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What's Wrong with Being a Technological Essentialist? A Response to Feenberg*

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Abstract

In *Questioning Technology*, Feenberg accuses Heidegger of an untenable technological essentialism. I show that Feenbergs criticisms are addressed not to technological essentialism as such, but rather to three particular kinds of technological essentialism: ahistoricism, substantivism, and one-dimensionality. After explicating these three forms of technological essentialism and explaining why Feenberg finds each objectionable, I investigate whether or not Heidegger in fact subscribes to any of them. I conclude, first, that Heideggers technological essentialism is not at all ahistoricist, but the opposite, an historical conception of the essence of technology which serves as the model for Feenbergs own view. Second, that while Heidegger does indeed advocate a substantivist technological essentialism, he offers a plausible, indirect response to Feenbergs voluntaristic, Marcusean objection. Third, that Heideggers one-dimensional technological essentialism is of a non-objectionable variety, since it does not force Heidegger to reject technological devices in toto. These conclusions help vindicate Heideggers ground-breaking ontological approach to the philosophy of technology.

I. Introduction

Questioning Technology is Andrew Feenbergs third major work on the critical theory of technology in a decade, and it confirms his place as one of the worlds leading philosophers of technology.^[1] In an earlier examination of this important text, I traced out some of the philosophical and political tensions in the legacy of technology critique leading from Heidegger through Marcuse to Feenberg, and concluded that the critical theory of technology Feenberg elaborates in *Questioning Technology* remains much more conceptually indebted to Heidegger than Feenbergs own Marcuseanism had allowed him to admit. In response, Feenberg forthrightly acknowledged Heideggers great influence on his work, but then went on to stress what he took to be the most important outstanding difference between his own critical theory of technology and Heideggers critique of our technological understanding of Being, namely, Heideggers untenable *technological essentialism*.^[2]

I would like to follow up on our previous exchange here by asking, What is at stake in Feenbergs claim that Heidegger is a technological essentialist? I pursue this question

not only in order to vindicate much of Heidegger's ground-breaking ontological approach to the philosophy of technology, but also to clarify Feenberg's conceptual cartography of technological essentialism. Doing so, I believe, will help orient the approach of future philosophers of technology to one of its central theoretical controversies.

II. Technological Essentialism

In our previous debate, the fundamental philosophical difference between Heidegger and Feenberg's understandings of technology emerged in deceptively stark terms. Feenberg argued that Heidegger's ontological understanding of technology is untenably essentialistic, while I maintained that Feenberg's reading is never so hermeneutically violent as when he accuses Heidegger of being a technological essentialist. On closer inspection, however, things are not quite so simple; as we will see, technological essentialism turns out to be an extremely complex notion.^[3] Indeed, if we are to evaluate Feenberg's critique of Heidegger, the first thing we need to do is establish the criteria which determine what counts as technological essentialism. To minimize potential objections, I will stick to the criteria set forth by Feenberg himself.

The necessary criterion seems obvious; to be a technological essentialist, one needs to believe that technology has an essence. This criterion is not sufficient for our purposes, however, because it does not tell us what makes technological essentialism *objectionable*. A radical constructivist like Baudrillard or Latour might maintain that there is no technology, only particular technologies, and thus that *all* technological essentialisms are unsound; but whether or not this is a coherent position, it is clearly not one that Feenberg shares.^[4] Feenberg proposes his own theory of the essence of technology (p. 17), so the mere belief that technology has an essence cannot be sufficient to qualify one as the kind of technological essentialist to whom Feenberg objects. Thus, despite Feenberg's rather incautious claim that [t]he basic problem is essentialism (*ibid.*), it seems that the problem is not with essentialism as such, but rather with particular kinds of technological essentialism.

In fact, if I understand him correctly, Feenberg objects to technological essentialists like Heidegger, Ellul, Borgmann, and Habermas because each commits himself to at least one of three particular claims about the essence of technology, claims which render their technological essentialisms unacceptable: *ahistoricism*, *substantivism*, and *one-dimensionalism*. Our next task will be to unpack these three essentialist claims with the goal of understanding what they are and why they are objectionable. We will then come back to each claim in turn and ask whether Heidegger holds any of the objectionable doctrines in question.

1. Ahistoricism

What is *ahistorical* technological essentialism, and what is wrong with it? According to Feenberg, an ahistorical technological essentialist is someone who interprets the historically specific phenomenon [of technology] in terms of a transhistorical conceptual construction (p. 15). Thus, for example, Weber and Habermas understand the essence of technology in terms of rational control [and] efficiency (p. vii), while Heidegger understands it as the reduction of everything to functions and raw materials (p. viii). What does Feenberg think is illegitimate about this? The problem is that, in an attempt to fix the historical flux [of technology] in a

singular essence, ahistorical essentialists abstract their understandings of the essence of technology from the socially and historically specific context in which particular technologies are always embedded (p. 17). As a result, not only do these ahistoricist theories fail to understand the essence of technology as a social phenomenon (*ibid.*), but their complete abstraction from socio-historical context yields an essentially unhistorical understanding of the essence of technology which is no longer credible (p. 15), and so needs to be replaced by Feenberg's own historical concept of essence (p. 201).

We will hold off on evaluating this objection and asking whether or not it really applies to Heidegger until the two other objectionable forms of technological essentialism are on the table.

2. Substantivism

Let us turn, then, to substantivism, the second form of technological essentialism Feenberg seeks to vitiate and surpass. What is *substantivist* essentialism, and what is wrong with it? Feenberg characterizes substantivism as the claim that the essence of technology comes from beyond us and is thus out of our control. Substantivists from Marx to Heidegger understand technology as an autonomous force separate from society, impinging on social life from the alien realm of reason (p. vii). For the substantivist, the essence of technology seems to be shaping history from outside, imposing itself as though from a metaphysical beyond which entirely escapes human control. We can easily understand why Feenberg finds substantivism so objectionable if we remember that he is a critical theorist who believes that [t]he fundamental problem of democracy today is the question of how to ensure the survival of agency in this increasingly technological universe (p. 101). The substantivists' belief that the essence of technology is beyond human control seems to entail a fatalistic attitude about the historical impact of technology, a fatalism which runs directly counter to Feenberg's attempt to preserve a meaningful sense of agency in our increasingly technological world.

3. One-Dimensionalism

Finally, Feenberg objects to those technological essentialists who subscribe to what he calls one-dimensional thinking, the belief that all technological devices express the same essence.^[5] What is wrong with claiming that the myriad diversity of technological devices all express a common essence? The problem, Feenberg contends, is that one-dimensional technological essentialists must either reject or embrace technology whole-cloth. There is no room within one-dimensional conceptions of technology for a fine-grained analysis capable of appreciating *both* the positive potentials and the deleterious effects of the ever more pervasive rule of technology in our everyday lives. For the critical theorist of technology, an uncritical embrace of the totality of technological devices is just as unsound as a technophobic rejection of technology *tout court*.

