

I

The Philosophical Genesis of the Ecological Crisis

When I see the blind and wretched state of man, when I survey the whole universe in its dumbness and man left to himself with no light, as though lost in this corner of the universe, without knowing who put him there, what he has come to do, what will become of him when he dies, incapable of knowing anything, I am moved to terror, like a man transported in his sleep to some terrifying desert island, who wakes up quite lost and with no means of escape. Then I marvel that so wretched a state does not drive people to despair.

—Pascal, *Pensées*

I. Crisis

In his essay “Philosophy at the End of the Century,” Hans Jonas describes the crisis he sees arising from “the threat we pose to the planet’s ecology,” one that forces us to look anew at “one of the oldest philosophical questions, that of the relationship between human being and nature, between mind and matter—in other words, the age-old question of dualism.”¹ Jonas sees the ecological crisis originating in unrestrained scientific and technological development occurring without an objective ethical framework to serve as a guide. Ethics lags behind action and consists of weak attempts to circumscribe the potentially negative consequences of actions already set in motion.

Yet a crisis can also be a turning point—the moment when things come to a head and a new direction is taken. Through a reexamination of the development of the Cartesian worldview, Jonas provides a way to heal the separation between *psyche* and *physis* initiated by Descartes,

a separation he finds at the root of the environmental crisis. He seeks to restore value to nature and return the human to a meaningful place within nature. In effect, the human world is reintegrated into the life-world as the inherent value of nature becomes clear and the relation of the human being to the natural world is made manifest.² Through an investigation into ontology, Jonas prepares the ground for his arguments in support of the "imperative of responsibility."

For Jonas, the impact of contemporary humanity on the natural environment has been unprecedented. Informed by a theoretical understanding of the human being as separate from nature, technological innovation, supported by science, has progressively developed ever new and more powerful forms of technology, extending the reach of human power far beyond human ability to foresee the consequences. For Jonas, the relations between human knowledge, technological power, responsibility, and ethics are both complicated and fundamental. His analysis of the problem we face and his philosophical argument for a new ethics revolves around the complex interrelationship between these related, though often competing, aspects of human action.

What is needed is a new understanding of "the status of mind in the total scheme of Being" (*MM*, 51). Jonas argues that philosophy must work in harmony with science in order to arrive at a new way of thinking the mind and its relation to nature as Being. To situate his argument, he points out that there is no evidence that there exists any other "dwelling place for life" in the universe. The Earth is unique, so far as we now know. It is on this planet that the fortuitous events occurred that revealed the potentiality hidden in matter and enabled it to become manifest as life; living organisms coming into being through the long process of evolution (*MM*, 51).

For Jonas, Darwin's theory of evolutionary biology is evidence of two distinctly important truths, truths that directly challenge the assumptions of the physics and philosophy of Descartes. On the one hand, evolution shows that Cartesian dualism, which defines matter as lifeless, cannot adequately explain the phenomenon of the presence of life evolving out of the material stuff of the universe.³ On the other hand, evolution gives proof to the presence of mind or *psyche* at all levels of living organisms, thus proving the strict separation between mind and matter, the basic premise of Cartesian dualism, wrong (*MM*, 52). Jonas's phenomenological biology seeks to return spirit to matter and reconnect the human to nature—two fundamental steps that enable him to begin to argue for the "imperative of responsibility." From a reevaluation of being, seen through the theory of evolution, and from an investigation into the meaning of the human being, Jonas attempts to formulate a

comprehensive ethic, one that can respond to the ecological and ethical crisis we face.

2. "The Altered Nature of Human Action"

To begin a discussion of Jonas's work, it is well to ask why we need a *new* ethics. Can we not address the ecological crisis through an extension of the theories of ethics we already have? Jonas begins *The Imperative of Responsibility* by discussing the limitations of the ethical systems and theories we have already at hand. The problem is not that deontology, consequentialism, virtue theory, social contract theory, and so on are of no value to us. It is that they aim at relations between people in society and thus lack both the impetus and the scope necessary to confront the very real problems we are facing. Traditional theories of ethics also fail to address accountability for the future of life itself.⁴

One problem, for instance, is how we might justify a normative claim in regard to non-human beings. Jonas does not argue that other living organisms have rights in the way that human beings do. The notion of rights is a political concept related to duties. Animals, trees, the air we breathe—these cannot be understood as belonging to the socio-political community. Instead, we need a new conceptualization of ethics in order to include all living organisms, the ecosystem, and the physical environment in our ethical considerations. Additionally, Jonas argues this new ethics must find a way to justify taking into our regard considerations concerning future others who will occupy this planet after we ourselves are gone. It is apparent that the ethical theories we have today are incapable of bringing these extended considerations into their realm of concern. Traditional ethical theories are based on the interactions of contemporary human beings living together in society—their claims and justifications revolve around that fact. The confused notion of the *rights* of animals, plants, air, and water is an expression and indication of the limitations of traditional ethical theories when confronted with the crisis we face.

