

TECHNOSCIENCE STUDIES AFTER HEIDEGGER?

NOT YET

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Heidegger's account of the global hegemony of technology has often been condemned as exaggerated and dystopian. Exposing technoscientific excess is one thing, so goes the argument, but engaging in a "totalizing" condemnation of technology and science themselves is quite another.¹ Moreover, those who argue this way often add that Heidegger's later discussion of technology is a kind of betrayal of the promising but flawed analysis of everyday practices he gives in *Being and Time* [SZ].

In my view, this line of criticism is simply mistaken. Heidegger's account of the rise and current dominance of technoscience is neither abstract nor dystopian; and his later questioning of technology is not only consistent with SZ but depends on it. In fact, his idea that we live in an ontologically enframed world is much less metaphysical and totalizing than the much more familiar and acceptable idea that we are living in the so-called "developed" world. Both ideas portray technoscientific life as the practical and theoretical culmination of the Western intellectual tradition. The difference is that Heidegger does not share the happy, unreflective complacency that usually accompanies the developed-world idea. Even before SZ, he is already trying to dismantle and rethink the popular understanding that nourishes such complacency, not just sociopolitically but ontologically, so that instead of letting it define a way of disclosing what is real that seems necessary, we might see it as just the now-dominant, frequently occlusive, and thus often "distressful" disclosure of sometimes all too "obvious" possibilities.

From Dilthey, Heidegger learned how to interpret his questions about what it is like to be born in the midst of this situation as an exercise in *Selbstbesinnung*—that is, as an effort at self-understanding he soon transforms into the ontological question: how it is to "be" philosophical in the present age?² At first, he conceives this situation quite generally and promissory note-like; it is "always already" a world of everyday affairs, but one that keeps getting meta-

physically obscured whenever we try to "know" it. Eventually, Heidegger comes to articulate the character of this world more precisely as a technological one, and he distinguishes between trying to theorize this situation—which is what the Western tradition has typically done—and learning (as he says) to *think* it. He refuses to move directly to the usual questions of "what" there is and what we should "choose" to make of it. Instead he stops to ask: how "is" it to "be" in such a world? Must everything real and every way of living with it reiterate an ontology of knowable essences and instrumental choice? Like so many others in his time and ours, Heidegger does not understand technoscientific life to be an unrelievedly satisfying site of human progress.

It is at precisely this point that Heidegger's critics like to pounce. "See?" they say. Look at his romantic over-reaction! Just because we cannot celebrate our actual technoscientific present with the same incautious enthusiasm as the nineteenth century celebrated its then still mostly projected technoscientific future, this is no reason to throw a totalizing wet blanket over the whole age. The progressivist-scientific utopianism of the previous era is gone; and with it goes any need for dystopian rejoinders. The age of grand narratives is over.

In my view, however, the scientific optimism of the nineteenth century kind has not gone away. At least in North America and Western Europe, it is the widely, if silently, accepted default position—for the political economy's administrators and technocrats, mainstream epistemologists, and most philosophers of science. It is the pedagogical outlook of the "developed" world—the world one already belongs to or wants to join. It is the stance of the mature and educated human mind. And those who express doubts about this development in more than piecemeal, reformist terms, are judged as simply having failed to move beyond the theological, ideological, or romantic beliefs of earlier times. Like Heidegger, they are seen as having refused to be even late moderns—while the rest

of us, in our greater maturity, are already considering how to be postmodern.

Heidegger's critics are right about one thing—his target. What “distresses” him is the way the current technoscientific world “sets up” and overshapes how we generally understand ourselves and the things we encounter as “being.” Yet if his complaints about this are extensive, that does not make them regressive or Luddite; and it certainly does not justify psychologizing him away as suffering from anti-scientific pathology, or terminal pessimism, or a faulty political conscience. On the contrary, when his descriptions of technoscientific life are taken as formal indications (the way he means them) instead of as essentialist pronouncements (the way his critics take them), these descriptions bring issues into focus that have grown even more pressing than they were when he wrote the Technology-essay.³

In fact, I am going to argue that the usual criticisms of Heidegger may ultimately tell us more about his critics than about Heidegger. All the complaints about his alleged romanticism and essentialism strongly suggest that his opponents overestimate the degree to which the nineteenth century's scientific understanding of the age has been surpassed—and thus also overestimate their own success in thinking after it. Viewed from this angle, Heidegger's analysis of technology may be not so much backward-looking or nostalgic, as “untimely” in Nietzsche's sense. For he seems to be saying what those who are trying most resolutely to be concrete about technoscientific life don't want to hear, at precisely the moment they most need to hear it.

