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Feenberg's Marcuse: Design, Ontology, and the Critique of Technology

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Abstract:
A book review of Andrew Feenberg's *The Ruthless Critique of Everything Existing: Nature and Revolution in Marcuse's Philosophy of Praxis* that emphasizes how Feenberg develops a critical philosophy of technology from Marcuse's work.

Keywords:
Herbert Marcuse, Andrew Feenberg, Philosophy of Technology, Critical Theory

Introduction

Andrew Feenberg's book *The Ruthless Critique of Everything Existing: Nature and Revolution in Marcuse's Philosophy of Praxis* is a reminder that philosophy, and the philosophy of technology in particular, can be both utopian and unrelentingly critical; indeed, the former warrants the latter. The concrete possibility that technology could be designed to alleviate scarcity and competition while increasing free-time demands the "ruthless critique" of many socio-technical ambitions and ideas.

There is much more to Marcuse's philosophy than a critical theory of technology, but in what follows I want to argue that Feenberg makes a convincing argument that many aspects of Marcuse's philosophical thought find concrete grounding in the critique of modern technology (and science), including potentiality, imagination and instinct, phenomenology, Marxism, utopia, and rationality. These aspects are presented in Feenberg's history of Marcuse's work from the 1930s to the 1970s: first, his phenomenological reading of Marx, and in particular the *1844 Economic and Philosophical Manuscripts*, which he undertook while he was studying philosophy with Heidegger in the 1930s; second, his study of Hegel, which was the topic of his dissertation with Heidegger and the basis of the book *Reason and Revolution: Hegel and the Rise of Social Theory* (1941); third, his interpretation of Freud through a Marxist lens, which was the subject of *Eros and Civilization: A Philosophical Inquiry into Freud* (1955); fourth, his critique of science and technology, work that began in essays in the 1940s and is best associated with *One-Dimensional Man* (1964); and finally, his work on aesthetics (*The Aesthetic Dimension: Towards a Critique of Marxist Aesthetics* [1977]) and environmentalism from the 1970s.

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Feenberg's argument is that what ties Marcuse's philosophical project together are the concepts of *reason* and *potentiality*,[1] which I will use to explore how Feenberg re-constructs aspects of Marcuse's philosophy of technology, not as a distinct topic within his oeuvre, but a culmination of his different intellectual projects. This is a critical social theory that prioritizes the place of technology; the significance of which should not be underestimated. Technology is both a contingent and permanent feature of the human experience such that any critical theory of society that is not also a critical theory of technology is woefully incomplete. Re-considering the concerns of social theory as distinctly sociotechnical would open up trajectories of analysis and change that may prove to be more durable and effective than the law, education, or governance.

Feenberg argues that the basis of Marcuse's philosophy of technology is a tension between the idea that technology, in one sense, is neutral. This shouldn't be confused with neutrality in the essentialist sense, but neutral in the sense that technological design is open to being transformed by different socio-political projects. This idea is in tension with another dimension of Marcuse's thought, that technology is inherently biased and any attempt at reform or transformation merely reproduces technological rationality. Feenberg's reconciliation of this tension leads into his own critical philosophy of technology, which I summarize to demonstrate how he has overcome some of the problems in Marcuse's work.

The Tension Between Ontology and Design

How can one critique technology? Amongst contemporary social theorists of technology this question is usually addressed through either the critique of design or the critique of ontology. For the former, the argument is that design is a contingent feature of technology that can be subjected to transformative efforts. Within the philosophy of technology, work of this kind is associated with the empirical turn and related efforts, including post-phenomenology and value-sensitive design, most of which borrows heavily from the empirical work found in STS. These approaches can be characterized by methodological rigour and an emphasis on the role of designers and engineers. Examples include Robert Rosenberger's book *Callous Objects: Designs Against the Homeless*,[2] which examines how technological design is used against the homeless, tying together class, power, and governance with design and Ellen van Oost's phenomenological description

1 Andrew Feenberg, *The Ruthless Critique of Everything Existing: Nature and Revolution in Marcuse's Philosophy of Praxis* (London: Verso, 2023), xiv.

2 Robert Rosenberger, *Callous Objects: Designs Against the Homeless* (Minneapolis: University of Minnesota Press, 2017).

of women's and men's shavers which were coded through explicit gender norms.[3] This work parallels the ideas of labour process theorists such as Harry Braverman and David Noble who empirically demonstrate how the imperative for control, profit, and de-skilling are translated into the design of machines. The result of all of this work is the presumption that design is flexible and contingent, open to a variety of influences but largely determined by the socio-economic values of capitalism.

