

Ideas for a Critical Theory of Nature

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Introduction

To the stark choice that Rosa Luxemburg presented in the Junius Pamphlet of 1915—a choice between socialism and barbarism—we might today, in an era of potentially run-away climate change, add a third possibility: annihilation. A theory of the causes of the present environmental crisis and of the destruction of nature, which today reaches catastrophic proportions, is surely an imperative. Resources for such a theory can be found in the ideas of the Frankfurt School, a school of Marxist thinkers who as early as the middle of the last century built into their critical theory of society a diagnosis of man’s destructive, “dominating” relation to nature. This diagnosis becomes increasingly topical as the extent of humans’ current predicament becomes clearer. Yet while Frankfurt School critical theory contains valuable resources for making sense of the current crisis, that theory is not without its flaws. It succumbed to abstraction and ahistoricity in its diagnosis and so failed to realize a truly *critical* theory of nature. This is partly attributable to the philosophies on which the Frankfurt School theorists themselves drew. Adorno and Horkheimer repeated many of the motifs of the early German Romantics’ view of nature, including their abstract concept, “man,” and it was this that made it difficult for them to explain the origins of nature’s subjugation. Similar flaws can be found in the work of Marcuse, who on occasion equated technology with domination, again a Romantic tenet, but one which leads to an impasse. Yet something in these diagnoses of man’s domination of nature proves persistently appealing, as we see in the afterlife they have taken on in the environmental movement. The simultaneous forcefulness and simplification typical of Frankfurt School thinking, which derive from the School’s philosophical roots, reappear in so-called “deep ecology,” a form of thinking which likewise rehearses old, problematic, philosophical moves. Problems common to Frankfurt School and “deep ecological” thinking are examined here. Against the simplifications and abstractions in both, we can learn how best to conceptualize humans’ relation to nature from other philosophical sources, in particular Hegel and what differentiated Hegel’s philosophy from the Romantic worldview. By recognizing how Hegel differed from a Romantic philosopher like Schelling, we can develop a more nuanced and dialectical account of our relation with nature. This in turn can inform a *critique of critical theory* and allow us to develop a truly *critical theory of nature*.

In the opening pages of his *System of Transcendental Idealism*, written in 1800, the philosopher Friedrich Wilhelm Joseph von Schelling stumbled upon an idea whose revolutionary implications are hard to overestimate. Schelling suggests in the book’s opening pages that man—humankind—is to be conceived not in contradistinction to nature but rather as *nature come to consciousness of itself*; that in and through man, nature comes for the first time to self-awareness. “The dead and unconscious products of nature,” Schelling writes, “are merely abortive attempts that she makes to reflect herself; inanimate nature so-called is actually as such an immature intelligence, so that in her phenomena the still unwitting character of intelligence is already peeping through.” Nature’s highest goal, Schelling continues,

to become wholly an object to herself, is achieved only through the last and highest order of reflection, which is none other than man; or, more generally, it is what we call reason, whereby nature first completely returns into herself, and by which it becomes

apparent that nature is identical from the first with what we recognize in ourselves as the intelligent and the conscious.

What was revolutionary in this idea was not simply what soon transformed philosophical speculation: the insight that the subject-object dualism bequeathed from Kantian philosophy could be overcome by an understanding of evolution; that subject (man) and object (nature) could now be seen as two sides of the same substance; and the division between phenomenal appearances and noumenal knowledge thereby superseded, though it is true that this was the problem Schelling felt himself to have solved. It is not only in the birth of absolute idealism that Schelling's radicality can be found but in the idea that he gives us here of a new conception of man's relation to nature. Transforming Spinoza's view of a unified natural substance which however was indifferent to man's significance, it was Schelling's grounding of Spinozism in natural history, and the insight that man is of the same substance as nature and yet qualitatively different from the natural substance out of which he has evolved, that was a truly radical insight. Schelling shows nature dividing itself while remaining unified and gives us a naturalism which is also a humanism, one which, despite its teleology, reduces neither one to the other. Subject and object are explained in their unity and their difference: nature is not just nature, but must be conceived—if it is to be conceived at all and not remain mute—in relation to man, the rational animal, who reaches nature's goal in being able to reflect upon human significance with regard to the natural world.

Meanwhile, at the moment Schelling's formulation was being set down in print, the very form of humans' natural-unnatural existence was being radically altered. The industrial revolution was changing irrevocably the relation between man and nature, heightening a separation of that which had only just been philosophically united. Though this change was recognized by some of the great minds of the period—among them Schelling's own circle in Jena and their Romantic counterparts in Britain—there was little that poetry or indeed philosophy could do but record the new ravaging of nature by human society.

At that time, Germany had yet to experience the full impact of industrialization. Schelling put down his nature philosophy at a time when Blake's "dark Satanic mills" had yet to spread to the continent. But Novalis, Schelling's close friend, sensed something changing. In his *Lebrlingen zu Sais*, Novalis wrote that the "companionable" Nature of old "has expired, leaving behind only her lifeless, twitching remains." The poet Hölderlin, a visitor to the Jena circle, saw similarly. "We have been dislocated from nature," he wrote in the preface to *Hyperion*, "and what was once One now battles itself." A few miles away in Weimer, however, Goethe saw things differently. Industrialization was inevitable and was furthermore to be embraced. Rejecting his own youthful flirtation with Romanticism, Goethe set about writing *Wilhelm Meister's Wanderjahre*, a paean to the industrial division of labor, and a companion-piece, *Faust Part II*, whose hero would be a daring engineer, the ruler of a land which his own technological invention reclaims from the sea. Only those who adapt to the coming industrial revolution, the aging Goethe told his readers, will have a useful role to play in society. Novalis was appalled, berating him for having worshipped the new god of "economics."