The crisis we face is new, and it introduces the need for new considerations and justifications—it compels a need for a new understanding of ethics. Jonas argues that it is a crisis brought about by the extended reach of our actions—the nature of human action has fundamentally changed, our technology has developed to a point where its consequences far exceed our knowledge of them, and the repercussions of these consequences extend far into the future.⁵ Not only are we depleting the Earth of its resources, but it is also the case that terribly destructive side effects

are created as the result of the utilization and alteration of the natural environment.⁶ Simultaneously, we are developing ever more sophisticated technologies to affect and alter the natural world—including the alarming capacity we have to rearrange the very elementary stuff of life, the genetic material that is the result of billions of years of evolutionary development. As Jonas points out, the effects of our technological actions have a tendency to gather repercussions in a cumulative manner—progressively increasing in impact and scope as they build (*IR*, 7). As a result, experience is of little help to us, and our knowledge diminishes in proportion to the accumulation of technological aftereffects reaching far into the future. In light of this fact, Jonas argues that a new ethic of responsibility must incorporate a notion of caution coupled with the imaginative projection of possibly negative consequences to guide us in our actions. He calls this a “heuristics of fear” (*IR*, x).

We have arrived at the need for a new ethics because of the unprecedented reach of our technological power. Appropriately, Jonas begins his discussion of the crisis by referring back to an earlier time when the relationship between human and nature was marked by a natural proportionality that mirrored the actual place of the human being in the natural world (*IR*, 2–4). Human beings built societies and cities, carving out for themselves a niche that fostered their survival. Nature was not threatened by the early societies of humans, and early humans had no significant power over the existence of nature. With the burst of technological development that issued from the scientific revolution, we find the balance has been altered. The human being no longer occupies a niche within the greater ecosystem but threatens to overrun the planet, depleting natural resources and altering the biosphere, imperiling the very existence of life. All of this is well known and well documented. The significance, for Jonas, is the way these changes have created a need for a new understanding of the meaning of the human being in relation to the consequences of human actions. Ethics tells us how to live, yet we are not the same as we once were, and neither is the world in which we live. The need for a new ontology is based on the fact that the scope of human action has changed, and a new understanding of the human is needed to inform an ethics that has relevance in a changed and changing world. In order to ground his new ethic of responsibility, Jonas engages in a phenomenological and existential examination of evolutionary biology, in effect creating a more nuanced and subtle ontological understanding of the human being, one that comprises both the technological human, *homo Faber*, and the human being in her relation to and dependence on nature.

The human being is, without doubt, characterized by technological capacity. As beings adept at creating and using tools to shape and

organize their environment, human beings, of all animals, have worked extensively to affect the environment in which they live. Yet it is only with the modern machine age and the subsequent development of subtle and powerful new technologies that *techne* has overshadowed other human capacities and purposes. We define ourselves more and more through our technology, and it has become for us the central significance of our being (*IR*, 9). As we develop new technologies, they begin to shape who we are as well as the way we experience and view the world. In other words, the world for us becomes more and more a created one, and we become further and further removed from the natural one upon which we depend. While this obviously complicates and perhaps aggrandizes the crisis we are facing, it can help us recognize Jonas's claim as a valid one—our purposes, intentions, and their resulting actions have changed significantly, necessitating the development of a new ethical understanding in response to the altered nature of human action.

So far I have been using the words “nature” and “world” more or less interchangeably, but it is apparent that as the result of technological development more and more there is a “world” that is created by the human being—a constructed world that reinforces itself through its reliance on and use of technologies.⁷ “Nature” is no longer the “world,” for as Jonas says, “the natural is swallowed up in the sphere of the artificial, and at the same time the total artifact (the works of man that have become ‘the world’ and as such envelop their makers) generates a ‘nature’ of its own, that is, a necessity with which human freedom has to cope in an entirely new sense” (*IR*, 10).

Throughout his work Jonas is deeply concerned with the fundamental importance of human freedom as it relates to our capacity to make ethical choices when considering our actions. Greatly expanded technological capacities introduce ethical concerns that previous ethical theories were not required to consider—primary among these is the issue of the effect of technology on the very nature of the human being.⁸ It is essential to take into consideration the danger of technologies that have the potential to radically alter the nature of the human being in regard to her capacity to make free choices. The most significant threat to the unique result of evolution that is the human being is genetic engineering. I mention this only briefly in order that it might serve as an example of the threat that technological development unaccompanied by critical thought and cautious foresight presents.⁹ With the advent of genetic engineering, the human being deliberately steps into the natural process of evolution and begins to manipulate its building blocks for her own purposes, foremost among them “improvements” undertaken to perfect the species. Jonas raises the question as an example of the

kind of ethical deliberation for which we are not prepared, or indeed capable of effecting. He asks, "Who will be the image-makers, by what standards, and on the basis of what knowledge?" (*IR*, 21). For Jonas, the potential we have to alter our own species is a compelling example of how far we have come from ethical questions that can be answered by reference to traditional ethical theories. We lack both experience with the consequences of such actions and knowledge of their potential for harm. Complicating this lack of experience and knowledge is our belief in the possibility of infinite progress toward ever better conditions resulting from the unfettered growth of science and technology.¹⁰ Jonas points out that given that science claims that its knowledge is value free, we also suffer from the lack of an objective standard with which to judge scientific and technological developments. We tend to assume all innovation is progressive and therefore good. All of these conditions hamper our ability to develop an effective ethical critique of new technologies.¹¹ The crisis we are facing, according to Jonas, is the result of our increased power to act, and it is intensified by the lack of knowledge and experience we have concerning the consequences of these actions. We are at a loss to tackle the problem, he says, because we do not possess the norms or standards needed to challenge the beliefs of scientific materialism. We cannot find a guide for actions because, as Jonas puts it, we act within an "ethical vacuum."

