

Thinking Technology, Thinking Nature^{*}

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Introduction

The notion that technology is a mere tool at our disposal has become commonplace over the past one hundred years. According to this view technical devices can be explained as means that are used for good or evil, the enhancement or destruction of life. The power is in the hands of the users. Some philosophers have traced this anthropological view back to the disembodied rational subject of modernity. For this subject rationality is the legitimating grounds for treating man and nature as mere objects, the precondition for the proliferation of technological production.

In his latest book, *Heidegger and Marcuse: The Catastrophe and Redemption of History*, Andrew Feenberg argues against this utilitarian approach to technology and proposes an alternative rationality that will facilitate our shaping of the technological world in accordance with life affirming values.

The promise of the book is that the revival of critical reason will lead to a creative reconstruction of our technological world, a reconstruction that aims, with Marcuse, at the “pacification of existence” rather than the destructive perpetuation, through technological means, of the “struggle for existence.” Feenberg’s alternative is grounded in a phenomenological reading of the later Marcuse’s call for the “aesthetic liberation” of the

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individual. This liberation presupposes a historical reconciliation between reason and the imagination.

Heidegger and Marcuse: The Catastrophe and Redemption of History is a critical response to Heidegger's dystopian view of technology as our historical destiny in the West. While in several previous works Feenberg challenged Heidegger's exclusively ontological understanding of technology on empirical grounds, this book provides an alternative to any essentialist interpretation of technology. The proposed alternative involves thinking technology as an always already political, ethical and aesthetic event, something that Heidegger explicitly rejects. So while Feenberg clearly builds on Heidegger's ontological critique of technology's putative neutrality his work develops along socially inflected lines.

In step with much nineteenth century European philosophy and early twentieth century messianic thought, Heidegger sees the technological age as the beginning of the end of history. Feenberg's critique of this ideological conclusion leads him to a philosophical revival of the role of human agency in constructing a free relationship to technology. In this emphasis on the centrality of technology, Heidegger and Marcuse are in agreement: due to the highly technologized nature of the world today, we can hardly address the question of human freedom without thinking about the ways in which it is technologically conditioned.

I begin by outlining Feenberg's clear and insightful account of Heidegger's philosophy of technology from its early productionist roots, evident through the Aristotle lectures of the 1930's, to the later works where Heidegger clearly attempts to distance himself from a productionist understanding of being. This attempt accounts, in part, for his inability to provide a *positive* critique of technology. Marcuse, who was Heidegger's student at Freiburg, supplies his teacher's critique with a necessary political analysis; but the coherence of his aesthetic alternative depends on the retrieval of Heidegger's phenomenological insights, which Marcuse resists. I then show that, today, Marcuse's critical theory and Hubert Dreyfus' applied phenomenology represent two different attempts to respond to Heidegger's dystopian diagnosis, albeit with mixed success. Drawing on both accounts, I briefly show how the cultivation of local artistic practices demands the rethinking of subjectivity along constructivist lines. Finally, I argue that Feenberg's notion of "participatory interest" carves a middle path between the alternatives expressed by Marcuse and Dreyfus.

I.

The core ambition of *Heidegger and Marcuse: The Catastrophe and Redemption of History* is to reconcile the Greek and modern notions of

production (*techné*) in order to promote a life enhancing technological environment. Feenberg writes,

The task of a post-Heideggerian philosophy is to conceive a technology based on respect for nature and incorporating life affirming values in its very structure, the machines themselves. I understand this utopian demand as an implicit recovery of *techné* in a modern context, freed from the limitations of ancient Greek thought and available as a basis for a reconstructed modernity. (p. 4)

Feenberg thus sees technology as a socially transformable event. On his account, any critique of technology must imply a redemption that contains a positive content. While Heidegger presciently indexes the pervasively technological character of modern life, his critique fails to account for the emergence of concrete possibilities of change. In this he is at one, albeit for different reasons, with the dominant instrumental interpretations that view technical making as inherently value free.

Feenberg traces this instrumental view back to Callicles' confrontation with Socrates in Plato's *Gorgias*, where the opponents represent the Janus faces of ancient technical production. With Callicles' refutation, the danger of the *logos* losing its objective moorings was temporarily avoided and the centrality of knowledge for the good life restored. More importantly, arts guided by the *logos* in accordance with an objective, pre-established idea (*eidos*) or plan are redeemed against the subjectively determined, non-verifiable and value neutral knacks (*empeiriae*) of Callicles (p. 8). Although Socrates wins the argument history validates Callicles.

In the technological age, Callicles himself becomes trapped in an illusory freedom as his "pleasures" and desires are produced and distributed in accordance with the demands of the system. Rereading Callicles in light of Heidegger's critique of technology we rediscover him as the totally administered individual who sees himself as master of his possibilities but fails to recognize his complete (technological) conditioning. The instrumental understanding of technology covers up the reality that it is nothing but power disseminating itself in a variety of forms.

Feenberg's philosophy of technology uses Heidegger against Heidegger by showing the ethically normative implications in his critique of instrumentalism.¹ For Feenberg technology is an always already ethically and politically coded phenomenon whose neutrality is merely ideological, the necessary means for securing the vast proliferation of the iron cage. Feenberg argues that a phenomenological interpretation of technical devices shows that their meaning is socially transformable insofar as both their production and implementation are always already conditioned by a

historically determinate understanding of being. The task is to recognize their “inherent possibilities” based on their practical integration into the lifeworld. Like all things, technical devices,

do not have fixed essences separate from their manifestations because they are not themselves stable and fixed. Rather, they belong to a field of interactions which establishes their inner coherence and their boundaries... Potentialities are inscribed in things but do not constitute them as independent Aristotelian substances. Instead, something in the constellation of their present connections gives a direction to their development. (p. 18)²

Although the later Heidegger tries to distance himself from understanding nature (*physis*) through production, he cannot move beyond his phenomenological beginnings.³ His work remains indebted to the Greek understanding of being (*physis*) on the model of *techné* where the presence of both natural and artificial beings is understood as “producedness.” But in *Being and Time*, Heidegger gives this approach an original formulation. Influenced by Aristotle’s account of *phronesis* in *Nicomachean Ethics*, Heidegger’s *Being and Time* illustrates the togetherness of human being and being, subject and world in the analytic of *Dasein* as *care* (*Sorge*). Here meaning emerges as the relationship of *Dasein*’s circumspective concern rather than somehow pre-existing it, or the converse, originating in subjective cognition. Thus:

The production model continues to operate but in a phenomenological context. Heidegger presents everyday *Dasein* as primarily handling objects, i.e. involved in *techné*. But the equipmental realm, now defined as the “world,” is no longer approached through the *structure of the product* as it is by Aristotle. Instead, Heidegger develops a phenomenology of *Dasein*’s use of objects. This approach grounds the *eidōs* in *Dasein*’s temporality. (p. 41, my emphasis)

This phenomenological conception of essence reconciles Greek objectivism with modern subjectivism and overcomes the contradiction between objectively given essences and subjectively chosen plans or goals. For existential ontology, “The essences of things are no longer reified as things themselves but understood from out of their place in everyday practical activity, phenomenologically interpreted. *Paradoxically, this new understanding of essence is made possible by modern technology*” (p. 36, my emphasis). The rise of mechanical production is connected with the breakdown in the concept of essence.

According to Heidegger the Greeks believed that essences, that what endures, the *eidai*, are not arbitrary products of the human will “but arise

from being itself.” The Greeks viewed the world in terms of discovery rather than invention, and this discovery itself reduced the very self-showing (*phainestai*) of being to immutable *eidai*, rather than grasping it historically. The Greeks thought *aletheia*, but were unable to think *a-letheia*,⁴ the very structure of this self-showing, revealing as such. This determines the origin and legacy of metaphysics as the constriction of being to the concept of *eidos*.

Feenberg argues that while the Greeks were unable to acknowledge the historical contingency in their understanding of essence and “confounded being with the essences of particular things”, the moderns “confused the essential role of humanity in the process of revealing with technical command of nature” (p. 44) through the arbitrary imposition of the will. The deep insight of *Heidegger and Marcuse: The Catastrophe and Redemption of History* points to a Hegelian reconciliation of these two historical understandings of essence, a synthesis between antiquity and modernity, in “a relation of human being to being that can replace both Greek bringing-forth (*poiésis*, *hervorbringen*) and the modern *Gestell* (*herausfordern*)”⁵ (ibid, my inserts).

In Hegel we find the earliest form of this historical reconciliation in the experience of labor, the stand-in for Aristotle’s concept of *techné*, now cast as the subjective production of history. Here, “the essential potentialities the Greeks found in things return as human potentialities. But since the world is a human creation in some sense, things too are restored in their rights and claims along with the human beings who created them” (p. 136). This is the argument in *Hegel’s Ontology and the Theory of Historicity* where, according to Feenberg, Marcuse’s reading of Hegel’s concept of life as “the bringing forth of itself and the world through desire and labor” (p. 62) continues Heidegger’s early interpretation of Aristotle’s understanding of being on the model of *techné* (pp. 54–63).

Feenberg’s work underscores this revival of subjective creativity, a revival that he traces from Marcuse’s early works on Hegel to his later essays on the immanent redemption of the catastrophe of the technological age. Marcuse’s controversial reading of Hegel’s dialectical understanding of essence dismisses any final resolution of history as the cognitive actualization of the absolute.⁶

It is crucial to note that Feenberg’s attempt at a historical redemption of technology, through a revitalization of subjective creativity and agency, conflates the last two stages in Heidegger’s account of history (*Geschichte*).⁷ Paradoxically, this reading highlights two irreconcilable positions regarding technology. As I have noted above, Feenberg recognizes modernity as the last phase in the historical unfolding of being. The modern age and the technological age are simply blended together, characterized by the willful imposition of the subject’s arbitrary desires upon an inert world (or nature) that shows up as nothing more than “fungible” raw material. This

disembodied and alienated picture of subjectivity is the legacy of Descartes and Kant waiting to be redeemed, in Feenberg's view, by the retrieval of a second modernity in the relational subjectivity of Hegel and Marx.

However, Heidegger's critique of modernity is directed at all brands of subjectivity, seeing in them the imminent deployment of the technological age. Thus, he draws a sharp boundary between the age of the subject that finds its last expression, on his reading, in Nietzsche's will to power as the will to will,⁸ and the technological age where "both subject and object are sucked up as standing-reserve"⁹ or resources. According to Heidegger, the technological age can be defined by the structural loss of the autonomy of the subject and by the subordination of both subject and object to the demands of the network.¹⁰ In other words, Heidegger's account of what shows up in the technological age is no longer autonomous subjects over and against objects but resources engaged in networks of optimization.

The fundamental characteristics of the technological age, what Heidegger indexes in *The Question Concerning Technology* as the technological mode of revealing, are controlling, securing, ordering, optimizing for its own sake, rendering efficient and flexible. This aggressive mode of disclosure Heidegger calls, albeit idiosyncratically, *das Gestell* or *enframing*. Under the aegis of *Gestell*, the world is no longer disclosed it is now "challenged-forth" (*herausgefordert*). This describes the reduction of the subject, nature and the world to the status of a resource or "standing-reserve". Thus, "challenging-forth" finds its correlative term in what it reveals, no longer objects but resources. The structural relationship that obtains here is fundamentally one-dimensional. Furthermore, as long as we are ruled by *enframing* our primordial way of relating to the world and to each other remains fundamentally unfree. Therefore, subjects are inscribed in a systematically ordered reality and this means that their desires, as Marcuse correctly acknowledges throughout *One Dimensional Man*, are completely administered.

Unlike Heidegger, Marcuse and Feenberg believe that the autonomy and creativity of the subject are undermined, not by an anonymous reconfiguration of cultural norms and meanings, but by the systematic rationalization of irrational, because life-denying, desires and choices. This domination is socially determined and therefore socially transformable through an aesthetic revolution, in Marcuse's case, and through the active incorporation of "participant interests" in the historical development and implementation of technology, for Feenberg.¹¹ It is interesting to note that while these solutions may be plausible, they are a structural impossibility for the totally administered (*enframed*) individual in Heidegger's *Gestell*. It is precisely the collation of the modern and the technological age that allows the retention of a subjectivity that can provide the tools for an immanent solution. This unfaithfulness to the letter of Heidegger's text opens up the necessary space to attempt a move beyond Heidegger.

