8 The origin of one-dimensionality
Husserl, Heidegger, Marcuse

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1 Introduction

After scholarship on the relationship between phenomenology and Marxism subsided at the end of the 1970s,[1] interest in forging a connection between Marxism and phenomenology largely disappeared, especially in Husserl scholarship. This picture has recently shifted again, though, as several scholars have demonstrated that it is time to bring phenomenology back into Marxism and vice versa: examples include Richard Westermann showing that Lukacs' early philosophy was developed via a close encounter with Husserl and can be read as a "phenomenology of capitalism"; Ian Angus' recently published monumental study on a new foundation for a phenomenological Marxism, which includes substantial considerations of Husserl; and Andrew Feenberg's elucidations of new ways to consider Marcuse and his encounter with Husserl and Heidegger in his *The Ruthless Critique of Everything Existing*.[2]

In what follows, I would like to contribute to these new trajectories by focusing on a few selected building blocks of the relation between Marcuse and the phenomenologies of Husserl and Heidegger. As Feenberg has pointed out, despite Marcuse's distancing himself from Heidegger in later interviews,[3] one can see that his concept of technological rationality stems from his reception of Heidegger and his critique of scientific reason from his

1 Almost all major French phenomenologists, not only Sartre and Merleau-Ponty but also figures such as Lefebvre, were close allies of Marxism at some point in their intellectual developments; in the Frankfurt School tradition we find not only close encounters such as Marcuse's early essays and their attempt to connect Heidegger with Marx, but also appropriations of phenomenology in thinkers such as Lukacs and Adorno; in the 1960s we are confronted with the revival of a Marxist phenomenology in Italy and Eastern Europe, particularly in the work pushed forward by Paci and Patocka; and finally, in the late 1970s, we saw a general appropriation of Marx and Marxism by phenomenological scholars in Europe, represented by four volumes on these issues edited by Waldenfels. For Fink's connection to these issues, see Christian Ferencz-Flatz and Alex Cistelecan, "Encounters: East/West Dialogs on Existence," *Studies in East European Thought* 75 (2022), 373–97.

2 Richard Westerman, *Lukács's Phenomenology of Capitalism: Reification Revalued* (Cham: Palgrave Macmillan, 2019); Ian Angus, *Groundwork of Phenomenological Marxism: Crisis, Body, World* (Lanham: Lexington Books, 2021); Andrew Feenberg, *The Ruthless Critique of Everything Existing: Nature and Revolution in Marcuse's Philosophy of Praxis* (London: Verso, 2023). Westerman, Angus, and Feenberg return to phenomenology within a larger critique of capitalist society. While Angus' focus lays in a critique of formalization, Feenberg's and Westerman's main approaches to modern technology and alienation are focused on the concept of reification.

3 These are published in Herbert Marcuse, *Heideggerian Marxism*, eds. Richard Wolin and John Abromeit (Lincoln: University of Nebraska Press, 2005).

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reflections on Husserl's *Crisis*. Marcuse turns Heidegger's analysis of technology into a concept of social domination and Husserl's concept of scientific abstraction into a concept of societal alienation. Seen together, they provide one of the best examples of how we can bring together two discourses that are otherwise conceived of as completely different intellectual projects. Here, I will follow Feenberg's lead and outline central signposts of Marcuse's appropriation of phenomenology in order to better understand how phenomenology, critical theory, and Marxism can be more productively viewed as projects that can benefit from each other. I should underline that this chapter is part of a larger reconstruction of the relation between phenomenology and Marxism, which includes a reading of Marx that differs from the traditional readings of Marx within the Frankfurt School and which accordingly—at least in my mind—offers more potential for a renewed confrontation of Marxism and phenomenology. The most important contemporary scholarship that serves as the backdrop of my remarks in this regard stems from Ian Angus and Andrew Feenberg. In what follows, I will outline the main points in Husserl's *Crisis* that are of importance for Marcuse, then briefly show how Marx and Husserl may be connected to each other, before I finally examine Marcuse's transformation of these points and his Heideggerian influenced extension toward technological rationality.

2 Husserl

The relations between phenomenology and Marxism in regard to Husserl's *Crisis* were noted after WWII by important philosophers, such as Paci and Marcuse. For example, Marcuse took Husserl's *Crisis* as a forerunner for his own concept of technological rationality. In a lecture delivered in 1965 entitled "Phenomenology and Science," Marcuse argues that Husserl's life-world analysis can be seen as a precursor to the concept of reification and technological rationality.[4] Unfortunately, the appropriation of Husserl by Paci and Marcuse remains tied to a classical view of Marx's theory of labor and value, and, hence, the connections between Marx and Husserl are rarely discussed in a productive way. This is likely connected, at least in part, to the fact that the traditional understanding of Marx has been challenged and further developed during recent decades by the so-called value form theory, which has disconnected Marx's philosophy and social theory from what was once called the "labor theory of value."[5] In this vein, the concept of value has been reinterpreted as a societal form.[6]

Husserl was worried about the abstractions that the modern natural sciences introduce as a new ontology of nature inasmuch as they introduce a concept of "the" reality via idealized and universalized models of nature, which, in turn, results in a scientific definition of nature. The accompanying technification of science leads, then, to a

4 Herbert Marcuse, "On Science and Phenomenology," in *Proceedings of the Boston Colloquium for the Philosophy of Science, 1962–1964*, eds. Robert S. Cohen and Marx W. Wartofsky (New York: Humanities Press, 1965), 279–90. Also online: http://www.autodidactproject.org/other/marcuse7.html. For this, see also Thom Workman, "Marcuse's Critique of Science," in *One-Dimensional Man 50 Years On: The Struggle Continues*, ed. Terry Maley (Halifax: Fernwood Publishing, 2017), 20–39; John O'Neill, "Marcuse, Husserl and the Crisis of the Sciences," *Philosophy Society Science* 18 (1988), 327–42.

5 I cannot go into further detail within the scope of this chapter. The most prominent scholars in this area are Michael Heinrich, Hans-Georg Backhaus, and Werner Bonefeld.

