*, et al.). It quickly becomes clear that any attempt at recuperating technicity *for* ontology—as if it were a Logos to be discovered—necessarily returns us to the problematic of pure presence, the ideality of the sign, and the metaphysics of temporalisation. Accordingly, when we speak of a “technological ontology,” or *technicity*, we are already speaking of what Derrida terms *différance*; which is also to say a recursion and a *détournement*, by which the metaphysics of presence is opened to the logic of the fold, to techno-poiesis, and to radical distancing. If ontology necessarily requires an assent to the “is” of present-being, technicity discloses this being as “tele-” present, in the mode of a “prosthesis of/at the origin,” as Derrida says.

While Derrida’s thought enables us to glimpse the concept of an “originary technicity,” Bernard Stiegler has recently argued that the accompanying work of deconstruction is too often carried out on a predominantly formal, logical, and a-historical level. If we fail to attend to the technological character of historical discourse itself (and hence to a certain historicity and discursiveness of technics), the deconstruction of the opposition between philosophy and technology may appear purely *philosophical*, and the *historical* or *material* role that specific technological supplements themselves might play in that process is potentially occluded. Viewed within a positivistic or instrumental framework, this gesture would thus risk re-establishing the categorical mode of thought that has traditionally, within the history of Western metaphysics, accompanied such classical oppositions as *anamnēsis* /

<sup>12</sup> Jacques Derrida, “Two Words for Joyce,” *Post-structuralist Joyce: Essays from the French*, eds. Derek Attridge and Daniel Ferrer (Cambridge: Cambridge University Press, 1984) 148.

hypomnēsis, at one and the same time as it calls precisely this oppositional logic into question. In this sense, we might be tempted to wonder, as Stiegler does, whether or not even Derrida's re-thinking of technology doesn't remain vulnerable to the metaphysical pitfalls he identifies, in *Echographies of Television*, with a certain Heideggerianism: "Doesn't he [Heidegger] suggest that there is a thinking pure of all technics?"<sup>13</sup>

This collection of essays invites us to take up the question of technology anew. It is now becoming possible to speak of a new "technological turn" within contemporary continental thought to match the much-vaunted "ethical" and "political" turns of the 1980s and '90s. From the ground-breaking explorations of such seminal figures as Marx, Heidegger and Derrida to the work of more recent thinkers like Friedrich Kittler, Manuel de Landa and N. Katherine Hayles, the theory and praxis of technicity has become one of the defining—perhaps *the* defining—conceptual tasks of our moment. Yet despite the growing amount of important work in this field during recent years, it still often appears that there is no agreement on the precise terms of the debate itself. "Technicity" remains a term whose meaning is, if anything, more contested now than ever before, some 2,500 years after Aristotle first attempted to define it: it is variously defined today as everything from a philosophical concept or idea, a historical or material process, an anthropological tool or prosthesis, an ontological condition, a mode of discourse, a way of thinking to even the basic state of life itself. If the meaning of technicity remains very much in question, then it is hardly surprising that the much larger and more fraught questions of its relation to the status of the human, the animal, nature, culture, history, evolution, science and the political lie equally unarticulated. In this sense, we still need a sustained or concerted debate about the larger

<sup>13</sup> Jacques Derrida and Bernard Stiegler, *Echographies of Television: Filmed Interviews*, trans. Jennifer Bajorek (Cambridge: Polity, 2002) 133.

implications of our technological condition and this is what the following collection seeks to set into motion.