It is not hard to see prototypes of contemporary environmentalism in these philosophical debates. We now know that our environmental crisis may have had its origins at this moment too. Schelling's writing coincides with the birth of the "industrial age," at whose beginning scientists now place the start of a "man made" increase in the volume of greenhouse gases in the atmosphere, and with it a steady increase in the

average global temperature that has continued to this day, threatening now to become “runaway.” Such a development renders Schelling’s *Naturphilosophie* cruelly ironic: the conditions for humanity’s disappearance from the Earth may have been sown at just the moment he felt himself to have understood man’s significance in nature, and nature’s coming to self-consciousness in the form of *homo sapiens* may prove to have been only the briefest blink of an eye in cosmic time.

“One Immense Hunting Ground”

The ecological inheritance of German Romanticism would be worthy of study in its own right, but one particular strand of this inheritance will concern us here. The Romantic critique of the Enlightenment—Novalis contra Goethe—was inherited some 150 years later by Horkheimer and Adorno in the key work of Frankfurt School critical theory, *Dialectic of Enlightenment*, and it is the Frankfurt School and their contribution to thinking about man’s relation to nature that offers a perennially challenging and searching, though in key respects also problematic, contribution to environmental thought.

To justify this, however, some reconstruction of Frankfurt School thinking about nature, beginning with *Dialectic of Enlightenment*, will be necessary. On the face of it, that work’s title orients us to Hegel, and it is true that Hegel in his time at Jena wrote of something like a dialectic of the Enlightenment: enlighteners’ notions of scientific progress through application of the empirical method sometimes passed over into their ostensible opposite—faith. And yet it is more likely that the arguments employed by Horkheimer and Adorno and the inspiration for their title, *Dialectic of Enlightenment*, come from the Jena *Frühromantik* circle which flourished before Hegel’s arrival, something the authors themselves all but admit at the end of the book’s opening essay. “Enlightenment” in Adorno and Horkheimer’s hands is not the solely eighteenth-century phenomenon it was under Hegel’s scrutiny but is widened out to a form of knowledge and practice projected back as far as Homeric Greece and even beyond to the earliest shamanic rituals.

Dialectic of Enlightenment traces the enlightened worldview back to a fateful separation of subjective mind from nature, which occurred in the earliest human societies. These earliest societies sought to overcome their superstitious fear of nature through ritual, and yet ritual already showed rudiments of the calculating reason that would later “disenchant” the world of ritualized magic—science. As myth passed over into enlightenment, Horkheimer and Adorno argue, nature turned into pure objectivity, disenchanted of inherent powers or hidden qualities. In the fully enlightened world, man has taken on “the countenance of the lord and master,” which was merely the dream of the primitive in his ritual invocations. The fantasized domination of nature via magic gives way to “realistic world domination” via a more skilled science in which Being is now apprehended “under the aspect of manufacture and administration.” Man’s “happy hunting ground” becomes no less than “the unified cosmos, the inclusive concept for all possibilities of plunder,” while men themselves become fungible particulars in a schematizing science that mirrors industrial society’s total processing of material. Repressing internal nature at the same time as controlling external nature, humanity becomes a parody of the Schellingian subject-object, “not only overtaking their immediate predecessors but thoroughly exterminating them.” By the end of *Dialectic of Enlightenment*, the separation of reason from nature has almost come full circle. “Either men will tear each other to pieces or they will take all the flora and fauna of the earth

with them; and if the earth is then still young enough, the whole thing will have to be started again at a much lower stage.”

Famously, Adorno and Horkheimer’s thesis is expounded via a reading of Homer’s *Odyssey*, and in particular Odysseus’ encounter with the Sirens, a “presentient allegory” of the dialectic of enlightenment that shares its “inescapable compulsion to the social domination of nature.” Odysseus’ trickery of the Sirens, commanding his sailors to tie him to the mast as his ship passes their rocks so that he can hear their beguiling song while the sailors’ ears are stopped with wax, becomes the cunning of an instrumental reason that is already “enlightened” in its calculations towards nature: “what men want to learn from nature is how to use it in order wholly to dominate it and other men.” Ancient myth is said to be thoroughly modern: Odysseus acts like the factory manager, “*homo oeconomicus*,” his sailors anticipate production-line workers yoked together by invisible chains. The Sirens meanwhile represent nature “neutralized to become merely the wistful longing of the passer by,” while the successful passage of Odysseus’ ship signals their last hour, nature disenchanted in the act of being overpowered.

Many of these themes recur in a work published just three years after *Dialectic of Enlightenment*, Horkheimer’s *The Eclipse of Reason*, a work that develops at greater length the theme of man’s domination of nature, a process whose evidence Horkheimer now finds even earlier than Homeric Greece, in the first book of Genesis. Again a double subjugation of internal and external nature is described, though now the internal relation between the two forms of subjugation is emphasized. One crucial difference has emerged by the time Horkheimer writes this solo work, though: *Eclipse of Reason* begins to move away from the sort of abstraction involved in *Dialectic of Enlightenment*’s laying the blame at the feet of either “man” or the trans-historical process of “Enlightenment.” In *Eclipse*, humans’ avidity to subjugate the natural world is said to arise not from their own nature but “from the structure of society.” Thus, just as the aggressive actions of imperialist nations are not to be explained by abstractions like “national character” but rather by struggles within those societies,

so the totalitarian attack of the human race on anything it excludes from itself derives from interhuman relationships rather than from innate human qualities. The warfare among men in war and in peace is the key to the insatiability of the species and to its ensuing practical attitudes, as well as to the categories and methods of scientific intelligence in which nature appears increasingly under the aspect of its most effective exploitation.