6 In the next section of this chapter on Marx, I will discuss a different entry point for discussing Husserl and Marx via the abstractions that both the modern sciences and the value form introduce in modern life.

disconnect from the life-world as the primary level of meaning for the experience of rational agents and their relation to their world. I want to mention three important points here: first, the mathematization of nature is based on the difference between generalization and formalization; second, the formalized concept of reality leads to an ethical disorientation in the life-world, and third, the mathematization of nature implies technological rationality. Similarly, what we find in Marx is not a mathematization of nature but a mathematization of social relations, one that runs its course in the same manner as the "auto-pilot" on which Husserl worries that the modern sciences and their technological peers run.

First, a few remarks about the mathematization of nature and the accompanying disconnection from the life-world, as Husserl sees it in the *Crisis*, are in order. As Ian Angus has it, this disconnection

> is rooted in the "mathematization of nature" whereby the entire field of nature is understood to be fundamentally a mathematical structure; thus, meaningful and value-laden experiences are registered as "subjective." Built upon this is the notion that such subjective experiences, in order to make a claim on external reality, must be "indirectly mathematized," that is to say, rigorously related to mathematical indexes. Mathematics becomes the *ontology* of nature through a sleight-of-hand in which method is taken as being.[7]

In other words, the world, as the world we practically live in, becomes subjected to a form of thinking that is based on an ideal of exactness. As a consequence, reality becomes identified with and appears as an ideal model, through which, ultimately, the world of experience, constituted by styles, habits, and types, is obscured and becomes intransparent to the agents who live in it. The life-world becomes opaque to us, although Husserl does not yet consider the impact of modern technology *in* the life-world itself, as he is most concerned with the abstractions themselves and the turn of scientific method into *technization*.[8] In his comments on Marcuse and Husserl in this regard, even Gurwitsch only speaks of the "idea of *episteme*." To conceive of the

7 Ian Angus, "Critique of Reason and the Theory of Value: Groundwork of a Phenomenological Marxism," *Husserl Studies* 33 (2017), 63–80, here 65.

8 "The formula-meaning of this world lies in idealities, while the whole toilsome work of achieving them takes on the character of a mere pathway to the goal. And here one must take into consideration the influence of the above-characterized technization of formal-mathematical thinking: the transformation of its experiencing, discovering way of thinking, which forms, perhaps with great genius, constructive theories, into a way of thinking with transformed concepts, 'symbolic' concepts. In this process purely geometrical thinking is also depleted, as is its application to factual nature in natural-scientific thinking. In addition, a technization takes over all other methods belonging to natural science. It is not only that these methods are later 'mechanized.' To the essence of all method belongs the tendency to superficialize itself in accord with technization" (Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology: An Introduction to Phenomenological Philosophy*, trans. David Carr [Evanston: Northwestern University Press, 1970], 48; henceforth cited as *Crisis* with page reference. Feenberg has argued that the issue is more complex: even if we take into account that the life-world is not simply covered up by "theory," it cannot be formal rationality alone that alienates us from the life-world. Instead, Feenberg argues that technological rationality cannot be completely separated from normative questions. Technologies, as they exist in the life-world, contain ethical and political assumptions and are thus based on social conflict and praxis. For this, see Andrew Feenberg, *Transforming Technology: A Critical Theory Revisited* (Oxford: Oxford University Press, 2002), 63–90.

mathematization of nature, however, only as an *epistemic* development is misleading because the point is that reality itself can be changed via technological means that are, in turn, based on modern sciences. For example, the fact that we can now bio-*engineer* plants is not only the result of an epistemological shift; it is also possible because the biological *reality* is manipulable. The truth, as Heidegger argues, must take place on "both" sides: knowledge and being.[9]

The new, ideal world, projected by the mathematization of nature, is fixed.[10] What is new in modernity is the invention of a science that grasps reality as "a rational infinite totality of being."[11] The most important step in establishing this new ontology and totality of being as mathematizable is the central function of the "formalizing abstraction,"[12] which is differentiated from classical abstraction as generalization.[13] This concept of formalization is most important not only for the reception of Husserl in the philosophy of mathematics, but also because almost the entire Frankfurt School, with the exception of Marcuse, misses the important difference between formalization and abstraction, which leads to them misinterpreting the value form in Marx as something that can be generalized from exchange (instead of being deduced from the formalized positioning and projection of value toward all beings).[14] Angus again notes:

> Generalization refers to abstraction in the form of a species-genus relationship of subordination and superordination. So, I can generalize from the desk on which I am

9 Ultimately, the point, which goes beyond the scope of this chapter, is that we need to understand formalization and mathematization as a shift to which all three main ontological realms are subjected: the noetic realm, the natural realm, and the societal realm. Put differently, formalization can only become central for the modern episteme because it is an *event in reality*. According to my own understanding, this event cannot be understood without the complete disruption that capital introduces in modernity. As Marx put it in *Capital*, "Capital . . . announces from the outset *a new epoch* in the process of social production" (Karl Marx, *Capital: A Critique of Political Economy*, vol. 1, trans. Ben Fowkes [New York: Penguin, 1993], 274, emphasis mine).

10 In Husserl's words, "To ideal space belongs, for us, a universal, systematically coherent a priori, an infinite, and yet-in spite of its infinity-self-enclosed, coherent systematic theory which, proceeding from axiomatic concepts and propositions, permits the deductively univocal construction of any conceivable shape which can be drawn in space. What 'exists' ideally in geometric space is univocally decided, in all its determinations, in advance" (*Crisis*, 22).

11 *Crisis*, 22.

12 *Crisis*, 22.

13 The topic of formalization is also important for the early Heidegger. For the pre-*Crisis* appropriation of the topic of formalization, see Burt Hopkins, "Deformalization and Phenomenon in Husserl and Heidegger," in *Heidegger, Translation, and the Task of Thinking: Essays in Honor of Parvis Emad*, *Contributions to Phenomenology, Volume 65*, ed. Frank Schalow (Den Haag: Springer, 2011), 49–69, here 63: "Heidegger is quite clear that the meaning of 'formal' in 'talk of formal indication' is something that 'has nothing to do' with the 'the sense of universality' that 'is common to formalization and generalization.' Thus, he writes: 'the meaning of "formal" in the "formal indication" is more original.' Within the formalized, the differences between 'something is an object' and 'experience as such' go together with the 'sense of "universal," whereas 'the formal indication has nothing to do with this'."