Firstly, *Technicity* offers a series of theoretical reflections upon the formal relation between thought, technology and humanism. Bernard Stiegler, whose ongoing project *La Technique et le temps* (1994-) has done so much to re-open the question of technology after Heidegger and Derrida, opens the collection with a new meditation upon the Platonic opposition between anamnēsis and hypomnēsis. Pursuing a critique of what he has recently termed the “epoch of hyper-industrialisation”—where the inherently technical status of human memory and knowledge are now at the mercy of an unparalleled industrial exploitation—Stiegler argues that the question of hypomnēsis is now perhaps the defining political question of our age. Louis Armand picks up the question of the originally technical constitution of man through a re-reading of Marx, Heidegger and Derrida. Far from being a question or problem that is posed by a human subject, Armand argues that a generalised state of technicity turns this situation on its head: what we call the human is disclosed *technologically* as a being vested in the logic of the stereotype, the iterative event, supersession, futurity, and the mechanics of the possible. For Arthur Bradley, Derrida and Stiegler’s philosophy of originary technicity remains complicit with a residually anthropological account of the human: what unites their work is a tendency to consider the implications of technicity *for* a certain idea of the human rather than in terms of the technical constitution of life in general. Approaching this problem by way of the science fictional tenets of cognitive science, Christopher Johnson offers a set of postulates towards an anthropology of what he calls our “technological imaginary.” Why, he asks, do we consistently imagine the general process of technological *replication*, for example, in terms of the simple *reproduction* of human capacities—what Ruskin termed the “pathetic fallacy”?

Secondly—and more generally—the collection broadens out to offer a series of theoretical and empirical explorations of the

relation between technicity, materiality and culture in a range of different contexts. It is possible, Hartmut Winkler argues—in attempting to construct a new theory of the cultural continuity of media—to negotiate a middle ground between anthropocentric and technocentric media theories—whereby technicity is either wholly dependent upon a human user or evolves autonomously of humanity—by means of what he calls an “economy of discourses.” In Winkler’s view, it is only this economy that produces both continuity and rupture, innovation and stasis, dynamism and inertia within culture. In turn, J. Hillis Miller offers a meditation on the role played by new communication technologies in globalisation. According to Miller, the global impact of such technologies demands an equivalently global academic response. In his conclusion, Miller calls for a globalised cultural studies capable of articulating the myriad different ways in which culture is consumed—and indeed produced—throughout the world. Belinda Barnet is similarly concerned with the quasi-intentional role played by technicity in the production and transmission of culture. Pursuing and broadening Stiegler’s concept of tertiary memory—the exteriorisation and preservation of human memory in the form of manuscripts, works of art or computer programmes—via a reading of the work of Niles Eldredge, Barnet offers a prolegomena for a theory of evolution of technical artefacts.

Assessing the cultural evolution of one particular, if now all-pervasive, technical artefact—the internet—Darren Tofts addresses the long-standing assumption that—with its quasi-infinite capacity for virtual, real-time communication—the world wide web creates or fosters new forms of community and connectivity. Far from bringing people together, Tofts argues that the web contributes to the *diminution* of community. In his view, what began as a new means of connectivity and interactivity has in fact produced little more than increasingly individualised and privatised discursive spaces (epitomised by such sites as Myspace.com). Geert Lovink and Kenneth C.

Werbin's dialogue also concerns the status of one specific technical medium: the list. From the earliest literate societies, through the totalitarian horrors of Nazi Germany, all the way down to the electronic mailing lists of today, Lovink and Werbin's discussion shows how "list culture" has always been inextricably tied to questions of power, knowledge, surveillance and what Giorgio Agamben has recently termed the politicisation of bare life (*zoē*). For McKenzie Wark, it is the virtual space mapped by the computer game—rather than strictly the world of cyberspace—that is the defining *topos* of technicity in the 21<sup>st</sup> century. In the gamespace of *Civilisation III* and its equivalents, Wark's analysis shows that we enter an uncanny world which is both rule-bound and limitless, both absolutely quantifiable and infinitely substitutable, both actual and yet to come.