Heidegger's Post-Heideggerian Critics

Critical reactions to Heidegger take several forms.⁴ I shall focus on two of them here. First, there are the American and European philosophers of technology—Don Ihde and Peter-Paul Verbeek among them—who have taken what Hans Achterhuis calls the “empirical turn” toward technology (or technoscience) studies.⁵ The most thorough and fair-minded elaboration of this position is probably Verbeek's *What Things Do*.⁶ The technoscientific “empiricists,” he explains, are perhaps best understood as post-Husserlians, aspiring to be phenomenological about “[the

technological] things themselves.” He agrees with their critique of Heidegger, but he admits that their actual criticisms are often too one-sided in their neglect of his positive contribution to current technoscientific studies and too superficial and external to his own outlook to be really telling.⁷ Verbeek is right, I think, that Heidegger's empiricist opponents tend to be just as abstract and totalizing in their portrayal of Heidegger as they accuse him of being about technology.

However, Verbeek seems less right in what he himself says about Heidegger instead. He does praise SZ for pointing the way to a phenomenology that “takes actual technologies seriously.” Yet he argues that Heidegger's later work is fatally reductive because of what Verbeek calls its “transcendental” concern for technology's essence. Transcendental philosophy, he reminds us, looks for THE conditions for THE possibility of something; and taking this approach to all technologies effectively closes off any possible transformation of modern technology understood as enframing and leaves us helplessly “awaiting the arrival of a new way of being” (95). This transcendentalism forces Heidegger to conceive technology, in Verbeek's words, “backwards” instead of “forwards.” By looking to technology's past in order to establish its allegedly essential conditions, Heidegger reduces all technology to its role in a “history of being,” rooted in the Ancient Greeks' conception of *τέκνε*—and thereafter conceives everything about it as just a “consequence” of an earlier disclosure of being. The result is that Heidegger can never see technology instead as the possible “source” of future technoscientific transformations (91–94).

A second major reaction to Heidegger is represented by critical social theorists like Marcuse, Habermas, and Andrew Feenberg. Like the new empiricists, they often have positive things to say about SZ—only in their case, it is because they claim to find in this work the basis for a critique of ordinary life under capitalism that they cannot find in Marx. But they, too, regard SZ as betrayed by Heidegger's later work—and politically, they insist, not just philosophically. Habermas is of course the best known of these critics; and in addition to being politically influential, his polemics have also become a kind of *locus classicus* for any-

one wishing to defend the Enlightenment spirit against Heidegger's alleged attempt to "undermine...Western rationalism."⁸ According to Habermas, the early Heidegger was an existentialist; he was seduced in the 1930s by the implicit decisionism of SZ into using it to justify his shameful political activity, and he thereafter retreated into a mystical and apolitical quietism that allowed him to explain away his Nazi past.⁹

As a student of Marcuse, Feenberg was of course exposed to this view, but his own reading of Heidegger's texts has always been less self-serving and ideological. In fact, in recent writings Feenberg has largely come to accept Heidegger's account of our present technoscientific condition. For him, Heidegger is not so much wrong about today's world as he is badly placed to offer an alternative. Here, Feenberg comes close to Verbeek and the technoscientific empiricists. He, too, regards Heidegger's account of current technoscientific life as a "metaphysical" over-interpretation of it.¹⁰ He, too, construes Heidegger's claims about the "essence" of technology as claims about what is universally true and unchangeably necessary. Unlike the new empiricists, however, Feenberg's own program is not indebted primarily to SZ and to the post-Husserlian project of multiple phenomenologies. Instead, he looks to other parts of Heidegger's own work, but with a neo-Marxist eye. From Heidegger's interpretation of ancient *τέκνῆ* in the early lecture courses, Feenberg extracts a non-instrumentalist model of praxis. And in Heidegger's writings on poetry and art, he finds descriptions of a source of creative and less dehumanizing ideas about life and reality that might offer us a more democratizing vision of socio-political choice.

