

Chapter 12

A Neo-Marxist Critique of Technology: Andrew Feenberg

This chapter is a companion piece to Chapter 4, above. The chief difference between Marx Wartofsky (there) and Andrew Feenberg is a matter of age. Feenberg is almost totally lacking in references to classical Marxism; he studied under Herbert Marcuse, and his references—whether on technology or any other topic—are mostly to neo-Marxists, not to classical Marxists or doctrinaire Soviet-connected Communists. Wartofsky's main body of work antedates the fall of the Soviet Union; Feenberg's, which continues right down to the present, never needed to refer much to the fall of Communism. If anything, his sources all eagerly anticipated that fall; he is, without qualification, neo-Marxist, though he is his own philosopher with his own particularized views.

Nonetheless, Feenberg has always been solicitous to situate himself precisely among recent authors who were influenced, in different ways, by classical Marxism; and this is nowhere clearer than in a review—combined with a summary of his own latest thoughts—of the Marxist/feminist philosopher, Sandra Harding: “On Bridging the Gap between Science and Technology Studies: Sandra Harding’s *Is Science Multicultural?*” (*Science, Technology, & Human Values* 24:4, Autumn 1999, pp. 483–494, specifically 483–5, 486–8 [abbreviated], 489–90 [abbreviated], 492).

Here are some longish selections from that review, beginning with Feenberg's summary of Harding's overall view. I include that in its entirety because Harding's and other feminists' technology-related philosophical views are not otherwise included in this book. Feenberg begins his review this way: “Sandra Harding’s several books (1986, 1991, 1998) attempt to introduce a political perspective into the understanding of science without falling into relativism or science-phobia. She argues that the politics of science have been systematically overlooked by the philosophy of science and by social and political philosophy as well. Yet she also claims that scientific and technical experts do know some things in the strong sense—that their accumulated knowledge is precious and that it should be enhanced by critique rather than destroyed. This is particularly obvious in fields such as women’s health. History records how precious medical knowledge is won not only in the struggle with the ordinary difficulties of research but also in opposition to long-standing prejudices. But as we will see, Harding extends the thesis well beyond this obvious instance.

“Harding at first drew primarily on feminist standpoint epistemology, an approach that incorporates a reflexive awareness of the knower’s social position. Standpoint epistemology privileges socially and economically inferior positions as opening up new cognitive perspectives—what Foucault called ‘subjugated knowledges.’ Harding’s approach is loosely based on the theories of class consciousness and reification of the early Marxist Lukács.

“Lukács argued that workers are in a unique cognitive position. Their subordination in the labor process reveals the contradiction between the forms of capitalist thought and administration and real life. The category of ‘profit,’ for example, masks the real relation of exploitation, which is immediately evident to the worker in situations in which the capitalist sees only the pursuit of greater efficiency (Lukács 1971, 166). Harding draws on this standpoint epistemology, which she transposes into the realm of gender. She generalizes from Lukács’s characterization of the relation of workers to capitalism to a theory of the subjugated knowledges associated with women’s subordinate roles in the scientific-technical systems of modern societies. She writes, ‘Insofar as women and men interact with different regularities of natural and social worlds, have distinctive interests in those regularities and in others that they share, stand in different relations to available discursive resources (metaphors, models, narratives, etc.), tend to organize differently the production of knowledge, and occupy a distinctive location in their culture’s diverse and complex power relations, they will tend to produce and sustain different patterns of knowledge and ignorance.’ (Harding 1998, 107.)

“These different patterns show up not only in everyday consciousness but also in the organized pursuit of expert knowledge by members of the group. Harding argues that nature can only be perceived and represented in a coherent body of knowledge from one or another social standpoint. Each standpoint opens some fruitful perspectives while closing off others that might be developed from another standpoint. No perspective is truly universal and identical with nature’s order, although all are significantly constrained by it (Harding 1998, Chap. 10). Thus, although it is indeed more powerful, in many senses but especially militarily, modern science is in these respects no different from the so-called ‘ethnoscience’ of non-Western and premodern societies. All have something to offer, and all contain systematic errors determined by the perspective from which they are constructed. None of them has final answers. The task of philosophical critique is to rectify where possible these systematic errors and to facilitate the

conversation of different knowledge traditions. No one approach can guide that conversation, not even Harding's own multicultural approach. Harding's refusal to endorse a single scientific tradition or a particular 'method,' supposedly guaranteeing objectivity, marks her distance from positivism.