Marcuse's alternative blends Heidegger's analysis of *Dasein's* factual life with Marxist politics in order to reach a "concrete" level of resistance to the hegemony of technological rationality that is rooted in experience. According to Feenberg:

The problem is to find an authentic, i.e. philosophical, politics capable of articulating the situation of contemporary *Dasein*. Following Lukács, Marcuse interprets that politics in terms of the struggle against reification, reification cast in the role of inauthentic objectivism in Heidegger. The equivalent of authenticity now appears as solidarity in that struggle. All Marcuse's later attempts to reach the concrete, through such concepts as the "new sensibility," sensuousness, the aesthetic, the instincts, resonate with this original existential Marxist approach. (p. 93)

The goal of these varied attempts is to politicize technology in a way that resonates with Heidegger's account of the *Gestell* but at the same time transcends its limits. To this end "his concept of technological rationality cannot be identical with the formal concepts of efficiency and control, but must have a content as a socially specific pattern of goal orientation. But nor can it be a mere ideological 'reflection' for then it would have neither technical efficiency nor truth value" (p. 100). Here the critique of the instrumentality of technology does not lead to a remembering of our forgetfulness of being or to the pre-modern craft but to the recognition that this neutrality is ideological, a reflection of the on-going "struggle for existence" that defines capitalist norms of production. The alternative proposes a restoration of "values to their place in the *structure of technical reason*" (ibid, my emphasis).

This restoration of value is not arbitrary but recognizes the given truth or inherent possibilities of human and non-human nature. However, in a one-dimensional society that forecloses the possibility of real opposition, this recognition demands the prior liberation of the individual at the most fundamental and non-reducible level, that of experience itself. Marcuse articulates this need in *One-Dimensional Man* and elaborates it in his later works. He writes,

"Liberation of inherent possibilities" no longer adequately expresses the historical alternative. The enchained possibilities of advanced industrial societies are: development of the productive forces on an enlarged scale, extension of the conquest of nature, growing satisfaction of needs for a growing number of people, creation of new needs and faculties. But these possibilities are gradually being realized through means and institutions which cancel their liberating potential, and this process affects not only the means but also the ends.

The instruments of productivity and progress, organized into a totalitarian system determine not only the actual but also the possible utilizations.¹²

Marcuse's critique of technological rationality¹³ culminates in the call for the overcoming of the reified split between nature and culture in an aesthetically grounded affirmation of life that would endow all life with dignity and respect. Paradoxically, this aesthetic turn is made possible by the material successes in the West because "the very wealth of modern societies has rendered their repressive organization obsolete" (p. 128). The question becomes whether this aesthetically redemptive alternative, where reason once again incorporates the imagination and the notion of a substantive good is restored, presents a viable alternative.

II.

A phenomenological analysis of technical devices shows that they are always already ethically inflected according to particular normative horizons, and that changes in technical design reflect a change in technical practices and preferences. The sharp division between values and technical facts is part of the repressive technical and political ideology that needs to be overturned. The goal is to make this link in the technical base explicit in order to further a democratically constructed technological world that will not reproduce "the struggle for existence", but instead its "pacification." Feenberg argues that under capitalism utility has triumphed as "operational rationality" so that now "obligations flow from system requirements and not from essences; they do not transcend a bad reality... but guarantee its smooth functioning. The 'natural justice' of our time is efficiency" (p. 110). Furthermore,

capitalism is the first social system to repress the underlying population primarily through technology rather than through religion, ritual, and violence, and the first to treat it as essentially neutral rather than governed by an inherent *logos*. In this sense "neutral" capitalist technology can be said to be "political" without mystification or risk of confusion. (p. 106)

Thus, "The machine is not neutral" Marcuse writes, "technology is always a historical-social project: in it is projected what a society and its ruling interests intend to do with men and things."¹⁴ Technical facts are always already value-laden, ethically coded, we just need to decipher the code that is embedded in the design of the device and then change it. Technology and values are inextricably linked.¹⁵

Because Heidegger evaluates technology as an ontological event that is larger than, and the condition of, regional concerns like politics and aesthetics, he perceives the politicization of technology as the reproduction of the same, the very consolidation of *Gestell*. His critique of instrumentality leads to the awaiting of new gods or to the cultivation of “releasement toward things” (*Gelassenheit*) once we have experienced the “openness to the mystery” of being.¹⁶ While his concept of *Gelassenheit* suggests that we bind the influence of technologies upon our lives it assumes an already foregone conclusion.¹⁷ The hegemony of the *Gestell* precludes the real possibility of acting otherwise.¹⁸ His critique of subjectivity also precludes a concrete transformation of technology insofar as he views the reshaping of values as the arbitrary assertion of the will to power. It is easy to see why some philosophers acknowledge his invaluable insights but feel unsatisfied with his conclusions. His famous remark that “Nobody dies for mere values”¹⁹ is likely to arouse critical hostility from thinkers who value freedom and safety (what Marcuse calls vital or transhistorical needs), and would like to see them shape our relationship toward the world and implemented in our daily technologies.

It is clear that Heidegger’s *Gestell* forecloses the possibility of any type of revolt. But “Revolt against whom?” and “By whom?” are legitimate questions that cannot be answered because the seat of power is vacant; power becomes diffused in the system. The power of opposition has been effectively appropriated. Marcuse appears to agree, but nonetheless attempts to revitalize concrete forms of resistance. In *Repressive Tolerance*, for example, he argues that universal tolerance under the conditions of domination legitimates the growth of irrational, and therefore oppressive, activities. Therefore Marcuse’s critique legitimately points out that this formal and empty structure (*Gestell*) is ideological, preserving in our age the political and economic interests of the corporate elite. The need for a democratic alternative is indeed urgent, but how is it supposed to be possible?