14 The best example for this is Adorno's central term "exchange principle," which refers to an abstraction that occurs in exchange. In contrast, I argue that formalization has already taken place through the value form itself (even if this form *exists* as money in the life-world). It is only *because* the value form takes on societal totality that it can it be conceived of as formalization. I cannot go into detail within the scope of this chapter, but with this position I argue against Feenberg, who does not see a connection between formalization and "real abstraction": in contrast, I maintain that "real abstractions" are not simply based on the distinction between use-value (in the life-world) and exchange-value (abstraction) but that the *difference*

> writing to desks in general, from there to furniture, from there to made objects, and finally to objects-in-general. Given any level of this structure, one can *abstract* to a higher-level concept and *specify* toward a lower-level concept. Formalization, in contrast, abstracts from any concrete object all at once, as it were, to the concept of an anything-whatever, or an undetermined "x." It may be thought that the formal anything-whatever is the highest genus, subsuming all material universals.[15]

As we will see later, this abstraction by formalization is precisely what Marx means by "value," which not only comprises social relations in the narrow sense but also includes the entire "metabolism" between humans and nature.[16] Accordingly, from a Marxian perspective, the scientific projection of a new ontology of nature is itself related to the subsumption of both nature (through scientifically produced technology) and the natural sciences to the value form. Indeed, it is not Marx but Heidegger who gives Marcuse the "hinge" between the abstractions that the natural sciences introduce and the *real* abstractions that occur in the life-world through technological rationality. As Angus has pointed out, Husserl is concerned with the domination of reality by a theory, not by its practical impact.[17] In contrast, in Marxism, the task of phenomenology to "heal" the life-world disconnect *theoretically* has been shifted to a practical task, as defined by Marxist political (and aesthetic) philosophy. As Marcuse has it,

> Husserl proposes breaking the mystification inherent in modern science through a phenomenological analysis that is—in a literal sense—a therapeutic method. Therapeutic

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itself is already the effect of formalization. As a result, my position is much closer to that of Angus, who sees a direct connection between Husserl and Marx, whereas Feenberg remains stuck in a traditional Marxian interpretation. Some remarks on Feenberg can be found in Christian Lotz, "Gegenständlichkeit. From Marx to Lukacs and Back Again," in *Theory and Practice: Critical Theory and the Thought of Andrew Feenberg*, ed. Darrell Arnold (New York: Palgrave, 2017), 71–89.

15 Angus, "Critique of Reason and the Theory of Value," 70.

16 Moreover, Angus argues that Husserl's distinction between generalization and formalization leads to the inability to "heal" the abyss between the two by the attempt to trace the formalization back to life-world individuals: "The consequence of the distinction between generalization and formalization is to disallow, in the latter case, the sort of specification to individuals that Husserl assumed applied—at least teleologically through the phenomenological restoration of meaning—to both forms of abstraction" (Angus, "Critique of Reason and the Theory of Value," 71). For a slightly different position, see Andrew Feenberg, "Heidegger and Marcuse: The Catastrophe and Redemption of Technology," in *Herbert Marcuse: A Critical Reader*, eds. John Abromeit and W. Mark Cobb (London: Routledge, 2004), 188–209; Andrew Feenberg, "Marcuse's Phenomenology: Reading Chapter Six of 'One-Dimensional Man'," *Constellations* 20:4 (2013), 604–15. Burt Hopkins holds a similar position to Angus' claim, though he is, in the context of Jakob Klein's discussion, more concerned with the connection between formalization and historicity: "We shall show that it is precisely Husserl's encounter with the crisis posed by the unintelligibility of the formalized language of modern mathematics and mathematical physics—where 'intelligibility' is measured by our pre-formalized encounter with the world—that engenders his method of historical reflection on the origin of modern science" (Burt Hopkins, *The Origin of the Logic of Symbolic Mathematics: Edmund Husserl and Jacob Klein* [Bloomington: Indiana University Press, 2011], 15). Put differently, the "de-formalization" that Husserl intends to present by tracing back the de-realized concept of reality to the life-world and to individuals encountered *in* the life-world fails because the meaninglessness introduced by the mathematical sciences cannot be traced back due to the *complete rupture* between the life-world and formalized reality that occurs in the first place.

17 Ian Angus, "Galilean Science and the Technological Lifeworld: The Role of Husserl's Crisis in Herbert Marcuse's Thesis of One-Dimensionality," *Symposium* 21:2 (2017), 133–59, here 138.

> in the sense that its task is to get behind the mystifying concepts and methods of science in order to uncover the constitutive life-world [*lebensweltlich*] priori under which all scientific a priori stand.[18]

As indicated, critical theory thinkers, including Horkheimer and Adorno, missed the distinction between generalization and formalization and, as a consequence, critical theory misses the connection between modern—formalized—science and technique in the life-world.[19] The abstraction that the modern sciences introduce is *not* simply an abstraction *from* something given in the life-world; instead, it is based on a complete distinction between the two levels. It is only on this basis that Marcuse (with Heidegger) can claim that mathematization functions as a *projection*. In Gurwitsch's words:

> Being first to conceive the idea of nature as a mathematical manifold, Galileo had to develop the methods of physics, understood in the just mentioned sense, so as to substantiate that idea. This is what justifies the use of his name as a symbol. The point requires some emphasis, because the contention that the world is not in reality as it looks but that its true condition and constitution has to be disclosed and discovered by means of mathematical construction is not retrospectively formulated on the basis of results attained. On the contrary, it is the guiding principle of the science of physics still to be developed, and it institutes its very development.[20]

It is important to note that, in his reflection on the life-world, Husserl includes the practical dimension, although the concept of "life-world" in the *Crisis*—as many scholars have remarked—remains tied to the perceptive world alone. Despite this general limitation, there are at least three passages that point to the ethical and practical dimensions (within which, oddly, Husserl rarely includes the political dimension). First, he points to the positivist destruction of all questions related to ultimate values:

> Thus the positivistic concept of science in our time is, historically speaking, a *residual concept*. It has dropped all the questions which had been considered under the now narrower, now broader concepts of metaphysics, including all questions vaguely termed "ultimate and highest." Examined closely, these and all the excluded questions have their inseparable unity in the fact that they contain, whether expressly or as implied in their meaning, the *problems of reason—reason* in all its particular forms. Reason is the explicit theme in the disciplines concerning knowledge (i.e., of true and genuine, rational knowledge), of true and genuine valuation (genuine values as values of reason), of ethical action (truly good acting, acting from practical reason); here reason is a title for "absolute," "eternal," "supertemporal," "unconditionally" valid "values and ideals."[21]

Second, he points to the scientific fundamentalism that excludes all other praxes as secondary, lower, and only "subjective-relativistic" praxes. As a consequence, praxes related

18 Marcuse, "On Science and Phenomenology," 287 (quote slightly altered).

19 Angus, "Galilean Science and the Technological Lifeworld," 153.

20 Aron Gurwitsch, "Comment on the Paper by H. Marcuse," last modified April 8, 2006, http://www.autodidactproject.org/other/marcuse8.html.

21 *Crisis*, 9.

to the good and the beautiful tend to be excluded from the modern *logos*. However, as Husserl astutely points out, science as a praxis that is carried out *in* the life-world should only be considered as *one praxis among others*. Theory, though Husserl does not define this in a Marxist fashion as "praxis," is normative and, hence, it is connected to goals, which, in turn, can only be defined via values, ethics, and so on. He writes:

> Is it not the case that this hypothesis, which in spite of the ideality of scientific theories has direct validity for the scientific subjects (the scientists as human beings), is but *one* among the many practical hypotheses and projects which make up the life of human beings in this life-world—which is at all times consciously pregiven to them as available? Do not all goals, whether they are "practical" in some other, extra-scientific sense or are practical under the title of "theory," belong *eo ipso* to the unity of the life-world, if only we take the latter in its complete and full concreteness?[22]

Third, Husserl not only points to the perceptive and embodied world as the truly universal world of experience but also to the *personalistic* aspect of the life-world that, in manuscripts on ethics and in *Ideas II*, he connects to practical-ethical questions. He writes:

> To be sure, everyday induction grew into induction according to scientific method, but that changes nothing of the essential meaning of the pregiven world as the horizon of all meaningful induction. It is this world that we find to be the world of all known and unknown realities. To it, the world of actually experiencing intuition, belongs the form of space-time together with all the bodily [*körperlich*] shapes incorporated in it; it is in this world that we ourselves live, in accord with our bodily [*leiblich*] personal way of being. But here we find nothing of geometrical idealities, no geometrical space or mathematical time with all their shapes.[23]

As we know, the term "bodily personal" is a key word that points to *Ideas II*. According to Husserl in this text, we must draw a distinction between the psyche and the person. Husserl tries to show that these are *two different ways of interpreting the same (transcendental) consciousness*. The difference between the psychic layer and the personalistic layer consists, according to Husserl, in how the personalistic layer of consciousness is simply the psychic layer conceived of as *not causally* dependent on nature. In addition, a person for Husserl is consciousness conceived of as an individual, whereas the psyche remains a *typical* constitution, which means that a person is, for Husserl, a "bearer of its habituality, and that implies that it has its individual history."[24] To give an example, a person can become "older" in the strict sense of the word. She can learn and become "wise" because her personal formation is connected to "reason" [*Vernunft*] and to a normative basis of consciousness. Accordingly, in the context of the *Crisis*, Husserl wants to say that the life-world remains tied to *individuals* who are constituted in a non-causal way, which gets completely lost and forgotten in the scientific projection of "the" reality.

22 *Crisis*, 131.

23 *Crisis*, 50 (emphasis mine).

24 Edmund Husserl, *Ideen zu einer reinen Phänomenologie und phänomenologischen Philosophie II: Phänomenologische Untersuchungen zur Konstitution*, ed. Marly Biemel, Husserliana IV (The Hague: Martinus Nijhoff, 1952), 300 (my translation).

Though often overlooked in commentaries of Marcuse, we can easily see how close Marcuse's thinking comes to Husserl's when he writes:

> While the new scientific method destroyed the idea that the universe was ordered in relation to a goal, to a teleological structure, it also invalidated a hierarchical social system in which occupations and individual aspirations were predetermined by final causes. The new science, in its neutral form, abstracted itself from an organization of life which deprived the immense majority of human beings of their liberty. In its effort to establish the physical mathematical structure of the universe, this new science also abstracted itself from the concrete individual and its "sensuous body." Such an abstraction was fully validated by its result: a logical system of propositions which guided the use and the methodological transformation of nature and which tended to produce a universe controlled by the power of man.[25]

Put in the language of *Ideas II*, the personalistic point of view and the constitution of individuals in their own historical being, which is nevertheless related to reason, is completely sidelined and is thus yet another expression of the modern phenomenon of alienation. Put simply, acting individuals are reduced to scientific objects, and, as a consequence, they disappear as individual beings with *their own* historicity and rationality.

Taking all three points together, Husserl argues in the *Crisis* that the sciences, as both an ideal activity and as theory, remain tied to the life-world since, in order for them to be carried out, a practical framework from which they operate must be presupposed. For Husserl, this primarily means that an ethical framework provides the necessary backdrop for "doing" science, theoretical or otherwise. Since Husserl does not consider politics, law, or social institutions as practical frameworks, we can certainly see here the dividing line between phenomenology and Marxism. Leaving this question aside for a moment, though, we can nevertheless see how Husserl's claim that the scientific obfuscation of what remains *truly universal*—namely, the *practical* life-world—leads to his worries in the 1920s, which are particularly visible in his *Kaizo* articles, where he argues that we have lost cultural direction.[26]

Let me briefly point out that this Husserlian diagnosis is still in play in contemporary debates even though they operate with concepts of culture and human life that are less idealized. For example, Bernard Stiegler has called the process of modernity to which we are currently subjected a fundamental "disorientation" and "stupidification" of entire populations, if not humanity itself, in which all living horizons of consciousness and their world constitution become disrupted or replaced by scientifically induced technological processes: "But the true question," Stiegler writes,

> is the colossal attentional disequilibrium affecting infantile psychic systems, and the technological and pharmacological stupidity produced by systems for capturing psychopower and by the situation of generalized proletarianization, which spreads and

25 Herbert Marcuse, *Philosophy, Psychoanalysis, and Emancipation: Collected Papers of Herbert Marcuse, Volume Five*, eds. Douglas Kellner and Clayton Pierce (London: Routledge, 2011), 133.

