

Left Heideggerianism or Phenomenological Marxism? Reconsidering Herbert Marcuse's Critical Theory of Technology

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Herbert Marcuse's theoretical debts to Martin Heidegger have become the subject of renewed scrutiny. A number of recent publications have documented and analyzed Marcuse's early engagement with Heidegger's philosophy as well as the remnants of that engagement in Marcuse's later works. In what follows, I would like to make a contribution to these recent discussions by revisiting Marcuse's theory of technology and technological rationality. A reappraisal of Marcuse's theory of technology is crucial to determining the extent to which he remained indebted to Heidegger, since many commentators see this as the aspect of his thought that most clearly displays Heidegger's continuing influence. In contrast to this interpretation, I will argue that Marcuse borrows elements from the phenomenology of Heidegger and – to an even greater degree – Edmund Husserl, but that these elements are critically appropriated within an overall Marxist theoretical approach, in which social and historical factors are seen as the ultimate determinants of technology and technological rationality.

I would like to offer an alternative interpretation to that put forth recently by Andrew Feenberg and Richard Wolin, both of whom see a more profound and lasting influence of Heidegger on Marcuse's later work. While both Feenberg and Wolin recognize the ways in which Marcuse was critical of Heidegger, they also insist that he remained a "Heideggerian" in some significant sense until the end of his life. Feenberg emphasizes Marcuse's indebtedness to Heidegger in order to praise his work and highlight his continuing relevance for a critical theory of technology.¹ Wolin, in contrast, sees Marcuse's indebtedness to Heidegger as a blind spot in his work, which made him susceptible to problematic anti-modern and anti-democratic tendencies, shared by other "children" of Heidegger, such as Hannah Arendt, Karl Löwith and Hans Jonas.² While Feenberg and Wolin both capture important aspects of Marcuse's relationship to Heidegger, in the end they overemphasize his indebtedness to Heidegger and fail to grasp the *subordinate* role that Heidegger, in particular, and phenomenology, in general, play in Marcuse's non-traditional Marxist Critical Theory.³ Thus, the following reconsideration of Marcuse's theory of technology and technological rationality also seeks to clarify the relationship between Marxism and phenomenology in Marcuse's later work.

Herbert Marcuse began his studies with Heidegger in 1928, just after the publication of *Being and Time*. In his first published article, Marcuse described *Being and Time* as a "turning point in the history of philosophy: the point at which bourgeois philosophy unmakes itself from the inside and clears the way for a new and 'concrete' science."⁴ Marcuse's language here is strongly reminiscent of the early Marx. Just as Marx believed that Hegel had spoken the final word on bourgeois philosophy and in so doing set the stage for a transition to the critique of political economy and new forms of political praxis, so Marcuse believed that in *Being and Time* Heidegger "has driven his radical investigation to the most advanced point that bourgeois philosophy has yet achieved – and can achieve."⁵ Marcuse thought that *Being and*

Time contained certain philosophical breakthroughs that could help philosophy move beyond the influential positivist and revisionist interpretations of Marx that had emerged from the Second International.⁶ As Lucien Goldmann has shown, positivism had decisively influenced not only “bourgeois” philosophy in the late 19th and early 20th century, but Marxism as well.⁷ Marcuse believed Heidegger’s existential analytic of Dasein moved decisively beyond the abstract, rationalist theories of subjectivity, which had dominated modern philosophy – from Descartes’ *ego cogito* to Husserl’s *Logical Investigations* – and had contributed as well to a passive notion of subjectivity in evolutionist interpretations of Marxism, such as Eduard Bernstein’s revisionism. Marcuse was drawn even more to Heidegger’s theory of historicity: as a critique of positivism and as an attempt to work out the full significance of historical consciousness for both the individual and society. Despite his initial enthusiasm for *Being and Time*, Marcuse was aware of the limitations of Heidegger’s philosophy from the very beginning and he never became a “Heideggerian” himself. When Marx’s *Economic and Philosophic Manuscripts* were first published in 1932, Marcuse believed he had found in Marx’s own work the missing philosophical elements he had been seeking in Heidegger’s philosophy.⁸

Heidegger’s enthusiastic embrace of National Socialism in May of 1933 took his students and colleagues by surprise.⁹ While Heidegger was using his already formidable philosophical reputation and his power as the newly elected Rector of the University of Freiburg to legitimate National Socialism, Marcuse applied for a job at the Institute for Social Research in Frankfurt, under the directorship of Max Horkheimer. After a successful interview with Leo Lowenthal, Marcuse was given the job and he soon followed Horkheimer and the rest of the core members of the Institute into exile in New York City. Working with the Institute in the 1930s gave Marcuse an opportunity to contribute not only to Horkheimer’s path-breaking efforts to develop a critical theory of society, but also to come to terms with the influence of Heidegger on his own thought. In the first article Marcuse published while working at the Institute, he sharply criticized “political existentialism,” here referring not only to Heidegger, but also to Carl Schmitt.¹⁰ He pointed, in particular, to Heidegger and Schmitt’s “radical devaluation of logos as knowledge that reveals and decides,”¹¹ which led both of them to a defense of voluntarism, decisionism and, ultimately, totalitarianism. Heidegger’s engagement with National Socialism also demonstrated the fundamental weakness in his concept of historicity: it remained an anthropological category and, as such, separate from real historical developments. Heidegger’s emphasis on authenticity and historical consciousness in the first half of *Being and Time* was reduced at the end of the book to “choosing one’s hero” and accepting one’s place in the “community of destiny.”¹² In the absence of any substantial historical or social analysis, the captivating concreteness of Heidegger’s philosophy succumbed all too easily to pseudo-concrete myths and authoritarian ideology.

Marcuse’s self-criticism and reevaluation of Heidegger continued throughout the 1930s. It was most evident in his reconsideration of the critical potential of the rationalist tradition in Western philosophy. Prior to 1933, Marcuse would certainly have had no objections to Heidegger’s fundamental criticisms of Descartes. But in his 1936 essay, “The Concept of Essence,” Marcuse penned the following words of appreciation for him:

It is often asserted today that Descartes, by beginning with *ego cogito*, committed the original sin of modern philosophy, that he placed a completely abstract concept of the individual at the basis of theory. But his abstract concept of the individual is animated by concern with human freedom: measuring the truth of all conditions of life against the standard of rational thought.¹³

Marcuse's positive reevaluation of the rationalist tradition during this time culminated in his 1941 study of Hegel's critical and dialectical rationalism, *Reason and Revolution: Hegel and the Rise of Social Theory*.

The question of technology was decidedly not one of the reasons why Marcuse became interested in Heidegger's philosophy in the late 1920s. Marcuse did not begin to write about technology until over a decade later, in his 1941 essay "Some Social Implications of Modern Technology."¹⁴ Marcuse analyzes technology in terms of the larger social transformation of liberal capitalism into a monopoly and then state capitalism in the late nineteenth and early twentieth centuries. Around 1940, there was an intense internal debate among Institute members about the viability of the concept of state capitalism.¹⁵ Marcuse's concept of "technological rationality" should be seen as his particular contribution to this debate and also as the foundation for his theory of technology in the narrower sense.

As mentioned, in the 1930s, Marcuse had reexamined the critical potential of the rationalist tradition that had developed during the historical ascent of the bourgeoisie and liberal capitalism. In its struggle against feudalism and absolutism the bourgeoisie had proclaimed the inalienable rights and dignity of man, the autonomy of the individual and the imperative of judging all social relations in terms of the transcendent standards of reason. But, according to Marcuse, this form of critical, autonomous rationality had been increasingly attenuated and then completely undermined in the passage from liberal to monopoly and state capitalism and replaced by "technological rationality." But what exactly is "technological rationality" and how did Marcuse define it? Provisionally, one could say that he defined it as the belief that rationality is embodied in the coordinated apparatus of production itself. As Marcuse puts it: "He is rational who most efficiently accepts and executes what is allocated to him, who entrusts his fate to the large scale enterprises and organizations which administer the apparatus."¹⁶ Marcuse links technological rationality to the rise of large corporations, increased state intervention in the economy and the integration of the working class into the capitalist system. In the essay, he illustrates these links more precisely with discussions of the rise of large-scale bureaucracy and the widespread implementation of Fordism and Taylorism in the 1920s. He highlights the manner in which bureaucracy conceals the persistence of social domination and "bestows upon the bureaucratic groups the universal dignity of reason."¹⁷ He also shows how the "union of exact science, matter-of-factness and big industry" in Taylorism and Fordism reduce any notion of critical autonomy or working class politics to an ideal of "compliant efficiency."¹⁸