Marcuse was involved in numerous political acts of resistance, from his student days in Germany, when during the German Revolution of 1919 he was elected to the Soldier’s Council, to his involvement with the American New Left during the 1960’s and 1970’s. It seems that his aesthetic alternative was, at least in part, inspired by the French New Left, the last in a series of avant-garde movements that proclaimed in the 1960’s “All power to the imagination.” The New Left responds “to the revolt of the repressed sensibility” by invoking “the sensuous power of the imagination” (p. 97) and appealing to a sexual liberation that opened up the infinite realm of the imaginary. However the values of the New Left did not seem to resonate widely enough, and therefore could not effect a lasting cultural transformation. Nonetheless, Marcuse uses their insights to build his own vision of a new aesthetic transformation.

III.

It is interesting to note that the impact Marcuse sees in the New Left in France mirrors the impact Hubert Dreyfus discusses in the counterculture of the 1960's in the United States. These opposition movements emphasized new values and new practices that briefly promised to produce a new cultural (paradigm) shift, a new understanding of being. Marcuse's and Dreyfus' responses to Heidegger's philosophy of technology represent two ways of actively thinking a post-technological age. The first one is overtly critical and political and the latter emphasizes receptivity to extra-technical practices. In what follows I want to suggest a combination of some of their insights.

An alternative modernity presupposes that there is a place from which critique can be leveled, a space of resistance that can catalyze transformation. According to Feenberg there must be "a *trace* however small, not assimilated to subjectivity" that can "become the article of faith on which the possibility of resistance depends. This *trace* commands *receptivity* rather than activity which has exceeded its mandate with catastrophic consequences. So concludes not only Adorno and Horkheimer, but also Heidegger in his own way" (p. 117, my emphasis). We have seen that Heidegger's receptivity is directed toward the mystery of being, toward the retrieval of our forgetfulness of being and a homecoming to our historical, albeit all too formally conceived, essence as sites for the disclosure of being.

Following Heidegger, Marcuse and Dreyfus appeal to the receptivity to this trace, but in different ways. Marcuse's historical interpretation of the instincts accounts for a basic core of resistance at the level of perception where the "physical and the cultural are encountered together" (p. 121). This enmeshment of the two levels is what Marcuse terms "second nature" and it is to this nature that he extends his existential reevaluation.

Many critics have charged that the qualification of this basic core as biological threatens Marcuse's project with determinism and ahistoricism, the very norms it intends to subvert. While Marcuse's redefinition of biological needs as historically inflected needs, vital needs that cannot be ignored, refutes his critics, it does so only partially. He successfully points out that certain vital needs demand universal recognition and fulfillment. He writes, "We could then speak, for example of the biological need of freedom, or of some aesthetic needs as having taken root in the organic structure of man, in his 'nature' or rather 'second nature' whereby the 'substantive' universals of philosophy, such as freedom and happiness, are not exhausted by the meaning they acquire in their original historical context" (p. 120). The appeal to biology confers upon these needs a transhistorical force and contrasts them with social needs that can be seen to remain culturally variable and are pleasure-oriented.

However, just insofar as it historicizes nature, Marcuse's account does not explain the otherness of nature, as it purports to do. Thus it seems to me that the subject does not come to "rest in the other" but simply returns to itself and rests in itself. Nature can be thought existentially only because the subject too is an object in the world, and as this object it must (somehow) identify with other human and non-human others. But in this identification, nature appears to be reduced to the subject just as surely as in technological mastery. Marcuse, however, would not accept this conclusion. According to Feenberg he insists that aesthetic values inhere in non-human nature as such (p. 126). This formulation of Marcuse's appears to be due to a confused equivocation on the concept of nature that Marcuse inherits from the Marx of the *1844 Manuscripts*. In that text Marx insists that the subject is the correlate of lived nature and objective nature as what is taken up in labor. This conflation in the concept of nature is resolved eventually by privileging the scientific understanding of nature in the later Marx. The subject cannot be the correlate of this objective nature. Marcuse moves in the opposite direction to identify nature as such with lived nature, but he is no more consistent in this than the early Marx.

Feenberg correctly points out that, without a phenomenological account of "technical action", Marcuse reinforces the notion that we can know nature as it exists independent of our practical engagement with it. Moreover he tries to legitimate our lived experience of nature by grounding it in a scientific framework where a new science can account for lived experience. This hankers after the kind of objectification that splits the subject from nature in the first place. The alternative would be to recognize with the phenomenologists that the lived experience has its own logic, as does scientific description. In fact, Husserl²⁰ and Heidegger²¹ show that if an ontological primacy should obtain it would favor the lifeworld, which grounds the sciences.

While Feenberg correctly points out that an explicitly phenomenological account of production would help to explain what Marcuse calls the "objectivity" of the aesthetic values in nature, this phenomenological analysis is still too abstract. According to Feenberg,

In a free society... the object would be perceived through its concept, as it is today, but that concept would include a sense of "where the object is going," what it can become. The object to which these qualities are attributed is not the object of science. It is the lived experience of the world in which the perceived incompleteness and imperfection of things drives action forward. (p. 131)

Yet Marcuse leaves the *how* of this conceptual broadening unexplained. His claim is that the collective internalization of life enhancing "social critical standards" should broaden until they begin to "structure our perception

and action.” As it stands this claim is not only utopian, but dangerously abstract.

What seems to be missing is a concrete account of how the cultivation of receptivity to vital needs is experienced by different social groups. Without this situatedness, what would keep the values of freedom and happiness from duplicating the dominant ideology in which such values figure large? This is not an argument against the central need for freedom and happiness; but without situating these values concretely they are left to wander the utopian landscape. Moreover, it is problematic to posit economic emancipation as the fundamental criterion for achieving social freedom. Feenberg overlooks this when he claims that, “What is truly innovative in Marcuse’s position is the hypothesis that once increasing wealth releases society from the struggle for existence perception can transcend the given toward unrealized potentialities foreshadowed in art” (p. 128). The continuing disparity in wealth, in the most industrially advanced countries, attests to the contrary. But even if this release were possible, race and gender theory have shown that social oppression is conditioned by factors that exceed economic exploitation.²² Any correlation between economic emancipation and aesthetic liberation must presuppose a further correlation between the former. Race and gender equality are not just intertwined, but equally fundamental in the construction of subjectivity.