Now, I am entirely in favor of both Verbeek's phenomenological "turn toward things" and Feenberg's call for a humanized technology. Their mistake is thinking that Heidegger must oppose them. To start with, as others have pointed out, in Heidegger's vocabulary "essence," *Wesen*, is a verbal not a substantive noun. Hence, when Heidegger says that in the current eventuation of technoscience, there lies a pervasive "danger" more "essential" to it than its global reach and positive promise, he is characterizing how things most strongly tend to be, not how they cosmically

have to be.¹¹ Thus he insists that "the essential unfolding of technology harbors within itself what we least expect, the possible rise of [a] saving power" (QT, 337). Indeed, if there were no potential "saving power" in our experience—that is, if we did not already have a strong sense that our relations with various technologies speak of other possible ways in which things are not just enframed and life is not just set up mostly as "one" instrumentally conceives it—we could not recognize these other possibilities as "other" at all. Things would simply "be" knowable and usable—and we would just "exist" with them—as knowers and users of stockpiled things.

We misread the Technology-essay, then, if we assume that what Heidegger says about *Gestell* and *Bestand* are the template for measuring every technology we currently encounter.¹² His point is not that all technologies are just instantiations of the universal idea of an enframed stockpile of useful things and nothing else. It is rather that, to the extent that we experience things as not being so, describing *how* they "really" are will be hard—in just the way SZ showed it is hard to give non-objectifying accounts of the stuff of everyday praxis. The central ontological fact of our age is that the "materially pervasive" presence of technology—so clearly a blessing in so many ways and so deserving of sensitive and detailed analysis in its own right—is also, and simultaneously, existentially intrusive. Hence, instead of reading him as discouraging the new phenomenological and critical accounts, we should understand how Heidegger's complaints arise at the very same time and from the very same place as these accounts. So, for example, we can love our information technologies and we can analyze their power and promise and fun just as concretely as we like—as long as we also consider how all this power and promise and fun happens in an ontological atmosphere that encourages us to *define* "knowledge" as information processing, to *define* "thought" as neural networking, and to *reduce* "intelligence" to having a big memory and an ability to manipulate symbols very fast.

Heidegger's critics are surely right—even if they do not see that Heidegger agrees with them—that we are all to some extent happy technoscientific pragmatists, and there is no going back. In a black mood, we might imag-

ine giving all of it up, but as he says, we cannot really “think” this. Nevertheless, there is also a whole disturbing array of experiences to be had at the margins of our happy technological practices, all of them tending to make technoscientific optimism as such feel profoundly unsatisfying. Today it is not just Heidegger who thinks that a depressing, retrograde, and dehumanizing threat seems at least somewhat more than equally constitutive of the kind of world for which the earlier modern tradition has nothing but praise. As even Feenberg now admits, when it comes to our current situation, Heidegger’s account is generally telling. Are we, for example, better now at asking about the Good Life, the Just Society, or the Nature of Beauty, or even about what it would take to “know” these things, than in earlier days? Is life more spiritually satisfying, our political economy more democratic? Can we be sure that post-Heideggerians will handle such questions better than onto-theological metaphysicians?

Critique of Heidegger’s Technoscientific Critics

To put this last point another way, as phenomenological or postphenomenological as Heidegger’s critics may be in their accounts of particular technologies, their critique of him often seems shaped by a very pre-phenomenological traditionalism. In the early 1920s, Heidegger saw just this sort of problem in Dilthey, Husserl, and Jaspers.¹³ For him, the real difficulty with, say, Dilthey’s philosophy of historical life, or Husserl’s phenomenology, or Jaspers’ philosophy of *Existenz* does not lie in what they try to do. Their descriptions of human experience, he says, are often “phenomenological enough.” The problem lies in their very traditional understanding of “who”—that is, what sort of philosopher—does the describing. A Dilthey who wants a “Critique of Historical Reason” still sees himself as a kind of anti-positivist positivist, epistemically looking down from above, reconstructing a second sort of method, for a second kind of objectivity, in a second set of sciences. The Husserl who wants a radically new beginning for philosophy still sees himself as founding a school, defending a traditional “scientific” ideal, looking for meaning in modes of “consciousness” as it intends differ-

ent sorts of “objects,” and teaching a method that will make phenomenology the ultimate positivism. Even Jaspers, who says he only wants to describe with the greatest possible sensitivity “what life is,” still finds himself making “observations” about lived experience in the old objectivist language of subject-and-object, method-and-substance, the knowable vs. the ineffable, etc.¹⁴