26 For this, see also D. J. Hobbs, "Values, Purposeful Ideas, and Human Culture in Husserl's *Kaizo* Articles," *Husserl Studies* 38 (2022), 335–58.

> generalizes a state of systemic stupidity that becomes the law of drive-based capitalism and industrial populism.[27]

As Ian Angus has argued, moreover, the formalization of scientific reason can no longer distinguish practical ends insofar as it treats any practical (ethical, political) end as "an" end.[28] This point is also visible in Marcuse, who, in *One Dimensional Man*, argues that the scientific definition of reality can no longer take any form of practical *telos* and finality into account[29]: "Contemporary positivism, semantics, symbolic logic, and linguistic analysis define and filter the universe of discourse for the use of technicians, specialists, and experts who calculate, adjust, and match without ever asking *for whom* and *for what*."[30] Consequently, from a scientific standpoint, the question of whether it is a good thing that science leads to the nuclear bomb or to the airbag can no longer be answered.

3 Marx

Given the practical dimension of the life-world and the formalized abstractions through which the life-world is lost, one does not need to artificially construct associations to immediately notice how close Marx's thought appears to that of Husserl. As Husserl attempts to phenomenologically "heal" the disconnect from the life-world that the modern mathematization of nature introduced, thereby reconciling the modern world with itself, so also does Marx attempt to reconcile the elements of the social world with one another by bridging the disconnect of society and its agents through the distortions introduced by metaphysics and, in his later writings, distortions carried out by classical political economy.

The problem of how formalized abstractions and the scientific worldview mystifies reality shows up not only in the early Marx via his critique of metaphysics but also in *Capital*, where it is presented as *the* problem insofar as the mystification of the natural sciences determines the entire fetishism issue, as well as reappearing on the *methodological* level of Marx's mature theory. For example, think of the problem of money and capital in relation to actually existing life-world exchanges and transactions. Marx's theory deals with the problem that all social relations—relations contained in production, consumption, and distribution—disappear at the surface of commodity circulation. Put in modern terms, at the surface of market exchanges and the processes of selling and buying, the *entire* content of political economy and the central functioning of capital and surplus value disappear and are no longer visible. However, the abstractions that this process introduces become "the" reality for every (trans)action done under conditions of modern surplus value production. Recent scholarship has referred to these as "real abstractions."

What is interesting for us in the context of the concept of formalization is not only the constitution of value through exchange but, to an even greater extent, Marx's thesis that all relations and entities (if we assume that capitalist dynamics make everything exchangeable) receive a "uniform social status" through exchange. In fact, capitalist *sociality* is established through value as an abstraction from *all* concrete exchanges, actions,

27 Bernard Stiegler, *What Makes Life Worth Living: On Pharmacology*, trans. Daniel Ross (London: Polity, 2013), 55. For this, see also Bernard Stiegler, *The Decadence of Industrial Societies: Disbelief and Discredit, Volume 1*, trans. Daniel Ross and Suzanne Arnold (London: Polity, 2011).

28 Angus, "Galilean Science and the Technological Lifeworld," 155.

29 Marcuse, *Philosophy, Psychoanalysis, and Emancipation*, 134.

30 Marcuse, *Philosophy, Psychoanalysis, and Emancipation*, 135.

and praxis. What we need to see, accordingly, is that value as the form of wealth in capitalist societies establishes itself not only as something that occurs in the exchange of commodities, but also as something that makes the objects exchanged *abstract* insofar as all social relations are now determined by a universal relationship that binds all individuals together in an abstract form. Universal exchangeability of entities as commodities *presupposes* that everything becomes comparable and mathematizable; in addition, the universal comparison of everything with everything presupposes a universal concept and criterion under which this comparison can be successful. For Marx, this universal concept is value, and the first *real* appearance of this abstract universal is money.

Hinting at the *exact* uniformity of everything is important for our purposes here as it can help us understand that value is another name for the absolute identity of everything with everything, an ideal projection of social reality under which everything becomes exactly measurable and comparable. Value for Marx is *not* a generalized property of things or commodities; rather, it makes all exchanges possible and thereby equalizes *all* things in capitalism by making them *potentially* exchangeable and subject to *exact* measurement. The social synthesis under capitalism is established by abstract relations constituted in universal exchange, according to which everything (in principle) is exchangeable with everything. This, as Marx argues, is only possible if sociality takes on the value form: in other words, if labor as the substance of social reality takes on an abstract form that is determined, on the one hand, as abstract labor and, on the other hand, as universal exchangeability. As labor is taken to be the substance of social reality, legal and other social relations need to be taken as secondary compared to the commodity form. Marx promises at the very beginning of *Capital* to investigate the nature of commodities, by which he means the contradiction between the singular natural thing that is used for consumption and the exchange value that establishes the intrinsic relationality of commodities. As one commodity is worth *X* amount of another commodity, the exchange value is at first some amount of the *other* commodity (for instance, *X* amount of linen is worth *X* amount of iron). Consequently, exchange value is not a *property of* or *in* a commodity; rather, it *is* the other commodity as the *relationship* between commodities. Unfortunately, this concept of value as absolute identity and as the mathematizability of all social relations is what many commentators miss. I cannot here offer an account of how this is linked with Marx's concept of abstract labor and time, or with Heidegger's attempt to analyze the modern concept of "thing" [*Gegenstand*] through the concept of mathematics, but I must nevertheless insist that "the" thing in Marx *is* the value form. To support this, let me simply point to Heidegger's 1935 lecture on Kant, where he wrote the following:

> The Mathematical escalates into [*steigert sich*] the determining essence and ground of all knowledge. Such a knowledge is directed towards the whole of beings in projection and, accordingly, cannot recognize posited beings [*Vorgegebenes*]; it is forced to be posited on axioms and basic laws [*Grundsätze*] that are taken from the essence of the simple sentence and positioning. The essence of the simple sentence is the relation between subject and predicate.[31]

31 Martin Heidegger, *Die Frage nach dem Ding. Zu Kants Lehre von den transzendentalen Grundsätzen, Freiburger Vorlesungen Wintersemester 1935/36, Gesamtausgabe II. Abteilung: Vorlesungen 1923–1044, Band 41* (Frankfurt: Klostermann, 1984), 247 (my translation; this passage is not included in the English translation).