Like Marcuse, Hubert Dreyfus has emphasized the role of receptivity in his attempt to think through the Heideggerian *Gestell*. He underscores the significance of keeping technology, while transcending the technological age and its dominant norms of efficiency, flexibility and optimization. Dreyfus believes that we can resist technological domination by separating technological from pre-technological practices, and cultivating the latter because they do not reinforce these norms.²³ He interprets Heidegger’s call for the “saving power of little things” as soliciting the cultivation of our receptivity to what he calls, marginal practices. The transformation of the technological age depends on the pre-reflective cultivation of these practices. We simply allow ourselves to be solicited by any activities that emphasize solidarity, relaxation, even intoxication.

While Marcuse drew some inspiration from the aesthetic movement of the French avant-garde, Dreyfus turns to the values of the American Woodstock Music Festival of the late 1960’s where,

People actually lived for a few days in an understanding of being in which mainline contemporary concern with rationality, sobriety, willful activity, and flexible, efficient control were made marginal and subservient to Greek virtues such as openness, enjoyment of nature, dancing, and Dionysian ecstasy along with a neglected Christian concern with peace, tolerance, and love of one’s neighbor without desire and exclusivity. Technology was not smashed or

denigrated but all the power of the electronic media was put at the service of the music which focused all the above concerns... Of course, in retrospect we see that the concerns of the Woodstock generation were not broad and deep enough to resist technology and to sustain a culture. Still we are left with a hint of how a new cultural paradigm would work, and the realization that we must foster human receptivity and preserve the endangered species of pre-technological practices that remain in our culture, in the hope that one day they will be pulled together into a new paradigm, rich enough and resistant enough to give new meaningful directions to our lives.²⁴

We notice that Dreyfus' emphasis on a social phenomenology of experience is fairly abstract. A concrete analysis of the subjects that felt solicited by Woodstock might help illuminate the ultimate demise of the movement and project the possible success of kindred movements in the future. But Dreyfus precludes the possibility of active intervention precisely because he sees this as a reinforcement of calculative thinking. This is not the same as mere resignation to the technological age.²⁵ In fact, he is more hopeful than Heidegger seems to have been about the coming to pass of a new age, or a new beginning, and his contributions in this area have been invaluable. Thus, my point is not that Dreyfus forecloses the possibility of overcoming the technological age, but that his solution mirrors Heidegger's insofar as it looks away from a concrete analysis of technologies and their local impact upon users. This leads him to further draw on *Gelassenheit*. Consider the following passage:

Releasement, it turns out, is only a stage, a kind of holding pattern we can enter into while we are awaiting a new understanding of being that would give a shared content to our openness what Heidegger calls a new rootedness... Of course, one cannot legislate a new understanding of being. But some of our practices could come together in a new cultural paradigm that held up to us a new way of doing things – a new paradigm that opened a world in which these practices and others were central, whereas efficient ordering was marginal... What can we do to get what is still nontechnological in our practices in focus in a non-nihilistic paradigm? Once one sees the problem, one also sees that there is not much one can do about it.²⁶

Dreyfus' phenomenological insight, that cultural meanings cannot be legislated but must be given, is undeniable. However, today, this meaning is more dependent on human agency from *within* the technical sphere than he is willing to acknowledge. Thus, as long as efficiency is thought to sum up the possibility of all technologies it seems Dreyfus' conclusion is inevitable.

However, a concrete analysis of various technologies shows, as Feenberg's notion of "primary and secondary levels of instrumentalization"²⁷ points out, that the conflict is not between efficiency versus non-efficiency, but about understanding efficiency in different contexts of use. In fact, Dreyfus recognizes that non-technological practices can also embody efficiency. He writes, "All these practices remain marginal precisely because they resist efficiency. The practices can, of course, also be engaged in for the sake of health and greater efficiency. Indeed, the greatest danger is that even the marginal practices will be mobilized as resources."²⁸

Despite, what I consider to be some limitations, Dreyfus' detailed account of actual practices does concretize an alternative picture²⁹ that we do not get in Marcuse's account of an *aesthetic rehabilitation*, and this despite his personal and philosophical commitment to concrete forms of social opposition. It seems to me that people need a picture of what this post-technological life will be, even if that picture turns out to be false.

Marcuse's technological utopia benefits from thinking technologically because this means thinking politically. His critique of a utilitarian philosophy of technology unmasks its ideological presuppositions but does not give us a concrete picture of the alternative. Both³⁰ Marcuse and Dreyfus show that art's radicality has the power to subvert the familiarity of everydayness, but they do not explain how these spaces of freedom can endure. Perhaps what can be gleaned from their philosophies is not how to make these spaces durable, in the sense of continuously permanent, but how to continue to generate them locally.

I want to suggest that this may entail the increased organization of public space around public art that can spur dialogue, even civic engagement. Art has the power to generate dialogue because we do not respond to it (primarily) in a rational way, but affectively, and this can facilitate a plurality of meanings rather than a facile one-dimensional consensus. Moreover, the very activity and consequence of dialogue makes it a part of what Merleau-Ponty calls sedimentation or our sedimented core, as the way in which practices settle down in our matter pre-reflectively. Thus, dialogue is more than just speech. It reflects our very subjectivity as situated in public space(s) where this location-perception is always embodied and encoded according to registers of race, gender and class, among others.³¹

IV.

In conclusion I want to return to Feenberg's notion of "participant interests" as a factual and concrete form of technological resistance that is inspired by, and takes the place of, Marcuse's rather abstract vision of an aesthetic liberation. This "participant framework" arises from the situatedness of the actors in their various technological contexts. Although he develops this notion in previous works, and only briefly mentions it in

Heidegger and Marcuse: The Catastrophe and Redemption of History, it underscores the lasting philosophical influence of his teacher.

Feenberg's notion of the "participant framework" takes the place of Marcuse's aesthetic liberation by focusing on the facticity of different participants in technical networks. Thus if we think of Marcuse's later aesthetics as being comprised of two dimensions, a theory of art as revealing potentialities and a theory of sensation as incorporating an awareness of potentialities in immediate experience, the notion of "participant interests" or a "participant network" draws more heavily on the latter. Through this notion Feenberg points to different strategies and tactics that inform everyday technical struggles.