How does Jonas understand the notion of an "ethical vacuum?" He bases his claim on the fact that science has "destroyed the very idea of norm as such" (*IR*, 22). Through the philosophical development of dualism, nature as extended matter became value-less. With the devaluation of nature and the glorification of science and technology, based as they are on a foundation of value-free facts about things, we have reached an imperiled state, that of "a nihilism in which near-omnipotence is paired with near-emptiness, greatest capacity with knowing least for what ends to use it" (*IR*, 23). Thus, we are in a state of near emergency, and we find that we do not have the tools to deliver ourselves from it. This is the case Jonas makes. The need for an ethics that can rise to the challenge of the times, one that can address the global reach of our actions and guide us in protecting the future from the potentially dire consequences of our actions today is imperative if the planet is to continue to thrive and if the human being is to retain her capacity to live freely and ethically in harmony with the Earth.

We see around us the growing threat to existence as the repercussions of past decisions begin to come to fruition as the climate changes, effecting natural disasters and food shortages, exacerbated by the depletion of the natural resources we depend on to support our way of life. It

does not need to be argued that we must develop some way to approach the problems we face before they overwhelm us—and without an ethics that has thought through the complications constitutive of the looming global environmental crisis to guide us, we stand helpless before those who will seek to control or profit from the chaos that will prevail as emergencies, shortages, and confrontations threatening our lives and livelihoods begin to arise with greater intensity and frequency.

Before turning to Jonas's response to the problems we face, it is useful to consider his critique of scientific materialism and its relation to nature and value in greater detail. Because dualism is the philosophical theory underlying the premises of scientific materialism, I begin with a discussion of the Cartesian view.

3. Materialism and the Problem of Dualism

The philosophical foundation of the scientific materialist view can be traced back to Descartes. In his *Meditations on First Philosophy*, Descartes arrived at a vision of the natural world that was sharply bifurcated. Duality has been an interest and a problem in philosophy since Parmenides, but with Descartes the problem is delineated in a new and powerful way. Descartes's careful and intricate examination of his own consciousness led him to conclude that mind or soul is fundamentally different and separate from matter or bodily things.¹² This conclusion seems almost cannily designed to facilitate the beginnings of a view of life that lends itself well to the newly emerging sciences. To understand life as composed of dead matter and disembodied mind is to encourage a manipulative attitude toward nature—it is reduced to a thing there for our own use. Hence nature is devalued, and because this view does not envision the human as intricately related to and dependent upon nature, it appeared to these early scientists that nature could be acted upon with impunity.

The most significant result of the Cartesian view of the duality of mind and body is the separation of life from substance. Substance or body, under this conception, is mere extension. Other qualities that we may associate with it are not essential to what it is.¹³ Materialism, the idea that nature is dead matter existing in a world ordered by cause and effect, is the foundation of modern science.¹⁴ Divorcing soul (*anima*) from matter, making them alien to one another, led to a worldview that facilitated the experimentation and manipulation of nature and this led to the development of increasingly sophisticated technologies. Cartesian dualism gave way to scientific materialism, the view that matter is the only substance and all causes are physical. The troublesome matter of the soul

or mind still lingers, however, as consciousness is difficult to explain given that it is neither substantial nor apparently physical, and it is apparent that a certain amount of incoherence results from the materialist view.¹⁵

When persons can look at organisms and see only matter, it is infinitely easier to act upon them experimentally than would be possible if such entities were understood to be capable of emotion or thought, ensouled, or animated by spirit, as we humans consider ourselves to be. Without an appreciation for or vision of the potentiality of spirit within matter, nature becomes pure stuff, its animation likened to that of a machine. It is possible then to look upon nature as something there for our purpose, ready-to-hand, and without purpose of its own.¹⁶ In contradistinction to this view, Jonas argues that organisms have their own inherent purposes, and claims that life is not merely physical. Jonas's broader, more inclusive understanding of nature effectively situates it in the moral realm.¹⁷

Cartesian dualism, together with the newly determined physical laws developed by Newton, restructured the way humans understood the world and their place in it. This development is an illustration of the way theories about the world can eventually shape the world itself. Once the power and potential of Newtonian physics and Cartesian dualism began to be understood, the vision was widely adopted and the human world that sits atop the natural one began to be shaped in its image. This vision incorporated the understanding that nature is outside the moral realm and not subject to ethical consideration, a vision particularly evident in our present treatment of animals raised for food. The devaluation of nature facilitates the use of nature for human purposes—no longer is the human relationship with the natural world sustainable. The vision of nature as a thing subject to mechanical laws and available for our use has brought us to a point of near environmental collapse because it is not based on ecological and biological truths.