In sum, then, Feenberg's objections go not to technological essentialism as such, but rather to three specific kinds of technological essentialism: the ahistoricisms which illegitimately elide technology's embeddedness within socio-historical currents that continue to shape it, the substantivisms which adopt a politically dangerous fatalism by viewing technology as a force completely beyond our control, and the one-dimensionalisms which treat all technological devices as of a kind and thereby preclude

any balanced critique of technology's benefits as well as its harms. With these three objectionable varieties of technological essentialism laid out before us, we are ready to evaluate Feenberg's critique of Heidegger's technological essentialism. So let us ask: Is Heidegger's conception of the essence of technology unacceptably ahistorical, substantivist, or one-dimensional?

III. Heidegger on the Essence of Technology

What exactly is Heidegger's understanding of the essence of technology? Heidegger's most famous claim, that the essence of technology is nothing technological, may not initially seem to be of much help. But as I explained in our earlier debate, essence is an important term of art for Heidegger, a term which he painstakingly explains in his famous 1955 essay on *The Question Concerning Technology*. Drawing on these careful remarks, I argued that:

Heidegger's paradoxical-sounding claim that the essence of technology is nothing technological does not mean [as Feenberg contends] that technology leaves no room for reflexivity (p. 207). Heidegger is really expressing the paradox of the measure; height is not high, treeness is not itself a tree, and the essence of technology is nothing technological. To understand the essence of technology, Heidegger says, we cannot think of essence the way we have been doing since Plato (as what *permanently* endures), for that makes it seem as if by the [essence of] technology we mean some mythological abstraction. We need, rather, to think of essence as a verb, as the way in which things essence [*west*] or remain in play [*im Spiel bleibt*].^[6] The essence of technology thus means the way in which intelligibility *happens* for us these days, that is, as what Heidegger calls enframing (the historical mode of revealing in which things show up only as resources to be optimized).

In short, the referent of the phrase the essence of technology is our current constellation of intelligibility, which Heidegger calls enframing [*das Gestell*].

According to Heidegger, enframing is grounded in our metaphysical understanding of what-is, an ontotheology transmitted to us by Nietzsche.^[7] In Heidegger's history of Being, the great metaphysicians articulate and disseminate an understanding of what beings *are*, and in so doing establish the most basic conceptual parameters and standards of legitimacy for each historical epoch of intelligibility. These metaphysicians' ontotheologies function historically like self-fulfilling prophecies, reshaping intelligibility from the ground up. Nietzsche, on Heidegger's reading, understood the totality of what-is as eternally recurring will-to-power, an unending disaggregation and reaggregation of forces without purpose or goal. Now, our Western culture's unthinking reliance on this nihilistic Nietzschean ontotheology is leading us to transform all beings, ourselves included, into resources to be optimized and disposed of with maximal efficiency. I explained in my earlier piece that,

Within our current technological constellation of intelligibility, [o]nly what is calculable in advance counts as being. This technological understanding of being produces a calculative thinking which quantifies all qualitative relations, reducing all entities to bivalent, programmable information, digitized data, which increasingly enters into what Baudrillard calls a state of pure circulation.^[8] As this historical transformation of beings into resources becomes more pervasive, it increasingly eludes our critical gaze; indeed, we come to treat even ourselves in the terms underlying our technological refashioning of the world: no longer as conscious subjects in an objective

world but merely as resources to be optimized, ordered, and enhanced with maximal efficiency (whether cosmetically, psychopharmacologically, genetically, or even cybernetically).

With this brief recapitulation in mind, let us begin to evaluate Feenberg's objections.

1. Ahistoricism?

First, ahistorical essentialism. Feenberg alleges that Heidegger's ontologizing approach to the history of technology entirely cancels the historical dimension of his theory (p. 16). This objection seems to me to be the least plausible of the three. It is true that Heidegger understands technology ontologically, but he understands ontology historically. Remember that for Heidegger, the essence of technology is nothing other than an ontological self-understanding which has been repeatedly contested and redefined for the last twenty-five hundred years. This is why I contended in my earlier piece that

Heidegger's historical understanding of the essence of technology may actually put his position closer to the constructivist than the essentialist camp, and it becomes clear that Feenberg shares a similar view when he advocates a historical concept of essence in [*Questioning Technology's*] concluding chapter (p. 201).

It was Heidegger who gave us the first historical conception of the essence of technology, and I think Feenberg should acknowledge this important conceptual debt while continuing to build on this tradition, rather than seeking to distance himself from Heidegger where there are no good philosophical reasons for doing so.[\[9\]](#)

If this is right, how can Feenberg possibly think that Heidegger has an ahistorical conception of technology? It is instructive to pinpoint just where his reading goes wrong. Critics like Derrida have long questioned Heidegger's epochal account of the history of Being. They were not persuaded by the way in which Heidegger's account divides the history of our ontological self-understanding into a series of unified constellations of intelligibility. Where Heidegger sees a series of overlapping but relatively distinct and durable ontological epochs, his critics claimed to observe a much greater degree of ontohistorical flux. Feenberg too questions the periodization of Heidegger's history of Being (p. 15), but his objection is more precise. In order to deny all [historical] continuity and treat modern technology as unique (*ibid.*), Heidegger introduces an untenably sharp ontological break (p. 16) between modern technology and pre-modern craft. I contend that Heidegger does indeed claim that our contemporary technological understanding of Being is unique, but that he does not deny all historical

If we understand, as too few commentators do, what exactly Heidegger thinks is unique about our contemporary historical self-understanding, then it becomes clear that Feenberg has bought into a widespread misreading when he attributes to Heidegger the unconvincing claim that the contemporary age is uniquely oriented toward control (p. 15). According to Heidegger's understanding of enframing, the ontological reduction to raw materials is *not* in the interests of control (p. 178). Why not? Because in our post-Nietzschean age there is increasingly no subject left to be doing the controlling. The subject too is being sucked-up into the standing reserve![\[11\]](#) This unprecedented absorption of the subject into the resource pool makes our contemporary world unique in Heidegger's eyes, but he still explains this on-going development historically; put simply, it results from the fact that we post-moderns have turned the practices

developed by the moderns for objectifying and controlling nature back *onto ourselves*.^[12]

In fact, despite this misreading of Heidegger, Feenberg now seems to have taken the basic Heideggerian point on board. In a recent essay on Modernity Theory and Technology Studies, Feenberg observes with grim irony that: Modern societies are unique in de-worlding human beings in order to subject them to technical action we call it management. As Feenberg here seems to recognize, Heidegger presciently described an alarming ontological trend which now appears disconnected from our actual socio-historical reality only to those who are not paying attention.^[13] It should be clear, then, that Heidegger's technological essentialism does not suffer from the ahistoricism Feenberg attributes to it. Let us turn to one of Feenberg's more telling objections, his claim that Heidegger's understanding of technology suffers from a politically debilitating substantivism.