According to Feenberg any resistance to the one-dimensionality of the *Gestell* must involve an awareness and transformation of our technological engagements, those that define our view of the world and of ourselves. He writes, "The concept of participant interests refers to the diverse personal impacts of technical activity: side-effects, both beneficial and harmful, social preconditions and consequences, effects on life conditions, and so on."³² The destiny of the technological age depends on our *lived* experience of particular technologies. Life-affirming technologies will develop as a result of participatory concerns that will ultimately be reflected in the implementation of new technological designs, which in turn will reflect the changing desires and needs of the population.

Feenberg offers several *local* examples of resistance that support the democratization of our technological world. The lobbying by disabled groups for "barrier free design" has resulted in the creation of the sidewalk ramp. This change in design has resulted in the social participation of a previously excluded group. Thus, "The changed technical code of sidewalk construction is semantically 'pure' of the ethical considerations that justify it and refers only to cement, but it does in fact represent a definite social group and its demands for a more accommodating world."³³ Moreover, the mandatory introduction of ramps within public buildings has increased the employment opportunities of disabled people.

Feenberg's work is replete with examples of the way in which technological design and implementation is politically and ethically biased, relying exclusively on professional expertise at the expense of the different kinds of concrete knowledge(s) that emerge(s) in various use contexts. This attention to the particular possibilities afforded by different technologies opens the path to moving beyond a one-dimensional technological world that ignores creative agency. It is a movement that proceeds from *within* the technological world as the only available world for us today. Feenberg's situated alternative combines aspects of Marcuse's call for the revolt of the sensibility with Dreyfus' demand for a local response to technological domination, without succumbing to the abstract appeals of the former and the non-technical demands of the latter.

Notes

1. Despite his critique of Heidegger's essentialism regarding the technological age, Feenberg (1999) remains deeply influenced by Heidegger's critique of instrumentalism, and he acknowledges this debt. In his review of Feenberg (1999), Thomson (2000, pp. 203–216), makes this debt explicit and argues that Feenberg's position represents a synthesis of Marcuse and Heidegger. In his response to Thomson, Feenberg (2000, p. 229) seems to concede this point but insists on Heidegger's essentialism because "he unthinkingly adopts the strategic standpoint on technology."
2. Thomson (2000, pp. 432–433) points out, as Feenberg (1999) and elsewhere also points out, that Heidegger has a historical concept of essence and explicitly rejects any Platonic brand of essence. This does seem to bring Heidegger's position close to a constructivist view like Feenberg's. However, Feenberg, following Marcuse, argues that Heidegger's historical conception of essence is empty because it lacks any social content.
3. For example, Zimmerman (1990) argues for Heidegger's fundamentally productive understanding of being. On the other hand Schmidt (1990) underscores this reading from a critical perspective.
4. Heidegger underscores this limit in Plato's and Aristotle's thinking throughout his later writings and turns to the Pre-Socratics for a non-technical understanding of being. In particular, see (Heidegger [1967] 1984 & [1984] 1994). Also, for a critical account of the transition from *aletheia* to *a-letheia* see Caputo (1993, ch. 1).
5. For an explicit account of the difference between the Greek mode of revealing, (*poiésis*), and the technological mode of revealing, (*Gestell*), see (Heidegger [1954] 1977, pp. 10–21).
6. It seems that the historical resolution offered by the Hegelian concept of "the absolute" resembles Heidegger's idealist interpretation of history (*Geschichte*); but Hegel's cognitive inflection is typically un-Heideggerian.
7. I am indebted to Hubert Dreyfus' excellent undergraduate course at The University of California at Berkeley, Spring 1995, on *The Later Heidegger and Foucault*. Dreyfus repeatedly insisted on the importance of distinguishing between the features of the modern age and the technological age in Heidegger's later essays. On the difference between the ontological understanding of history (*Geschichte*) and its regional or ontic counterpart (*Historie*) see (Heidegger [1953] 1962 & [1989] 1999).
8. For a developed account of this reading see (Heidegger [1961] 1979–1987). For a condensed version of this argument see (Heidegger [1954] 1977, pp. 53–112).
9. Heidegger, M. [1952] (1977) "Science and Reflection" in *The Question Concerning Technology and Other Essays* (Harper & Row, Publishers, Inc.), p. 173. Translated by William Lovitt from *Holzwege* (Frankfurt: Vittorio Klostermann, 1952).
10. In his analysis of the power plant on the Rhine Heidegger claims that the river remains a river only in its capacity as "an object on call for inspection by a tour group ordered there by the vacation industry." Also, the autonomy Hegel attributes to the machine (as a tool) no longer holds in the technological age because the machine, as part of the network is now multi-determined, that is, "it has its standing only from the ordering of the orderable." See (Heidegger [1954] 1977, pp. 16–17).
11. Human activity conditions the ontological dimension of technology. Feenberg argues that technical design always already embodies concrete socio-ethical norms that reflect participant interests. These norms are part of the two-fold ontological structure of particular technologies. For an account of this structure in terms of "primary and secondary levels of instrumentalization" and for an account of "participant interests", see Feenberg (1999, pp. 140–142 & pp. 202–208).
12. Marcuse H. (1966) *One Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (Boston: Beacon Press), p. 255.