What we find here is—in its core, even if not in its exact analytic angle—the same idea as in Marx: "posited beings" become subjected to a new future apriori framework under which, from now on, all beings are to be interpreted and understood. Capital functions in *precisely* the same way: namely, as a projection of all beings as *exchangeable* and therefore identical (formalized) in their essence insofar as all social relations turn from their sociality into something formalizable.[32] From the viewpoint of the value form (that is, from the viewpoint of capital), reality in the life-world is condensed to value, while practical goals that make up our experience are eliminated. However unsatisfactory, this brief outline remains, what we can notice is that Marx introduces a formalized concept of value that can be understood in similar terms to that of Husserl's mathematized concept of nature insofar as value, like mathematization, cannot be traced back through a process of generalization to life-world practices; indeed, we can see that value and capital introduce an epochal break in the modern social world, much like the mathematization of nature does in Husserl.[33] Though what we find here is not a mathematization of nature, it is nonetheless a mathematization of social relations that runs its course in the same way in which Husserl worries about the "auto-pilot" on which the modern sciences and their technological peers run.[34]

As we know, in his writings during the 1920s, Husserl proposes an idealist program of "renewal." Interestingly, in the *Kaizo* articles, Husserl points to the "political sophistry"[35] of his days, which uses its rhetoric for nationalist goals that, in turn, make a culture based on universal values and true science and reason impossible. Against this, Husserl proposes a "praxis of communal life"[36] that is guided by practical reason and rationality. He says, "However, facts are hereby judged and valued, are subjected to the norm giving power of reason; we ask how a reform of this non-valued cultural life can lead to a life of reason. Consequently, every deeper reflection [*Besinnung*] leads back to the principled questions of practical reason."[37]

Sadly, Husserl's analysis of the mystifications and loss of practical guidance in the life-world and culture do not include considerations about society, and his call for

32 For this, see Christian Lotz, *The Capitalist Schema: Time, Money, and the Culture of Abstraction* (Lanham: Lexington Books, 2014).

33 For this, see Marx, *Capital*, 271–82.

34 As Angus has pointed out, "commodity fetishism consists in the systematic concealing of the social relations of producers by the quantitative system of mensuration that represents and regulates the relations between products. The social relations of producers thus occur 'behind their backs' and cannot be brought under conscious control. This systematic absence of self-knowledge in social action is reproduced in an apologetic scientific form in political economy, such that it produces a systematic lack in the social representation of value. Commodity fetishism thus is, in both social action and political economy, the name for a necessary absence in the social representation of value due to the hegemony of the system of quantitative mensuration in exchange" (Angus, "Critique of Reason and the Theory of Value," 74). For the connection between the commodity form and technology, see also Samir Gandesha, "Marcuse, Habermas, and the Critique of Technology," in *Herbert Marcuse: A Critical Reader*, eds. John Abromeit and W. Mark Cobb (London: Routledge, 2004), 188–209; Samir Gandesha, "Totality and Technological Form," in *Sage Handbook of Frankfurt School Critical Theory*, eds. Beverly Best, Werner Bonefeld, and Chris O'Kane (London: Sage, 2018), 642–60.

35 Edmund Husserl, *Aufsätze und Vorträge (1922–1937)*, eds. Hans Rainer Sepp and Thomas Nenon, Husserliana XXVII (Kluwer: Dordrecht, 1989), 5.

36 Husserl, *Aufsätze und Vorträge*, 6.

37 Husserl, *Aufsätze und Vorträge*, 10 (my translation).

community remains in the end dissatisfactory.[38] Thus, though we must admit that transcendental phenomenology and Marxist theory of society remain in tension with each other at a fundamental level, we might think of this opposition philosophically, which could begin with recognizing that both are in their own ways concerned with the whole. For both, speaking of crisis means to understand the concept of crisis as something *fundamental* to the entirety of culture. Marx's analysis of capital and commodity fetishism are not only focused on letting us understand labor exploitation, as some Marxists assume; rather, his theory of society helps us understand how a society being subsumed under relations of surplus value and capital leads to inner contradictions *as a whole* that, as we now see, endanger all relations contained in society: production, distribution, exchange, and consumption are all in crisis under the spell of the growth paradigm. In addition, Marcuse's attempt to synthesize the Marxist concept of alienation with Husserl's analysis of the crisis of modernity via the sciences can equally be seen as a concern with the whole to which, in terms of reason and rationality, *all* forms of rationality belong and not, as the scientific point of view holds, only its own form of reason. Let us not forget that reason is related to *what is*, and phenomenology and critical theory defend concepts of reason that remain tied to reality, whereas positivism and scientism tend to banish all non-scientific forms of rationality and theorizing to the psychological realm. As a consequence, our entire mode of social organization leads to a deep cultural and practical disorientation that no longer seems to permit us to see what is *really* needed. The questions raised by critical theorists are equally practical but broader than in Husserl: What are our social goals? What kind of political organization do we need? How do we organize our social reproduction in a non-fetishizing way, *including* our scientific praxes?