2. Substantivism?

Earlier we saw that Feenberg is moved to reject technological substantivism, the belief that the essence of technology is outside of human control, because of the politically dangerous fatalism this seems to entail.^[14] Of course, a philosopher cannot reject a philosophical doctrine solely because of its political consequences. Distressing political implications should lead us to subject a philosophical doctrine to especially relentless critical scrutiny, but ultimately such philosophical scrutiny must seek to determine whether or not the doctrine in question is true. And if a philosophical doctrine turns out to be true, then either we have to accept its political consequences, however disturbing, or else we have to work politically to bring about a change in the world which would subsequently falsify the doctrine.

The problem with Heidegger's substantivism, as Feenberg presents it, is that the truth of the doctrine would seem to preclude the latter, activist option. For if Heidegger's substantivism is right that it is simply not within our power to transform the essence of technology, then neither can we change the world so as subsequently to gain control over the essence of technology.^[15] In fact, if Feenberg were correct about Heidegger's substantivism, this would place us before a strict aporia, since Heidegger recognizes that we cannot stop trying to take control of the essence of technology; the endeavor may be impossible, but it is also unavoidable. As enframers, the drive to control everything is precisely what we do not control.^[16] Yet for Heidegger, this is a situation about which something can be done at least indirectly.^[17] This caveat, which allows for the possibility that our actions could *indirectly* transform the essence of technology, is crucial, it seems to me, for vindicating Heidegger's substantivism against Feenberg's objection.

For Feenberg is right that if Heidegger thought we had no hope of ever transcending our technological understanding of Being, his insights would lead only to fatalistic despair. Fortunately, Heidegger's position is more complex than this. Let us recall, with Dreyfus, that Heidegger's concern is the human *distress* caused by the *technological understanding of Being*, rather than the *destruction* caused by *specific technologies*. Heidegger thus approaches technology not as a *problem* for which we must find a *solution* [which would be a technological approach], but [as] an *ontological condition* that requires a *transformation of our understanding of Being*.^[18] From the Heideggerian perspective, then, the most profound philosophical difference between

Feenberg and Heidegger concerns the level at which each pitches his critique of technology; Feenbergs strategy for responding to the problems associated with the increasing rule of technocracy takes place primarily at what Heidegger would call the ontic level. The problem with Feenbergs strategy is that our everyday ontic actions and decisions almost always take place within the fundamental conceptual parameters set for us by our current ontology, otherwise these actions would not make sense to ourselves or to others.

For those of us seeking to synthesize Heidegger and Feenbergs powerful critiques of technology, the crucial question is: Can ontic political decisions and resistances of the type Feenberg puts his faith in ever effect the kind of ontological change Heidegger seeks? Ontologically, Heidegger is more of a realist than a constructivist; our understanding of what-is is something to which we are fundamentally *receptive*. We cannot simply legislate a new ontology. As Dreyfus nicely puts it, A new sense of reality is not something that can be made the goal of a crash program like the moon flight.[\[19\]](#) But does Heidegger deny that our ontic decisions could ever build up enough steam to effect an ontological transformation? No; in fact, Heidegger explicitly recognized this possibility. As he wrote in the late 1930s:

World-historical events are capable of assuming a scale never seen before. [The unprecedented magnitude of these events] at first speaks only to the rising frenzy in the unbounded domain of machination and numbers. It never speaks immediately for the emergence of essential decisions. But when, within these world historical events, a coming-together of the people sets itself up and partly establishes the peoples existence according to the style of these events could not a pathway open here into the nearness of decision? Certainly, but with the supreme danger that the domain of this decision will be missed completely.[\[20\]](#)

In other words, it is possible that a confluence of ontic political struggles could open the space for a reconfiguration of our ontological self-understanding, but only if we are aware of the true radicality of that endeavor, the fact that it requires a fundamental transformation in the nature of our existence, not merely the redistribution of power or the realignment of particular interests.

As Dreyfuss famous Woodstock example is meant to show, it is possible that practices marginalized by our technological understanding of Being could become central to our self-understanding, radically transforming our sense of what is and what matters.[\[21\]](#) As I pointed out last time, Feenberg is extremely wary of this revolutionary aspect of Heideggers thinking because of the political direction it took Heidegger himself. But how different are Feenberg and Heidegger on this point? Do we not have Feenbergs own position if we simply replace Heideggers politically dangerous Nietzschean-Wagnerian hope for a revolutionary *Gesamtkunstwerk*, a work of art which would transform our entire ontological self-understanding in one fell swoop, with the more modest hope that a convergence of differently situated political micro-struggles could evolve into a counter-hegemony capable of permanently subverting our contemporary technocracy?[\[22\]](#)

If Heidegger steadfastly advocates the goal of ontological transformation, while Feenberg seeks to reverse-engineer a possible means to achieving this goal (through a confluence of democratizing ontic struggles over technological design), this should lead us to wonder, I think, how much Heidegger and Feenberg really differ on the truth of

substantivism. In our previous debate, I argued that Feenberg's views actually waver back and forth on the substantivism question, that,

In fact, there is a tension in Feenberg's positive view, which reflects the difference between the Marcusean and Heideggerian positions he has synthesized. He vacillates between an optimistic, Marcusean, May 68, Progress will be what we want it to be view which exalts the human capacity to control our future through strategic interventions in the design process (p. 22), and a more pessimistic Heideggerian view which suggests that while we cannot directly *control* the historical direction in which technology is taking us, we can nevertheless impact the future in small ways by learning to recognize, encourage, and support technological democratizations when they occur, while hoping that our ontic political interventions might yet indirectly foster an ontological transformation.

In other words, Feenberg is torn between his Heideggerian substantivism and his Marcusean anti-substantivism. The Marcusean position has the surface appeal of all heroic existential voluntarisms, but it ignores the very issue that led Heidegger to develop his ontological approach, indeed the very reason that Marcuse disciplined himself to Heidegger before the war. However important, democratization without a corresponding ontological transformation will just end up replicating and reifying the technological understanding of Being.

Another thing this shows, I think, is that Feenberg's projected democratization of technological design needs to be supplemented by a pedagogical project aimed at the level of what the Greeks called *Paideia*, the Germans *Bildung*, that is, an educational formation geared toward recognizing and encouraging the development of certain specific world-disclosing skills one species of which would be those skills necessary for making appropriate democratizing interventions in the design process.^[23] I will try to say a bit more about what sort of skills this pedagogical project should seek to inculcate as we evaluate Feenberg's final objection.