There are also those philosophers who problematize technology at a deeper level. These critiques are ontological and are effective not because they are empirically sound, but because they are indifferent to the standards of empiricism. Byung-Chul Han's critique of productivity and the imperative for activity that characterizes our engagements with technology[4] and Carolyn Merchant's feminist critique of science and technology point to aspects of technology that endure and persist across all technology, regardless of design.[5] Even Heidegger's work, despite its reputation as essentialist and dystopian, has currency amongst many of my students who agree with his argument that technology has an essence, independent of any particular technological object, that is always oriented towards an instrumentalization of nature and humans.[6]

Most philosophers of technology choose one form of critique or the other, often times legitimating their choice by denigrating the other. For theorists of design, an ontological critique is gloomy, essentialist, and deterministic; disconnected from concrete studies of actual technologies, ontological critiques are an exercise in theoretical gymnastics and not much else. Against this, a focus on design is oblivious to context and merely a tool for reifying historically contingent ideas about capital while valorizing a professional class of designers and engineers whose indifference to labour processes and anticipated consumption habits neatly avoids empirical scrutiny. In both cases, one's choice of critique ends up being the only logical way to study technology.

Marcuse attempts to reconcile both in his work. Feenberg traces both of these modes of critique in a way that resonates with Marcuse's decades-long attempt to reconcile Heidegger, Hegel, Freud, and Marx. Marcuse's critique of technological design was

3 Ellen van Oost, "Materialized Gender: How Shavers Configure the Users Femininity and Masculinity," in *How Users Matter: The Co-Construction of Users and Technology*, ed. Nelly Oudshoorn and Trevor Pinch (Cambridge: MIT Press, 2003).

4 Byung-Chul Han, *The Scent of Time: A Philosophical Essay on the Art of Lingering*, trans. Daniel Steuer (Cambridge: Polity Press, 2017).

5 Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York: Harper & Row, 1980).

6 Martin Heidegger "The Question Concerning Technology," in *Martin Heidegger: Basic Writings*, ed. David Farrell Krell (New York: Harper Collins, 1977).

developed through careful consideration of Marx's writings on machinery. Of particular importance was Marx's contention that technology contains the potential to liberate people from scarcity, struggle, and competition. This is the Marx of the *Grundrisse* who writes that capitalism has succeeded in developing machinery in which the amount of labour necessary for the production of a given object is reduced to a minimum: "capital, quite unintentionally, reduces human labour, expenditure of energy, to a minimum. This will redound to the benefits of emancipated labour, and is the condition of its emancipation."[7] Less labour to make more products, though, in the hands of capital is translated into increased productivity. In response to the legal restrictions on the length of the working day, for example, capital seeks to compensate itself, "by a systematic heightening of the intensity of labour, and to convert every improvement in machinery into a more perfect means of exhausting the workman."[8] But this is a contingent feature of technological design and not an inevitability. Technology can, if designed to meet the goals of a different socio-economic system, be directed to reducing the work needed to produce the necessities for life, thus freeing humans to pursue their own interests.

Following Marx, then, for Marcuse industrialization is not a mistake or a historical wrong turn; it is a necessary step towards freeing people from the necessity of labour and opening up potentials that go beyond the opportunities and experiences that capitalism offers. For example, in *One-Dimensional Man* he writes that "complete automation in the realm of necessity would open the dimension of free time as the one in which man's private and societal existence would constitute itself. This would be the historical transcendence toward a new civilization."[9] Or, in *An Essay on Liberation*: "Is it still necessary to write that science and technology are the great vehicles of liberation, and that it is only their use and restriction in the repressive society that makes them into vehicles of domination."[10] The significance of this, for Marcuse, cannot be underestimated. He writes "…if technics were designed and utilized for the pacification of the struggle for existence…such a new direction of technical progress would be the catastrophe of the established direction."[11] This reading of Marx points to a philosophy of technology aimed at a critique of the design of technology in which the objective is clear: freeing humans from the demands of labour to allow them to pursue a life that is their own and not one dedicated to producing and consuming commodities.

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7 Karl Marx, *Grundrisse: Foundations of the Critique of Political Economy,* trans. Martin Nicolaus (London: Penguin, 1974), 701.

8 Karl Marx, *Capital: A Critique of Political Economy, Vol.1*, trans. Samuel Moore and Edward Aveling (Moscow: Progress Publishers, 1954), 393.