4 Heidegger and Marcuse

Marcuse discusses Husserl's worries about the disconnect of scientific rationality from practical rationality primarily in terms of scientific "neutrality" as the ground of modern alienation: once the essential and ancient connection between *logos* and *eros* falls apart in early modernity, as Marcuse has it, "scientific rationality emerges as essentially neutral."[39] Values now appear as no longer "real." Via Heidegger, however, Marcuse extends Husserl's analysis of the "de-realization" of all ideas that "cannot be verified by scientific method"[40] toward science and technology as social and ecological domination. Accordingly, he tries to show—again, via Heidegger—that scientific formalization is at the same time a process linked to instrumental reason. Given Marcuse's traditional view of Marx's *Capital* as a labor theory of value, he does not work this position out via Marx's political economy but instead via the inclusion of Heidegger's position on

38 Husserl does not transcend the cultural-intellectual horizon of his time, as is also visible in almost all sociological positions at the beginning of the twentieth century. For this, see section one of Massimo Cacciari, *Architecture and Nihilism: On the Philosophy of Modern Architecture*, trans. Stephen Sartarelli (Yale: Yale University Press, 1995).

39 Herbert Marcuse, *One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society*, introduction by Douglas Kellner (London: Routledge 2002), 147; henceforth cited as *One-Dimensional Man* with page reference.

40 *One-Dimensional Man*, 147.

technology, as initially developed in the 1930s and further developed in his essays during the 1950s. The decisive passage in *One-Dimensional Man* is the following:

> I do not suggest that the philosophy of contemporary physics denies or even questions the reality of the external world but that, in one way or another, it suspends judgment on what reality itself may be, or considers the very question meaningless and unanswerable. Made into a methodological principle, this suspension has a twofold consequence: (a) it strengthens the shift of theoretical emphasis from the metaphysical "What is . . . P" (*ti estin)* to the functional "How . . .?," and (b) it establishes a practical (though by no means absolute) certainty which, in its operations with matter, is with good conscience free from commitment to any substance outside the operational context. In other words, theoretically, the transformation of man and nature has no other objective limits than those offered by the brute factuality of matter, its still unmastered resistance to knowledge and control. To the degree to which this conception becomes applicable and effective in reality, the latter is approached as a (hypothetical) system of instrumentalities; the metaphysical "being-as-such" gives way to "being-instrument." Moreover, proved in its effectiveness, this conception works as an *a* priori—it predetermines experience, it projects the direction of the transformation of nature, it organizes the whole.[41]

We can easily illustrate what Marcuse has in mind with an example: before the discoveries and projections of the modern sciences in the ontology of the middle ages, a tree had an *essence* that could be metaphysically determined via ontological and theological assumptions and as part of the entire cosmos, and wood could be determined via a fourfold instrumentality within human creative acts, as paradigmatically introduced by Aristotle; however, what we find left of this essence of the tree is a *functional* ensemble. Instead of asking "What is the tree?" we now reduce this question to "How does the tree work or function?" It is exactly this transition that Marcuse finds in Heidegger's essay on technology insofar as Heidegger, though not always explicitly, argues that the four causes that made up the ancient concept of instrumentality get stripped of three dimensions and reduced to material causes [*causa materialis*]. Given the extensive commentaries that exist on this essay, I will only briefly point to the decisive issue in the context of discussing Marcuse.

In his essay, Heidegger focuses on two aspects of technology: namely, the modern tendency to use everything up and the total availability of everything for human usage. Moreover, Heidegger speaks of the "using up of all materials [*Stoffe*], the resource [*Rohstoff*][42] human included, for the unconditional possibility of the production [*Herstellung*] of everything."[43] What Heidegger has in mind here, among other things, is that beings within enframing [*Gestell*][44] are revealed as *material causes* and as *mere* materiality only (materiality here understood as "stuff"). The simple schema of stuff and matter

41 *One-Dimensional Man*, 151.

42 The German word *Rohstoff* goes back to "prime matter."

43 Martin Heidegger, *Vortrge und Aufsätze, Gesamtausgabe, Band 7, I. Abteilung: Veröffentlichte Schriften 1910–1976* (Frankfurt: Klostermann, 2000), 94.

44 In Marcuse, the *Gestell* turns into an ensemble of machinery: "But the machine, the instrument, does not exist outside an ensemble, a technological totality; it exists only as an element of technicity. This form of technicity is a 'state of the world,' a way of existing between man and nature. Heidegger stressed that the

gets a new sense here as we are now living in an age in which beings *really* become just "stuff"—something that is available all the time for an infinite range of purposes—and "forms" that remain *external* to "stuff." Beings tend to be "just there," taken out of their cosmological placement within their world, as constituted by all four dimensions of instrumentality: final, formal, and efficient causality, along with the material cause. When Heidegger introduces the essence of modern technology in his essay, he claims that modern technology is still a form of revealing but that it is now of a different character, which he calls *challenging* [*Herausfordern*]. This transition is important as it allows us to reject the claim that the difference between modern and non-modern technology seems to be absolute in Heidegger. It is, rather, the opposite insofar as technology turns out to be a form of instrumental horizon that strips away all the aspects that were once *essential* to beings within the world of human activities. They become meaningless "objects" that "lay around" to be discovered for exploitation. What changes between the pre-modern and modern period, however, is *instrumentality* itself, which for Heidegger, as we might recall, is the relationship between the four causes. Consequently, modern technology is characterized by the opposite or destruction of indebtedness (as the basic principle for how all aspects of a thing come together in the ancient concept of "technics"). The main consequence of this is that the *material* moment of beings becomes *separated* from the other three. Here, the cause-and-effect relation replaces causality as indebtedness and instrumentality. Accordingly, Heidegger's philosophy of technology is in truth a theory of causality or a theory of how causality becomes interchangeable with the being of beings. Causality, however, is not simply the relation between cause and effect; instead, it is the reduction of the world to one causal relationship that no longer allows us to see how all dimensions of the meaningfulness of entities hang together. "It seems," as Heidegger puts it, "as though causality is shrinking into a reporting,"[45] which leads him to introduce the *standing-reserve* [*Bestand*]. The German word *Bestand* means something that is "just there," positive, and stripped from its context. As he emphasizes, the being of beings as standing-reserve is no longer encountered as a thing [*Gegenstand*]; instead, it is encountered on the basis of its *orderability* [*Bestellbarkeit*] or, perhaps better, on the basis of its *availability*. As he writes in *The Ister*:

> It suffices here to point out in a cursory manner that in the unfolding of the modern world picture, that is, in terms of the mathematical and technical projection of inanimate nature, the aspect of "order" came to be essential with respect to whatever is actual. "Order" here means the calculable accountability of everything actual to everything else that is actual, of every relation between actual things to every other relation, of every relational relation to every other relational relation. Order here means calculable and ordered relationality. Whatever is subject to order must be posited in advance in such a way, and can be posited only in such a way, that it becomes accessible for such order and can be controlled by it.[46]

'project' of an instrumental world precedes (and should precede) the creation of those technologies which serve as the instrument of this ensemble" (Marcuse, *Philosophy, Psychoanalysis, and Emancipation*, 137).