Marcuse first developed the concept of technological rationality with a view to National Socialist Germany. In several "enemy analyses" that Marcuse wrote while working for the U.S. government in the early 1940s, he describes National Socialism as the "specifically German adaptation of society to the requirements of large-scale industry, as the typically German form of 'technocracy.'¹⁹ Building on the arguments set forth by his friend and colleague, Franz Neumann, in his path-breaking study, *Behemoth*,²⁰ Marcuse interprets National Socialist policies as a violent reaction to the internal and external political and economic restraints imposed upon Weimar Germany, such as war debts, labor laws, and international treaty obligations. Once in power, the Hitler regime rapidly fulfilled its promises to remove these hindrances, which opened the door to its subsequent ruthless economic and political expansion. Marcuse argues that this expansion was carried out internally through a total mobilization of the population along the lines of technological rationality. He writes,

Under National Socialism, all standards and values, all patterns of thought and behavior are dictated by the need for the incessant functioning of the machinery of production,

destruction and domination . . . Men are compelled to think, feel and talk in terms of things and functions which pertain exclusively to this machinery.²¹

Anticipating Hannah Arendt's argument about the banality of evil, Marcuse argues that the brutal reorganization of German society along the lines of technological rationality manifested itself among the population at large not as a deeply-felt allegiance to Nazi ideology, but as a coldly calculating self-preservation and resolute matter-of-factness.²²

We have just seen the decidedly negative characteristics and consequences of technological rationality, as presented by Marcuse in his first essay on technology and his analyses of National Socialism. But this is only one side of the story. It is important to tell the other side, because Marcuse's analysis of technology and technological rationality depart from Heidegger on precisely this point. Marcuse always insists on the dialectical character of technology in modern capitalist societies. In other words, he emphasizes not only its destructive and repressive effects but also its emancipatory potential. Along with the thoroughgoing historical, rather than ontological or anthropological, character of his analysis, Marcuse's stress upon the emancipatory potential of technology makes clear that his theory is ultimately much more indebted to Marx than to Heidegger. For Marx, too, had always stressed not just the exploitative, but also the potentially emancipatory character of technology. In Volume One of *Capital*, Marx demonstrated the way in which competition and the "werewolf hunger" of the capitalist to increase relative surplus value drove producers to introduce new, more efficient technology whenever possible. This constant *social* compulsion to innovate technologically leads in turn to an ever-increasing ratio of constant to variable capital, that is, of technology and technological know-how to living labor.²³ While this process drives down the *value* of wage labor, it also increases the *material wealth* of society as whole. In the *Grundrisse*, Marx spells out the emancipatory potential of this process in more detail, arguing that the capitalist compulsion to increase productivity by introducing new technology creates the historical possibility of overcoming a society based on abstract, exchange-value producing labor. For this general tendency creates the potential for extensive automation; so extensive, in fact, that wage labor could be reduced to the point where it no longer comprises the dominant activity in most people's lives.²⁴

Marcuse integrates into his own theory these Marxian notions of the emancipatory potential of technology. In the 1941 essay "Some Social Implications of Technology," Marcuse stresses two emancipatory tendencies in particular. First, he points to the way in which advanced technology and the spread of technological rationality lead to a simplification and standardization of tasks both within and across various professions and occupations. This "exchangeability of functions" means that the tasks performed by experts and regular employees become increasingly similar and it becomes more and more difficult to justify rigid social hierarchies based upon specialist training insofar as this knowledge is easily attainable by anyone.²⁵ The second and even more important emancipatory tendency inherent in modern technology is its potential to reduce the amount of human labor needed to produce the necessities of life, thereby greatly increasing the scope of individual freedom. Marcuse writes, "mechanization and standardization may one day help to shift the center of gravity from the necessities of material production to the arena of free human realization."²⁶

After its first appearance around 1940, Marcuse's theory of technology remains essentially the same until the late 1960s, when a shift of emphasis occurs. But, even in his last writings, Marcuse returns to the early Marx in an effort to anticipate the qualitatively different forms technology could assume in a post-capitalist society. As we shall see, he would push Marx's critical theory to its speculative limits, but never completely abandon it.

Published in 1955, *Eros and Civilization* was Marcuse's first book after the war. By this time Auschwitz and the atom bomb had proven beyond any doubt the catastrophic potential inherent in modern technology and technological rationality. This new historical situation was reflected in Marcuse's theory by the introduction of psychoanalytic categories.²⁷ Marcuse recognized that Auschwitz and the atom bomb could not be explained solely with the categories of orthodox Marxism. In *Civilization and its Discontents*, Freud described the tendency of modern societies to create ever-stronger feelings of guilt, which undermined individual autonomy and constantly threatened to explode in collective anti-civilizational outbursts. In his 1936 essay, "Egoism and Freedom Movements," Horkheimer developed a more historically precise analysis of the same dynamic, which drew upon Erich Fromm's innovative efforts to supplement and refine Marx's theory of history with psychoanalytic categories.²⁸

Marcuse drew on Freud's metapsychology as well as Horkheimer and Fromm's work from the 1930s to analyze the fateful "dialectic of civilization" at work in modern capitalism.²⁹ Marcuse argued, in particular, that catastrophic historical events had become more likely because the repressive forms of sublimation – alienated labor – necessitated by modern capitalism attenuated the inherent tendency of Eros to strengthen social bonds and to keep the destructive impulses of Thanatos in check.³⁰ Furthermore, Marcuse held that the social forms of labor and sublimation also determine the form of technology. He writes,

Aggressive as well as libidinal impulses are supposed to be satisfied in work "by way of sublimation," and the culturally beneficial "sadistic character" of work has often been emphasized. The development of technics and technological rationality absorbs to a great extent the "modified" destructive instincts.³¹

But Marcuse also poses the question, "Is the destructiveness sublimated in these activities sufficiently subdued and diverted to assure the work of Eros?" His response is largely negative. He writes,

Extroverted destruction remains destruction: its objects are in most cases actually and violently assailed, deprived of their form, and reconstructed only after partial destruction . . . Destructiveness, in extent and intent, seems to be more directly satisfied in civilization than libido.³²

Although Marcuse does not systematically develop these insights into technological rationality in *Eros and Civilization*, they demonstrate his efforts to determine the ways in which science and technology are *socially* formed – even in their most abstract concepts – under the historically specific conditions of modern capitalism. Marcuse's efforts here to supplement and refine Marx's theory with psychoanalytic categories anticipate his attempts in *One-Dimensional Man* to do the same with phenomenology.³³

But Marcuse also continues to defend the emancipatory potential of technology and technological rationality in *Eros and Civilization*. He writes,

The alienation of labor is almost complete. The mechanics of the assembly line, the routine of the office, the ritual of buying and selling are freed from any connection with human potentialities . . . The positive aspects of progressive alienation show forth . . . The theory of alienation demonstrated that the fact that man does not realize himself in his labor, that his life has become an instrument of labor, that his work and his products have assumed a form and power independent of him as an individual. But the liberation from this state seems to require, not the arrest of alienation, but its consummation . . . The elimination of

human potentialities from the world of (alienated) labor creates the preconditions for the elimination of labor from the world of human potentialities.³⁴

Even if, due to the prevailing Cold War climate, Marcuse chose not to mention Marx's name explicitly in *Eros and Civilization*, his thinly veiled references to alienated labor and commodity fetishism leave no doubt that Marx's theory remained the underlying framework for his theory of technology. They also make clear that Marcuse by no means espoused a romantic, anti-modern critique of technology. Emancipation can be based only on a "consummation" of technological rationality, not its "arrest."³⁵ In short, Marcuse was perfectly willing to supplement Marx's analysis with psychoanalysis, as he would later with phenomenology. But in neither case does he abandon the basic Marxist framework of his theory of technology.