Though this divergent tendency of *Eclipse of Reason* is interesting, it must be acknowledged that the work often falls back on many of the arguments from *Dialectic of Enlightenment* and so rehearses many of its flaws.

Several points of criticism can be leveled at Adorno and Horkheimer’s ideas in these texts. Firstly, the concept that runs through these works—*Naturbeherrschung*, the domination of nature—may describe a state of affairs, but it does not explain them. What explanations there are for man’s putative desire to dominate nature are said to lie in the drive to self-preservation, or paradoxically in the influence of certain ideas and modes of thinking, e.g., Baconian Enlightenment, mathematics, a schematizing mind. One problem with the former explanation is that since self-preservation is an ineluctable human drive, one cannot thereby imagine the domination of nature being overcome. The problem with the latter explanation is that we are left wondering how the *idea* of dominating nature entered the everyday *practices* of those not schooled in those sciences

or enlightened worldviews that are said to be to blame. Did such an idea really organize the everyday worldview of those most empowered to effect nature on a daily basis?

Adorno and Horkheimer's argument can be critiqued at a deeper level, too, once we ask what the word "dialectic" in *Dialectic of Enlightenment* actually means. Given the often cited sources for much Frankfurt School theory, one might rightly think that this key work of theirs is drawing upon the Hegelian and Marxian meaning of the term dialectic. And in one sense it is, insofar as it shows phenomena—here myth and enlightenment—reversing (*umschlagen*, Hegel's often used word) into their ostensible opposites. But the work is not dialectical in another sense: one which finds a conflict or struggle at the heart of the social phenomena it observes (something central to Hegel's and Marx's understanding of dialectic). And in lacking this second sense of dialectic, we find a further significant weakness of the book. Dialectical reversals in *Dialectic of Enlightenment* are not grounded in the social experience of the phenomena described, nor do they allow us to find a social dynamic within the contradictory world that is analyzed. For the tradition that one would expect to have informed a dialectical analysis—Hegel and Marx—a reversal at the level of ideas is inseparable from the experience of a contradictory social world and the dynamic of that experience, an experience which does not bear contradiction happily.

This is important because Adorno and Horkheimer at several points in *Dialectic of Enlightenment* link their argument explicitly to that of Hegel, notably when they liken the story of Odysseus's and his sailors' encounter with the Sirens to Hegel's account of master and slave (Odysseus becomes the Lord of the master-slave dialectic in the *Phenomenology of Spirit*, his sailors the enslaved). Yet while acknowledging that the category of work is important to Hegel's account—it is what mediates the slave's encounter with nature—Adorno and Horkheimer overlook the many other aspects of Hegel's reflections on Lordship and Bondage that distinguish them from the Homeric myth. Not least is that in Hegel, the slave gains an independence through work by turning nature into "things," which qualifies what at first sight seems to be his dependence upon the master. In Adorno, this Hegelian point is explicitly denied: the "stopped ears" of the "pliable proletariat" have "no advantage" over the "immobility of the master" in the relation of each to the nature represented by the Sirens. In another vital respect, the *Phenomenology* seems incomparable with the *Odyssey*: the growing independence of Hegel's slave implies a parallel dependence—of the master upon the slave's recognition. This idea is likewise absent in Adorno and Horkheimer. And crucially for our topic, a third implication of the master-slave dialectic is that the relation of master to slave is the key to understanding the relation of both to nature: the slave is forced to produce "things" for the master through "work" on nature, while the master consumes ("enjoys") them. The slave's relation to what Hegel calls "natural existence" thereby becomes more active, concrete, and educative than the master's. Hegel is telling us that it is only the differences and divisions within humanity which fully explain society's exploitation of nature. Finally, another difference should be mentioned. Hegel shows us a social relation (mastery and slavery) that is malleable and not static; it is a struggle in which power (independence and dependence) are seen to change, indeed to all but change hands. Antagonism and struggle, foregrounded in Hegel's master-slave dialectic, are curiously absent from *Dialectic of Enlightenment*.

In Adorno and Horkheimer, the command over his slaves by Odysseus is widened out to become general social domination (*Herrschaft*), and the trickery against the Sirens becomes an immemorially ancient control of nature. But if Hegel is correct, then

dependence as well as *independence* characterize a relation of mastery: for Hegel, the master is also dependent upon the enslaved. This has implications for how we understand nature's supposed domination. That otherwise flawed advocate of a dialectics of nature, Friedrich Engels, was at least on strong Hegelian ground when he argued that "we by no means rule over nature like a conqueror over a foreign people, like someone standing outside nature... [but] we, with flesh, blood and brain, belong to nature, and exist in its midst." And Engels' colleague Marx was consistent with this thinking, despite his own occasional eulogies to nature's subjugation, when he put in a logically central position, not the concept of domination, but rather the interchange, or "metabolism" (*Stoffwechsel*), between man and nature. By metabolism (literally the exchange of material), Marx meant to show that humans are as much dependent upon nature as they are capable of dominating it, that reciprocity and not simple subjugation characterizes the relationship, and that the exchange of matter between humans and nature is a fine balance, one which he saw threatened by the capitalist organization of production. In this light, any domination of nature would threaten man himself; each attempted conquest "takes its revenge on us," as Engels presciently put it. Drawing on the work of Adorno's student Alfred Schmidt, I argue that this "metabolism" could be the starting point of a richer analysis than mere "domination" (Adorno and Horkheimer's concept) allows, because the concept of metabolism allows an understanding of the different and differently destructive *forms* that human interaction with nature has assumed at different moments in human history and in different modes of production. Thus, an analysis based on the concept of metabolism does not posit domination as a primordial *condition humaine*.