In my view, one often sees just this sort of split between insightful description and traditional self-understanding in Heidegger’s critics. On the one hand, the “empiricism” of the new American philosophers of technology is undoubtedly more phenomenological than traditional and more post-phenomenological than traditionally phenomenological. Yet on the question of how our being-with various technologies is actually to be approached, they often explain themselves in very traditional terms—by saying, for example, that they are proceeding “materially” and “concretely,” rather than “theoretically” and “abstractly.” Verbeek and other so-called “new wave” figures now mostly reject the old idea that to be concrete means returning to an “original” sense of reality that lies beneath our scientific and technologically enhanced ones. But the real question is how to avoid this old idea in the right way. Verbeek argues that the notion of starting from a pure and uncorrupted lifeworld is a holdover from the embattled Husserlian era when phenomenology was preoccupied with undercutting the positivist-naturalist claim that a scientific view of the world is philosophically basic. Today, he says, we need only observe that

the tree that I climb is real for me in a different way than the one whose cells and sap I study, but so is the tree that I photograph, chop down to use for firewood, or cut up to build a table. None of these disclosures can claim to reveal the “true” tree: they are each equally true. (105)

Verbeek claims that even today’s scientists themselves accept this view. He says they realize that science does not involve “excluding” or replacing our older senses of the meaning of the world, but only offering “a new and different kind of disclosure of it” (105). Yet I seriously doubt that many scientists are this pluralistic about their “new disclosure”—and

especially not when they are applying for grants, ranking the best journals, or taking sides in the Science Wars. In fact, and more importantly, when they dig in their ontological heels on the disclosure question . . . they still tend to win. The Real is What Is the Case; there is nothing multistable about it. On this issue, science has no competitors, only detractors.

To such familiar and self-confident scientism, anti-scientific pluralism is no reply, and technoscience studies pays a price for characterizing itself this way. In point of fact, an egalitarian appeal to multiple perspectives is just as abstract and contextless as the reigning philosophical claim to objectivism. It is already a mistake not to recognize that no one lives in such a way that they can actually *be* someone who says—and means it—“I *understand* that ‘All the disclosures of things are *equally* true.’” Or “Let’s *compare* ordinary and enhanced experience.”¹⁵ But to make this mistake in an atmosphere in which philosophical objectivism is already winning simply guarantees that it will maintain its undeserved hegemony at phenomenology’s expense.

Critical social theorists, too, often seem to speak from a viewpoint that nobody lives—even when, as Feenberg clearly does, they explicitly deny that they are doing so and insist instead on attending to real and concrete socioeconomic needs. Yet how, for example, does one achieve what Feenberg calls the “reflexive” outlook from which one feels justified in, first, embracing a de-essentialized version of Heidegger’s account of current technoscientific life and then, second, offering a “democratically” liberalized idea for its transformation? And how does one obtain his sort of assurance that this liberalized idea—or for that matter, any idea of technoscientific life—will ever succeed in addressing *all* our concerns and activities? Should all the issues associated with democratization—among them, issues of race, gender, class, and species—be treated through a critical analysis of technoscience? How can we be sure that these other phenomena, if given their full due at the outset, would not displace precisely Feenberg’s own philosophical priorities? How does someone who has achieved his sort of reflexive standpoint respond to those who would appeal “concretely” to the very same experienced world as he does, but reject his technological displace-

ment of, say, political economy, or class, or race as the basic issue?¹⁶

In short, stated without frills, both phenomenological and neo-Marxist critics of Heidegger, whatever they say they are doing, tend to display the following approach in their practice. Leave essentialism and bad theorizing behind, attend to the technoscientific matters at hand, and consider “normativity” whenever the occasion seems to call for us to turn to it.¹⁷ All of this should sound very familiar. It recapitulates in the new, allegedly post-scientific outlook a variant of precisely the same ahistorical viewpoint that Heidegger’s post-Heideggerian critics claim to have surpassed. In fact, whatever may be their intention, philosophers who “reject” the abstract and “decide” on the concrete are *behaving* like inverted Cartesian subjects. Like good Cartesians, they turn to their phenomenological descriptions because they “resolve” to do so—just as they resolve to reverse Descartes original priorities. Instead of favoring his theories about nature, they ask us to return to all those everyday experiences that his *Meditations* distort and ignore (or at least view “differently”) . . . so that we can describe and evaluate and privilege them instead.