In both *Soviet Marxism* (1958) and *One-Dimensional Man* (1964), the analysis and critique of technological rationality plays an even more important role than in *Eros and Civilization*. Marcuse begins *Soviet Marxism* by showing how the old imperialist conflicts between the leading Western powers have been supplanted by the East-West conflict in the post-war world. He notes that the social and historical conditions that originally gave rise to monopoly and state capitalism are still retained in modified form. The Soviet threat makes a return to laissez-faire capitalism impossible in the West, which, under American leadership, develops a permanent war economy based on "international capitalist planning."³⁶ In his analysis of the Soviet Union, Marcuse stresses the basic continuity of the primacy of industrialization over liberation in its policy from Lenin, through Stalin to Khrushchev. Marcuse demonstrates how this political imperative to catch up economically with the West led to a reorganization of Soviet society along the lines of technological rationality as brutal as National Socialist Germany. Here as there the putatively objective goals of technological rationality conceal ongoing social domination. Marcuse writes,

The technological perfection of the productive apparatus dominates the rulers and the ruled while sustaining the distinction between them. Autonomy and spontaneity are confined to the level of efficiency and performance within the established pattern . . . Dissent is not only a political crime but also a technical stupidity, sabotage, mistreatment of the machine.³⁷

While Marcuse highlights the repressive effects of technological rationality in the Soviet context, he also points to its hidden emancipatory potential. He writes, "Freed from politics which must prevent the collective individual control of technics and its use for individual gratification, technological rationality may be a powerful vehicle of liberation."³⁸ In fact, Marcuse even goes so far as to claim that the possibility for the realization of the emancipatory potential of technology is greater in the Soviet Union than in Western capitalist countries. Although Marcuse describes in detail the ways in which Marx's theory was reduced to the metaphysical doctrine of "Dialectical Materialism," which served to justify the extremely repressive policies of the Soviet state, he advanced the questionable claim that this ideology and the already nationalized economy of the Soviet Union would offer less resistance to the realization of the emancipatory potential of technological rationality than the competitive systems of the West.³⁹ Writing at a time when Khrushchev was carrying out significant reforms, Marcuse overestimated the potential of the "liberalizing tendencies" at work in the Soviet Union.⁴⁰

In *One-Dimensional Man*, Marcuse turns his attention to the advanced industrial societies of the West. In the opening pages of the book, Marcuse uses the same dialectical theory of

technology and technological rationality to describe the dominant ideology and basic social tendencies in contemporary capitalist societies. He writes,

The technological processes of mechanization and standardization might release individual energy into a yet uncharted realm of freedom beyond necessity . . . This is a goal within the capabilities of advanced industrial civilization, the “end” of technological rationality. In actual fact, however, the contrary trend operates . . . By virtue of the way it has organized its technological base, contemporary industrial society tends to be totalitarian. For “totalitarian” is not only a terroristic political coordination of society, but also a non-terroristic economic-technical coordination which operates through the manipulation of needs by vested interests.⁴¹

Marcuse’s argument here makes clear that his basic understanding of technological rationality has remained the same. One could discuss whether or not Marcuse is justified in applying the concept to Western capitalist societies, which leads him to make the provocative claim that they represent a soft form of “totalitarianism.” This claim certainly helps explain the success of *One-Dimensional Man* with radical students and the New Left in the 1960s, but I don’t want to examine it more closely here. I would like to turn instead to Marcuse’s appropriation of phenomenology, an aspect of *One-Dimensional Man* that was genuinely new. My thesis is that Marcuse uses Husserlian and, to a lesser extent, Heideggerian phenomenology to clarify and deepen, but not fundamentally to alter his critique of technological rationality. It is important for our purposes here to examine Marcuse’s appropriation of phenomenology, because it is the only time that he refers explicitly to Heidegger in any of his major published writings after 1934.

Marcuse’s discussion of phenomenology in the sixth chapter of *One-Dimensional Man* rests primarily on Husserl’s *Crisis of the European Sciences*.⁴² Marcuse mentions Heidegger only in passing. While there are, of course, important differences between the phenomenology of Heidegger and that of the late Husserl, we will focus on the similarities of their arguments here, as Marcuse seems to do himself. Marcuse draws on phenomenology – as he had earlier with psychoanalysis – to advance one main argument, namely that scientific, mathematical and technological reason are not neutral, that even in their most abstract theoretical forms they reflect the larger socio-historical context. Marcuse uses a potentially misleading concept to illustrate this argument: the “technological a priori.”⁴³ He writes, “The science of nature develops under the *technological a priori* which projects nature as potential instrumentality, stuff of control and organization.”⁴⁴ But in the remainder of the chapter, Marcuse makes it abundantly clear that the cognitive bias concealed in putatively neutral scientific concepts is by no means ahistorical, as suggested by the term technological a priori. Marcuse explicitly criticizes Jean Piaget’s anthropological theory of scientific rationality for precisely this reason and he turns instead to Husserl because he “offered a genetic epistemology which is focused on the socio-historical structure of scientific reason.”⁴⁵ Marcuse approvingly recapitulates Husserl’s argument to the effect that scientific rationality is always related to the concrete practices of a lifeworld, even though its concepts conceal this essential relationship. It is in this context that Marcuse also approvingly cites Heidegger’s critique of the notion of the neutrality of technology and his claim that modern science rests upon a particular ontology in which nature is always preconceived as mere raw material to be manipulated for human ends.⁴⁶

But Marcuse’s affinity with Husserlian and Heideggerian phenomenology ends here. Husserl and Heidegger could help Marcuse expose the false neutrality of technological

rationality, but they could not adequately explain how and why it becomes dominant in modern capitalist societies. Marcuse writes,

The technological a priori is a *political* a priori inasmuch as the transformation of nature involves that of man, and inasmuch as the “man-made creations” issue from and reenter a *societal ensemble* . . . *the social mode of production, not technics is the basic historical factor.*⁴⁷

Marcuse’s ongoing commitment to an essentially Marxist understanding of technological rationality is apparent in many other passages in the chapter, including the following: “technology has become the great vehicle of reification – reification in its most mature and effective form.”⁴⁸ If this were not enough to demonstrate his continued distance from Heidegger, Marcuse’s unbroken adherence to what he considered to be the best aspects of the rationalist tradition leave no doubt about it. This adherence is evident in Marcuse’s statement in the same chapter that a society dominated by technological rationality “subverts the idea of Reason.”⁴⁹

In his writings after *One-Dimensional Man*, Marcuse’s theory of technology undergoes a significant shift of emphasis. Although he continued to insist upon the capitalist development of technology as a phase necessary to set the stage for a socialist society, the protest movements of the 1960s and the New Left critique of technocracy led to two main changes in Marcuse’s analysis. He insisted more on the importance of subjective factors and he explored the possibility of integrating aesthetic values directly into the spheres of science and technology.⁵⁰ Marcuse’s renewed interest in the subjective conditions for social and technological change registered not only the experience of the widespread revolts of the time, which demonstrated that the advanced industrial societies may not be as “one-dimensional” as he had claimed, but also the ferocious backlash against them, which explains his return to psychoanalysis and the early Frankfurt School analyses of authoritarianism. Rejecting technological determinism more strongly than ever, Marcuse writes:

The level of productivity which Marx projected for the construction of a socialist society has long since been attained in the technically most advanced capitalist countries and precisely this achievement (the “consumer society”) serves to sustain capitalist production relations, to ensure popular support and to discredit the rationale of socialism.⁵¹

Thus, even though the scientific and technological conditions exist for the creation of a much less repressive society, late capitalism continues to produce a dominant character structure, which militates against this objective possibility. As Marcuse puts it,

The needs generated by this system are thus eminently stabilizing, conservative needs: the counter-revolution anchored in the instinctual structure . . . Is it still necessary to repeat that science and technology are the great vehicles of liberation, and that it is only their use and restriction in the repressive society which makes them into vehicles of domination?⁵²

These statements clearly demonstrate that Marcuse’s analysis of technology continued to be firmly grounded within the larger framework of Marxian and psychoanalytic theory, which had guided his thought from the 1920s and 1950s, respectively.

Marcuse pointed increasingly to the *Grundrisse* as the source of Marx’s most profound insights into the historically specific dynamic of modern capitalist societies.⁵³ In the *Grundrisse*, Marx demonstrated how technological development would eventually make possible

new forms of subjectivity that were no longer determined by wage labor and the struggle for existence. But, as the history of the 20th century made clear, the working class did not come to embody these emancipatory forms of subjectivity. As Horkheimer and Fromm demonstrated in their social-psychological studies, already in the 1930s the majority of the working class in the most advanced industrial countries had internalized a conservative bourgeois character structure. Thus, according to Marcuse, Marx's analysis of the emancipatory potential of technology remained valid, but it had to be supplemented with an analysis and critique of the persistence of sado-masochistic and authoritarian character structures among large sections of the lower and lower-middle classes. In fact, Marcuse viewed the strong aesthetic moment in the May 1968 revolts in France and the 1960s protest movements more generally as a sign that new forms of radical subjectivity were emerging that pointed beyond the "anthropology of the bourgeois epoch."⁵⁴

In *One-Dimensional Man*, Marcuse had drawn on phenomenology to demonstrate that science and technology are determined – from their concrete manifestations to the formation of their most abstract concepts – by the social and historical context in which they take shape. Although he uses Husserl's concept of the "lifeworld" on a few occasions, there are no explicit references to phenomenology in Marcuse's published writings after *One-Dimensional Man*.⁵⁵ But he continues to insist, more emphatically than ever, that technology cannot be seen as either fundamentally neutral or transhistorically instrumental. He argues that "quantitative technical progress" would have to be transformed into "qualitatively different ways of life," and that "in order to become vehicles of freedom, science and technology would have to change their present direction and goals."⁵⁶

As part of a larger movement in his writings at this time away from a predominately negative to a more utopian social critique, Marcuse tries to describe what these qualitatively different forms of science and technology would look like.⁵⁷ One of the central features of a post-capitalist science and technology, according to Marcuse, would be its ability to incorporate aesthetic values. As Marcuse puts it,

Technique would then tend to become art, and art would tend to form reality: the opposition between imagination and reason, higher and lower faculties, poetic and scientific thought, would be invalidated. Emergence of a new Reality Principle: under which a new sensibility and a desublimated scientific intelligence would combine in the creation of an aesthetic ethos . . . Technique, assuming the features of art, would translate subjective sensibility into objective form, into reality.⁵⁸

In his earlier writings, Marcuse had little to say about the shape science and technology would take in a post-capitalist society. He seemed to follow Marx's statement in the third volume of *Capital*, that a rational and democratic organization of the sphere of necessity – in which science and technology would be crucial – would greatly enlarge the sphere of freedom for everyone. But, true to his call for a move back "from Marx to Fourier"⁵⁹ in his later writings, Marcuse argued that "the development of the productive forces beyond their capitalist organization suggests the possibility of freedom *within* the realm of necessity."⁶⁰ Hence, Marcuse speculated more freely in his last writings about the qualitatively new forms science and technology would take in a post-capitalist society.