The idea that domination exhaustively captures man's relation to nature is simplistic. It overlooks that one can never wholly dominate that upon which one is dependent without annihilating it and thereby oneself, as Hegel's master-slave dialectic shows. The critical theory of nature I am proposing would develop the idea that there exists not simply an unhindered and achieved domination of nature or of man but an *antagonism within society* that mediates our relation with nature. Recognizing such an antagonism would mean acknowledging the dynamic behind the destruction of nature, what Engels calls "the original appropriation—the monopolization of the land by a few, the exclusion of the rest from that which is the condition of their life." It would also mean acknowledging that this original appropriation is itself struggled over and that some human practices already strive to resist nature's destruction, often because the very livelihood of those resisting depends on it. No sense of what Hegel would call the "ethical life" of peoples engaged in activities that do not dominate nature is to be found in Adorno and Horkheimer's writings, perhaps because exploring it might have moderated the hyperbole of their critique. A theory that did justice to the antagonism at the heart of *Naturbeherrschung* would see not only the way nature has been destroyed by the imperatives of class-ridden forms of production, but crucially would see the other side of this dynamic too: the struggle that this entails on the part of many peoples today attempting to preserve a sustainable form of metabolism with nature. These struggles might be the building block for practical attempts (untheorized in *Dialectic of Enlightenment*) to resist nature's degradation.

Someone who went part of the way along this path was Adorno and Horkheimer's colleague, Herbert Marcuse. Though clearly sharing many of their concerns over the domination of nature by man, Herbert Marcuse's views on nature follow different trajectories and developed more subtly during the same period. We can see, for instance, differences between the way domination of nature is expressed in *Eros and Civilization* (1956), *One-Dimensional Man* (1964), the essay "Industrialization and

Capitalism in the Work of Max Weber” (1964, revised 1965), the lecture “Nature and Revolution” (delivered in 1970), and the essay “Ecology and the Critique of Modern Society” (written shortly before his death in 1979). The particular development of Marcuse’s views were no doubt informed by the changing social conditions through which he lived. By the mid 1960s, Marcuse could see something that would not have been obvious to Horkheimer writing in the immediate aftermath of the war and in a situation of widespread austerity: that mass consumption might play an increasing role in the environment’s destruction. But at a certain point, a weakness inherent in the Frankfurt School thesis of *Naturbeherrschung* itself seems to have dawned on Marcuse. In his essay on Max Weber (1964), for instance, technology’s role in environmental destruction is emphasized.

Not only the application of technology but technology itself is domination (of nature and men)—methodical, scientific, calculated, calculating control. Specific purposes and interests of domination are not foisted upon technology “subsequently” and from the outside; they enter the very construction of the technical apparatus.

Here the influence of Marcuse’s one-time teacher, Heidegger, seems evident. Heidegger in the essay “What are Poets For?” had criticized those who assume technology is “something neutral, beyond benefit and harm, creation and destruction, to be used by anybody at all for any ends at all.” For Heidegger, “the object-character of technological domination,” a domination in which every thing that exists is seen as quantifiable, producible and saleable, “spreads itself over the earth ever more quickly, ruthlessly and completely.” Marcuse rehearses the Heideggerian argument in *One Dimensional Man* where he suggests that “technics” (Heidegger’s term) has become “the universal form of material production,” instrumentalizing nature *a priori*, before any particular technical organization of society.

However, it seems that towards the end of his life, Marcuse pulled back from the implications of such an idea, perhaps not only because of the tarnished politics which Heidegger had drawn from the critique of technological domination, but because he realized such ideas are unsound on their own terms and are not sufficiently dialectical or faithful to the sources of critical theory. This shift is apparent in Marcuse’s 1970 lecture “Nature and Revolution,” where he talks of “the destructive abuse of science and technology in the service of exploitation.” Clearly a different concept of technology has been introduced, one that can be said to have been “abused” in the service of exploitation rather than being inherently exploitative. Marcuse’s former Heideggerian beliefs seem here to have been jettisoned. In the same lecture, Marcuse goes on to cast doubt on whether an exploitative relation to nature can or should ever fully be overcome, since, he argues, some human activities inevitably require it.

An interesting historicization of relations of man to nature also emerges in Marcuse’s “Nature and Revolution” essay: nature here is said to be “part of history,” an idea that destabilizes the idea of a simple domination of nature by man. The view of nature as “there for the sake of domination” may appear “a *historical a priori*” but actually pertains “to a specific form of society.” Which form of society? Marcuse answers that we must recognize “to what extent the violation of nature is inseparable from the economy of capitalism.” Not that the *critique* of capitalism has been immune to the same dominating thinking. In Marx’s work, Marcuse argues, nature “is predominantly an object, the adversary in man’s “struggle with nature,” the field for the ever more rational development of productive forces.” But in this form, Marcuse says, “nature appears as that which capitalism has *made* of nature: matter, raw material for the expanding and

exploiting of men and things.” In other words, Marxism lapsed when it failed to push through the implications of capitalism’s specific transformation of the relation between man and nature, and when it failed to subject the concept of nature to the thorough de-reifying critique received by categories like “the commodity,” “profit” or “the wage.”

Such formulations are clearly more dialectically sophisticated than the earlier, Heidegger inspired, theories. They open up the possibility of rendering Adorno and Horkheimer’s dialectic of enlightenment more critical, not just by revealing technology to be a socially determined and ambivalent phenomenon, even when an epoch appears determined by technics, but also by embarking on the sort of disaggregation of the concept “man” which would be needed to produce a truly critical theory. The extent to which theories of environmental destruction today blame the ahistorical abstractions “man,” “anthropocentrism” and “technology” and thereby overlook what Marcuse identifies as “the economy of capitalism” is a measure of how far they fail to make the transition from traditional to critical theory.