It is this tendency toward the silent continuation of a kind of inverse traditionalism—an embrace of the old ontological dualism that now favors the side which has long been out of favor—that concerns me. Being committed to phenomenological description or democratically rationalized practice does nothing by itself to weaken the hegemony of the traditional privileging of *Wissenschaft*. Nor does it give us a world in which we have stopped playing the familiar ontological favorites. In fact, being thus committed is an expression of this hegemony. At this moment, in this world, it “is” not True, as Verbeek wants to say, that we can just decide to identify technologies in their multiple disclosures, instead of always judging them in terms of their essential utility and manipulating them according to what everyone knows and values. Our world does not contain any Understanders of Verbeek’s pluralizing Truth, because some of his multiple disclosures already arrive in our experience with significantly greater ontological clout than others. In our world, the problem is not that we cannot—sometimes, here and there, in some

venues—have experiences that seem ill-served by the usual metaphysical understanding of things. It is rather that we have not figured out how to properly “think” this or to actually live out the unrealized possibilities of life that such non-framable experiences suggest to us.

Conclusion: A Modest Proposal

I conclude, then, with a philosophical statement of intent. I want to think in Heidegger’s wake without imagining that I think “after” him. On the grounds that it involves ontological backsliding, I refuse to “choose” between a humanizing, phenomenological interest in particular technologies, and a thoughtfully reflective self-concern for the fact that precisely this interest must work itself out in the technoscientific atmosphere of an ever more “developed” world that already sets-up and “essentializes” everything. I happily acknowledge the rapid growth of technoscience studies.¹⁸ I want its proponents to make their concrete studies an integral part of twenty-first century life. Yet if we ask what a phenomenologist, post-phenomenologist, or critical theorist of technology actually does, their answers are still too often given in the metaphysical language of essentialism vs. empiricism, of abstract and concrete, of values and choices—even when their accounts of particular technologies achieve something better. The problem is that no study of material culture—not even the most resolutely post-phenomenological or democratically-minded—can actually become what it claims to be when it rests on a loud dismissal of the Heideggerian project as merely old-fashioned, metaphysical “world-interpretation.”¹⁹ Affirming one thing while dismissing another is just the sort of move one makes *within* a technoscientific “set up” world, under the delusion that one is doing so entirely by choice, and from Nowhere.

To explain all of this from one more angle, I close with a passage from *On the Internet*, the little book in which Hubert Dreyfus describes what he calls, “Nihilism on the Information Highway.” He begins with an analogy between Kierkegaard’s critique of “the Press” and his own critique of the World Wide Web. Kierkegaard, he says, would surely have regarded the Internet as a “hi-tech synthesis of

the worst features of the newspaper and the coffeehouse.”²⁰ Dreyfus then continues:

What [Kierkegaard] envisaged as a consequence of the [Danish] press’s indiscriminate and uncommitted coverage is now fully realized on the World Wide Web. Thanks to hyperlinks, [all] meaningful differences have, indeed, been leveled. Relevance and significance have disappeared. And this is an important part of the attraction of the Web. Nothing is too trivial to be included. Nothing is so important that it demands a special place. . . . Kierkegaard [saw] the implicit nihilism in [this] idea. . . . On the Web, the attraction and the danger are that everyone can take [a detached and] godlike point of view. One can view a coffee pot in Cambridge, or the latest super-nova, study the Kyoto Protocol . . . plough through millions of ads, all with equal ease and equal lack of any sense of what is important. The highly significant and the absolutely trivial are laid out together on the information highway. (78–79)

Dreyfus concludes that, in the world of the Press and the Web, we seem to have only two options left: conformity or nihilism. Either join in or, as Kierkegaard puts it, plunge into some activity, any activity, as long as you do so “with passionate commitment” (80).

Note carefully, however, that passages like this one can be read in two very different ways. If we take our cue from Heidegger’s critics, it might be supposed that we should read it as a collection of essentialist claims about the Web with a capital “W.” And, obviously, we must therefore reject what Dreyfus says as mere romanticism, expressed in one-size-fits-all statements so abstract and general that they misrepresent just as many experiences as they cover. But it seems clear that Dreyfus intends this passage quite differently. I think he wants it to be heard with a Heideggerian ear, as describing how technoscience *for the most part* already tends to “occur,” to “give” reality to us—that is, to essentialize. And this gift, as Heidegger says, has a double structure: it discloses everything in a way that simultaneously makes it intelligible, fascinating, useful, fun *and also* often existentially intrusive, ontologically oppressive, and unsatisfying.