Marcuse's speculative formulations have elicited a number of criticisms, most notably perhaps from Jürgen Habermas. In "Technology and Science as 'Ideology'" – an essay he dedicated to Marcuse on his 70th birthday in 1968 – Habermas engages with Marcuse's critique of technical rationality as it was formulated in an important essay Marcuse wrote

on Max Weber in 1964.⁶¹ On the one hand, Habermas was sympathetic to the main thrust of Marcuse's argument against Weber; so much so, in fact, that Marcuse's objections to the ideological and the one-sidedly instrumental character of Weber's concept of occidental rationality became one of the most important inspirations for Habermas's efforts to provide an alternative, discourse theory of rationality, which came to fruition a decade later in his magnum opus, *Theory of Communicative Action*. On the other hand, Habermas articulated several fundamental objections to Marcuse's understanding of technology and technological rationality, which remained consistent in Habermas's later work.⁶² He argues that Marcuse fails adequately to distinguish between symbolic and purposive-rational action and mistakenly believes that the former type of *interaction* can also be applied to relations between humans and nature.⁶³ Habermas also objects to Marcuse's insistence upon the thoroughgoing social and historical conditioning of science and technology. He notes that Marcuse's argument here is indebted to Husserl and Heidegger, but also that Marcuse moves fundamentally beyond them, insofar as "Marcuse is the first to make the 'political content of technical reason' the analytical point of departure for a theory of advanced capitalist society."⁶⁴

Regardless of whether one traces Marcuse's argument back to Marx or phenomenology, Habermas objects to any attempt to view the essence of science and technology as fundamentally historical. He argues that the relationship between humans and nature, as manifested in science and technology – or significantly also, human labor – will always be guided by a form of purposive-rational action, whose basic features are not historical, but *anthropological*, i.e. characteristic of the human species as a whole. He writes,

Technological development thus follows a logic that corresponds to the structure of purposive-rational action regulated by its own results, which is in fact the structure of *work*. Realizing this, it is impossible to envisage how, as long as the organization of human nature does not change and as long therefore as we have to achieve self-preservation through social labor and with the aid of means that substitute for work, we could renounce technology, more particularly *our* technology, in favor of a qualitatively different one.⁶⁵

In short, Habermas refuses to accept Marcuse's claim that science and technology are decisively determined by the social context in which they are located and that qualitatively different social relations would bring with them qualitatively different forms of science and technology.⁶⁶

Several commentators have attempted to defend Marcuse against Habermas's criticisms.⁶⁷ Andrew Feenberg's recent study is motivated, in part, by just such a defense of Marcuse against Habermas.⁶⁸ But in contrast to Feenberg, who believes that the best aspects of Marcuse's theory of technology are derived from phenomenology, in general, and Heidegger's reformulation of Aristotle's concept of *techné*, in particular, I would like to suggest that the Marxian roots of Marcuse's theory of technology should be taken seriously. One does not have to jettison Marcuse's Marxism in order to defend him against Habermas or to preserve those aspects of his theory that are still relevant today. Toward that end, I would like to outline some of the problems inherent in a phenomenological and, more specifically, Heideggerian approach to technology, which could be overcome through a renewed consideration of Marx's theory, which moves beyond some of the widespread misconceptions about his work.

As noted, Marcuse believed that phenomenology was limited by its inability to move beyond a purely philosophical approach. Marcuse articulates this argument in the following way in his 1965 essay on Husserl:

Husserl's transcendental subjectivity is again a pure cognitive subjectivity. One does not have to be a Marxist in order to insist that the empirical reality is constituted by the subject of thought *and of action*, theory and practice. . . . Pure philosophy now replaces pure science as the ultimate cognitive lawgiver, establishing objectivity. This is the hubris inherent in all critical transcendentalism which in turn must be cancelled.⁶⁹

In other words, phenomenology never adequately incorporated the *materialist* dimensions of Marx's critical theory of modern capitalism. It goes without saying that for Marcuse materialism here means *historical*, not metaphysical or mechanical, materialism.⁷⁰ Second, Marcuse never succumbed to an uncritical celebration of everyday experience, which he viewed as thoroughly conditioned by social and historical factors. In fact, Marcuse does not believe that Husserl or Heidegger defended such a position either. For example, in the essay above, Marcuse writes, "Scientific as well as pre-scientific experience are false, incomplete inasmuch as they experience as objective (material or ideational) what in reality is subject-object, objectivation of subjectivity."⁷¹ So Feenberg's emphasis on the centrality of everyday experience for phenomenology and its importance for Marcuse's theory seem out of place.⁷² Marcuse the Hegelian would never uncritically celebrate "sense certainty" or other forms of unmediated or everyday experience. The structure and practices of the "lifeworld" are not ahistorical, but are profoundly shaped by social and historical factors, which must be recognized, not ignored. Finally, and perhaps most importantly, Heidegger, in particular, never developed any sophisticated categories to understand modern society. Despite his often penetrating readings of modern philosophy, Heidegger's post-*Kehre* philosophy – of which his mature theory of technology was a part – was based on the fundamental assumption that Western metaphysics had taken a wrong turn with the development of logocentrism in ancient Greek philosophy and what came afterwards was one long chronicle of *Seinsvergessenheit*. As many commentators have argued, Heidegger's late philosophy represented an abstract negation of modernity.⁷³

In contrast to Heidegger's prelapsarian critique of the metaphysical assumptions at the root of modern society and technology, both Marx and Marcuse believed that modern capitalism had an emphatic, emancipatory dimension vis-à-vis traditional societies, but that this emancipation remained partial and soon gave way to new abstract forms of social domination. Nevertheless, the capitalist development of the means of production – in which science and technology increasingly supplant living labor as the decisive element – remain the necessary condition for the creation of a qualitatively different society in which the commodity, capital and abstract labor would no longer be the essential mediating forms.⁷⁴ The capitalist development of science and technology make possible the tendential elimination of these social forms, which would, in turn, also transform the essence of science and technology themselves. Habermas's main objection to Marcuse rests upon the faulty assumption that both technology and labor are transhistorical characteristics of the relationship between the human species and nature. Within this model, it is impossible to distinguish between the different forms of labor and technology that have existed historically and that could exist in the future. While Marx recognized the "metabolic exchange" (*Stoffwechsel*) between humans and nature as an ontological condition of all societies,⁷⁵ this did not prevent him from identifying the qualitatively different forms of labor and technology (such as abstract, exchange-value producing labor in capitalism) as the *differentia specifica* of societies and historical epochs. Habermas's flattening out of these differences leads us into the anthropological night in which all forms of labor and technology are grey. In contrast to Habermas, Heidegger may have recognized that the essence of technology is not a transhistorical characteristic of the

relationship between the human species and nature, but he did not reflect adequately on the concrete social and historical conditions which determine the particular forms that science and technology take in any given epoch. This recognition is why Marcuse was able, in a few instances, to supplement his theory of technology with Heidegger's insights, but always placed them within a larger Marxian theory of modern capitalist society.