3. One-Dimensionalism?

Is Heidegger's technological essentialism one-dimensional? Does he believe that all technological devices express the same essence? In *The Question Concerning Technology*, Heidegger explicitly denies that enframing, the essence of technology is the common genus of everything technological. That is, in seeking to understand the essence of technology, Heidegger is not trying to fix the extension of the term; he is not seeking to determine what is and what is not a member of the class of technological devices.^[24] Thus he does not conceptualize technology's essence in terms of the commonalities shared by the hydroelectric plant, the autobahn, the cellular phone, the internet, etc., the way a Platonist might conceive of the essence of trees as the genus uniting oaks, beeches, birches, and firs.^[25] Strictly speaking, then, Heidegger's understanding of the essence of technology is orthogonal to the question of whether or not all technological devices express the same essence.

Nevertheless, the question of whether Heidegger is a technological one-dimensionalist remains. And the answer, I think, is a qualified yes. Why? Because, as we have seen, Heidegger holds that *the essence of technology is nothing less than the ontological self-understanding of the age*. In so far as we implicitly adopt the ontology of enframing, *everything* in the contemporary world will show up for us as reflecting the essence of technology, technological devices included. In this sense, then, Heidegger

does seem to be a kind of technological one-dimensionalist. But do the negative consequences Feenberg attaches to this position obtain in Heidegger's case? Not unless Heidegger's understanding of the essence of technology forces him globally to reject technology. This, then, is the crucial question: Does Heidegger's one-dimensionalism force him to reject technology *in toto*?

Now, Heidegger is obviously no fan of technology; he seems, for instance, to have had a kind of visceral reaction to the sight of his neighbors chained hourly and daily to their television sets.^[26] But even on the personal level, Heidegger seems occasionally to have been capable of distinguishing between those technological applications which serve, and those which undermine, the cause of phenomenology, the endeavor to go to the things themselves! For example, while watching a television show a friend put together to showcase the art of Paul Klee, Heidegger was appalled by the way the television moved over the paintings randomly and forced the eye away from one piece and on to the next prematurely, hindering an intensive, quiet viewing as well as a lingering reflection, which each single work and the relations within it deserve. On the other hand, Heidegger deeply appreciated the way a televised soccer match revealed its subject, raving publicly about the way it showcased the brilliance of Franz Beckenbauer.^[27] Of course, such anecdotes do not get us to the crux of the issue. For, however techno-phobic (p. 151) Heidegger may have been personally, it is obvious to careful readers of his work that he does not advocate any monolithic rejection of technology *philosophically*. This should not be too surprising, since the philosophical implications of Heidegger's thinking often far exceed the rather narrow conclusions he himself drew from them.

In our previous debate, I reminded Feenberg of Heidegger's phenomenological description of the massive freeway interchange on the autobahn. Here in 1951, Heidegger treats the autobahn in terms of what he calls a thing thinging, that is, as a work of art reflecting back to us the ontological self-understanding of the age.^[28] In response, Feenberg acknowledged that in these passages on the autobahn bridge, Heidegger discusses modern technology without negativism or nostalgia and suggests an innovative approach to understanding it. Nevertheless, Feenberg countered, Heidegger's defenders have to admit that the famous highway bridge passage is the one and only instance in his whole corpus of a positive evaluation of modern technology. Feenberg may well be right about this; Heidegger's brief phenomenological meditation on the autobahn interchange as a paradigm reflecting our ontological self-understanding may be the only positive evaluation of modern technology to be found in his published work. But is not this single, carefully thought-out exception sufficient to prove that Heidegger does not reject technology wholecloth?

In his meditation on the autobahn interchange, Heidegger's concern is not to valorize this technological paradigm, but rather to help us recognize that, as the internet now makes plain, we are increasingly treating our world and ourselves as a kind of network of long distance traffic, paced as calculated for maximum yield.^[29] Indeed, the only thing making this a positive evaluation (as Feenberg puts it) is the fact that, in his phenomenological description of the autobahn interchange, Heidegger is attempting to get us to notice the presence of the divinities which linger in the background of even our most advanced technological constructions.^[30] When he refers to the presence of the divine, Heidegger is evoking those meanings which cannot be explained solely in terms of human will, encouraging us to attend to that pre-conceptual phenomenological

presencing upon which all of our interpretations rest, a presencing which Heidegger thinks will be a prime source of any new paradigm rich enough and resistant enough to give a new meaningful direction to our lives.[31]

=Like his mediation on the place of earth in the work of art, Heidegger's resacralization of the simple thing reminds us that the conditioned has its roots in the unconditioned, the secular in the sacred, and thus suggests that we should adopt a very different attitude toward our world, a *Grundstimmung* much more reflective and thankful than the thorough-going instrumental reasoning characteristic of our technological mode of revealing. Indeed, as Dreyfus has argued, Heidegger is convinced that we should be *grateful* for the essence of technology; for without this cultural clearing, nothing would show up as anything at all, and no possibilities for action would make sense.[32] To recognize enframing as our current constellation of intelligibility is to recognize our ontological receptivity in addition to our active role as disclosers of what-is. If we can incorporate a sense of this receptive spontaneity into our practices, we can learn to relate to things with a phenomenological comportment open to alterity and difference (on the ontological as well as the more fashionable ontic level), a comportment through which Heidegger believes we may yet disclose the constituent elements of a post-technological ontology.

This may sound mysterious, but in his 1949 essay on *The Turning*, Heidegger unequivocally states that he is not advocating anything as ridiculous as the abandonment of technology. In the post-nihilistic future that Heidegger worked philosophically to help envision and achieve, Technology, he repeats, will not be done away with. Technology will not be struck down, and certainly it will not be destroyed. Indeed, Heidegger can no longer be confused with a Luddite longing for a nostalgic return to a pre-technological society; in his final interview (given in 1966), he reiterates that the technological world must be transcended, in the Hegelian sense [that is, incorporated at a higher level], not pushed aside. Heidegger's critics may object that he does not provide enough guidance about how practicing an open phenomenological comportment will allow us to transcend our current technological understanding of Being, but he cannot be accused of a reactionary rejection of technological devices, and even less of wanting to reject the essence of technology, which would be madness, a desire to unhinge the essence of humanity.[33]

One further point is clear; Heidegger did not believe that our technological understanding of Being could be transcended through a phenomenological practice disconnected from socio-historical reality. It will doubtless surprise those who have been taken in by a one-sided stereotype to hear that when Heidegger was devoting a great deal of thought to the question of the relation between the work of art and the power plant, he spent several days visiting power plants under the direction of professors from technical colleges.[34] The fruits of such phenomenological labors are undeniable. As I noted previously, when Heidegger looked out at the autobahn interchange and the powerplant on the Ister and found words which powerfully describe those fundamental transformations in our self-understanding which are only now becoming obvious with the advent of the internet, word-processing, genetic research, and cloning, his was not what Auden called *The dazed uncomprehending stare / Of the Danubian despair*. [35]

IV. Conclusion

In sum, then, Heidegger appears to be a technological essentialist, but of a largely unobjectionable variety. For as we have seen, he rejects ahistoricism entirely, and the forms of one-dimensionalism and substantivism he accepts lack these doctrines usual negative implications. Heidegger's substantivism offers an indirect response to Feenberg's political objection, a response which rests on a much more thorough philosophical analysis than the voluntaristically-motivated objection, and Heidegger's one-dimensionalism clearly does not force him into any global rejection of technology. Heidegger's rather limited technological essentialism thus does little to discredit his profound ontological understanding of the historical impact of technology. Indeed, even where Feenberg's rhetoric conceals this fact, his important critical theory of technology has obviously learned a great deal from the ontological and phenomenological subtleties found in Heidegger's work, and there is every reason to suppose that Feenberg and future philosophers of technology will continue to find in Heidegger's reflections a challenging and rewarding source of philosophical inspiration.