"As she became involved with various United Nations commissions focusing on problems of economic development, Harding broadened her approach to include a postcolonial perspective on science and technology. In her latest book, *Is Science Multicultural?* Harding now moves beyond the feminist revision of philosophy of science to a concern for practical issues of global development that depend on technology. This is a shift in emphasis rather than a change in basic approach. The standpoint epistemology opens up to embrace yet another type of subjugated knowledge and its associated critique. If anything, postcolonial theory confirms Harding's basic argument that there is a fatal 'gap between marginalized interests and consciousness . . . and the way the dominant conceptual schemes organize social relations, including those of scientific and technological change' (Harding 1998, 159).

"According to Harding, the marginality of women and postcolonial peoples reveals aspects of both nature and the modern project masked from the standpoint of the official knowledge-producing institutions. Their pretension to universality and neutrality is imposed at the expense of valuable local knowledge that lacks the imprimatur of modern science. A critique from the margins brings to light the cognitive limitations that result from the close association of official science and technology with gender-biased and neocolonial politics and corporate interests.

"Harding asserts that all knowledge is local knowledge, although admittedly some local knowledge has a farther reach than others. But this view contradicts the widely held assumption that modern science is universal. A third tradition enters into Harding's work to address this problem. This is post-Kuhnian science studies, which offers theoretical tools for deepening standpoint epistemology. Post-Kuhnian science studies shows that the socially concrete forms of research, technical applications, and economic development are not value-neutral instances of some general rational capacity of the human mind, brought to perfection in modern science; their complex and socially mediated structure incorporates a variety of social influences and perspectives. Science is not a single unified edifice based on common methods grounding universal truths but a system of significantly different interacting fields in which communication takes place

across cognitive boundaries of all sorts. Science studies has shown the extent to which technology is a voice in that communication, and non-Western knowledge traditions can also be included. Post-Kuhnian science studies thus opens the door to the type of multicultural approach Harding favors.

“This seems a relativist view, but relativism has no way to resist ‘might makes right’ in the domain of knowledge. Without some cognitively pertinent way of ordering different knowledges as better or worse, there is no appeal from the logic of power. Harding must avoid relativism at all costs since the subjugated knowledges privileged by standpoint epistemology are precisely those of the less powerful. Yet how can she escape a scientific realpolitik without relying on traditional notions of method and verification?”

“It is important to recall that standpoints open as well as closed minds. The mere fact of a social background does not discredit claims to knowledge, which can still be verified by reference to experience and practice. If one takes seriously both the possibility of knowledge and its social situatedness, objectivity appears as an arduous and risky task that requires not only attention to evidence and argument but also the identification and elimination of deep-seated biases. These go beyond factual errors and concern distortions at the methodological level, at the level of fundamental forms of thought. ‘The issue is not that individual men (and women) hold false beliefs, but that the conceptual structures of disciplines, their institutions, and related social policies make less than maximally objective assumptions’ (Harding 1998, 135). Critique and argument can lead from less to more objectivity, if not to final truths. Harding contrasts the ‘strong objectivity’ achieved through engaged political and social critique with the usual view of modern science as objective just insofar as it is free of subjective sentiments and political interference. Such weak’ objectivity is unconscious of the systematic sources of error built into the perspectives underlying science.

“Science, in sum, is political whether it knows itself to be or not. The traditional scientific ideal of a perfectly neutral apolitical standpoint is seductive, but in reality no such standpoint exists. Apparent neutrality turns out in the end to be nothing more than acquiescence in a hegemonic consensus that is so well established it appears as common sense. Only an engaged standpoint from the margins can reveal the hidden biases of such hegemonic perspectives. Feminist and postcolonial critiques are thus vitally important, not just for the particular problems and abuses they bring to our attention but also for the new social conception of scientific knowledge they support.”

Feenberg next summarizes his personal take on Harding's book and situates it within the traditions of philosophy of technology: "I am sympathetic to this approach but have a reservation nevertheless. My question concerns the identification of marginality with specific gender and racial positions. There are two problems with this identification.

"First, Harding's standpoint epistemology can only offer a concrete basis for criticism in cases in which gender, race, and neocolonial status are at stake in modern scientific and technological systems (e.g., in domains such as women's health or Third World development policy). Women's struggle for control of reproductive technologies, such as birth control devices and the medical practices surrounding childbirth, offer significant examples. But important as these domains are, they are only a small fraction of the scientific and technological activity of modern societies. . . .