Still, many reservations remain about Marx's theory of technology. For example, many people read Marx as a technological determinist. In his path-breaking reinterpretation of Marx's critical theory, Moishe Postone has argued that technological determinism is one of the defining characteristics of what he calls "traditional Marxism."⁷⁶ Traditional Marxists tend to conflate Marx's categories of value and material wealth, thereby obfuscating the historically specific character of abstract, value-producing labor as a *social* form characteristic of modern capitalism, a form which would not play the same central mediating role in a post-capitalist society. Like labor, technology is seen as having a logic of its own that is largely independent of social and historical factors. As Postone puts it,

They [traditional Marxists] tend to view the mode of production as an essentially technical process impinged upon by social forces and institutions; and they tend to see the historical development of production as a linear technological development that may be restrained by extrinsic social factors such as private property, rather than as an intrinsically technical-social process whose development is contradictory. Such interpretations, in short, fundamentally misunderstand the nature of Marx's critical analysis.⁷⁷

This "traditional Marxist" interpretation optimistically believes that the natural evolution of science and technology and ever increasing material wealth will lead almost inevitably to the creation of a society of abundance; in other words, only the forms of distribution, not the forms of production need to be changed. But this interpretation fails to grasp the ways in which science and technology continue to be formed and subordinated to the *value* form in capitalist society, which places them in the service of ongoing social domination, rather than emancipatory ends. Postone writes,

The basic contradiction in capitalism . . . is grounded in the fact that the form of social relations and wealth, as well as the concrete form of the mode of production, remain determined by value even as they become anachronistic from the viewpoint of the material wealth-creating potential of the system. In other words, the social order mediated by the commodity form gives rise, on the one hand, to the historical possibility of its own determinate negation – a different form of social mediation, another form of wealth, and a newer mode of production . . . On the other hand, this possibility is not automatically realized; the social order remains based on value.⁷⁸

There is no question that Marcuse was critical of this type of interpretation of Marx as a technological determinist. Throughout his writings on technology and technological rationality, Marcuse stressed the ways in which they facilitated and reinforced social domination. As we have also seen, Marcuse turned his attention increasingly in his last writings to the *subjective* factors involved in the transformation of capitalism.

Another common objection to Marx is that he posited the relationship between humans and nature as a purely instrumental one. As the Marx scholar George Lichtheim put it in 1961, "For the early Marx the only nature relevant to the understanding of history is human nature . . . Marx wisely left nature (other than human nature) alone."⁷⁹ Lichtheim refers here to the early Marx, but Marx's later work is often seen as even more "Promethian" with

its emphasis on the necessity of humans to subdue nature in order to develop the means of production. But beginning with Alfred Schmidt's important 1962 study, *The Concept of Nature in Marx*, commentators have recognized that Marx's materialism was highly attuned to the complex relationship between humans and nature and represented a break with the dominant idealist tendency to reduce nature to nothing more than inert matter shaped at will to suit human aims.⁸⁰ In his early work, in particular, Marx stressed the embeddedness of humans within nature, which he referred to as man's "inorganic body."⁸¹ It is not a coincidence that Marcuse returned in his later writings to Marx's early work in an attempt to anticipate the forms of technology in a post-capitalist society, which would no longer rest upon a purely instrumental relationship to nature.⁸²

But Andrew Feenberg sees this return to Marx as a dead-end, which could have been avoided had Marcuse returned instead to Heidegger and his reformulation of Aristotle's notion of *techné*. Feenberg acknowledges that "Marcuse never distinguished his idea of nature from Marx's" but that Marx's idea "suffers from a confusing ambiguity about the ontological status of nature."⁸³ Feenberg describes this putative ambiguity in the following way:

Marx's word "nature" refers at one and the same time to the immediate object of sensory experience, the lived nature contrasted in romanticism with the nature of natural science, and the nature appropriated by labor in the production process . . . Poetic receptivity to nature and technical transformation of it are opposites referring us to different understandings of the object. What is puzzling in Marx's insistence, against both idealism and naturalistic realism, that nature in this ambiguous sense is essentially correlated with and yet wholly independent of the subject . . . Heidegger's Aristotle could have made sense of this.⁸⁴

Rather than seeing Marx's overdetermined concept of nature as a weakness, one could see it as an attempt to grasp the complexities of the human-nature relationship in modern societies, which succumbs neither to romantic anti-modernism nor to an uncritical celebration of the subordination of nature in the name of capitalist "production for production's sake."

One wonders if Heidegger's reformulation of the pre-modern notion of *techné* can really do justice to these complexities. Feenberg is correct to emphasize Marcuse's affinity with Heidegger's "analysis of production (*techné*), in which nature is grasped as the essential object of the producing subject" and "is not indifferent to its transformation by craft but is appropriate to its finished form in which its own potential is realized."⁸⁵ But Marx also emphasized the potential for this type of "production," particularly in a post-capitalist society. Feenberg, who does not view Marx's understanding of nature as purely instrumental, and who distinguishes between Marx and traditional Marxism, points this out himself. He writes,

Despite the dependence of nature on labor, the otherness of the object is preserved: the meaning of the object is not arbitrarily imposed, it is not just raw material for human projects. Nature retains its independence, its truth, even in the process of transformation by human labor.⁸⁶

The fact that Marx also examined the other manifestations of the human-nature relationship under the historically-specific conditions of capitalist society – with a view to the possibility of moving beyond them, while at the same preserving their positive aspects – must be seen as a strength. For an absence of a nuanced conceptual understanding of the particularities of modern society, could easily lead to an abstract, rather than determinate negation of those relations. Heidegger's own engagement in "conservative revolutionary" politics provide sobering testimony to one possible outcome of such an approach.⁸⁷

I have attempted to demonstrate that Marcuse's theory of technology and technological rationality borrowed elements from Husserlian and Heideggerian phenomenology, but ultimately remained much more indebted to Marx's critical theory. While I think that Marx's approach and its development and refinement by Marcuse in the twentieth century offer a much more promising point of departure for contemporary attempts to theorize technology than Heidegger's philosophy, Marcuse's theory was not without its problems. For example, Marcuse's theory of technological rationality reflected the historical conditions of the mid-twentieth century – the period of high-Fordism and the so-called “affluent society.” From our contemporary post-Fordist perspective, in the wake of the global transition to new forms of “flexible accumulation,”⁸⁸ rigid centralization and repressive standardization no longer seem to define the “technological rationality” of the present. Furthermore, Marcuse's optimistic speculations that technology will soon make possible an historical epoch no longer defined by scarcity, seem less convincing at a time when real wages of middle and lower-class citizens of the advanced industrial countries have remained stagnant for decades, while the past few decades of “globalization” have led to dramatic increases in poverty in many areas of the globe.⁸⁹ The most recent global economic crisis has reinforced many of these trends and has resulted in a partial return to state-centric forms of capitalism. But the illusion, which was widespread in the mid-twentieth century, that isolated nation states can control the *bellum omnium contra omnes* of global capitalism, has not returned. Hence, the Marxist categories that inform Marcuse's theory of technology are still relevant but would need to be rethought to address more recent historical developments.⁹⁰

Finally, some recent commentators – myself included – have pointed to a “democratic deficit” in Marcuse's theory.⁹¹ As we have already seen, Richard Wolin believes that this deficit can be traced back to the lasting influence of Heidegger on Marcuse's thought. But our examination of Marcuse's theory of technology should have made clear that he departed from Heidegger in at least two decisive respects: his rejection of a backwards-looking, one-sidedly anti-modern critique of technology and his greater sympathy for the rationalist tradition in philosophy. While Marcuse usually maintained his distance from anti-democratic tendencies on the left and was much less enamored with the idea of a Platonic educational dictatorship than Wolin claims,⁹² his uncompromising critique of *bourgeois* democracy⁹³ occasionally led him to take deeply problematic positions – such as his uncritical praise of the Chinese cultural revolution⁹⁴ or his call for the suspension of the civil rights of the “political right” in his 1965 essay “Repressive Tolerance.”⁹⁵ But this blind spot cannot be explained by any lasting influence of Heidegger on Marcuse's thought. Marcuse was critical of Heidegger from the very beginning and always appropriated his thought with a view to supplementing a fundamentally Marxist approach to modern society. There are clear and justifiable reasons for labeling Marcuse a “Heideggerian Marxist,” at least from his enthusiastic reception of *Being and Time* in 1927 to his discovery of Marx's *Paris Manuscripts* in 1932, or even a “phenomenological Marxist,” with regard to his later writings on technology. But one wonders if Wolin's description of Marcuse as a “left Heideggerian” is justified, particularly in regard to his writings after 1932.

The explanation for the democratic deficit in Marcuse's thought should be sought instead within Marxist theory itself and its development in the twentieth-century.⁹⁶ While there were several Marxist theorists in the twentieth century who attempted to recover the best aspects of the liberal-democratic political tradition, they were the exception, rather than the rule – and Marcuse was not among them.⁹⁷ But the catastrophic experience of so-called “real-existing socialism” in the twentieth century has made it clear that any contemporary attempts to revitalize socialist theory and practice, must *preserve*, not simply negate, the best aspects of

that tradition.⁹⁸ Habermas and his followers have set themselves to this task. At the same time, Habermas' more recent attempts to work out the normative foundations of liberal democracy seem increasingly formalistic and out of touch with recent historical developments.⁹⁹ Hence, it seems that critical theorists today are faced with the task of recovering the more critical and nuanced approaches to history, society, culture and ideology, and psychological character structures, found in the work of Marx and the "first generation" of the Frankfurt School, while at the same time taking seriously the efforts of Habermas and his followers to preserve what is best in the liberal-democratic political tradition.