The Ontic and the Ontological in Heidegger's Philosophy of Technology: Response to Thomson

Andrew Feenberg

Abstract

Iain Thomson's critique persuades me on several points, but not on the major difference between us, the relation of the ontological to the ontic in Heidegger's philosophy of technology. In this reply I attempt to show that these two dimensions of Heidegger's theory are closely related, at least in the technological domain, and not separate as Thomson affirms. I argue that Heidegger's evaluations of particular technologies, the flaws of which Thomson concedes, proceed from a flawed ontological conception.

Let me begin by thanking Iain Thomson for clarifying a number of points in the interpretation of Heidegger's philosophy of technology. I will certainly have to be more cautious in criticizing his thought in the future, but I still have some fairly basic disagreements.

I will concede that the adjective "unhistorical" does not quite apply to Heidegger's theory. What I called "unhistorical" about his account of modern technology is not that it lacks an origin, but that it lacks an end. To be sure, Heidegger's history of being grants the uniqueness of modernity, and I would agree that there is *something* unique about it. But I can find no indication in his thought that the *things* we normally refer to as "modern technology" can change significantly in the future. Even if the "mode of revealing" were to shift away from the technological enframing, it seems as though we would still be using the same devices. Hydroelectric plants on the Rhine would still "challenge" nature to deliver over its energy for a project of domination, even if we no longer participated in that project. This rather confusing prospect is due to the partial disconnection of Heidegger's concept of the essence of technology from actual devices, to which I will return below.

I would also agree with Thomson that there was a time in his life when Heidegger was not fatalistic, when he held out the hope of radical change. Unfortunately, this hope was linked with Nazism, the failure of which Heidegger himself eventually recognized. His later thought proposes not technological activism but *Gelassenheit*, translated as "releasement" although the usual meaning is "calmness" or "composure." We are to use technology indifferently, without ourselves being mobilized by the technological enframing. I find no trace of the early activism here at all. Perhaps there is deep insight into the conditions for another type of modernity that would help us achieve the Hegelian transcendence of technology for which Heidegger finally called, but he did not apply his thought to actual devices, just to our attitude toward them and toward nature.

And even in discussing a possible successor to the technological revealing his discourse is so vague and oracular it is not possible to figure out what he hopes or expects. I would agree with Thomson that his position is not irrelevant, but it does not go far enough.

We live in a society in turmoil around technical issues in communications, computers, medicine, the environment. How are we to intervene and for what? I have argued for more historical continuity in our judgements of modern technology and an appreciation of the role of the technical lifeworld in which we live with devices, not merely controlling them but also finding meaning through them. This approach opens the possibility that desirable features of premodern technical life or marginal technical practices today may take on greater importance in the technical future. One example: collegial control of production by the producers, a feature of craft, might be restored in a re-skilled version of industrialism.

I do agree that this conclusion resembles Dreyfus's interpretation of the role of marginal practices in Heidegger. I too am advocating a reversal in values that would privilege sources of meaning present in our experience but pushed to the side by the frenzied struggle for money and power that characterizes the age. However, I cannot agree that this accurately reflects Heidegger's own view. It seems to me that Heidegger was himself far more deeply touched by modern nihilism than Thomson is willing to concede, far more so than Dreyfus. Nothing in his world escaped the enframing sufficiently to constitute a new "god." This is why after his Nazi fling he never specified the content of his nebulous hopes, certainly not in terms of a concrete historical alternative such as Woodstock.

But the interesting and perhaps inconclusive discussion of these points does not take us to the core of our disagreement, the relation between the ontic and the ontological in the understanding of technology. Thomson emphasizes that Heidegger's essence of technology, "enframing," refers to the ontological rather than the ontic level. What Heidegger calls "technology" we would more likely call an attitude toward the world and ourselves in which everything appears as a resource. Heidegger's claim that we live in a technological age would then be roughly equivalent to the notion that modern culture comprehends everything as a potential object of technical action.

The ontic, by contrast, is the level of empirical objects, of actual machines and the nature they transform, of our own needs and activities, hence also of political strife and struggle. The "ontological difference" appears to insulate the one from the other. Ontic political struggles over the design of devices cannot change the ontological dispensation within which the world appears as technological. Or, again in my rough translation, one can't change the fundamental background assumptions of a culture by enacting them in this or that particular situation. The insulation of the ontological from the ontic has another implication for Heidegger's defenders: no matter how reactionary most of Heidegger's statements about particular technologies (the ontic), that does not affect the basic soundness of his (ontological) theory of the essence of technology. In fact, it is possible to argue as Thomson does that Heidegger was "basically" reconciled with technology despite his frequent complaints about this or that device (power plants, television, typewriters, etc.)

Thomson draws on these distinctions to clarify Heidegger's intent. He claims that the essence of technology is not a genus under which modern technologies would fall as particular instances but an ontological happening of some sort. Each particular, Heidegger writes, "belongs as stockpart, available resource, or executer, within

Enframing; but Enframing is never the essence of technology in the sense of a genus. Enframing is a way of revealing..." etc. (Heidegger, 1977: 29). This is an important point and it obliges me to rethink my argument, but as we will see I come to the same conclusion.

Heidegger's position seems rather confusing at first glance: what sense does it make to call something an essence if it is not the genus of that which it names? The whole Heideggerian theory risks collapsing into semantic triviality if he is employing the word "technology" to refer to something no one would normally refer to as such. As in Thomson's critique, so in earlier discussions with Heideggerians, I have not gotten a simple and direct answer to this obvious objection but rather elaborate accounts of Heidegger's concept of essence. These accounts are interesting but do not address the basic problem, which is the link (or absence thereof) between technology as a mode of revealing and actual technological devices.