"This defense of Harding's epistemology against accusations of essentialism and irrationalism does, however, leave her stuck with the original problem I identified above—the limits of a critique of modernity based on the concrete issues that can be raised from a feminist and postcolonial standpoint. This problem is related to a second issue that concerns me. . . .

"The general subordination of the population in modern technical systems is not due to the 'essence' of technology or to injustices in the distribution of skills or the rewards of the system. Rather, the control of nature these systems offer is constrained by the imperatives of alienated administration. Whatever else they do, they are specifically designed to centralize power and to produce a subordinate population. This approach is embodied at the most basic level of the technical disciplines and requires no special ideological commitment or conviction on the part of technologists and managers. The most familiar application of this argument is the deskilling hypothesis of Braverman (1974) and Noble (1984), but it can be extended to all the technical systems of modern societies, regardless of their place in the social structure or the ruling political ideology, be it capitalist or communist. . . .

"Let me hasten to add two qualifications to this position, which I have tried to develop in my own critical theory of technology (Feenberg 1991, 1999). First, I do not claim that technocratic forms of oppression are entirely distinct from gender, race, and national oppression. Much technocratic oppression falls

precisely on these groups. Women, to take an example, have both general and specific relations to the technical systems of modern societies. As birthing mothers or employees in gendered work roles, they are exposed to forms of oppression shared by all patients and workers as well as gender-specific forms of oppression, many of which take a technical form. In such cases, significant resistances to the design of technical systems emerge directly out of women's subordinate position.

“Second, although both Harding and myself are critical of technoscience, that does not mean that we see no good in it. For example, we are both in favor of modern medical care for the many illnesses it can treat successfully. The point is not that modern medicine is altogether bad because of the way in which it disempowers patients but rather that it might be better if it were reorganized to recognize the legitimate claims to agency of those it serves. This is a democratic, not an antimodern, critique.

“Although Harding must feel rather isolated and frequently misunderstood among mainstream philosophers of science and social theorists, there is a tradition in which a radical democratic critique of modernity not unlike her own is commonplace. This is the tradition of American philosophy of technology that, under the influence of both native figures such as Dewey and Mumford and continental philosophers such as Heidegger and Marcuse, has addressed the failure of technocratic liberalism in our time. . . .”

Feenberg next elaborates on what he thinks is the benefit for Harding of relating her work to philosophy of technology: “In what follows, I will suggest ways in which Harding's argument could be enriched by [what I have, following Lukacs, called] standpoint ontology.

“Harding touches on the ontological issues at several points in her book, two of which are especially relevant to the problem of the institutionalization of rationality: the critique of the neutrality of modern technoscience and the suggestion that technoscience depends on other forms of local knowledge for its efficacy.

“Harding's discussion of the nonneutrality of science and technology is referenced to several contemporary science studies scholars, but there is no mention of Marcuse (1964), whose *One-Dimensional Man* offered a powerful critique of the neutrality thesis twenty-five years ago. She recapitulates much of

that critique when she assures us that ‘value-neutrality is not itself value neutral’ and goes on to argue that scientific abstractions are shaped by a biased social background that reappears clearly in their technological applications (Harding 1998, p. 140). The elimination of this bias cannot proceed simply by eliminating external political interference in science because ‘power is exercised less visibly, less consciously, and not on but through the dominant institutional structures. . . . Paradoxically, this kind of politics functions through the depoliticization of science—through the creation of *normal* or *authoritative* science’ (Harding 1998, p. 131). Harding concludes that science cannot be ‘pure’ since it is ‘conceptualized at its cognitive core in ways suitable to culturally local . . . purposes’. . . (Harding 1998, 170).

“These [Frankfurt School-based] reflections might be pursued to give substance to Harding’s critique of Eurocentric universalism as a ‘predatory conceptual framework’ (Harding 1998, p. 181). Harding argues that despite the pretension of modern science to replace all earlier forms of thought, ‘abstract concepts must in fact be accompanied by local knowledge about how to apply such concepts. . . . It is not that modern science actually replaces its pre-modern predecessor; rather, it insists on its continual reproduction as a devalued form of knowledge’ (Harding 1998, p. 181). The dependency of abstract formalistic technoscience on specific local knowledges for its implementation reveals its own limitations. Attending to the issues that emerge in implementation can open technoscience to suppressed interests and needs. Harding seems to be arguing that the way in which we elaborate concepts, categories, plans, and designs is subtly shaped not just by gender and national bias but also by the split between conception and execution that underlies modern industrialism. Scientific-technical rationality would bear the marks of the class-divided society in which it originated. . . .”