NOTES

1. Feenberg argues that, "Heidegger's early thought is far more significant for Marcuse's critique of technology than is usually supposed," and that even though Marcuse himself "would have surely felt a return to phenomenology impossible . . . there are resources in phenomenology which he might have applied to the explanation of his later project." In other words, Feenberg believes that Marcuse's theory of technology was deeply influenced by Heidegger and that the Heideggerian dimension of his theory was actually what was best about it, even though Marcuse himself may not have fully realized this. See his *Heidegger and Marcuse: The Catastrophe and Redemption of History* (New York and London: Routledge, 2005), 83–140.

2. Wolin writes, "all accepted, willy nilly, a series of deep-seated prejudices concerning the nature of political modernity – democracy, liberalism, individual rights, and so forth – that made it very difficult to articulate a meaningful theoretical standpoint in the postwar world." *Heidegger's Children: Hannah Arendt, Karl Löwith, Hans Jonas, and Herbert Marcuse* (Princeton and Oxford: Princeton University Press, 2001), 8 (emphasis his own).

3. For an interpretation of Marcuse which views his work as a whole as a critical attempt to reformulate Marx's categories in light of the changed historical circumstances of the twentieth century, see Douglas Kellner, *Herbert Marcuse and the Crisis of Marxism* (Berkeley, CA: University of California Press, 1984). For example, Kellner writes, "Contrary to many previous interpretations which present Marcuse as a pre-Marxist, a non-Marxist or even an anti-Marxist thinker, I shall try to show that his work is an extremely critical, speculative and idiosyncratic version of Marxism . . . Even in works where Marx is never mentioned, such as *Eros and Civilization*, or in those where traditional Marxism is radically questioned, such as *One-Dimensional Man*, Marcuse is using Marxian concepts and methods to expand the Marxian theory, to overcome its limitations and to question aspects that he believes should be revised or rejected," 5.

4. *Herbert Marcuse: Heideggerian Marxism*, eds. John Abromeit and Richard Wolin (Lincoln and London: University of Nebraska Press, 2005), 11.

5. *Ibid.*, 15.

6. For a more detailed examination of Marcuse's shifting intellectual relationship to Heidegger during this period, see Abromeit, "Herbert Marcuse's Critical Encounter with Martin Heidegger, 1927–33," *Herbert Marcuse: A Critical Reader*, eds. John Abromeit and W. Mark Cobb (New York and London: Routledge, 2004), 131–51.

7. Lucien Goldmann, *Lukács and Heidegger: Towards a New Philosophy*, trans. William Q. Boelhower (Routledge: London, 1977), 3.

8. As Marcuse put it in a later interview, "In 1932 the *Economic and Philosophical Manuscripts* appeared. That was probably the turning point . . . After that Heidegger versus Marx was no longer a problem for me," "Theory and Politics: A Discussion," *Telos*, 58 (Winter 1978–79), 125.

9. In an interview in 1977 Marcuse stated, "From personal experience I can tell you that neither in his lectures, nor in his seminars, nor personally, was there any hint of his sympathies for Nazism . . . his openly declared Nazism came as a complete surprise to us." *Heideggerian Marxism*, 169. Marcuse's impressions have since been corroborated by many others. For example, most of Heidegger's colleagues at the University of Freiburg were relieved when he was elected Rector in an emergency meeting on April 21, 1933. They believed the esteemed philosopher would defend academic freedom and protect the university from the Nazi *Gleichschaltung*. Heidegger's *Rektoratsrede* on May 27th would prove otherwise. See *Die Freiburger Universität in der Zeit des Nationalsozialismus*, ed. E. John (Freiburg: Ploetz, 1991), 14ff.

10. Marcuse, "The Struggle Against Liberalism in the Totalitarian View of the State," *Negations: Essays in Critical Theory*, trans. Jeremy J. Shapiro (Boston: Beacon Press, 1968), 31–42.

11. *Ibid.*, 34.

12. For a detailed analysis, see Johannes Fritsche, *Historical Destiny and National Socialism in Heidegger's Being and Time* (Berkeley, Los Angeles and London: University of California Press, 1999).
13. "The Struggle Against Liberalism," 50.
14. Herbert Marcuse, *Technology, War and Fascism*, ed. Douglas Kellner (London and New York: Routledge, 1998), 39–66.
15. Martin Jay, *The Dialectical Imagination: A History of the Frankfurt School and the Institute for Social Research, 1923–1950* (Boston, Toronto and London: Little, Brown and Company, 1973), 150–67.
16. *Technology, War and Fascism*, 60.
17. *Ibid.*, 57.
18. *Ibid.*, 49.
19. *Ibid.*, 145.
20. Franz Neumann, *Behemoth: The Structure and Practice of National Socialism, 1933–1944* (New York: Oxford University Press, 1942).
21. Marcuse, *Technology, War and Fascism*, 161.
22. Marcuse, "The New German Mentality," *Technology, War and Fascism*, 139–90. It is worth noting that Marcuse's carried these studies out prior to the end of the war, before the full extent of the Nazis' systematically pursued destruction of the European Jews and other targeted groups (such as socialists, criminals, the disabled and mentally ill, homosexuals, Sinti and Roma) became known. Hence Marcuse and Neumann's analyses were both still marked by a rather orthodox Marxist approach, which failed adequately to address the importance of irrational components of National Socialist ideology, such as anti-Semitism. As we shall see below, in the post-war period, Marcuse would recognize this shortcoming of his analysis and follow the path already taken by Horkheimer and Fromm in the 1930s; he would recognize that Marxist theory needed to be supplemented by psychoanalytic categories in order to grasp the changed conditions and the greatly increased potential for violence and genocide in twentieth-century societies. For a more detailed discussion of Marcuse's writings during this time, see my review of *Technology, War and Fascism* in *Constellations: An International Journal of Critical and Democratic Theory* 8, no. 1 (March, 2001): 148–55. See also Tim B. Müller, "Bearing Witness to the Liquidation of Western Dasein: Herbert Marcuse and the Holocaust, 1941–1948," *New German Critique*, 85 (Winter, 2002), 133–64.
23. Karl Marx, *Capital*, vol. 1, trans. Ben Fowkes (New York: Vintage, 1977), 455–564.
24. Thus, according to Marx's analysis in the *Grundrisse*, it is primarily this tendency, and only secondarily the proletariat, which is the true gravedigger of capitalism. For it is this tendency which makes it possible for the proletariat to abolish itself, as a historically contingent class created by modern capitalism. For a more detailed discussion of these issues as they emerge in the *Grundrisse*, see Moishe Postone, "Capital in Light of the *Grundrisse*," in *Karl Marx's Grundrisse: Foundations of the Critique of Political Economy One Hundred and Fifty Years Later*, ed. Marcello Musto (London and New York: Routledge, 2008).
25. Adorno would develop this insight more systematically in his sociological writings after the war. See, for example, "Gesellschaft," *Soziologische Schriften I*, ed. Rolf Tiedemann (Frankfurt a.M.: Suhrkamp, 1972), 17.
26. *Studies in Philosophy and Social Science (Zeitschrift für Sozialforschung)*, vol. 9 (New York: Institute for Social Research, 1941), 437.
27. Horkheimer had already – with the help of Erich Fromm – integrated psychoanalysis into his critical theory in the 1930s. He argued that without being supplemented by Freud's psychological and social-psychological insights, Marx's theory was not adequate to the changed historical circumstances of the twentieth century. For an overview of Horkheimer's early critical theory and Fromm's contributions to it, see Abromeit, "The Origins and Development of the Model of Early Critical Theory in the Work of Max Horkheimer, Erich Fromm and Herbert Marcuse," *Politics and the Human Sciences*, ed. David Ingram, vol. 8, *History of Continental Philosophy*, ed. Alan Schrift (London: Acumen Publishing, 2010).
28. Max Horkheimer, "Egoism and Freedom Movements: On the Anthropology of the Bourgeois Epoch," *Between Philosophy and Social Science*, trans. G.F. Hunter, M.S. Kramer and J. Torpey (Cambridge MA: MIT Press, 1993), 49–110. Erich Fromm, "Sozialpsychologischer Teil," *Studien über Autorität und Familie*, ed. Max Horkheimer (Paris: Felix Alcan, 1936), 77–135.
29. Marcuse, *Eros and Civilization* (Boston: Beacon, 1955), 78–105.
30. *Ibid.*, 54 and 87.
31. *Ibid.*, 85.
32. *Ibid.*, 86.
33. Traces of Marcuse's phenomenological analysis of technology can be found already in *Eros and Civilization*. Rather than Husserl or Heidegger, he evokes Max Scheler to make the following point: "Nature is *a priori* experienced by an organism bent to domination and therefore experienced as susceptible

to mastery and control... In such work-attitude, the objective world appears as 'symbols for points of aggression'; Scheler calls this mode of thought 'knowledge geared to domination and achievement' and sees it as the specific mode of knowledge which has guided the development of modern civilization," *Eros and Civilization*, 110–11 (emphasis his own).