As a metaphysical understanding of the world, theory has the potential to enlarge and engage our capacity to work within the world in a way that fosters our command. Theory contains within itself a perspective based upon a horizon that has been selected from the many positions and perspectives that are possible for thinking, imagining human beings. Thomas Kuhn calls this worldview a “paradigm.”¹⁸ It forms a perimeter for possible experimentation—being a collective of views and beliefs about what might be true. As a model for what is knowable about things, it both permits exploration and delimits it. It is best described as a method for isolating problems for experimentation in the hopes of gathering data that might create a better explanation for certain phenomena (*Kuhn*, 184). Its capacity to limit *or* enlarge our vision about the

world should not be overlooked, however. The tendency toward limitation results from the efficacy of narrowing the perimeter of investigation, which, while effectively reducing the area under consideration and making it manageable, necessarily shuts out or closes off aspects of reality that might offer a fuller understanding.

Kuhn points out that the paradigms that shape scientific exploration and explanation contain values in addition to beliefs (*Kuhn*, 184–5). Thus, Kuhn would agree with Jonas when he argues that science contains a hidden metaphysics even as it claims to be value and belief free.¹⁹ The notion that scientific knowledge is somehow exempt from the taint of human beliefs and values leads to the situation Jonas deplures—the ethical void at the heart of intellectual modernity. The notion of value-free science is itself a belief and a cherished one. It serves to inform the hidden metaphysics of the materialist worldview.

As I have indicated, the belief that nature lacks intrinsic value is inherent in the Cartesian understanding of substance as mere extension. Extended substance lends itself well to measurement. Abstracted from its qualities and from its connection with the lifeworld, body is merely object and as such reveals the universe to be homogenous. Matter is everywhere essentially the same and subject to the same mechanical laws. Materialist science believes itself free from subjective valuations—it seeks to isolate and abstract what is objectively true from the empirical evidence it investigates. Yet what it leaves out is the lived experience of nature as a whole with all its complexity and mystery. It raises the question of whether we can truly have knowledge without experience. In his essay “Seventeenth Century and After: The Meaning of the Scientific and Technological Revolution,” Jonas explores these themes. He says, “It must be realized that the controlled experiment, in which an artificially simplified nature is set to work so as to display the action of single factors, is *toto coelo* different from the observation, however attentive, of ‘natural’ nature in its unprocessed complexity. . . . It essentially differs, in one word, from *experience* as such.”²⁰

The devaluation of nature depends upon the abstraction of substance from the complexity of the whole. By redefining body as substance, understood as mere extension, Descartes facilitated a turn from understanding nature as alive, whole, and full of intrinsic value to a materialist understanding of nature as mechanical, homogeneous, and mathematical. The convergence of the claim of science as objective yet value free and the claim that nature is mere extended substance was fundamental to the development of the scientific-technological revolution. The significance of this development reveals itself in the argument that Jonas makes regarding how these claims fostered the scientific-technological revolution that,

in turn, reshaped our “ways of living and our modes of thinking” (*PE*, 45–47). We no longer *experience* nature in its wholeness and complexity because we are continually further removed from it; instead we receive refined notions about it from educators and scientists who see nature through the prism of scientific materialism. Having lost its intrinsic value as the result of its reevaluation on the part of science, nature now stands unprotected before us. And because science itself has relinquished any normative claims toward nature, the way is opened for nature to be used for the purposes of technological development. As much as scientific materialism has changed the way we understand nature, so it has changed how we understand our place in the world; we have become thinking subjects in a world of material objects. Consequently we confront the difficult task, in an ethic that seeks to respond to the environmental crisis we face, of finding our way to a more realistic place within nature through a reevaluation of both nature and the human—one emerging from the new ecological scientific understanding of the biosphere that encourages respect for the living planet rather than disregard for its integrity.

Scientific methodologies carry within them certain prejudices simply in the way they examine evidence and organize knowledge about the world. Efficient causes have priority over other final or formal causes in scientific explanations of natural events. It is believed that once we know the initial cause for something, we understand what it is. Aristotle taught that most natural phenomena exhibit a coincidence of efficient, formal, and final causes, but the devaluation of teleological explanations of nature and the disavowal of spirit or mind as a contributing factor in the shaping of an organism has meant that these two kinds of causes are no longer able to contribute to our understanding of a natural thing.²¹

This turn toward the simplest, primarily materialistic, evidence for our scientific conclusions is in part the result of the development of scientific methodologies that favor predication of and control over nature and its events. Reductive conclusions, while efficacious, serve to diminish value and alienate us from our own place in nature, as well as from our own natures. Recent trends in philosophy indicate that much effort is being directed toward seeking to retrieve what has been lost—investigations into the importance of embodiment and intersubjectivity, semiotic understandings of language, and a reevaluation of the place and role of the human in environmental ethics are all examples of directions in philosophy that seek to return to and investigate lacunas that have resulted from the primacy of scientific materialism. For Jonas, the mathematization of the world, the forgetting of the lifeworld, the loss of dynamism, the dismissal of speculation concerning final causes,²² and the lack of any sense of contextual interrelatedness has created a corresponding spiritual

and ethical void, and the isolation and alienation of humans from themselves and from nature. This worldview, according to Jonas, contributes to the devastation of the natural world (*PE*, 9).