“Nature’s Tongue is Taken Away”

In Frankfurt School theory, the growth of instrumental reason implied a repression of both inner human nature and outer worldly nature as well as an attenuation of reason to the goal of the subject’s self-preservation. But it is important to note that this argument was sometimes presented in Frankfurt School writings not only negatively in the form of an immanent critique (that might be expected if the Hegelian and Marxian roots of critical theory were to the fore), but positively in the form of a utopian counter-image. This counter-image appears in a different though recognizable form in almost every thinker associated with critical theory as an image of a nature whose entelechy is brought to fruition through some new form of interaction with man, a nature, as it were, *given its own voice*. Thus in *The Eclipse of Reason*, Horkheimer describes how

Once it was the endeavor of art, literature, and philosophy to express the meaning of things and of life, to be the voice of all that is dumb, to endow nature with an organ for making known her sufferings, or, we might say, to call reality by its rightful name. Today, nature’s tongue is taken away.

In *Dialectic of Enlightenment*, the very impartiality of scientific language is said to have stifled any expressive character of nature in favor of the neutral sign, the mathematical symbol with which the enlightened world seeks to secure itself from the return of the mythic. The reverse of this—what nature might be if no longer stifled—is glimpsed in Ernst Bloch’s suggestion that against the mechanistic bourgeois view, a *natura naturata* had to be found, where matter is “liberated to co-productivity.” A similar idea can be found in Walter Benjamin’s *Arcades Project* and in his theses *On the Concept of History*, where Fourier’s vision of a new form of labor is invoked, one that “far from exploiting nature, is capable of delivering her of the creations that lie dormant in her womb as potentials.” In Marcuse’s *Eros and Civilization*, a critique of the archetypes associated with traditional psychology involves substituting for Prometheus (Marx’s hero and symbol of an order “based on repression of both inner and outer nature”), Orpheus—“the voice that does not command but sings; the gesture which offers and receives; the deed which is peace and ends the labor of conquest.” Orpheus represents a non-repressive order in which the subjective and the objective world, man and nature, “are harmonized.” It should be noted that each of these formulations owed much to German Romanticism, particularly to Novalis’ *Lehrlingen zu Sais*, where a re-enchanted nature (even the very stones) speaks.

In Adorno's writing, this utopian Orphic image reappears in the idea of "mimesis," itself much transformed from its original Aristotelian meaning. Mimesis, which in artistic terms implied not simple copying of nature but the attempt to represent nature's ideal forms, becomes in Adorno's hands a fidelity to what in nature is unlike the subject, a subject who had colonized a world of objects with its "identity thinking." Adorno believes its traces can be found both in a supersensuous impulse that was not exhausted by critical philosophy's ban on metaphysics, and in those kinds of art which most consistently explored their own formal limits. Art can "do justice" to nature, as he puts it in *Aesthetic Theory*, when it "incorporates nature's wounds."

In Adorno we find, therefore, not so much an ethic as an *aesthetic* of nature, something that might stand in for morality where no grand ethics, no *Magna Moralia*, is any longer possible. Again the Romantic Circle is the inspiration. Art, Schelling had said in the 1800 *System*, is capable of expressing ideas that philosophy is not always best equipped to convey. In an art which is able to reflect upon nature, and on the disappearance of this very reflection, Adorno seems to find the sort of mimetic image of nature that can reveal the cost of its colonization. Thus Adorno's remarkable thoughts on Gustav Mahler, and in particular on the coda to Mahler's *Song of the Earth*:

It is said in the first song that the Earth has long—not forever—stood firm, and the leave-taker in "*Der Abschied*" [the leave-taking] even calls it the dear earth, as something vanishing that is embraced. To [Mahler's song] the earth is not the universe, but what fifty years later could fall within the experience of one flying at great altitude, a star. For the gaze of music that leaves it behind, it is rounded to a sphere that can be overviewed, as in the meantime it has already been photographed from space, not the center of Creation but something minute and ephemeral. To such experience is allied the melancholy hope for other stars, inhabited by happier beings than humans.

The closing lines of Mahler's *Lied von der Erde* famously set in song the idea that the Earth will outlive man, will "bloom in spring" while the firmament "shines blue forever (*ewig*)."¹ For Adorno this "stuttering *ewig*" is not Pantheism: "no one-and-all is conjured up as consolation." It voices not the Spinozistic *hen kai pan* (the Pantheism to which the early Romantics subscribed), but knowledge of the ephemeral and transient, here transient beauty as a symbol of morality and an urgent moral imperative. Adorno seems aware of the dangers within a simple Romantic re-spiritualization of nature, though here, he, too, succumbs to the lure of its imagery.

Today, though, what remains of value in this idea? While one must acknowledge the force of such images and recognize there is a critical role to be played by a poetic evocation of nature—that as Novalis put it, "poetry has been the instrument of choice for all true friends of nature"—the idea of a redeemed nature (Benjamin), or Bloch's and Marcuse's idea of nature as a "possible subject," remains problematic. This is not least because both ideas re-enchant nature; they render nature mythic again, which is the simple antithesis of Enlightenment. For Enlightenment, according to the critical theorists, overcame myth only to become mythic itself. To then substitute for Enlightenment a *new* myth is to take a step backwards and to betray the spirit of critique that was central to critical theory. Critique does not posit alternatives, it is not *positive*, but instead seeks—*negatively*—to expose the contradictions in what it analyzes. This spirit of critique, however, is abandoned when a new myth is posited as an independent standard by which to judge the present or to serve as a utopian guide to what ought to be. The thesis of nature's total subjugation (*Naturbeherrschung*) has generated the "ought" (*Sollen*)

of its opposite, an unappropriated, redeemed nature, separated from any tendency or praxis that might realize it.