34. *Ibid.*, 102 and 105.

35. Marcuse expressed this idea in the 1930s in the following way: "When the body has completely become an object, a beautiful thing, it can foreshadow a new happiness. In suffering the most extreme reification man triumphs over reification. The artistry of the beautiful body, its effortless agility and relaxation, which can be displayed today only in the circus, vaudeville and burlesque, herald the joy to which mankind will attain in being liberated from the ideal, once mankind, having become a true subject, succeeds in the mastery of matter." "The Affirmative Character of Culture," *Negations*, 116.

36. Marcuse, *Soviet Marxism* (New York: Vintage, 1961), 18.

37. *Ibid.*, 69.

38. *Ibid.*, 240.

39. *Ibid.*, xv.

40. Nonetheless the collapse of the Soviet Union thirty years later did confirm Marcuse's predictions in certain respects. For a reexamination of Soviet Marxism after 1989, which highlights the prescience of Marcuse's analysis, see Peter Marcuse, "Marcuse on Real-Existing Socialism: A Hindsight Look at *Soviet Marxism*," *Marcuse: From the New Left to the Next Left*, eds. John Bokina and Timothy J. Lukes (Lawrence KS: University of Kansas Press, 1994), 57–72.

41. *One-Dimensional Man* (Boston: Beacon, 1964), 2–3.

42. Further confirmation that Husserl, rather than Heidegger, was more important for Marcuse's theory of technology can be found in "On Science and Phenomenology," an article Marcuse wrote in 1965. Marcuse does not mention Heidegger at all in the essay. As elsewhere in his work, Marcuse uses phenomenology to illustrate how science and technology are not neutral and are shaped by external forces. But he also points to the idealistic limitations of Husserl's approach, which need to be placed within a larger critical theory of society. *The Essential Frankfurt School Reader*, eds. Andrew Arato and Eike Geppardt (New York: Continuum, 2000), 466–76.

43. See, for example, Samir Gandesha, "Marcuse, Habermas, and the Critique of Technology," *Herbert Marcuse: A Critical Reader*, 188–208. In his otherwise lucid and informative essay, Gandesha focuses on the concept of the "technological a priori" as proof of the fundamentally phenomenological character of Marcuse's analysis of technology (203). Like Feenberg, Gandesha seeks to defend Marcuse against Habermas's criticisms, but he thinks the best way to do so is to take recourse to the *phenomenological*, rather than the Marxist aspects of his work. Despite his insightful criticisms of Habermas, Gandesha also accepts Habermas's misguided critique of Marx's concept of labor as transhistorical "instrumental action" and he sees this same problematic concept at work in Marcuse's writings. But Marcuse explicitly criticized the reduction of labor to a transhistorical notion of instrumental action in his 1933 essay "On the Philosophical Foundations of the Concept of Labor in Economics," *Herbert Marcuse: Heideggerian Marxism*, 122–150.

44. *One-Dimensional Man*, 153.

45. *Ibid.*, 162.

46. The locution "particular ontology" may seem like a *contradictio in adjecto*; in fact, it captures Marcuse's idiosyncratic use of the concept of ontology as the quasi-transcendental foundations of knowledge and action in a particular society or during a particular historical epoch. Marcuse's use of the term does not imply any transhistorical validity of the "ontology" in question. As I will argue below, Marcuse's use of the concept of "ontology" here parallels his equally misleading use of the term "technological a priori" in *One-Dimensional Man*. For an explication of Marcuse's idiosyncratic concept of ontology and its basis in the ancient philosophical tradition, see Robert Pippin, "Marcuse on Hegel and Historicity," *Marcuse: Critical Theory and the Promise of Utopia*, eds. R. Pippin, A. Feenberg, and C.P. Weibel (London: Macmillan Education, 1988), 70ff.

47. *One-Dimensional Man*, 154 (my emphasis). Marcuse makes this objection to Heidegger's theory of technology explicit in an interview with Frederick Olafson in 1977. He states, "I have the impression that Heidegger's concepts of technology and technics are the last in the long series of neutralizations: they are treated as 'forces-in-themselves,' removed from the context of power relations in which they are constituted and which determine their use and function. They are reified, hypostatized as Fate," "Heidegger's Politics: An Interview," *Herbert Marcuse: Heideggerian Marxism*, 168.

48. *One-Dimensional Man*, 168–9.

49. *Ibid.*, 167. For his part, Heidegger insisted that “Thinking begins only when we have come to know that reason, glorified for centuries, is the most stiff-necked adversary of thought.” Quoted by Richard Wolin in *Heidegger’s Children*, 94.
50. In his critical theory Marcuse had, of course, always emphasized the importance of subjective factors, beginning with his reception of Heidegger in the 1920s. Yet, one can still speak of a renewed interest in subjective factors in the late 1960s and early 1970s, specifically in regard to his theory of technology.
51. *Counter-Revolution and Revolt*, 3.
52. *Essay on Liberation* (Boston: Beacon, 1969), 21.
53. *Ibid.*, 29; *Counter-Revolution and Revolt* (Boston: Beacon, 1972), 18.
54. For a discussion of Horkheimer’s concept of the “anthropology of the bourgeois epoch” and its relevance to Marcuse’s theoretical position at this time, see John Abromeit “The Limits of Praxis: The Social-Psychological Foundations of Theodor Adorno and Herbert Marcuse’s Interpretation of the 1960s Protest Movements,” *Changing the World, Changing Oneself: Political Protest and Collective Identities in the 1960s/70s West Germany and U.S.*, eds. B. Davis, W. Mausbach, M. Klimke, and C. MacDougall (Oxford and New York: Berghahn Books, 2010).
55. *Essay on Liberation*, 38.
56. *Ibid.*, 27–8.
57. Since what was previously considered utopian – for example, the possibility of creating a world in which “no one shall go hungry any more” (Adorno) – has now become a real possibility, Marcuse believed that socialist theory should respond by moving back from purely “scientific” to more “utopian” arguments. Here Marcuse’s arguments were admittedly, out of step with the deeply anti-utopian sensibilities of “postmodernism,” which developed partially as a reaction to or disillusionment with 1968. For a more recent critique of postmodern anti-utopianism and some reflections on the historical truth content of utopian speculation, see Fredric Jameson, “Utopianism and Anti-Utopianism,” *The Jameson Reader* (Malden, MA and Oxford UK: Blackwell, 2000), 382–92.
58. *Essay on Liberation*, 32.
59. *Ibid.*, 30.
60. *Ibid.*, 29.
61. Marcuse, “Industrialism and Capitalism in the Work of Max Weber,” *Negations*, 201–26.
62. It would take us too far afield to examine the ways in which Habermas’s understanding of the relationship between humans (including their science and technology) and nature has shifted in his later work. Despite some shifts Habermas has never abandoned his basic position – which belongs to his most fundamental assumptions – that the basic relationship between humans and nature must remain instrumental. See, for example, Habermas’s response to several theorists who criticize this aspect of his thought in Habermas: *Critical Debates*, ed. John B. Thompson and David Held (Cambridge, MA: MIT Press, 1982), 243–5. Habermas’s more recent introduction of concepts such as “weak naturalism” and “species ethics” may represent a more significant departure from his early work, which brings him closer to the position of Horkheimer, Adorno and Marcuse. But we cannot discuss these developments here. See Jürgen Habermas, *Wahrheit und Rechtfertigung: Philosophische Aufsätze* (Frankfurt: Suhrkamp, 1999), 32ff.; *Die Zukunft der menschlichen Natur: Auf dem Weg zu einer liberalen Eugenik?* (Frankfurt: Suhrkamp, 2001), 70ff.; and “Ich selber bin ja ein Stück Natur” – Adorno über die Naturverflochtenheit der Vernunft,” *Zwischen Naturalismus und Religion* (Frankfurt: Suhrkamp, 2005), 187–215.
63. In “Technology and Science as ‘Ideology’” (86), Habermas argues that Marcuse shares this idea of the “resurrection of fallen nature,” which comes from Jewish and Protestant mysticism, with others in the Western Marxist tradition, such as Horkheimer and Adorno, Ernst Bloch and Walter Benjamin. But in contrast to the these other thinkers – especially Bloch and Benjamin – one will search in vain for any theological residues in Marcuse’s thought. Habermas seems to assume that *any* attempt to move beyond a transcendental or anthropological understanding of the relationship between humans and nature leads willy nilly into a theological position.
64. *Ibid.*, 85.
65. *Ibid.*, 87 (emphasis his own).
66. There is a debate in the secondary literature on just how radical Marcuse’s intentions really were. For my purposes here, it is enough to defend Marcuse’s general claim that the relations between humans and nature embodied in science and technology are not necessarily transhistorically instrumental. As C. Fred Alford convincingly argues, Habermas’s claim to the contrary represents an unnecessary foreclosure of the possible development of future forms of knowledge and action. See his *Science and the Revenge of Nature: Marcuse and Habermas* (Gainesville, FL: University of Florida Press, 1985), 143.