Feenberg next moves toward his overall conclusion, relating Harding's book to some recent science studies accounts: “Lukács’s critique of formalism has a suggestive resemblance to Harding’s critique of the universality of modern technoscience. On another occasion, I intend to pursue the similarities between these macrosocial projects and phenomenology-influenced approaches in science studies. A number of scholars, including Lucy Suchman, Geoffrey Bowker, Susan Leigh Star, and Michael Lynch, have shown how cognitive achievements efface the practical labor of their own construction and how the gaps and breakdowns that result from the limitations of formalized knowledge are resolved practically in the application. For example, Star (1995, p. 101) offers an account of technological ‘wizards,’ individuals who have the unusual ability to devise

practical ‘work-arounds’ for the biases and blind spots tacitly encoded in formalisms. And Suchman (1987) has shown how formalistic assumptions about rationality get embodied in the user interfaces of devices, frustrating the ‘situated action’ of users.

“Bruno Latour (1993) and Andrew Pickering (1995) have attempted to base general social theories on this type of analysis, but it is difficult to draw critical conclusions from their approach, surely one important function of a social theory. Harding, like Lukács and Marcuse, also goes beyond the microlevel questions to consider the larger political implications of structuring a whole society around formalized knowledge. This is an important complement to science studies in a scientized society and one that may locate the site of a bridge between traditions. Empirical research on the limitations of formal rationality in science and technology studies is thus a fragment of a far broader critique of modernity still in the making.”

Feenberg then brings his review to a close: “The attempt to generalize formal rationality as a culture, to found a civilization on it, is so bizarre that it commands our attention once it is noticed. Yet this is in fact the dystopian paradigm of modernity in our century. The critique of this astounding project in thinkers as diverse as Lukács and Heidegger, Marcuse and Foucault, should also command our attention. It points the way to a new type of social theory. On this, Harding and I are in full agreement: only a critical theory of science and technology can address the fundamental problems of modern society. The humanities are still too timid in the face of these powerful fields. They and we can only benefit from a more self-conscious reckoning with the potentials and dangers of modern knowledge.”

Even when harshly abbreviated, these are rather long quotations; but it seems to me worthwhile to include such long selections if only to give the flavor of Feenberg’s “critical” approach to technology, as well as some of the points on which he differs with other neo-Marxist interpretations of the role of technology in the contemporary world—especially the Marx-based but centrally feminist theorizing of Sandra Harding. One of the failings of my SPT bias in this book is a neglect of female scholars (with the exception of Kristin Shrader-Frechette, earlier, and Deborah Johnson, later). Harding attended only one SPT meeting, and relatively few other female philosophers have done so over the years.

Because the Feenberg (and Harding) material is so long, all I will add here is a

critique I once offered of Feenberg's *Critical Theory of Technology* (1991). The review appeared in *Research in Philosophy and Technology*, vol. 14, 1994.

I said there that one chapter of that book, "The Promise of Civilizational Change," may fairly be taken as the culmination of Feenberg's argument. He begins the chapter with an acknowledgment of the difficulties currently facing socialism: "Over the last decade socialist theory has responded to an accumulation of political disappointments." What has the response been? It is a response "emphasizing its democratic heritage. That heritage offers the best basis for the survival of the socialist tradition now that communism is discredited even on the left" (p. 140). In concrete terms this means (for Feenberg) that one must give up on any Marxist references to "laws of history . . . leading from capitalism to socialism." What must substitute for this conception is a matter of workers' choice: "Capitalism supports one . . . civilizational project, and the Marxian model of socialist transition can be employed to define the logic of a corresponding socialist project" (p. 141). It is up to the workers of the world to make this "contingent" choice. It is a choice between a harsh, hierarchical capitalist reality—which admittedly supplies workers, at least in some countries, with a great many consumer commodities—and the promise of a possible better world, including one in tune with nature. What will that world, in broad outline, look like?