If Tofts, Lovink, Werbin and Wark are all concerned with present or future media, the contributions of Donald Theall and Niall Lucy return us to the (recent) past. Theall argues that the integration of the arts and sciences in James Joyce's *Finnegans Wake* anticipates much of the contemporary debate surrounding "originary technicity." To Theall's eyes, the "chaosmos" of the *Wake* is nothing less than a meta-textual exploration of the role of the book in what he calls "the electro-machinic world of the new technology." For Niall Lucy, it is the so-called "New Journalism"—pioneered by such figures as Tom Wolfe in the 1960s and early '70s – that provides a privileged historical vantage point for a critique of our technological moment. In Lucy's account, the New Journalism enables us to glimpse a different order of inquiry, knowledge and disclosure to what he terms the conventional journalistic—and techno-logical—ordering of the world as always already coherent and calculable. Laurent Milesi, meanwhile, explores the ontological and phenomenological implications of new technologies of touch and taste in light of Derrida's late work *Le Toucher—Pour Jean-Luc Nancy*. According to Milesi, the new forms of haptic media that are currently in development reveal the inherently

technical status of the “real” itself or what—after Derrida—he calls the “virtueal.” Michael Greaney’s essay analyses how a range of “technophobic” cultural texts respond to the irreducibly technical or virtualised status of human being. For Greaney, contemporary cultural attempts to “think” technicity invest everything in a massive repression of its *unthinkability*: what is nothing less than the internal condition of human thought and action is consistently externalised into an essentially foreign or *alien* threat. Finally, Mark Amerika’s grammatological collage proposes a brief “critical praxis” focused upon the assumed mutual exclusivity of technics and performativity, in which the question of technicity is not merely posed or described but *enacted*, raising anew the question posed by Derrida as to whether or not it has yet become possible to join the thinking of the machine to the thinking of the event.

Viewed as an ensemble, this collection of writings sets out to explore what “technicity” has come to mean at the beginning of the 21<sup>st</sup> century, whether theoretically, empirically, or both. What unites them is less a common conceptual, political or even methodological agenda than a shared series of *questions*:

1. Firstly, what characterises “technicity” today? Does this term merely stand for a revised utilitarian logic, a positivism for the digital age, a post-human residuum or some meta-ontological state? Faced with the ever present spectre of a “return” to something like a machine metaphysics, might it be possible to articulate an “originary” technicity that is both fundamentally material and yet inseparable from thought, being or language itself? To what extent, indeed, is technicity *thinkable* at all?

2. What is the relationship between contemporary philosophies of technicity and their historical predecessors? Do they represent a repetition of, or a radical break from, the philosophies of Aristotle, Marx or Heidegger? How do they make possible a new dialogue between philosophy, the technosciences and the life sciences—for example, in the exploratory modelling of consciousness by way of quantum

computing, or in the physical interaction of brains and computers by way of neural implants? To what extent does technicity thereby entail a radical revision of our traditional philosophical categories (physis and technē, zoē and bios, causality, automation, instrumentality, even the very concept of “philosophy”)?

3. What are the larger cultural, ethico-political or philosophical implications of this new thinking of technicity? How does the question of technology we have so far attempted to articulate inhere within, or arise out of, what Adorno called the contemporary “culture industry” and the aesthetics of the new media (whether in film, literature, journalism, games, the Internet, email, locative media, electronic mailing lists, digitalisation, “real time” communication and transmission technologies)? To what extent can we witness it at work in the political or geo-political sphere (globalisation, international law and rights, industrial, post- or hyper-industrial capitalism, production and consumption, the emergence of a new proletariat or what Foucault and, more recently, Agamben call the bio-political)?

Finally, and for us at least most pertinently, what impact does this state of technicity have upon our concepts of what it is to be human (rational animal, homo faber, homo sapiens, Dasein, even the so-called “posthuman” cyborg)? What—if anything—constitutes the “essence” of human being today? How might we begin to construct a thought that could do justice to that being? And if the task of “thinking technicity” is less a matter of anamnesically recollecting some immortal past than of entering a radically indeterminate hypomnesic future, then who or what—to go back to where we started—would be the agent—the “ego cogito”—of that thought?

*Arthur Bradley and Louis Armand*