What kind of world is seen through the prism of science? How do we, who have been educated to see life through the scientific materialist worldview, understand and relate to the world? The question brings to mind an experience I had during a recent total lunar eclipse. The eclipse was visible from the street near my residence in New York City, and I took up a position on the corner to watch the slow movement of the Earth's shadow over the surface of the full moon. It seemed both haunting and mysterious, evoking poetic thoughts and feelings. Yet when, as happened occasionally, some passerby stopped to see what I was looking at, nearly every time the reaction was the statement, "Oh, an eclipse" and then, generally, a kind of dismissal of the event. Rather than experiencing the actual eclipse, these observers were content to move on. Science has taught us what to call an eclipse and explained how it happens and thereby has encouraged us to assume we know something without our having actually experienced it. Knowledge, in the abstract, cannot carry the meaning that experience gives. Experience requires an openness to the event and results from participation in some way with what is unfolding. A deeper knowledge is gained, one that is closer to wisdom than that yielded by the surface information of a collection of facts.

With this story I would like to suggest that science has tended to devalue the lifeworld through its cultivation of an accomplishment of facts pertaining to natural events and conditions. Science has explained the world to us in a mechanical, materialistic way and given us the impression that we understand the natural world, effectively reducing both our wonder about it and our respect for it. Life itself has been reduced to a series of simple, causal, material explanations for discrete natural events that make us feel as if we know something. The result is evident in the disastrous ecological problems we have inherited from the application of this kind of scientific knowledge to *techné*. The problem is not that the knowledge is wrong per se but that it is partial and limited while claiming to be definitive. We might also question the *intent* with which this knowledge is generated—when it is generated with the intent to manipulate nature for human ends, a claim can be made that the knowledge we gain is partial because it is circumscribed by the intention to use nature for our own ends.

The sciences today have evolved in response to these kinds of critiques. The theoretical sciences are developing complex, open-ended explanations to guide an investigation into the mysteries of the natural world that defy mechanical explanations. In the fields of climate

studies, evolutionary biology, theoretical physics, and environmental science, acknowledgment of the reality of the complexity of interactions and interdependence of phenomena is taken into account. This science is not the science we receive through our culture, however. It is too complicated for most of us to grasp, and we remain influenced by and indoctrinated with Newtonian mechanics and post-dualistic materialism. These visions of nature construct a world of dead matter in homogeneous geometric space and posit a separation between spirit and matter, analogous to the split between human beings and nature itself. Again, while this vision of reality is conducive to technological developments of many kinds, it is a structure superimposed upon the natural world even though partially extracted from it, and it creates a situation where nature is separated from its essential foundation. Nature is not, in reality, composed of mechanical entities that can be extensively manipulated without fear of repercussion, as scientific materialism holds. It is, as contemporary ecological science tells us, a complex and vulnerable interdependent biosphere whose components cannot be separated and manipulated without disturbing the fragile balance. The recognition of, and emphasis on, the importance of the evolutionary ecological scientific worldview over that of mechanical physics is one of Jonas's major contributions to the philosophy of science and to environmental ethics.

4. Nihilism and Existentialism

One of the most disturbing and perhaps far-reaching effects on the human psyche resulting from the scientific-technological revolution and the theories that support it is the corrosion of belief in objective value. The corresponding loss of belief in the intrinsic value of nature cannot help but affect the self-understanding of the human being, for the philosophies of the seventeenth century fostered the notion that the human being is somehow separate from and disconnected from nature, including his own. Yet intuitively and experientially we do recognize ourselves as part of nature, as finite beings dependent upon the natural world and engaged in a material struggle for the continuance of our lives. If we accept the belief that nature has no value in and of itself, we must devalue our own natural being. This introduces dis-ease with ourselves and contributes to a disconnect between our mental experience and our bodily one.²³ Contributing to this uneasy relationship with our natural selves is the belief, promulgated by the scientific-materialist view, that science offers a disinterested and value-free understanding of the natural world.

For Jonas, the problem of nihilism begins here. He says, "The point that particularly matters for the purpose of this discussion is that a change

in the vision of nature . . . is at the bottom of that metaphysical situation which has given rise to modern existentialism and to its nihilistic implications” (*PL*, 216). In *The Will to Power*, Nietzsche defines nihilism as “the radical repudiation of value, meaning, and desirability.” Science claims to be guided by a value-free commitment to neutral and objective observation and evaluation. In effect, science chooses to maintain an openness to all empirical phenomena, excluding nothing that can be objectively observed and measured. By claiming that there are no values that might not distort the truth, materialist science reduces meaning and value to subjective phenomena. This opens the way to an understanding of all value as relative to each person’s individual perspective and experience, and without objective values that can be universally recognized we remain at a loss for a persuasive argument for a way of life that protects nature from harmful human action. With nihilism we find ourselves at a loss for a foundation for an ethics that can respond to the crisis that threatens our future because we have accepted an understanding of value and meaning as subjective and relative. Jonas says, “Behind the nihilism of existentialism and its ethic of arbitrary value-setting, just as behind the whole of modern subjectivism, stands modern natural science with its premise of a value-free world” (*IR*, 236).