13. Marcuse (1966) distinguishes what he critiques as technological rationality from the restoration of a true technological rationality. While the former perpetuates the systematization of life according to irrational and ideologically oppressive norms, the latter facilitates a living technology based on the incorporation of the imagination into a revived critical reason.
14. Marcuse, H. (1972) "Industrialization and Capitalism in the Work of Max Weber", *Negations* (Boston: Beacon Press), pp. 224, 225.
15. Feenberg underscores this point with his concept of the "technical code" in Feenberg (1999, pp. 88). He refers to "those aspects of technological regimes which can best be interpreted as direct reflections of significant social values" as "the 'technical code' of the technology. *Technical codes define the object in strictly technical terms in accordance with the social meaning it has acquired.* These codes are usually invisible because, like culture itself, they appear self-evident. For example, if tools and workplaces are designed today for adult hands and heights, that is only because children were expelled from industry long ago with design consequences we now take for granted."
16. Heidegger, M. [1959] (1966) *Discourse on Thinking* (New York: Harper & Row Publishers), pp. 53–55. Translated by John M. Anderson and E. Hans Freund from *Gelassenheit* (Stuttgart: Günther Neske Verlag, 1959). Through his conception of "focal practices" Borgmann (1984) further concretizes Heidegger's view that the influence of technology can be bound. Like Heidegger, he supports an essentialist understanding of technology, but unlike Heidegger his alternative is ludditic.
17. I develop this critique at greater length elsewhere; see Belu (2003, ch. 4).
18. Following Dreyfus (1993, pp. 310–311), Thomson (2000, pp. 435–436), in a second round of exchanges with Feenberg, argues against this reading and tries to show that concrete forms of resistance are, in fact, available insofar as "our actions could *indirectly* transform the essence of technology." This point underscores Thomson's position (2000, p. 209) from the first round of exchanges, where following Dreyfus' analysis and, *contra* Feenberg, he concludes that *Gelassenheit* provides "hope for a new historical beginning." However, while *Gelassenheit* may indeed allow us to preserve and cultivate pre-technological practices, it does not illuminate our relationship to technologies themselves. The point is not to separate pre-technological practices from technological ones, as Dreyfus and Thomson argue, but to understand the use and implementation of technical devices within the only world available to us, i.e. the technological world.
19. Heidegger, M. [1952] (1977) "The Age of the World Picture", in *The Question Concerning Technology and Other Essays* (New York: Harper & Row Publishers), p. 143. Translated by William Lovitt from *Holzwege* (Frankfurt: Vittorio Klostermann, 1952).
20. Husserl [1954] (1970) grounds the sciences in the shared world of experience (*Lebenswelt*). Ultimately, however, Husserl ([1954] 1970, pp. 219–224) seems to rescind the primacy of experience by positing the *cogito* as its foundation.
21. Heidegger [1927] (1962) argues that science is an ontologically founded, or regional study. His view remains consistent in the later writings, for example, (Heidegger [1954] 1977, p. 174). Here, he argues that modern science relies on an idealization of nature and therefore cannot ascertain its findings.
22. Mills, for example, has argued that racism can not be understood in terms of surplus labor value. Sandra Bartky and Tina Chanter, among other feminist philosophers, have shown that a woman who (re)produces herself as a docile body through continuous monitoring techniques is not free regardless of the economic parity she enjoys in the workforce.

23. Dreyfus, L. H. (1993) "Heidegger on the Connection between Nihilism, Art, Technology, and Politics", in C. B. Guignon (Ed.), *The Cambridge Companion to Heidegger* (Cambridge: Cambridge University Press), pp. 310–311.
24. Dreyfus, L. H. (1995) "Heidegger on Gaining a Free Relation to Technology", in A. Feenberg & A. Hannay (Eds.) *Technology & The Politics of Knowledge* (Bloomington: Indiana University Press), p.106.
25. To this end see his account of Heidegger's distinction between "destiny" and "fate", in Dreyfus (1993, p. 307). Thomson (2000, p. 209) invokes Dreyfus' explanation in his critique of Feenberg.
26. Dreyfus, L.H. (1993) "Heidegger on the Connection Between Nihilism, Art, Technology, and Politics", in C.B Guignon (Ed.) *The Cambridge Companion to Heidegger* (Cambridge: Cambridge University Press), pp. 309–310.
27. Feenberg, A. (1999) "Impure Reason", *Questioning Technology* (New York: Routledge Press), pp. 202–225.
28. Dreyfus, L.H. (1993) "Heidegger on the Connection Between Nihilism, Art, Technology, and Politics", in C.B. Guignon (Ed.) *The Cambridge Companion to Heidegger* (Cambridge: Cambridge University Press), p. 310.
29. See Spinosa, Flores, Dreyfus (1999, ch. 4) for an illuminating discussion of innovative entrepreneurs who, because they are sensitive to the "anomalies in life" can effect a historical "reconfiguration", that is they "change the style of our practices as a whole in some domain." These entrepreneurs seem to fulfill the role Heidegger [1960] (1971) assigns to poets and to works of art, or what Dreyfus calls "cultural paradigms", insofar as they "focus" our practices and give us a shared understanding of our identities. (The innovative entrepreneur's products "emphasize both the sensibleness and strangeness of her insight." It is interesting to note that this skillful, rather than rule-based, reconciliation of opposites comes very close to the demands Aristotle (1958) makes on the poet, namely, that he produce metaphors that are "lucid, pleasing, and strange, and has all these qualities to a high degree; moreover, one cannot learn its use from anyone else.") Finally, however, as Feenberg (2003) points out, the focus of Spinosa, Flores, Dreyfus (1999, ch. 4) is "not on the products but on the entrepreneurs". Therefore, while Feenberg (1999, ch. 5) focuses on practices that are internal to the technical sphere but are not technical, Dreyfus' focus is, again, almost exclusively on extra technological practices.
30. The main difference between Dreyfus' alternative and Marcuse's and Feenberg's alternatives seems to emerge from their different positions on Heidegger's history of being (*Seinsgeschichte*). A critical approach to the totalizing narrative of the *Seinsgeschichte*, such as Marcuse's and Feenberg's, lends itself to an emphasis on the locus of agency and technical analysis.
31. I am reminded of Segal's *Holocaust Memorial* in San Francisco. This public sculpture consisting of twelve white figures, eleven bound and one standing free, seems to combine aspects of the transformation envisioned by Marcuse and Dreyfus. It solicited a visceral and critical response that mobilized more than the Jewish and Japanese community, who recognized their vital needs threatened and affirmed. At the same time mainstream concerns with efficiency, flexibility and optimization were temporarily bound.
32. Feenberg, A. (1999) "Democratizing Technology", *Questioning Technology* (New York: Routledge Press), p. 140.
33. *Ibid.*, p. 141. Similar examples are provided throughout this chapter as well as in Feenberg (1999, ch. 4 & ch. 5).

References

- Aristotle (1958) "Rhetoric", *Aristotle: On Poetry and Style*, 1405a8–10 (Indianapolis: Bobbs-Merrill Educational Publishing), Translated by G.M.A. Grube.