Adorno, to his credit, did not always fall into the trap of the *Naturbeherrschung* thesis. A corrective to some of the weaknesses we have seen in *Dialectic of Enlightenment* seems to lie in one of his own early texts, the 1932 essay on Natural History. This text appears more faithfully dialectical insofar as it allows us to see a mediation of history and nature which in turn undermines the thesis of simple domination and the utopianism which is its abstract negation. The Natural History essay argues that “the moments of nature and history do not disappear into each other, but break simultaneously out of each other and cross each other in such a way that what is natural emerges as a symbol of history, and history, where it appears most historical, appears as a symbol of nature.” Yes, nature is historical, Adorno says, but he sees a complement to this in history’s reversion to “second nature,” a history become ossified and seemingly “given.” However, this idea of a nature which is historical and a history in which everything historical remains under the spell of blind nature was never theorized systematically by Adorno. Fleshing out this idea seems to have been left to his student, Alfred Schmidt. In his doctoral thesis of 1960, Schmidt reminds us of Lukàcs’ argument in *History and Class Consciousness* that “nature is a societal category,” that whatever is said to be natural “is related to man and whatever form his involvement with it takes.” But if this is true, says Schmidt, the converse is equally valid, “that society is equally a category of nature insofar as society’s current form and also the segment of nature appropriated by it remain within the still largely unpenetrated total reality, nature.” Schmidt’s point is that despite the exploitation of nature that characterizes human history, history does not and cannot ever fully remove itself from its natural basis. He does justice to the dialectic that what nature *is* is always mediated by society and so remains within the field of human history while that very society and its history is mediated by and remains dependent upon nature.

What Lukàcs called the “form” of man’s involvement with nature, and what Schmidt clarifies as the “historically determined form” of metabolism, are useful nuances to the thesis of *Naturbeherrschung*. When combined with Schmidt’s close reading of Marx on nature, these concepts allow us to develop (though Schmidt only began to do so) the sort of analysis of forms taken by the interchange between man and nature that would do justice to the Marxist analysis of the forms taken by *inter-human* relations at different stages of history and in different parts of the globe, with particular reference to their most “perverted” (*verkehrte*) form, in capitalism. Developing such a concrete, historical analysis of the metabolism of man and nature (without, as Adorno warns, letting these two concepts “disappear” into one another) would be a vital task for critical theory to begin to undertake.

Excursus on George Bradford’s Critique of “Deep Ecology”

What gives the debate over whether “man” and “technology” “dominate” nature a pressing actuality that goes beyond its scholarly interest is that these themes have today become resurgent orthodoxies in the green movement, a movement which itself has become increasingly mainstream as the extent of climate change has become known. There is a major school of thought within the green movement—I am thinking here of so-called “deep ecology,” which draws *inter alia* on the philosophy of Finnish ecologist Arne Naess—that derives from the idea of man’s domination of nature through technology, a politics which is, worryingly, at the opposite end of the spectrum to critical theory.

Deep ecology pits itself against “humanism” and “anthropocentrism” in thinking about the natural world, championing instead the perspective of nature conceived as a densely interwoven system of diverse life-forms, each of which demands both respect and equal rights to flourish. “The attempt to ignore our dependence and to establish a master-slave role,” writes Naess, “has contributed to the alienation of humans from themselves.” Naess finds his philosophical inspiration in Spinoza and puts forward what he admits to be a simplified version of the philosopher’s monism (one can imagine him having little truck with Schelling’s *System* of 1800 because of the central place given there to man). From Spinozism, Naess draws certain practical policies, including championing the preservation of wilderness areas and the protection of species. It is anthropocentrism, the belief in man’s external and privileged position with regard to the natural world, that he believes is the major cause of the present environmental crisis.

Some “deep ecological” ideas would certainly be familiar to a reader of *Dialectic of Enlightenment*. And yet some of deep ecology’s advocates speak of human population growth as the cause of scarcity and environmental destruction. Naess and his colleague, George Sessions, say that the “flourishing” of nonhuman life requires human depopulation. Some deep ecologists go even further, seeing humanity as a parasite or germ that, burgeoning beyond its legitimate limits, beyond the planet’s “carrying capacity,” to use a voguish but specious term, has become a positive threat to the survival of life on the planet. Some advocates have even suggested that diseases and famines should be left untackled as they represent “natural” forms of population control. That such noxious views derive from the same premises as the Frankfurt School’s concept of *Naturbeherrschung* would be reason enough to consider further the concept’s political implications; there is an undeniable “family resemblance” between the critique of the domination of nature on the left and that on the far right. Though Walter Benjamin might have been naïve when he proposed creating concepts that would be “unusable by fascism,” it would nevertheless be vital to stress what *distinguishes* a critical theory of nature from the dangerously misanthropic politics of some deep ecologists.

Drawing on Frankfurt School ideas and taking as his epigraph Adorno’s formulation from *Aesthetic Theory* that “in every perception of nature there is actually present the whole of society,” the writer and activist George Bradford has done just this, painstakingly challenging deep ecology’s philosophy and politics:

In opposition to humanism (defined rather simplistically as the ideology of human superiority and the legitimacy to exploit nature for human purposes), deep ecology claims to be a perspective taken from outside human discourse and politics, from the point of view of nature as a whole. Of course, it is a problematic claim, to say the least, since deep ecologists have developed a viewpoint based on human, socially generated, and historically evolved insights into nature, in order to design an orientation toward human society.”