As this comment shows, Jonas sees the inherent connections between the scientific worldview and the problems of meaning and value that existentialism seeks to address. If nature has no intrinsic value, no aims or purposes of its own, and if the universe is “an indefinite and even infinite universe which is bound together by the identity of its fundamental components and laws” (Koyré, 2), then we stand in danger of becoming lost to our place and its meaning within life. As Jonas puts it, “the essence of existentialism is a certain dualism, an estrangement between man and the world” (*PL*, 216). The idea of a cosmos, an ordered whole that is self-contained and self-sustaining, such as we see in Plato’s *Timaeus*, has given way to the infinite grid, mechanically governed by mathematical laws. What is the place of the human and the value and meaning of nature within such a logically ordered, abstract space?

What Jonas is pointing out is the effect dualism has had on the way we understand ourselves in relation to our bodies, the lifeworld, and nature. Under both dualism and the scientific-materialist view, the human being is in an artificial relationship with the natural world, and the existential effect of this particular self-understanding is alienation, anxiety, and despair. Jonas turns to Heidegger in an effort to discover a source for the relation between existentialism, nihilism, and ethics and finds that Heidegger’s existentialism harbors a tendency toward nihilism that Jonas finds threatens and undermines the capacity for ethics.²⁴ Heidegger’s notion of individual action, authenticity, and resoluteness, and

his emphasis on historicity, provide Jonas with evidence of the essential problem.²⁵ Jonas finds that Heidegger's philosophy of authentic being as resolute seizing of the historical moment fails to offer an ethical direction because within Heidegger's existential view there is no way to determine which actions may be ethical and which may not.

Both Husserl and Heidegger were Jonas's teachers, and their influence on him is significant. With Heidegger, however, there is a double influence; first, the positive effect of an astute and inspiring thinker whose hermeneutic, deconstructive approach to historical texts radicalized philosophical analysis, and second, a negative influence that occurs when recognition of Heidegger's lack of resistance to Nazism leads Jonas toward a reassessment and critique of his former teacher. Because of the significance of Heidegger for Jonas's own work, I dedicate some time here to a discussion of their similarities and differences.

Broadly speaking, Heidegger's early project was to "raise anew the question of the meaning of being," a question he claims has been overlooked throughout the history of philosophy.²⁶ Heidegger argues that this investigation must take place through an analysis of Dasein, the being for whom the meaning of being is a question and a concern. Yet his project is continually hampered by this necessity, and his analysis of Dasein has been accused of empty formality as he struggles to focus on the overarching question of the meaning of being without collapsing into a study of subjectivity or a philosophical anthropology of the human being.²⁷ Jonas argues that "Heidegger's statements about being are really, at least in part, ontic, not ontological, whatever his protestations—and that is to say, that they are metaphysical" (*PL*, 252). To speak of being, Heidegger must refer to real beings, and his insistence on the absolute separation between ontic (beings) and ontological (Being) results in incoherence. It is impossible to get outside of oneself to think, from some Archimedean point, the meaning of being. Although John Caputo argues that "Heidegger's attempt all along has been with the essence or Being (*Wesen*) of man, rather than with man's ontic activities,"²⁸ any attempt to understand what it means to be a human being must originate with the activity of being human, which includes the activity of thinking. Heidegger tries to maintain a distinction between ontic beings and being itself, and this division continually fails to hold.

By contrast, Jonas approaches the question of existence through evolutionary biology, considering human beings as evolved organisms that are biological, cognitive, and ethical. Heidegger calls this "biologism" and explicitly rejects such an approach, saying, "The existential analytic of Dasein is *prior* to any psychology, anthropology, and especially biology" (*BT*, 42). Heidegger refuses to accept an analysis of Dasein originating

within the sciences because he believes this overlooks the deeper question, that of the meaning of being itself. This resistance complicates his analysis because while he seeks to pursue the question of being itself, he is continually struggling to do so through an abstract analysis of the human being that disregards the organic origins, foundations, and concerns of the human organism. He fears reducing thinking of the human being to its biological basis and instead turns away from the biological aspect entirely and claims that the human is not an animal at all. In the "Letter on Humanism," he emphasizes this with great clarity,

Above and beyond everything else, however, it finally remains to ask whether the essence of man primordially and most decisively lies in the dimension of *animalitas* at all. Are we really on the right track toward the essence of man as long as we set him off as one living creature among others in contrast to plants, beasts, and God? We can proceed in that way; we can in such fashion locate man within being as one being among others. We will thereby always be able to state something correct about man. But we must be clear on this point, that when we do this we abandon man to the essential realm of *animalitas* even if we do not equate him with beasts but attribute a specific difference to him. . . . Ek-sistence can be said only of the essence of man, that is, only of the human way "to be." . . . The human body is something essentially other than an animal organism." (*LH*, 227–8)