Those of you who know Dreyfus will understand why I picked a Heideggerian-sound-

ing passage from his work rather than someone else's. For Dreyfus is famously no dystopian about technology, and no romantic about what's wrong with it. But he is, like Heidegger, convinced that a "free relation" with technology is not already present in our world, that it cannot simply be chosen, and that it will therefore have to be "prepared" for.²¹ Indeed, the point of the chapter from which I am quoting is that if we see how the Press and the Web are "the ultimate enemy" of a fulfilling life that involves unconditional commitment and genuine risk (88), this also helps disclose to us by contrast precisely what such a life would have to "be." The Press and the Web, while busy being themselves, are also the enemy of something. In other chapters, Dreyfus tells us what he thinks this something is—namely, all those aspects of human ek-sistence that are crucial to really flourishing lives, but that are now "metaphysically" subordinated in a dominant tradition that already tells us what is ontologically more fundamental. Thus, for example, *embodiment* already tends to lose out to disembodied cognition; technical and rule-governed skills are everywhere privileged over *expertise*; and propositional language and information processing are favored over what Kierkegaard is forced to call "*indirect* communication."²²

Dreyfus's aim is not just to complain about all this but to show how, precisely by making it explicit, we can find a voice for those elements of our lives that are now being obscured and subordinated. For example, says Dreyfus, if we use the Internet with my seemingly negative vision in mind, we may "remember that our culture has already fallen twice, first for the Platonic and then for the Christian temptation to try to get rid of our vulnerable bodies"—including, pace Ihde, our hands. Such temptations are precisely what are now "developing" into nihilism and technoscience (143–44). Yet, in remembering this, we may also learn to think how life could be—if, that is, we begin to cultivate our embodied capacities as assiduously as our traditionally favored capacity for "enlightened" rationality and "principled" choice (121).

My complaint, then, is not that Heidegger's critics are insufficiently distressed about the role of technologies in human life. My problem is that they often fail to think much about *the basic sense of being-in-the-midst-of-things that this life already sets up for us*—on the mistaken, and at bottom traditionalist, grounds that to do so would involve dwelling too much on the past, the dated, and the negative. One consequence of this lingering traditionalism is, as I have argued, the perception of a forced option between their approach to technologies and Heidegger's. But there are others. To name just one, an eager turning-away from Heidegger's technology-question in favor of allegedly better studies of it—when this turning-away is practiced in a world in which technoscience "is" already everywhere—encourages silence about whether there may be significant possibilities in life that will never get their best interpretation in any technoscientific way. Are there, for example, technological problems that do not have technological fixes? Aspects of human health that a scientific idea of care can never articulate?²³ Features of human mentality that elude in principle any computer or information-processing model? In short, if there are such possibilities, considering them will require a "free" and "thoughtful" *relation with* technoscience rather than just more of it, or "new and improved" versions of it.

For me, the often polemical and self-willed characterizations that Heidegger's critics give of their own philosophical outlook make their claims to be "post-" or "after" him seem unconvincing. They are certainly right, that there are life experiences which either do not fit or may even challenge the currently enframed and undemocratically set-up sense of what is real and what matters. Indeed, herein lies technology's possible "saving power." But claiming that good descriptions of these experiences by themselves place the old problem of technoscience behind us is hermeneutically naïve. Making this claim is actually a very traditional and metaphysical thing to do—and is, I think, a glaring sign of technology's currently essentializing "danger."