A contemporary list of measures capable of setting in motion such a process would include extensive (if not universal) public ownership, the democratization of management, the spread of education and lifetime learning beyond the immediate needs of the economy, and the transformation of technique and professional training to incorporate an ever wider range of human needs into the technical code (p. 142).

Feenberg says his "argument hinges on the *cultural and technical conditions* for the requalification of the labor force" (p. 143, italics added). Then he asks himself the tough question: "Does this new position represent a regression to a moralizing 'ethical socialism' of the sort Marx rejected so scornfully?" The rest of the chapter is devoted to showing how a new vision *can be* transformed into a cultural, democratic, and innovative new system of reality—though it never really answers the tough Marxist question about whether this might not be a mere pious hope. What Feenberg offers in place of a plan for political revolution is this: "The *generalized concept of suboptimization* explains how powerful ideological motivations can anticipate a new economic order" (p. 148, italics his).

Again: “It is impossible to predict the future, but one can attempt to outline a coherent path of development that would lead to a socialist outcome in favorable circumstances” (p. 151).

And finally: “*Deep democratization* implies significant changes in the structure and knowledge base of the various technical and administrative specializations [to accommodate an enlargement of workers’ freedom]. Furthermore, in advanced societies, where so many relationships outside the sphere of production are technically mediated, self-management in the workplace is only one dimension of a general attack on technocratic hegemony” (p. 155, italics in original).

Well, how likely is this? To his credit, Feenberg at least acknowledges the issue: “How plausible is this strategy?” he asks. Then, referring to the promise in his introduction, he answers: “I mentioned the importance of a culture of responsibility, without which those on the bottom of the system are unlikely to demand changes in the distribution of power. To be effective, this demand must meet a sympathetic response from a significant fraction of the technical elites to which it is addressed” (p. 155).

In short, the new “civilizational possibility” can become a reality if the workers are educated to recognize the benefits of a new socialized system and their demands are met with a “sympathetic response” on the part of technical managers newly enlightened by “a culture of responsibility.”

Traditional Marxists are clearly going to see this as an abdication of all that the words “class struggle” have always stood for. And even those of us who might be sympathetic toward Feenberg’s call for greater social responsibility on the part of technical elites should insist that he acknowledge how fierce the political battles are going to be to bring about his hoped-for antitechnocratic “civilizational change.” Further, despite Feenberg’s disparaging of the approach as a mere “moral reformism” (p. 166), one might wonder whether progressive liberal activism does not offer just as much hope as Feenberg’s ingeniously reinterpreted Marxism (see Chapter 14 on Hickman and Chapter 17 below).

Controversies? Feenberg is an avowed *neo-Marxist*. The clearest criticism of Feenberg is to be found in a reply in the Hickman author/critics volume in *Techné* (see Chapter 14 below). And Sandra Harding, with her *feminist standpoint epistemology*, despite his plea to her (above), has not given in to

Feenberg on the idea that such views as they share move her towards a pragmatism (if not toward Hickman's Dewey-based American Pragmatism). Neither does Feenberg give in to Hickman on this point. Others—who see him as nitpicking about who is most faithful to Marx's legacy (see Chapter 19 below)—have criticized Feenberg's Marxist “scholasticism” as well. Finally, with all Marxists, Feenberg would be expected to oppose *reductionist science*, including *meritocratic liberal* politics—and all forms of *idealisms*.

A side comment on Marxists and academia in the USA: in general, they have had difficulties getting accepted, especially during the Cold War era. But Feenberg is one among many Marxists who have had successful careers in academia. (Feenberg has recently taken a position in Canada, but he had a long career before that at the University of California at San Diego.) What is more, Marxists such as Wartofsky (Chapter 4 above) have not only held important appointments in major universities, but have been accepted into the inner circles of Pitt's favorite organization, the Philosophy of Science Association.

So far we have seen, as dominating SPT well into the 1990s, not only Pitt but the phenomenological analyst, Ihde (strongly influenced by Heidegger), and two radical critics, Feenberg and Winner, one Marxist, the other not. But this period also included strong links to European philosophers. Links to Germany had been there from the first international conference, in 1981; links to the Netherlands were strengthened by the third international conference, held there in 1985; and links to Spain were forged in the late eighties and early nineties. Our Dutch colleagues get a special chapter (19 below), but I turn now to Germany and Spain. Might Pitt find any supporters for his academic plea in those two countries?