I am provoked by Thomson's critique into trying once again to solve this problem. I believe there is a way to show that enframing is at least not *primarily* a genus in the usual sense. Consider the parallel case of culture or language. Culturally encoded behavior or speech are not particulars in the same way in which, for example, red paint is an instance of the genus red or a coffee cup an instance of the genus cup. The reason is that culture and language are enacted, and the enactments reproduce them concretely rather than simply instantiating them. Or, to put it the other way around, culture and language are not simply abstractions from particular instances of behavior and speech, but have a strange kind of reality "in" the latter, shaping them and being shaped by them in turn. Culture and language are thus what Hegel called "concrete universals"--they exist in their instances--in contrast with abstract universals that are simple generalizations from particulars. Heidegger indicates that this is the sort of distinction he wants to make when he says, "If we speak of the 'essence of a house' and the 'essence of a state,' we do not mean a generic type; rather we mean the ways in which the house and state hold sway, administer themselves, develop and decay--the way in which they 'essence' [*Wesen*]" (Heidegger, 1977: 30).

As a concrete universal, we should expect to find enframing enacted in particular technological arrangements and technically inspired behaviors. This accounts for the fact that even though he denies that enframing is a genus, Heidegger's refers to it constantly in describing the workings of actual technologies and technical actions. The famous hydroelectric plant on the Rhine, which comes off so poorly in comparison with Hölderlin's hymn to the river, is a case in point. Heidegger does not want to describe it as a mere instance of the idea of enframing, but he does show how it enacts enframing by transforming the meaning of the river: "What the river is now, namely a water power supplier, derives from out of the essence of the power station" (Heidegger, 1977: 16).

If I am right in this interpretation of Heidegger's enigmatic claim that the essence of technology is not the genus under which particular technologies fall, a great many things become clear. Most importantly, we begin to see why, contra Thomson, it matters so very much that Heidegger's analyses of particular technologies are often influenced by romantic technophobia. We cannot cleanly separate the theory of enframing from these regressive attacks on particular technologies because they are of a piece. An impoverished general theory is here reflected in an impoverished understanding of particulars. I would like to conclude with an example I find particularly revealing.

The example I have chosen reflects what I said earlier of Heidegger's nihilism. We will find him surrendering everything to "technology," in his sense of the term, in advance and in this instance in error rather than seeking those marginal potentials that could be actualized through progressive human agency. In this Heidegger's position concurs with a certain postmodernism which has indeed recognized a precursor in him.

One postmodern trend Heidegger anticipated is the radical transformation of culture under the impact of the computer. His view was clearly formulated in a recently published speech he gave in 1962 to teachers in the continuing education system of the German university. There he explains the difference between language as saying, as revealing the world by showing and pointing, and language as mere sign, transmitting a message, a fragment of already constituted information. The perfection of speech is poetry, which opens language to being. The perfection of the sign is the unambiguous position of a switch--on or off--as in Morse code or the memory of a computer. Heidegger writes,

The structure and performance of mainframe computer systems [Großrechenanlagen] rests on the techno-calculative principles of this transformation of language as saying into language as a mere report of signal transmissions. What is decisive for our reflection lies in the fact that it is from the technological possibilities of the machine that the instruction is set out as to how language can and should be language. The kind and character of language are determined according to the technological possibilities of the formal signal transmissions which execute a sequence of continual yes-no decisions with the highest possible speed....The kind of language is determined by the technology (Heidegger, 1998: 140, translation modified).

And Heidegger goes on to announce the end of humanistic culture under the impact of the computer.

All this makes fun reading for philosophers, but it is embarrassingly wide of the mark. What has actually happened to language in a world more and more dominated by computers? Has it in fact been reified into a technical discourse purified of human significance? On the contrary, the Internet now carries a veritable tidal wave of "saying," of language used for expression as always in the past. Of course, we may not be interested in much of this online talk, but that is another story. The simple fact of the case is that these "posthumanist" reflections on the computer were wrong. They not only failed to foresee the transformation of the computer into a communication medium, but they precluded that possibility for essential reasons (Feenberg, 1995: chap. 7).

Ah, but was the error ontic or ontological? In considering this question it becomes clear why the wall between the two realms breaks down. Underlying the ontic analysis of the computer there is an ontological presupposition according to which technology introduces a peculiarly impersonal form of domination into human affairs. This presupposition is then played out at the ontic level in the seeming enactment of impersonality and control in the unambiguous positioning of the digital switch. The resulting "aggression of technical language against the proper character of language is at the same time a threat against the proper essence of man" (Heidegger, 1990: 40-41). Now we are returned to the ontological level. The ontological appears in the ontic; the ontic strikes back at the ontological. The two are linked in Heidegger's discourse, not separate, as his interpreters claim. If Heidegger rejects attempts to control technology in the interest of human values, this is not because technology, as ontological, is insulated

by definition from merely ontic action, but because in his view all control is technological and so must reproduce the “same.”

Because of this subterranean linkage, ontological presuppositions intrude unacceptably on the ontic level. That is the source of the erroneous evaluation of the computer. The chain of equivalences, which runs from the impersonality and domination of technology as such down to particular devices such as computers, gets in the way of concrete analysis. A serious encounter with particular technologies shows that they have many dimensions that can be actualized under different social and historical circumstances. Technology has never had a single meaning such as enframing which summed up all its potentials. Nor does it make much more sense to describe our culture as uniquely oriented toward domination. The ability of the computer to mediate normal human language is not a startling reversal of ontological trends, but merely an expression of the complexity and flexibility of technology that is revealed as it is appropriated by a wider range of actors.

What conclusion do I draw from these reflections? I do think Heidegger’s philosophy of technology is interesting and suggestive. It helps to understand one important attitude toward technology and the corresponding type of technological design. That attitude and design philosophy has shaped central modern institutions such as business enterprises and government bureaucracies. The notion of revealing in Heidegger’s philosophy of art can also be usefully transposed to the study of technology, where it helps to understand how technologies establish “worlds” in his sense of the term. However, these concessions do not go as far as Thomson would like. While I can appreciate the complexity of Heidegger’s position, I cannot absolve him of his reactionary attitude toward modernity and specifically toward modern technology. That is really the ultimate stake in the argument and for my part I am not convinced.

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[1]See Feenberg, *Critical Theory of Technology* (New York and Oxford: Oxford University Press, 1991); *Alternative Modernity: The Technical Turn in Philosophy and Social Theory* (Berkeley: University of California Press, 1995); and *Questioning Technology* (London and New York: Routledge, 1999). Unprefixed page references throughout refer to this last work.

[2] See my *From the Question Concerning Technology to the Quest for a Democratic Technology: Heidegger, Marcuse, Feenberg, and Feenbergs Response to Critics*, both forthcoming in *Inquiry*.