ENDNOTES

1. For a laundry list of all the things that are typically claimed to be wrong with Heidegger, see Richard A. Cohen, "Technology: The Good, the Bad, and the Ugly," in *Postphenomenology: A Critical Companion to Ihde*, ed. Evan Selinger (Albany: SUNY Press, 2006), 147–49.
2. Everyone else, Heidegger says, thinks of philosophy as moving in the direction of asserting "pure and incontrovertible truth." For my part, I will be looking instead in the direction of "what goes on in philosophy before it becomes what [everybody thinks] it is." *Ontology—The Hermeneutics of Facticity*, trans. John van Buren (Bloomington: Indiana University Press, 1999), 46. For philosophy, the enigma for any study of history (and by implication, any human phenomenon) "lies in what it means to be historical." *The Concept of Time*, trans. William McNeill (Oxford: Blackwell, 1992), 20E.
3. "The Question Concerning Technology," in *Martin Heidegger: Basic Writings*, 2nd ed., ed. David Farrell Krell (New York: HarperCollins, 2008), 311–41.
4. In addition to the empiricist/phenomenological and neo-Marxist/critical-theory inspired forms discussed here, the third major type is neo-pragmatist. For a sample of a contemporary pragmatist critique of Heidegger that follows similar lines to that of critical theory as discussed below, see, for instance, Larry A. Hickman, "Postphenomenology and Pragmatism: Closer Than You Might Think?" *Techné: Research in Philosophy and Technology* 12/2 (2008): 99–104; *Pragmatism as Post-Postmodernism* (New York: Fordham University Press, 2007); 92–96 (on "neo-Heideggerianism"); and *Philosophical Tools for Technological Culture: Putting Pragmatism to Work* (Bloomington: Indiana University Press, 2001), esp. 151–56, 172–84.
5. Hans Achterhuis, *American Philosophy of Technology: The Empirical Turn*, trans. Robert P. Crease (Bloomington: Indiana University Press, 2001), 6–8. Achterhuis also includes Andrew Feenberg in this empirical turn, but as I am about to explain, this ignores the distinctive, socio-political edginess in writings on technoscience by critical theorists like Feenberg. Moreover, in recent works, Feenberg in particular has moved much closer to agreeing with Heidegger's critique of technology, so long as it is regarded only as a fairly accurate description of what is wrong with the current conception and use of technology and not also a diagnosis of its "essence."
6. Peter-Paul Verbeek, *What Things Do: Philosophical Reflections on Technology, Agency, and Design*, trans. Robert P. Crease (University Park: Pennsylvania State University Press, 2005).
7. *Ibid.*, 47–95.
8. See, e.g., Jürgen Habermas, *The Philosophical Discourse of Modernity: Twelve Lectures*, trans. Frederick Lawrence (Cambridge, MA: MIT Press, 1987), 131–60.
9. See, e.g., my "Habermas on Heidegger's *Being and Time*," *International Philosophical Quarterly* 31 (1991): 189–201.
10. For Feenberg's most positive account of Heidegger as furnishing a convincing critique of contemporary (undemocratic) technoscientific life—but in an unfortunately metaphysical form, see Andrew Feenberg, *Heidegger and Marcuse: The Catastrophe and Redemption of History* (New York: Routledge, 2005).
11. See, e.g., Iain Thompson, *Heidegger on Ontotheology: Technology and the Politics of Education* (Cambridge: Cambridge University Press, 2005), 58–68. Also, "What's Wrong with Being a Technological Essentialist? A Response to Feenberg," *Inquiry* 43 (2000): 429–44.
12. A well-known version of this mistake is the idea that Heidegger's description of the essence of technology is a very unphenomenological attempt to provide a "one size fits all" account of each and every one of our technologies, including everything from hammers and bridges to musical instruments. See Don Ihde, "Heidegger on Technology: One Size Fits All," in *Heidegger's Technologies: Postphenomenological Perspectives* (New York: Fordham University Press, 2010), forthcoming. Ihde admits that there have been "Heideggerian moments" in the development of, say, musical instruments using keys (e.g., flutes, clarinets, horns), but he argues that this happens only at the beginning of the introduction of new technologies when many protesting musicians still tend to focus more on what is being lost (e.g., there is a devaluation of actual fingering) than gained. He likens this sort of protest to Heidegger's complaint about the typewriter (or to update the analogy, the electronic keyboard or touchscreen). But in both cases, the complaint tends to come either from amateurs (who do