Clearly, Heidegger and Jonas fundamentally disagree on the question concerning the originary ground for the essential nature of the human being. Heidegger insists on disregarding the bodily nature of the human being, while Jonas insists that our failure to remain in our bodies, situated within nature, understanding ourselves as products of a long organic process of evolution, is at the root of our delusion and contributes to the crisis we face. We can recognize the need to take responsibility for the consequences of our actions upon nature only if we realize that we too are part of nature, dependent on it, and a product of its processes. While Jonas does not want to argue that the human is merely biological, he does not want to lose touch with the fundamental and significant ties of the human being to his biological and environmental self. As organisms, it is essential for humans to stay grounded in their relation to the biological and ecological *Umwelt*. Jonas sees Heidegger's denigration of the body, of the human as biological, as consistent with the history of modern philosophy and Cartesian dualism. The human is not a physical

body, not a being grounded on the Earth, but a disembodied mind thinking of existence from some externally oriented abstract perspective. While for Heidegger the human creates a clearing for Being, somehow the human is not a living being among other beings but a poetic revealer of Being in language. And language, for Heidegger, is not physical. He says, "In its essence, language is not the utterance of an organism; nor is it the expression of a living thing" (*LH*, 230). This statement seems strange indeed, for it fails to consider the physicality of spoken and written languages, while overlooking the fact that animals do "speak" to one another. This is another way in which Heidegger seeks to deny animals a "world." He is determined to construct a divide between humans and animals, placing language-lacking animals in environments and humans in worlds, while redefining language itself.

For Heidegger, an abyss separates the human from other living things. He presents it as an *aporia*, saying, "Of all the beings that are, presumably the most difficult to think about are living creatures, because on the one hand they are in a certain way most closely akin to us, and on the other are at the same time separated from our ek-sistent essence by an abyss" (*LH*, 230). For Heidegger, human beings are closer to the divine than to other living beings with whom they share the lifeworld, and being itself appears to be a kind of subject—that which gives, reveals or conceals itself, and calls to Dasein. Jonas says,

Indeed how can one speak of being's activity and man's receptivity, of the former's having and being a fate, being event, not only making possible thought but giving thought, clearing or obscuring itself in such thought, having voice, calling to man, happening upon man, sending man, entrusting itself to man's care, appropriating him into its own care, favoring him, enlisting his loyalty, summoning his gratitude, but also needing him—how can one attribute all this to it unless one understands it as an agency and a power, as some sort of subject? (*PL*, 252)

In strict contrast to Heidegger's hierarchical view of Being, human beings, and absolute other beings, Jonas holds that the failure to recognize the shared organic nature of all living beings and to value the organic basis of human existence underlies many of our mistaken attitudes toward existence, nature, the Earth, ourselves, and other beings. What Jonas is arguing for here is the necessity of recognizing the human being as a being of nature, part of an objective reality that transcends her, and limits and constrains her. There is an order to which human beings belong,

and this order is delineated by constricting parameters that simply cannot be ignored by organisms if they wish to survive and thrive. Humans are fundamentally bodies, and while their essence may extend beyond their bodily reality, bodily nature must be accepted as the ground for human existence.

In a similar vein, Jonas argues that Heidegger offers a view of other beings as things that are merely useable (*zuhanden*) or indifferent (*vorhanden*). For Jonas, this conception of nature as objects ready-to-hand, or things existing indifferently before us, is an important component of the thinking of nature that has led to the environmental problems we face today. He says, "It is being, as it were, stripped and alienated to the mode of mute thinghood" (*PL*, 231).²⁹ In Jonas's view, being, existence, and nature are one (*PL*, 232). Value is not projected by human will, as if it were not really existent until human beings seized upon it and made it their own, because nature is a cosmos infused with value and ordered by laws that pertain to human organisms as well as all other living beings. The opposition of transcendent human being to devalued thing-like other beings underlies nihilism. He says, "Once more our investigation leads back to the dualism between men and *physis* as the metaphysical background of the nihilistic situation" (*PL*, 232). Heidegger, by falling prey to the attractive idea that human beings are not animals, that they are of a different order from other organisms, fails to recognize the *ethos*, the way and manner, of living nature. From this *ethos* we can, as Jonas argues, derive an ethics, a good and right manner of being-in-the-world.

Jonas's main critique, apart from his concern with Heidegger's resistance to identifying the human as an organism, is that Heidegger's analysis elides the question of the ethical. Although authentic Dasein is a being acting resolutely, projecting himself onto the future through his choice in the moment, there is no framework for choosing well or poorly, rightly or wrongly, in Heidegger's philosophy. As a victim of the Holocaust who has witnessed the dehumanization and destruction of the Jewish people, Jonas, like Emmanuel Levinas, wishes to return ethics to a place of prominence in philosophy. For Jonas, the problem of ethics is the fundamental concern in the question of being, given human technological advances, the problems they raise, and the growing environmental and humanitarian crises facing us. The direction from which each thinker approaches Dasein, the human self, is important because the initial origin of inquiry concerning human existence and its meaning leads inevitably to very different views of what ethics requires.