[3] In fact, many of us already have definite ideas about what counts as an essence, and so we will probably also have some preconceptions about what technological essentialism must entail. To avoid confusions, it is worth noting ahead of time that when Feenberg criticizes technological essentialism, he is not thinking of the Kripkean claim that an essence is a property that a thing possesses necessarily, a property which fixes the extension of that kind of thing by determining what is and what is not a member. (See Saul Kripke, *Naming and Necessity* [Cambridge, MA: Harvard University Press, 1980].) But nor is Feenberg trying to reinvent the wheel. Rather, he is simply using essentialism as a descriptive term meant to characterize a fairly wide range of theories of technology with which he disagrees, with Heidegger providing the paradigm case.

[4] It is not clear that the radical constructivists sloganistic claim that there is no technology, only technologies makes sense; in virtue of what are all these different technologies? There are, of course, other affinities between Feenberg and the constructivist camp (see esp. pp. 83-5).

[5] Feenberg appropriates this term from Marcuse, then applies it back to Marcuses own one-dimensional conception of our fully administered society.

[6] Heidegger, *The Question Concerning Technology*, trans. W. Lovitt (New York: Harper and Row, 1977), p. 4; *ibid.*, pp. 30-1; *ibid.*, p. 30.

[7] I defend Heideggers conception in *Ontotheology: Understanding Heideggers Destruktion of Metaphysics*, forthcoming in the *International Journal of Philosophical Studies*.

[8] Martin Heidegger, *Traditional Language and Technological Language*, trans. W. Gregory, *Journal of Philosophical Research* XXIII (1998), p. 136. Heidegger, *Discourse on Thinking*, trans. J. Anderson and E. Freund (New York: Harper & Row, 1966), p. 46; Heidegger, *Traditional Language and Technological Language*, p. 139; Jean Baudrillard, *The Transparency of Evil*, trans. J. Benedict (London: Verso, 1993), p. 4. For Heidegger, the quantitative dominates all beings when this limitless quantification exhausts all qualitative relations, and we come to treat quantity as quality. See Heidegger, *Contributions to Philosophy (From Enowning)*, trans. P. Emad and K. Maly (Bloomington, IN: Indiana University Press, 1999), p. 95/*Beiträge zur Philosophie (Vom Ereignis)*, *Gesamtausgabe* vol. 65, (Ed.) F.-W. von Hermann, (Frankfurt a.M., Vittorio Klostermann, 1989), [hereafter GA65], p. 137; *ibid.*, p. 94 (my emphasis)/GA65 p. 135.

[9] Feenberg comes close to acknowledging Heideggers point in a recent essay: Where history rather than nature is identified as the fundamentally real, the finitude and constitutive power of human subjects can be reconciled. Here the notion of disclosure as the simultaneous constructing of and openness to reality makes sense. See Feenberg, *Modernity Theory and Technology Studies: Reflections on Bridging the Gap* <<http://www-rohan.sdsu.edu/faculty/feenberg/twente.html>>.

[10] Glazebrook shows this clearly in *From Phusis to Nature, Techn to Technology: Heidegger on Aristotle, Galileo, and Newton*, in *The Southern Journal of Philosophy* (2000), Vol. XXXVIII.

[11] See Heidegger, *Science and Reflection*, *The Question Concerning Technology*, p. 173. In Feenbergs *Modernity Theory and Technology Studies*, he again attributes to Heidegger the familiar complaint about modernity's obsession with efficiency and control. (Of course, Feenberg would be right if he were distinguishing modernity from post-modernity, rather than using modernity to designate the contemporary age, as he does here.)

[12] Heideggers claim is that when modern subjects dominating an objective world begin to transform themselves into objects, the subject/object distinction itself is undermined, and these subjects thus put themselves on the path toward becoming just one more resource to be *optimized*, i.e., secured and ordered *for the sake of flexible use*. See Charles Spinosa, Fernando

Flores, and Hubert L. Dreyfus, Skills, Historical Disclosing, and the End of History: A Response to Our Critics, *Inquiry* 38:1-2 (1995), p. 188 (my emphasis).

[13]The passage from modernity to post-modernity was, for Heidegger, already clearly visible in the transformation of employment agencies into human resource departments. (See 1955s *The Question Concerning Technology*, p. 18.) Our contemporary reduction of teachers and scholars to on-line content providers merely extends and so clarifies the logic whereby modern subjects become postmodern resources, a logic which (as we have seen) Heidegger traces philosophically back to Nietzsche's metaphysics.

[14]As I explained in my earlier essay, Feenberg believes that this fatalism stems from Heidegger's exclusive adoption of the strategic standpoint on technology. That is, Heidegger's view of technology coincides with the top-down managerial perspective, ignoring the bottom-up perspective of those enrolled within technological networks and so ignoring their anti-fatalistic subjugated wisdom: technologies can be appropriated from below, diverted away from the fixed ends for which they were originally designed. (Of course, Heidegger would not deny that specific technological designs can be subverted in this way. The crucial question is whether such ontic subversions could ever culminate in an ontological transcendence of the technological mode of revealing. As I show below, Heidegger did believe in just such a possibility.) Feenberg's criticism finds an interesting echo in Julian Young, who contends that the ethos of enframing is more complex than Heidegger allows; for there exists within it the perspective of the *user*, exploiter, of *Bestand*, but also that of the *used*, the one who *is Bestand* human resource. For the latter the highest value is efficiency; becoming as much like the totally efficient, unoriginal and obedient computer as is possible. *Ge-stell* thus determines an, as it were, master morality and a slave morality. It is not precluded, of course, that one might think of oneself as living according to the former while, in reality, one lives out the latter. (Young, *Heidegger, philosophy, Nazism*, p. 210.) Young does not bring this idea together with a provocative passage from Heidegger he also quotes (*ibid.*, p. 153), in which Heidegger bitterly bemoans the contemporary ages call for the Nietzschean *bermensch*: What is needed is a form of mankind that is from top to bottom equal to the unique fundamental essence of contemporary technology and its metaphysical truth; that is to say, that lets itself be entirely dominated by the essence of technology precisely in order to steer and deploy individual technological processes and possibilities. (See Heidegger, *Nietzsche, Volume Four: Nihilism*, ed. David Krell, trans. F. A. Capuzzi [San Francisco: Harper & Row, 1982], p. 117.) In the conjunction of these two passages, one can see the basis for a more aggressive Heideggerian response to Feenberg, who could be understood as advocating precisely this Nietzschean perspective.

[15]If substantivism is right that we cannot control the essence of technology (and clearly this is meant as the time-independent claim that the essence of technology is out of our control now and forever otherwise it would not be objectionable), then there is no non-question begging way to say that we could change the world such that we *could* control the essence of technology.

[16]See Dreyfus, Heidegger on the Connection Between Nihilism, Art, Technology, and Politics, in C. Guignon, ed., *The Cambridge Companion to Heidegger* (Cambridge: Cambridge University Press, 1993), pp. 307-10. On Heidegger's alleged fatalism, see also Young, *Heidegger, philosophy, Nazism*, pp. 188-91.