9 Herbert Marcuse, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (Boston: Beacon Press, 1964), 37.

10 Herbert Marcuse, *An Essay on Liberation* (Boston: Beacon Press, 1969), 12.

11 Marcuse, *One-Dimensional Man*, 227–228.

This is what Feenberg refers to as Marcuse's argument that technology is neutral. By focusing attention on technological design, technology reveals itself as neutral in regards to the ends that it can serve. It is not inherently oriented towards maximizing productivity or speeding up the labour process at the expense of labour nor is it oriented towards liberating people from the demands of labour or making work meaningful. Rather, it is flexible and can materialize a variety of socio-economic imperatives. This is a philosophy that argues that the design of technology is the problem, not technology itself.

But, as Feenberg points out, there is another philosophy of technology in Marcuse's work that seems to contradict the critique of technological design. Following Heidegger's philosophy of technology and the critique of instrumental rationality found in Horkheimer and Adorno, Marcuse also proposed that modern technology (and science) are oriented towards domination—not as a contingent aspect of capitalism, but in its essence. Again, in *One-Dimensional Man* he writes that, "domination perpetuates and extends itself not only through technology but as technology"[12] and that "science, by virtue of its own method and concepts, has projected and promoted a universe in which the domination of nature has remained linked to the domination of man."[13] From this perspective there is little we can do to transform technology towards more humane ends. These efforts, from this perspective, are nothing more that attempts to gloss over that which makes modern technology destructive and so we find ourselves in a situation where, as Heidegger claimed, only a God can save us now.

This is a paradoxical and potentially frustrating reading of Marcuse that Feenberg presents. But he does not leave it at this. He writes, "the mutually cancelling formulas do actually add up to a theory buried in the interplay of the concepts used to present it."[14] But he continues that he is "not convinced that Marcuse reconciled these positions successfully, but his attempt invites us to further reflections on technology" and the task, as he sees it, is to "bring these various approaches to technology together."[15] This is a significant challenge. On one hand, the argument for design is convincing, both conceptually and empirically. Transforming technology to reduce the necessity for labour while providing life's necessities (food, shelter, clothing) is the kind of idealistic realism that is easy to imagine. But does this not avoid larger problems concerning the inherent biases of modern technology? Modern technology is premised on an idea of the world in which its totality is artificially decontextualized and universalized, making the application of technology indifferent to individual and local experiences and expectations. An aspect of modern technology that cannot be undone by design!

12 Marcuse, *One-Dimensional Man*, 158.

13 Marcuse, *One-Dimensional Man*, 166 qtd. in Feenberg *Ruthless Critique*, 148.

14 Feenberg, *Ruthless Critique*, 134.

15 Feenberg, *Ruthless Critique*, 135.

The Bias of Neutrality

What Feenberg calls "formal bias" explains how bias and neutrality can co-exist. Perhaps this is the wrong phrasing; consider this not as bias and neutrality co-existing, but *the bias of neutrality*. This is paradoxical, to be sure, but tracing how Feenberg draws out congruencies between these positions can point to tensions that are reconciled in a philosophy that accounts for two forms of rationality.

Borrowing from Max Weber, Marcuse argues that there are two types of rationality that correspond with two different types of social thought and action. *Substantive* rationality embodies a purpose, like feeding a population or managing health care, while *formal* rationality characterizes arrangements that optimize calculability, control, and efficiency—rational means that can be applied to any end. Accounting, for example, can be used to organize the administration and ambitions of any organization across the political or cultural spectrum and is not implicated in these projects.

Feenberg argues that for Marcuse there a bias built into the neutrality of formal rationality. It is premised on the artificial separation of that which makes up our world, what Lukács called reification. Against this, critical thought recognizes that "each individual human, each business enterprise, each government agency exists in reality only through its essential connections, but they appear separate, contingently related to their context."[16] Applied to technology, Feenberg writes, "considered in isolation, technical devices appear neutral, but in context their biased social role under capitalism becomes visible."[17] For example, the assembly line is often considered to be a model of universal rational efficiency and progress that can be unproblematically used in any context. In and of itself, decontextualized from people or social orders, the assembly line is functionally neutral. But the design and implementation of the assembly line is dependent upon capitalist notions of labour and power. The functional deskilling of workers and their surveillance alongside the autonomy of management are contingent elements that only seem to be an inevitable corollary to productivity and progress. Forgetting this history transforms the assembly line into an ideologically useful neutral tool: "The assembly line only appears as technical progress because it extends the kind of administrative rationality on which capitalism already depends."[18]