- not understand the value of these “improvements” from the standpoint of those capable of expertise) or from those who are more experienced but who have not yet learned enough about how the improvement will work to appreciate it (especially when this involves some sort of revised facilitation of embodiment). All of this, however, misses Heidegger’s point, which is not about clinging to old-fashioned technologies when improvements come along. His question is: in what sort of ontological atmosphere are we understanding all of these changes? It is no rejoinder to explain that “any new technology in relation to human praxis, before it can become transparent and thus fully accommodated, must be ‘embodied’ if it is to be ‘known’ at all” (ms. 12).
13. The following summarizes my argument in a review essay of Feenberg’s *Marcuse and Heidegger*, “Feenberg on Marcuse: ‘Redeeming’ Technological Culture,” *Techné* 9/3 (2006): 67–70 [<http://scholar.lib.vt.edu/ejournals/SPT/v9n3/scharff.html>].
 14. See, e.g., Heidegger’s “Comments on Karl Jaspers’ *Psychology of Worldviews*,” in *Pathmarks*, ed. William McNeill (Cambridge: Cambridge University Press, 1998), esp. 30–37, and above all its last line: “In order for [Jaspers’ findings] to be capable of effectively stimulating and challenging contemporary philosophy, [his method of] pure observation must evolve into the ‘infinite process’ of a radical questioning that *always includes itself in the inquiry*” (37, my emphasis, translation altered). On Husserl, Scheler, and Dilthey, see, e.g., Heidegger, *History of the Concept of Time*, trans. Theodore Kisiel (Bloomington: Indiana University Press, 1985), 17, 108–119; thesis summarized, 128–31.
 15. Consider seriously, e.g., what it *really* means for a white U.S. male, at the beginning of this century, in the midst of the “developed” part of the world, to assert that “Gender(s) *are* multistable.” Don Ihde, *Bodies in Technology* (Minneapolis: University of Minnesota Press, 2002), 33, my emphasis. Or for an analytic philosopher, serving on the screening committee for APA conference papers, to announce proudly that “every philosophical approach is equally welcome.”
 16. I discuss this issue in detail in “Feenberg on Marcuse.”
 17. For example, this is how Selinger defends Ihde against critics who say he has only “descriptive” things to say about contemporary technology. See his “Normative Judgment and Technoscience: Nudging Ihde, Again,” *Techné* 12/2 (2008): 120–25; and “Normative Phenomenology: Reflections on Ihde’s Significant Nudging,” in *Postphenomenology*, 89–107. However, my question is not whether Ihde sometimes displays, “theoretically and normatively,” that his heart is in the right place, but whether concrete “descriptions” *plus* some sort of better “theorizing” are the right means to empower free or democratic or (post)humanistic alternatives to the determinative, elitist, and dehumanizing tendencies already, pre-theoretically, embedded in everything we say and do in the “developed” world.
 18. I acknowledge the sociological fact that many post-Husserlians think of themselves as belonging to “third” and “fourth wave” technoscience studies. See, e.g., Ihde’s “Forward” to *New Waves in Philosophy of Technology*, viii–xiii; and the “Concluding Phenomenological Postscript: Writing Technologies” in his forthcoming *Heidegger’s Technologies*. My question is: “are” they right?
 19. Verbeek’s phrase (*What Things Do*, 142–43); and see, with much less sympathy, Søren Riis, “The Question Concerning Thinking,” in *New Waves in Philosophy of Technology*, 123–45.
 20. Hubert Dreyfus, *On the Internet*, 2nd ed. (New York: Routledge, 2008), 77. Dreyfus’ earlier and more detailed discussion of the suggestive comparison between “the Press” and the World Wide Web is “Anonymity versus Commitment: The Dangers of Education on the Internet,” *Ethics and Information Technology* 1 (1999): 15–20.
 21. Heidegger, “The Question Concerning Technology,” 311. See Dreyfus, “Heidegger on Gaining a Free Relation with Technology,” in Andrew Feenberg and Alastair Hannay, eds., *Technology and the Politics of Knowledge* (Bloomington: Indiana University Press, 1995), 97–107.
 22. As Otto Pöggeler points out, Heidegger’s review of Jaspers’ *Psychology of Worldviews* ends by crediting Kierkegaard’s notion of “indirect communication” as the forerunner of the notion of formal indication Heidegger is developing at the time. *Martin Heidegger’s Path of Thinking*, trans. Daniel Magurshak and Sigmund Barber (Atlantic Highlands: Humanities Press, 1987), 267–68.
 23. My favorite sources here are still Carl Elliott, *Better than Well: American Medicine Meets the American Dream* (New York: Norton, 2004); and *A Philosophical Disease: Bioethics, Culture, and Identity* (New York: Routledge, 1999).