[17]Dreyfus, Nihilism, Art, Technology, and Politics, p. 305.

[18]*Ibid.*

[19]*Ibid.*, p. 310. Pace Winograd and Flores, then, we are not ontological designers. We are, rather, ontic designers. See Terry Winnograd and Fernando Flores, *Understanding Computers and Cognition: A New Foundation for Design* (Reading, MA: Addison-Wesley Publishing Co., 1986).

[20]Heidegger, *Contributions to Philosophy*, p. 68/GA65, p. 98. This passage from the *Beiträge* is problematic, both philosophically and politically: philosophically, because here we see Heidegger still naively committed to the metaphysical project of establishing a new historical

ground for beings (by deciding a new historical understanding of the Being of beings); politically, because Heidegger not only connects this metaphysical project with the people [*Volk*], but even asserts the singularity [or uniqueness, *Einzigkeit*] of this folks origin and mission, grounding this destiny in the singularity of Be-ing itself [*ibid.*, p. 67/p. 97]. This nationalistic philosophical appropriation of the Jewish trope of the chosen people, sometime between 1936-37, is especially troubling.

[21] See Dreyfus, *Nihilism, Art, Technology, and Politics*, p. 311. Cf. Hubert L. Dreyfus, Heidegger on Gaining a Free Relationship to Technology, in Andrew Feenberg and Alastair Hannay (eds), *Technology and the Politics of Knowledge* (Bloomington, IN: Indiana University Press, 1995), p. 106.

[22] There are, of course, important differences between the revolutionary and evolutionary perspectives. Indeed, Heidegger's own adoption of the revolutionary view seems to have desensitized him to the real human suffering ushered in by the pseudo-revolution of 1933. Nevertheless, Heidegger's critique of the evolutionary view is right about at least this much: the mere fact that the hands of the clocks keep turning, so to speak, does not mean that history is moving toward any sort of ontological transformation.

[23] Charles Spinosa, Fernando Flores, and Hubert L. Dreyfus ground-breaking work, *Disclosing New Worlds: Entrepreneurship, Democratic Action, and the Cultivation of Solidarity* (Cambridge: The MIT Press, 1997) closes by issuing a similar call (see esp. pp. 171-3), and Feenberg has recently recognized this affinity in his *Modernity Theory and Technology Studies*.

[24] See Heidegger, *The Question Concerning Technology*, p. 29. This, I take it, is what Dreyfus means when he says: when he asks about the essence of technology we must understand that Heidegger is not seeking a definition. His question cannot be answered by defining our concept of technology. See *Nihilism, Art, Technology, and Politics*, p. 305.

[25] The Platonist conceives of the essence of the different species of trees in terms of the abstract idea of treeness, but Heidegger does not analogously conceptualize the essence of the diversity of technological devices by abstracting toward a kind of technicity [*Technik*] or machination [*Machenschaft*]. Indeed, by 1938, he has recognized that Machination itself is the essential swaying of Beyng [*die Wesung des Seyns*], i.e., that what technological devices share in common is their ontological mode of revealing (which is rooted in Nietzsche's metaphysics of constant overcoming, his ontotheology of eternally recurring will to power). Thus Heidegger writes: The bewitchment by technicity and its constantly self-surpassing progress is only *one* sign of this enchantment, by which everything presses forth into calculation, usage, breeding, manageability, and regulation. See Martin Heidegger, *Contributions to Philosophy*, p. 89/GA65 p. 128; *ibid.*, p. 87/p. 124.

[26] Heidegger, *Discourse on Thinking*, p. 50. Thirty years earlier (in 1928), Heidegger pictured technology as rampaging across the globe like a beast off its leash. See Heidegger, *The Metaphysical Foundations of Logic*, trans. M. Heim (Bloomington, IN: Indiana University Press, 1984), p. 215.

[27] See Heinrich W. Petzet, *Encounters & Dialogues with Martin Heidegger: 1929-1976*, trans. P. Emad and K. Maly (Chicago: University of Chicago Press, 1993), pp. 149-50; *ibid.*, p. 210.

[28] See Heidegger, *Poetry, Language, Thought*, trans. A. Hofstadter (New York: Harper & Row, 1971), pp. 152-3. I have argued that Heidegger conceives of works of art on three orders of magnitude (in terms of their ability not only to reflect but to redirect the ontological self-understanding of the age): micro-paradigms (things) like Van Gogh's painting of the peasant shoes; paradigms (works of art proper) like the autobahn interchange; and macro-paradigms (gods) like the Greek temple. (See my *The Silence of the Limbs: Critiquing Culture from a Heideggerian Understanding of the Work of Art*, *Enculturation* 2:1 [1998]). While thinking in terms of such a continuum can be helpful, it is important to remember that for Heidegger things

are not works of art proper, since things *gather* a local world, while artworks *reconfigure* the worlds they bring into focus, in the extreme case (the god), inaugurating a new historical epoch.

[29] Heidegger, *Building Dwelling Thinking, Poetry, Language, Thought*, p. 152.

[30] *Ibid.*, p. 153. For a fascinating analysis of freeway interchanges as artworks reflecting back the self-understanding of the age, see David Brodskys monograph, *L.A. Freeway: An Appreciative Essay* (Berkeley: University of California Press, 1981).

[31] Dreyfus, *Nihilism, Art, Technology, and Politics*, p. 311. As possible sources of such a new paradigm, Dreyfus stresses those marginal practices which have not yet been completely mobilized as resources, such as friendship, backpacking in the wilderness, and drinking the local wine with friends (*ibid.*, p. 310). I would add that for Heidegger a crucial role will be played by presencing [*Anwesen*], that pre-conceptual phenomenological givenness and extra-conceptual phenomenological excess which existing practices never exhaust.

[32] *Ibid.*, p. 307. See also Dreyfus, *Heidegger on Gaining a Free Relationship to Technology*.

[33] See Martin Heidegger, *The Turning*, in *The Question Concerning Technology*, p. 38; Martin Heidegger, *The Spiegel Interview*, translated by L. Harries, in G. Neske and E. Kettering (eds), *Martin Heidegger and National Socialism* (New York: Paragon House, 1990), p. 63; Heidegger, *Nietzsche, Volume Four: Nihilism*, p. 223. For more concrete guidance about how such world disclosing takes place, see Spinoza, Flores, and Dreyfus, *Disclosing New Worlds*.

[34] See Petzet, *Encounters & Dialogues*, pp. 145-6.

[35] For a persuasive argument to this effect (one which Feenberg does not yet seem to have taken the full measure of), see Hubert Dreyfus and Charles Spinoza, *Highway Bridges and Feasts: Heidegger and Borgmann on How to Affirm Technology*, *Man and World* 30:2 (1997).