- Belu, D. (2003) "Thinking Again: Heidegger on Technology and the Place of Freedom", PhD thesis (Villanova: Villanova University).
- Borgmann, A. (1984) *Technology and the Character of Contemporary Life: A Philosophical Inquiry* (Chicago: The University of Chicago Press).
- Caputo, J. D. (1993) "Aletheia and the Myth of Being", in *Demythologizing Heidegger* (Bloomington: Indiana University Press), pp. 9–38.
- Dreyfus, L. H. (1993) "Heidegger on the Connection between Nihilism, Art, Technology and Politics", in C. B. Guignon (Ed.) *The Cambridge Companion to Heidegger* (Cambridge: Cambridge University Press), pp. 289–316.
- Dreyfus, L. H. (1995) "Heidegger on Gaining a Free Relation to Technology", in A. Feenberg & A. Hannay (Eds.) *Technology & The Politics of Knowledge* (Bloomington: Indiana University Press), pp. 106.
- Dreyfus, L. H., Flores, F. & Spinosa, C. (1999) *Disclosing New Worlds: Entrepreneurship, Democratic Action, and the Cultivation of Solidarity* (Cambridge, MA: MIT Press), pp. 34–68.
- Feenberg, A. (2003) "Modernity Theory and Technology Studies: Reflections on Bridging the Gap", in T. Misa, P. Berg & A. Feenberg (Eds.) *Modernity and Technology* (Cambridge, MA: MIT Press), pp. 73–104.
- Feenberg, A. (1999) "Democratizing Technology", in *Questioning Technology* (New York: Routledge Press), pp. 131–147.
- Feenberg, A. (1999) "The Problem of Agency", in *Questioning Technology* (New York: Routledge Press), pp. 101–129.
- Feenberg, A. (1999) "Impure Reason", in *Questioning Technology* (New York: Routledge Press), pp. 201–225.
- Feenberg, A. (2000) "Constructivism and Technology Critique: Replies to Critics", *Inquiry*, 43, pp. 225–238.
- Heidegger, M., [1927] (1962) *Being and Time* (Harper & Row Publishers, Inc.), Translated by John Macquarrie & Edward Robinson from the seventh edition of *Sein und Zeit*. (Tübingen: Max Niemeyer Verlag, 1953).
- Heidegger, M., [1930] (1999) "On the Essence of Truth", in William (Ed.) *Pathmarks*, (Cambridge University Press), pp. 136–154, Translated by John Sallis from the *Gesamtausgabe*, Vol. IX (Frankfurt: Vittorio Klostermann, 1976).
- Heidegger, M., [1952] (1977) "The Word of Nietzsche: 'God is Dead'", in *The Question Concerning Technology and Other Essays* (Harper & Row, Publishers, Inc.), pp. 53–112, Translated by William Lovitt from *Holzwege* (Frankfurt: Vittorio Klostermann, 1952).
- Heidegger, M., [1954] (1977) "The Question Concerning Technology", *The Question Concerning Technology and Other Essays* (Harper & Row, Publishers, Inc.), pp. 3–35. Translated by William Lovitt from *Vorträge und Aufsätze* (Pfullingen: Günther Neske Verlag, 1954).
- Heidegger, M., [1960] (1971) "The Origin of the Work of Art", in J. Glenn Gray (Ed.) *Poetry, Language, Thought*, pp. 61–62, Translated from *Der Ursprung des Kunstwerkes* (Ed.) H.G. Gadamer (Suttgart: P. Reclam, 1960).
- Heidegger, M., [1961] (1987–1979) *Nietzsche, Vol. I–IV* (San Francisco: Harper & Row), Translated by David Farrell Krell from *Nietzsche, Erster Band* and *Nietzsche, Zweiter Band*. (Pfullingen: Günther Neske Verlag, 1961).
- Heidegger, M., [1967] (1984) "Aletheia (Heralictus, Fragment B 16)", in *Early Greek Thinking: The Dawn of Western Philosophy* (Harper & Row, Publishers, Inc.). Translated by David Farrell Krell and Frank A. Capuzzi from the third edition of *Vorträge und Aufsätze*. (Pfullingen: Günther Neske Verlag, 1967).
- Heidegger, M., [1984] (1994) *Basic Questions of Philosophy: Selected "Problems" of "Logic"* (Bloomington: Indiana University Press). Translated by Richard Rojcewicz and André Schuwer from *Grundfragen der Philosophie: Ausgewählte "Probleme" der "Logik"*. (Frankfurt: Vittorio Klostermann, 1984).

- Heidegger, M., [1989] (1999) *Contributions to Philosophy (From Enowning)* (Bloomington: Indiana University Press), Translated by Parvis Emad and Kenneth Maly from *Beiträge zur Philosophie (Vom Ereignis)*(Frankfurt: Vittorio Klostermann, 1989).
- Husserl, E., [1954] (1970) *The Crisis of European Sciences and Transcendental Phenomenology* (Evanston: Northwestern Press), pp. 219–224. Translated by David Carr from Walter Biemel (Ed.) *Die Krisis der europäischen Wissenschaft und die transzendente Phänomenologie: Eine Einleitung in die phänomenologische Philosophie* (The Hague: Martinus Nijhoff, 1954).
- Marcuse, H. (1965) “Repressive Tolerance”, in H. Marcuse, B. Moore & R. P. Wolff (Eds.) *A Critique of Pure Tolerance* (Boston: Beacon Press), pp. 81–117.
- Marcuse, H. (1966) *One Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (Boston: Beacon Press).
- Marcuse, H. (1972) “Industrialization and Capitalism in the Work of Max Weber”, in *Negations* (Boston: Beacon Press), pp. 224–225.
- Thomson, I. (2000) “From the Question Concerning Technology to the Quest for a Democratic Technology: Heidegger, Marcuse, Feenberg”, *Inquiry*, 43, pp. 203–216.
- Thomson, I. (2000) “What’s Wrong with Being a Technological Essentialist? A Response to Feenberg”, *Inquiry*, 43, pp. 429–444.
- Schmidt, D. (1990) “Economies of Production: Heidegger and Aristototele on *Physis* and *Techné*”, in C. E. Scott, A. Dallery & P. H. Roberts (Eds.) *Crisis in Continental Philosophy* (Albany: State University of New York Press), pp. 145–157.
- Zimmerman, M. (1990) *Heidegger’s Confrontation with Modernity: Technology, Politics, Art* (Bloomington: Indiana University Press).