Deep ecology’s belief that “all things in this biosphere have an equal right to live and blossom” is for Bradford a similar projection (in Hegelian terms, “positing”) of human socio-political categories onto nature, in this case bourgeois law’s formal equality of all claimants. “Neither animals nor primitive peoples,” he argues, “recognized or conferred abstract legal rights, but lived in harmony and mutualism, including a mutualism of predation of other species to fulfill their needs and desires.” For Bradford, the form of relation between man and nature has been for millennia, and until relatively recently in historical terms, not one of anthropocentric domination but rather the “humanization”

of nature in which man interacted mythically, symbolically and metabolically with the natural world in a way which equally involved the continual re-naturalization of man.

In Bradford's view, the abstractions in deep ecology's philosophy of nature are repeated in its political diagnoses:

Deep ecologists err when they see the pathological operationalism of industrial civilization as a species-generated problem rather than as one generated by social phenomena that must be studied in their own right. . . . they contradictorily insist on and deny a unique position for human beings while neglecting the centrality of the social in environmental devastation. Consequently, they have no really "deep" critique of the state, empire, technology, or capital, reducing the complex web of human relations to a simplistic, abstract, scientific caricature.

His point is that we need to disaggregate the species "man" (repeated today in the IPCC's key phrase "man-made global warming") in order to understand the destruction of the environment and so make visible the relations of power which endow different humans and different human practices with differently damaging capabilities. Bradford's critique views environmentalists at large and deep ecologists in particular as mistaken in assuming industrialization to be an autonomous process rather than being rooted in a socio-economic system which has a deeper dynamic—a drive to perpetually increase the rate of exploitation of labor. Talk of industrial society as an autonomous form of social organization or technology as autonomously dictating social development is to this extent naïve. Though there are undoubtedly technologies which are ecologically dangerous, nothing in technology itself is destined to be so—a point which Marcuse realized late in life—or we would have to condemn windmills in the same breath as we condemn jet airliners.

Neither is it simply forms of consumption that are the root cause, as many environmentalists argue. The fact that today an Indian child consumes one ninetieth of the energy of her American counterpart should be reason enough to disaggregate the abstraction "man" who is said to be responsible for global warming. Though forms of consumption in the West, and use of the automobile in particular—what Guy Debord once called "the sovereign good of an alienated life"—are undoubted factors, consumption in itself cannot be understood outside of the circuit of capital, a structural imperative that must constantly increase the amount of commodities consumed if capital is to be accumulated (Marx's famous M-C-M). It is this that makes for the "grow or die" economies that environmentalists talk of. Inseparable from this, the birth of advertising, as we learn from the Frankfurt School's studies on the culture industry, allowed capital to expand the circuit further, bypassing the conscious discrimination of consumers over the usefulness ("use-value") of commodities in favor of their (manipulated) desirability.

But as Bradford also shows, capital only provides this rich dream world of consumption for some. For others, what drives them just as recklessly to degrade nature is the opposite tendency: impoverishment. The poor who lay waste their natural habitat in exchange for cash exhibit a rational response to poverty in a society where rationality is compelled to be instrumentally short-sighted, that is, irrational. Capital's topsy-turvy tendencies—enrichment alongside immiseration—are both naturally destructive.

Bradford's important critique of deep ecology uncovers problems we have already seen in the Frankfurt School's lament over the actions of "man" or "industrialism" upon nature. Both schools of thought fail to address the historically

specific configuration of humans within a capitalist system of production, a system of production which for centuries has chased markets over the whole surface of the globe and which in finding a market *beneath* its surface began to dig humanity's own grave. It is the relations of production and the distorted consumption in the now near ubiquitous capitalist market that determines the destructive relation to nature of those who live under its sign. Capital sees nature as mere resource for commodity production and encourages the wage laborer (and those forced by dispossession into wage labor) to do the same in both the production and consumption of those commodities which embody their now opaquely mediated contact with nature. The ecologically damaging character of many goods and services produced and consumed today—commodities which do not just replace use value with exchange value but make money from the positively *toxic*—is a function of the alienation of humans from the labor which should have embodied their metabolism with nature. And it is just this alienation from nature that makes an escape back to the natural world so appealing as a revolt against society's destructive trajectory, and which makes deep ecology's passion for wilderness so alluring. But such an escape, less and less possible in today's world, is merely symptomatic. The individual's flight into a purportedly pristine nature merely reflects the subject's disempowerment in an increasingly unfree society.

Paradoxes of Preservation

The growth of positively misanthropic tendencies within the environmental movement that attribute "man" rather than capital as cause of environmental degradation are a worrying development. We have seen how the Frankfurt School sometimes colludes with such abstractions, abstractions from which the environmentalist Right derive such a noxious politics. When they do so, both schools of thought overlook that one can only examine and explain the destruction of nature under particular modes of production, and fundamentally under that mode of production which takes destruction to unprecedented and catastrophic levels—the capitalist. It is possible to develop a more critical theory of nature if we set against the abstraction in the Frankfurt School's idea of *Naturbeherrschung* (particularly in its formulation in *Dialectic of Enlightenment*) a tool kit of theories from less well-known Frankfurt School writings. In particular, this should include elements of Horkheimer's *Eclipse of Reason*, which stress "interhuman relations" rather than "Man" as nature's enemy; the later Marcuse's recognition of capitalism's specific anti-ecological dynamic; and Alfred Schmidt's revival of the Marxian notion of "metabolism." These ideas in turn need to be linked to a careful re-reading of the Hegelian and Marxian roots of critical theory, which will find there already the insight that struggles within human societies mediate the relation between humans and nature.