Feenberg returns to Marcuse's ontological critique by uncovering the preconditions for the possibility of formal bias, drawing out in more detail the bias of neutrality that frames

16 Feenberg *Ruthless Critique*, 138.

17 Feenberg *Ruthless Critique*, 139.

18 Andrew Feenberg, *Transforming Technology: A Critical Theory Revisited* (Oxford: Oxford University Press 2002), 78.

our thinking about technology. These preconditions correspond with Marcuse's critique of modern science, which he developed from his reading of Husserl and Heidegger. Following Husserl, modern science relies upon and reproduces a representation of reality consisting of static objects that can only be understood quantitively. In Heidegger's hands, this critique is amplified. The quantified idea of nature becomes intrinsically oriented towards technical control.[19] This contrasts the ancient view of nature, Heidegger argues, in which nature is considered a dynamic process that contains potentialities and change, not a fixed picture. Marcuse follows this line of thought but draws out and emphasizes the place of "potential" as that which is eliminated from modern scientific and technological rationality. For Marcuse, potential is not something added on as a subjective value, but an aspect of objective reality that is as real as weight and colour, but obscured by formal rationality.

As Feenberg points out, bias in this case is not ideological in the sense that it is tied to a particular class or social group, rather that science and technology are neutral with respect to values is its bias. "That neutrality eliminates the notion of potential through which certain values were granted objective reality…this is what it means to view the world as raw materials: to deny potentialities is to leave a free space of exploitation. Insofar as it is value neutral, science adapted to the needs of capitalism in advance of any application."[20] By claiming to be neutral, modern science and technology eliminate the inherent potential of objects while also directing the world to continue as it is with little regard to how it came to be this way.

Potentiality is the basis of Marcuse's dialectical ontology in which he distinguishes between substantive and formal logic. Formal logic creates a specific way of knowing that leaves objects, people, and societies open to technical manipulation via bureaucracy and technocracy—formally rational systems that are designed to maximize efficiency and thus appear neutral. Dialectical thinking works with substantive universals that make possible the conceptualization of an essence. The examples of peace, freedom, and justice are substantive universals that do not explicitly refer to given reality but point to realistic potentialities that go beyond the empirical facts of formal rationality. These potentials are not idealizations or subjective values, but immanent in things themselves—they are as real as weight, colour, or age. This dialectic between is and ought is the basis of a critical consciousness.

The apparent neutrality of formal rationality is realized though its indifference to ends. But it is not neutral with respect to alternatives or potentialities. It is a way of thinking

19 Feenberg, *Ruthless Critique*, 150.

20 Feenberg *Ruthless Critique*, 160.

that is biased toward the actual, what is already fully realized and present at hand. This restricts its range to the reified object as it immediately appears; working only within the horizon of the existing society and its technical modes of practice. Through formal (or neutral) thinking, objects can be used, but not transformed; adapted to dominant social purposes, but not transcended toward the realization of higher potentialities in a possible, better society.[21] As Feenberg writes elsewhere:

> Existing science and technology cannot transcend the capitalist world. Rather, they are destined to reproduce it by their very structure. They are inherently conservative, not because they are ideological…because they are intrinsically adjusted to serving a social order that ignores potentialities and views being as the stuff of domination.[22]

To summarize, Marcuse's two-dimensional ontology consists of both an empirically given reality and the unrealized potentials that are inherent to this reality. The tension between empirical reality and unrealized potential permeates lived experience, but has been truncated in an attempt to reduce the totality of experience to the logic of a scientific rationality premised on de-contextualization and methodological atomism. Through this logic, technologies come to be understood as discrete and measurable, divorced from both history and culture and reduced to a precise, yet myopic, functionality. From this perspective, questions concerning why design takes the form that it does or why technologies have different consequences for different people become largely unanswerable. The reduction of technology to pure function—as if one could fully understand the significance and meaning of a technology simply by reading a user's manual—is an example of the one-dimensionality that Marcuse sought to critique in his philosophical project. Recovering a more accurate idea of what technology is requires, for Feenberg, a greater attention to the place of potentiality.