67. The most comprehensive and nuanced account of the debate between Marcuse and Habermas is still C. Fred Alford's study, mentioned above. Alford raises thoughtful objections to both Marcuse's and Habermas's positions, but ultimately suggests that "Habermas's argument, while extraordinarily fruitful in provoking debate, may have reached an impasse," and that "Marcuse's work contains several valuable hints as to how this insight might be circumvented" (15).

68. Samir Gandesha makes a similar argument in "Marcuse, Habermas and the Question of Technology."

69. *The Essential Frankfurt School Reader*, 475–6 (Marcuse's emphasis).

70. Marcuse followed Horkheimer in this regard. See Horkheimer's essays "Materialism and Metaphysics" *Critical Theory* (New York: Continuum, 1992), 10–46; and "Materialism and Morality," *Between Philosophy and Social Science*, 15–48.

71. *The Essential Frankfurt School Reader*, 475.

72. *Heidegger and Marcuse*, 131.

73. See, for example, Michael E. Zimmerman, *Heidegger's Confrontation with Modernity: Technology, Politics and Art* (Bloomington, IN: Indiana University Press, 1990) and Jürgen Habermas, *The Philosophical Discourse of Modernity*, trans. Frederick G. Lawrence (Cambridge, MA: MIT Press, 1987), 131–160.

74. Moishe Postone, *Time, Labor and Social Domination: A Reinterpretation of Marx's Critical Theory*.

75. Marx, *Capital*, Vol. 1, 283ff.

76. Postone, *Time, Labor and Social Domination*, 3–120.

77. *Ibid.*, 199.

78. *Ibid.*, 232.

79. George Lichtheim, *Marxism: An Historical and Critical Study* (New York, 1964), 245.

80. Alfred Schmidt, *The Concept of Nature in Marx*, trans. Ben Fowkes (London: New Left Books, 1971). The 1993 German edition contains a new preface which explores in more detail the relevance of the work to more contemporary discussions in environmental theory. *Der Begriff der Natur in der Lehre von Marx* (Hamburg: Europäische Verlagsanstalt, 1993), i–xvii. The most comprehensive recent attempt to demonstrate the importance of Marx's critical theory for contemporary environmental issues is John Bellamy Foster, *Marx's Ecology: Materialism and Nature* (New York: Monthly Review Press, 2000).

81. *The Marx-Engels Reader*, ed. Robert Tucker (New York: Norton, 1978), 78.

82. See, for example, "Nature and Revolution," in *Counter-Revolution and Revolt*, 59–78.

83. Feenberg, *Heidegger and Marcuse*, 119.

84. *Ibid.*, 125.

85. *Ibid.*, 130.

86. *Ibid.*, 124–5.

87. In his far-reaching and remarkably rich work on the philosophy of technology Andrew Feenberg by no means defends any kind of simplistic anti-modern view of technology. But some of his arguments in *Heidegger and Marcuse* border on a romanticization of pre-modern crafts, which was similar to Heidegger's romanticization of the Black Forest peasant. For example, Feenberg writes, "the skilled craftsmen sees in the object not only its present form but the formlessness it must lose in the work. This seeing is experiential not intellectual" (131). This type of privileging of "experience" over "intellect" resonates well with Heidegger's philosophy, but I hardly think Marcuse would have accepted it. Feenberg links the concept of "experience" to a concept of "existential politics" and "authenticity" which Marcuse allegedly "refused to give up" (133). Although Marcuse was a consistent defender of the individual and critic of any kind of collectivism throughout his life, he used the concept of "political existentialism" to demonstrate the pitfalls of an anti-rationalist politics of Heidegger and Carl Schmitt. See footnote 10 above. For further evidence of Marcuse's fundamentally critical view of existentialism, see his "Existentialism: Remarks on J.P. Sartre's *L'Être et le Néant*, in *Journal of Philosophy and Phenomenological Research* (Buffalo, March 1948), vol. VIII, 309–36.

88. David Harvey, *The Condition of Post-Modernity* (Cambridge MA and Oxford UK: Blackwell, 1989), 121–97.

89. David K. Shipler, *The Working Poor: Invisible in America* (New York: Vintage, 2005); Moishe Postone, "History and Helplessness: Mass Mobilization and Contemporary Forms of Anti-Capitalism," *Public Culture*, 18, Issue 1, (Winter, 2006), 93–110; Mike Davis, *Planet of Slums* (London: Verso, 2006).

90. For an attempt to rethink Marx's crisis theory in light of twentieth-century developments, see David Harvey, *The Limits to Capital* (Chicago: The University of Chicago Press, 1982). Although written in the late 1970s and early 1980s, Harvey's historical and analytical account of the role of financial institutions within the larger framework of capitalist production and accumulation, sheds much light on the current crisis and also provides a corrective to one-dimensional critiques of "finance capital." For an analysis of the current

crisis, which locates its source not in finance, but in the long-term decline of profitable capitalist production, see Robert Brenner, "What is Good for Goldman Sachs is Good for America: The Origins of the Current Crisis," available on-line at: <http://www.sscnet.ucla.edu/issr/cstch/papers/BrennerCrisisTodayOctober2009.pdf>

91. Abromeit and Cobb, "Introduction," *Herbert Marcuse: A Critical Reader*, 24.

92. See, for example, *Heidegger and Marcuse*, 143; Abromeit and Cobb, "Introduction," *Herbert Marcuse: A Critical Reader*, 18–19.

93. See, for example, his essay, "The Historical Fate of Bourgeois Democracy," which was published only posthumously in *Herbert Marcuse: Towards a Critical Theory of Society*, ed. Douglas Kellner (New York and London: Routledge, 2001), 163–86.

94. See, for example, *Essay on Liberation*, 9 and 87. It is surprising that Marcuse, who was a consistent and outspoken critic of anti-intellectualism on both the right and the left, identified with a movement notorious for sending "intellectuals" to the countryside for "re-education." But Marcuse's uncritical understanding of the Chinese Cultural Revolution was quite common among leftist intellectuals at this time. See Richard Wolin and Ron Hass, *The Wind from the East: French Intellectuals and the Chinese Cultural Revolution* (Princeton University Press, forthcoming).

95. See "Repressive Tolerance," in *A Critique of Pure Tolerance* (Boston: Beacon, 1968), 110.

96. It hardly needs mentioning that not all twentieth-century critics of the liberal-democratic political tradition were Heideggerians. Other Marxist theorists, such as Georg Lukács, who were even more unsympathetic to Heidegger than Marcuse, could also be accused of overlooking the progressive aspects of the liberal-democratic political tradition. Lukács' case also illustrates the necessity of re-examining the crucial role that the Bolsheviks played, with their unremitting hostility to liberal-democratic political forms, in the development of twentieth-century Marxist theory.

97. Marcuse was sympathetic to the efforts of his friend and colleague, Franz Neumann, to recover the best aspects of the liberal-democratic political tradition for a critical Marxist theory of twentieth-century capitalism, but his engagement with this tradition was not nearly as profound. For example, see Marcuse's appreciative, but tellingly brief introduction to, Franz Neumann, *The Democratic and the Authoritarian State: Essays in Political and Legal Theory*, ed. Herbert Marcuse (New York: The Free Press, 1957), vii-x.

98. Under "best aspects" one could include, minimally, the division of powers, the rule of law and the preservation and expansion of subjective rights. These rights need not include unlimited property rights, which – as C.B. MacPherson and others have shown – developed historically to safeguard *bourgeois* property against the absolutist state, on the one hand, and the disenfranchised lower classes, on the other. But they would include the preservation of basic civil rights (including the right "to be different without fear" as Adorno once put it), but also create new *social* rights, such as the right to adequate housing, health care and education.

99. See, for example, William Scheuermann, "Between Radicalism and Resignation: Democratic Theory in Habermas's *Between Facts and Norms*," *Habermas: A Critical Reader*, ed. Peter Dews (Oxford: Blackwell, 1999), 153–77; John P. McCormick, *Habermas, Weber and the Transformation of the European State* (Cambridge UK: Cambridge University Press, 2007), 1–15, 176–230; Postone, "Political Theory and Historical Analysis," *Habermas and the Public Sphere*, ed. Craig Calhoun (Cambridge, MA: MIT Press, 1996), 175–6.

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