45 Martin Heidegger, *Basic Writings*, ed. D. F. Krell (New York: Harper Collins, 2008), 328.

46 Martin Heidegger, *Hölderlin's Hymn "The Ister*," trans. W. McNeill and J. Davis (Bloomington: Indiana University Press, 1996), 40.

The German term that Heidegger uses in the Bremen lectures (which were the basis for the technology essay) is *Verwahrlosung*, which means "in a state of dilapidation or neglect."[47] This state of neglect is identical with thinghood as *available material*. We can read chapter six of Marcuse's *One Dimensional Man* as almost a direct comment on Heidegger in this respect:

> To the degree to which this conception becomes applicable and effective in reality, the latter is applicable as a (hypothetical) system of instrumentalities; the metaphysical "being-as-such" gives way to "being-instrument." Moreover, proved in its effectiveness, this conception works as an *apriori*—it determines experience, it *projects* the direction of the transformation of nature, it organizes the whole.... The science of nature develops the *technological apriori* which projects nature as potential instrumentality, stuff of control and organization.[48]

5 Conclusion

As early as 1941, Marcuse began to think about technology as a dominating framework for human experience: a mode of world disclosure that *frames* actions, feelings, expectations, responses, and so on.[49] On both the objective and the subjective side of world constitutive intentionality, technological rationality leads to semi-spontaneity, objective personalities, standardization, self-control, increased bureaucracy, instrumentality, adaptation, management, expertocracy, and standardized reaction patterns.[50] Technological rationality, conceived of in this sense, is a "project" in the light of which the unity of the world is constituted and discovered. In Marcuse's philosophy, meanwhile, the concept of alienation turns this into an anti-utopian world in which individuals are pressured to adapt to the existing reality. Liberatory goals appear, increasingly, as irrational, and the goal of addressing basic human needs and capacities appears as impossible. This has not changed today: indeed, many find it perfectly "normal" to think that human progress includes activities such as flying to the moon in private spaceships, while at the same time thinking that ending poverty on earth remains an impossible, if not irrational, goal despite the fact that the latter could, *in fact*, be achieved fairly easily by converting all activities related to flying in private spaceships to the moon toward alleviating the global food crisis (for example). Instead of a reasonable praxis related to *eros* and *logos*, "the totality of objects of thought and practice," as Marcuse has it, "is now 'projected' as *organization*."[51] In fact,

> technicity requires domination: the control of nature as a hostile, destructive, and violent force; the control of man as part of that nature; the exploitation of natural resources for the satisfaction of needs. In these ways, industrial society appropriately

47 Martin Heidegger, *Leitgedanken zur Entstehung der Metaphysik, der neuzeitlichen Wissenschaft und der modernen Technik, III. Abteilung: Unveröffentlichte Abhandlungen, Vorträge – Gedachtes, Gesamtausgabe, Band 76* (Frankfurt: Klostermann, 2009), 94.

48 *One-Dimensional Man*, 152.

49 Herbert Marcuse, *Technology, War, and Fascism: Collected Papers of Herbert Marcuse, Volume One*, ed. Douglas Kellner (London: Routledge 1998), 50.

50 Marcuse, *Technology, War, and Fascism*, 41–49.

51 Marcuse, *Philosophy, Psychoanalysis, and Emancipation*, 134.

> exercises its technological domination; but insofar as society has made an abstraction of technology's ultimate purpose, technology itself perpetuates misery, violence, and destruction.[52]

To sum up, we can see that Marcuse makes two moves: (1) he understands Husserl's critique of scientific abstraction as a critique of reducing reason and rationality to only one dimension and as the expression of societal alienation; and (2), he turns Heidegger's concept of modern technology into a critique of functionalist reason. Both (1) and (2) lead him to argue that science and technology are part of a project through which both humans and nature become subject to domination. As Andrew Feenberg has pointed out, to most commentators this Marcusian claim seems unsettling insofar as Marcuse seems to also suggest within this claim that science and technological rationality *as such* are the main forces of social domination.[53] However, in the light of Marcuse's later philosophy, it becomes clear that he actually sees modern domination as grounded in its *capitalist form*.[54] Even so, given that Marcuse remained within a traditional view of Marxism that claimed that Marx's critique of political economy is based on a labor theory of value, and given that he remained a technological determinist, he was unable to work out the connection between the value form, the commodity form, and technology. What is missing for Marcuse, in other words, is the concrete connection between a historically specific concept of value as the social form of objecthood and the intrinsic form of technology under value as constitutive for all social relations. On the back of recent work by Angus and Feenberg, elucidating this connection and its implications comprises an important project if we hope to understand how phenomenology and critical theory overlap in important respects and thus should not be taken as hostile intellectual projects.[55]

52 Marcuse, *Philosophy, Psychoanalysis, and Emancipation*, 137.

53 Feenberg, *The Ruthless Critique of Everything Existing*, 148

54 Feenberg, *The Ruthless Critique of Everything Existing*, 158.

55 From this should be excluded the project that has been termed "critical phenomenology." For example, in a recent publication with key contributions by contemporary phenomenologists and social philosophers, Frankfurt School critical theorists and Marxists remain *completely* absent; for this see Gail Weiss, Gayle Salamon, and Ann V. Murphy (eds.), *50 Concepts for a Critical Phenomenology* (Evanston: Northwestern University Press, 2019). A better take on these issues can be found in *Phenomenology As Critique: Why Method Matters*, eds. Andreea S. Aldea, David Carr, and Sara Heinämaa (London: Routledge, 2022).