Transforming Marcuse

Feenberg is not shy about the problems in Marcuse's philosophy. The problem of real change, both concretely and conceptually, is undeveloped in Marcuse, as are descriptions of actual technologies. This inability to develop a theory of change and continued abstractions from concrete technologies can only lead to more sophisticated theoretical work on the nature of one-dimensionality. Feenberg proposes a way out of this dilemma by borrowing from empirical studies of technological design and use. In particular, labour

21 Feenberg *Ruthless Critique,*162.

22 Andrew Feenberg *The Philosophy of Praxis: Marx, Lukacs and the Frankfurt School* (London: Verso, 2014), 180.

process theory and STS point to examples that demonstrate a variety of potentials that respond to engaged and situated use. Through this, Feenberg advances Marcuse's theory of potentiality by translating his dialectical ontology of "is" and "ought" into sociotechnical terms via historical examples of individuals and social groups who transform technical design, function, and meaning to better reflect their own experiences and expectations.

Potentiality is re-conceptualized as "democracy" in Feenberg's hands. This is a useful, but misleading category as it can imply the notion that technology should be subjected to elections or debates about representative or direct democracy. Democratization is not a matter of holding an election between different technologies, but accounting for what Feenberg calls democratic interventions, those unexpected and unimagined potentials that emerge from everyday users' sociotechnical engagements, that, by virtue of their existence and not their intention, destabilize technocratic rationality by demonstrating its limits. It is only through these moments of informal and improvised interjections into formally rational systems that it is possible to recognize alternative forms of rationality that reflect values, expectations, and initiatives that were not part of the formal design process. Moments of potential, in this sense, are one of our most immediate and philosophically overlooked forms of engagements with technology and this is where the importance of Feenberg's philosophical project lies. Moments of engaged use leading to unimagined technological transformations demonstrate the limits of formal rationality by integrating the messiness and irrationality of lived experience into the concept of technology. As it is imagined by engineers and designers is no longer sufficient to account for the ways that technologies are imagined, designed, and used. Thus, these moments are both empirically real and materialized through design while also pointing towards an ontology of technology that includes an alternative to formal reason.

Democratic potential is itself universal, but the character of this resistance is wholly local. There are no appeals to transcendent ideals or organized resistance to power independent of particular cases, just engaged use with technologies that reveal unimagined potentials.

> The new politics is neither revolutionary nor reformist…we do not know where these changes lead, but we cannot doubt that they represent a universal advance…critical constructivism gives an account of the process of transcendence without positing a final endpoint the nature of which we do not know.[23]

This distinguishes Feenberg's politics of technology from attempts to develop an ethics of

23 Andrew Feenberg, *Technosystem: The Social Life of Reason* (Cambridge: Harvard University Press, 2017),119.

technology or a responsible technology, both of which promote the vocational autonomy of engineers and designers to paternalistically impose their own ideas onto everyday users. Philosophers should not try to design their way out of contemporary problems—the hubris of so-called 'design thinking'—has the consequence of overlooking the experiences of individuals and social groups who, because they fall outside of the purview of formal decision making, are meant to accept and live with the technologies provided for them by designers, engineers, and policy makers.

Conclusion

The philosophy of technology, which was once populated by critical thinkers like Marcuse who rejected the trajectory of contemporary technological society, has been domesticated to such a degree that topics such as capitalism, exploitation, domination, and labour are politely avoided. This easy reconciliation with late-capitalist society is evident in excited speculations about the moral and ethical significance of anticipated developments in AI and the championing of products developed by profit-driven corporations such as OpenAI, Google, Facebook, and Spotify. Given this turn of events, returning to the work of Herbert Marcuse is a reminder that obstinacy in resisting the sociotechnical ambitions of the state and industry still has philosophical value. After all, how "ethical" can AI really be given the energy consumption and water usage that it requires, not to mention the exploitative processes of extraction that it necessitates? Any kind of ethics that avoids these questions is an ethics in name only. Raising concerns like this are important if one is to resist trajectories of technological change determined by profit, resource extraction, data collection, and surveillance. Returning to Marcuse, as Feenberg argues throughout his book, does not mean nostalgia for 1960s sloganeering or Frankfurt School dystopia. Rather, it means developing philosophically sound ideas about the extent to which capitalism has shaped our ways of knowing and demonstrating that there are very real alternatives to these ways of knowing. This is the most important takeaway from Feenberg's Marcuse: it is not enough to recognize the potentials that are being blocked by contemporary capitalism, but rather to better understand the processes by which capitalism blocks potentials that could transcend it. Marcuse undertook this challenge, but since his death in 1979 the world has changed; capitalism continually renews itself, creating new ways of knowing and being that confound resistance. Understanding these new ways of knowing and being, and being ruthless in critiquing them, is the first step to resisting them.

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