Adorno writes at one point that "Spirit is not what it enthrones itself as ... the transcendent in its purity, but rather is also a piece of natural history." But he fails to add that Spirit as a development of natural history is also divided in itself, as Hegel's master-slave dialectic was intended to show, and which in turn explains its relation to natural history. Spirit is born in natural history: it arises from but never fully transcends the desires (animal-like at first but then also humanly recognitive) that are at stake in the struggle between master and servant and which in turn implicate nature through the transformative action of work. Schelling found the birth of human self-consciousness in natural history, in evolution; Hegel deliberately places it at the start of human history, the first historical act which, crucially, is one of inter-human struggle and division. It is then the diremption, or division, of Spirit (contra Spinozan monism), that is also Spirit's history, its history of alienation and human inequality, that subsequently determines its

relation with nature. And by implication, it is only when the servant can mediate his or her relation to nature without lordship as the distorting, perverting factor (that is, cease to be servant at all) that Spirit might reconcile itself with nature and “make good again the loss.”

Today of course what may be at issue is not just the overcoming of alienation and unfreedom that was the master-slave dialectic’s telos, but ironically a return to the struggle for mere preservation with which that dialectic began. It was an axiom of another dialectical tradition, one emerging from Engels, that there exists a distinction between class society as a realm of necessity and classless society as a realm of freedom. But if the degradation of the biosphere has become exponential or “runaway,” the distinction between human actions based on necessity and those premised on freedom may itself fall, as survival becomes society’s only watchword. And we know from the Frankfurt School that elevating the survival of “society” masks the survival of particular interests. The instrumental jargon today, and which will no doubt be heard increasingly often, is of “adjustment” to climate change, a jargon which rehearses the reality principle of a repressive order in which freedom seems to manifest itself—perhaps even more so than in the Cold War society observed by Horkheimer and Adorno—only in adaptation. Mere adaptation mocks the freedom that was once seen as developing in history and even more the “peace” with nature that was offered as its alternative.

Will preservation against ecological catastrophe be an equal right of humanity, or will it more likely fall unequally to the powerful? Naomi Klein recently painted an ominous picture of the rich in America arming themselves against possible resource conflicts: “the really big money,” she says, “despite all the government incentives is turning away from clean-energy technologies, and is banking instead on gadgets that promise to seal wealthy countries and individuals into hi-tech fortresses” as the waters—perhaps literally—rise around them. Not that such enclaves will be able fully to separate themselves from the outside world—they will remain dependent on those workers who must daily pass through the gates, bringing with them the products of belabored nature. The master-slave dialectic—the Lord existing only for himself and indentured Servant forced to work on “things”—may prove resurgent in the coming storm.

Against this dark background, can a critical theory of nature do without the Frankfurt School’s utopianism, its Orphic idea? Might that at least motivate or ground the sort of concrete alternatives that are urgently needed? No positive ground for such a theory exists, in my opinion. If the “critical” in critical theory is to remember its roots in Hegel and Marx, it must tarry with the negative when the temptation to posit programs (Romantic or otherwise) is strong.

Of course, not only Hegel and Marx were the Frankfurt School’s inspiration but also Nietzsche. And it is Nietzsche who may yet be proved right with his fable about “a star on which clever beasts invented knowing,” an invention that lasted the merest “minute” of world history. But we would not have grasped the situation if, like Nietzsche, we saw knowing (or science or Enlightenment) as the cause of our ills. True, we might take little courage from a different view of knowing, one which comes—Owl of Minerva-like—belatedly, here too late, to an understanding of an economic system whose destructive tendencies may already have run out of control. In one spirit of Nietzsche, the misanthropic, many today are insouciant over whether humanity, ostensible cause of nature’s destruction, will go under. Critical theory, on the other hand,

can make clear the tragedy of this possible passing, though it must acknowledge, as Nietzsche's fable suggests, that the Earth will survive the brief history of the irrational societies that were born on it. But only from a perspective which rejects the anti-humanism of misanthropes and deep ecologists alike is the true value of what is passing—humans as well as non-human life—made visible, and capitalism's own already perfected anti-humanism made clear. A critical theory rendered critical again by remembering its dialectical ancestry can sharpen the axe of reasoning for the difficult but urgent task of thinking and acting against the present world course.

I began with Schelling's nature philosophy which broke with Spinozan monism's indifference towards man but saw how Schelling's recognition of man's significance in nature overlooked the abstraction in "man" himself. The Frankfurt School's view of nature as humanly dominated was shown to have remained within the Schellingian and Jena Romantic worldview and thus failed to grasp the significance of Hegel's break with the Jena circle, embodied in his master-slave dialectic. By placing the birth of self-consciousness in a very different context, Hegel showed the human spirit to be both born out of nature but alienated from it through the mediation of social hierarchy and the compulsion of labor. Forgetful of Hegel, only rarely did the Frankfurt School likewise recognize all the resources in Marx, Hegel's heir, for fleshing out that mediation of man to nature via insight into its different forms in history. Marx, never the simple materialist enemy of Hegelian idealism, can be seen to have developed such thoughts on the mediation of humans to nature via the notion of metabolism, a notion which in turn can be used to unravel the abstractions of *Naturbeherrschung*. From Marx we can learn how our metabolism with nature is mediated by class relations—necessarily antagonistic relations, such that capital's degradation of the planet is never a simple process of unchecked domination. Such ideas were at brief points glimpsed in Frankfurt School writings, and it is when they did so that their thinking proved most fruitful. It is in building on such moments in which a truly critical theory of nature was glimpsed that I suggest we find the best chance to understand the dialectical interrelation of nature and history, to comprehend the specific history (rather than generalized historicity) of the environmental crisis, and through this, begin to conceive a way out.