Heidegger claims "original ethics" is thought; "thinking which thinks the truth of Being as the primordial element of man, as one who ek-sists" (*LH*, 258). For Heidegger, the thinking of being is ethical

in itself, in the sense of an *ethos*, a way of being, yet he also claims that this thinking is “neither ethics nor ontology” (*LH*, 259). In his view, these categories are traditional philosophical constructs and they ultimately fail to offer meaning in relation to the truth of being. The thinking of being is complete in itself, in that it simply is and does not lead us or guide us as either theory or *praxis*. This ongoing *ethos*, this way of being-in-the-world, or dwelling and abiding, is a thinking of being that “lets Being—be” (*LH*, 259). One is reminded of Aristotle’s contemplative life, the life of the mind, and Aquinas’s comment that “bliss can’t consist in the activity of practical understanding but only in the activity of contemplation: and that is why practical knowledge is desired always for the sake of something else, whereas contemplation is desired more for its own sake . . . the most perfect bliss consists in contemplation.”³⁰

Heidegger’s being is merely for thought, and the highest calling for human beings is to be a clearing for being while remaining open to its revelations. He famously claims, “Man is the shepherd of Being” (*LH*, 234), and by this he means Dasein’s role is to cultivate receptivity in thought; to allow existence to be as it is without preconceiving or conceptualizing it. Jonas does not find fault with the practice of openness and receptivity to being but questions whether this is the highest mode of human existence. He asks, what of “action, brotherly love, resistance to evil, promotion of the good” (*PL*, 253), and goes on to argue that “it is nothing less than the thinker’s claiming that through him speaks the essence of things itself, and thus the claim to an authority which no thinker should ever claim” (*PL*, 257). The perils of this are quite evident; Heidegger reduces understanding of being to a purely subjective experience, and this experience is truer than anything reason can provide. The danger here is that when each person chooses actions based upon his or her subjective experience of being’s call, our duties to one another and to all life, evident through reason and discourse, may remain unrecognized and unheeded.

Thus, Jonas argues, “thinking is not indifferent to the conception of its task and nature. As responsible, it crucially depends on the conception of its responsibility” (*PL*, 258). In other words, thinking understood as a kind of primal openness to the revelatory unconcealment of being remains passive and cannot take responsibility for itself. And he responds vehemently to the detachment of thought from ethics in Heidegger’s work, saying, “[I]t is hard to hear man hailed as the shepherd of being when he has just so dismally failed to be his brother’s keeper . . . the terrible anonymity of Heidegger’s ‘being,’ illicitly decked out with personal characters, blocks out the personal call. Not by the being of another person am I grasped, but just by ‘being!’” (*ibid.*, 258).

To take responsibility, for Jonas, is to fulfill the human capacity for thought and ethics. The human capacity to be “what it is” is not reached through language or contemplation alone but extends to responsible ethical action in the world. Thus Jonas emphasizes the necessity of thinking deeply, together with others, about existence, human *techne*, and nature and its evolutionary and ecological processes, before acting in the world. Thinking of being in this way will open the way to appropriate and responsible choices that minimize harmful consequences. Jonas’s advocacy of “caution” with regard to our actions is based on an acknowledgement that our knowledge is limited in general about nature and life, and extremely limited in particular when it comes to future beings. Our thinking of being shapes our way of acting in the world, but Heidegger is not concerned with the possible connection between these two modes of human existence. He eschews considerations of practical action concerning ontic beings existing in the world.³¹ As John Caputo points out, Heidegger does not provide us with the means to move from his notion of originary ethics to practical, ethical action in the world; in effect, he leaves us stranded.³²

Jonas is therefore much more engaged with the practical question of how we should act in relation to our knowledge of existence (or lack of it) and certainly less content to rest in openness to being as if we floated above life somehow, contemplating it from afar. Everything we do affects the planet, and as the accumulation of repercussions from earlier choices and actions continues to build into a major environmental crisis, Jonas’s sense of urgency and his rather dire predictions seem more and more prescient. Heidegger’s lack of moral engagement and his failure to consider existence as organic life render the allure of his philosophy fundamentally tainted.

For Heidegger, being, existence, is an undefined, almost unknowable ground from which particular beings spring or are thrown. Dasein, for Heidegger, is that being who forms a clearing for being through which being comes to be and reach articulation. He says, “Man in his essence is ek-sistent into the openness of Being, into the open region that clears the ‘between’ within which a relation of subject to object can ‘be’” (*LH*, 252). Heidegger seems to want to differentiate the human from its animal origins and ground in nature in order to encourage us to see Dasein as something transcendent of being, something that allows being to be what it is, which somehow it would not be without the clearing of being that Dasein is. Thus, “language is the house of Being in which man ek-sists by dwelling, in that he belongs to the truth of Being, guarding it” (*LH*, 237). But for Jonas, being is life, nature. It is not reduced to a truth that can only be articulated by the human being, but rather it

is something we are an instance of, something we experience through the bodies we are. The only way we can "guard" it is to recognize the effects of our actions upon it while trying to understand how we might live more sustainably and lightly within the whole that it is.

While Heidegger claims that the human being is that which guards and shepherds being, he argues against the classical definition of the human as "rational animal," saying this places the human too low. Jonas counters that "the lowering to Heidegger consists in placing 'man' in *any* scale, that is, in a context of *nature* as such." He goes on to explain that "what is important for us [in Heidegger] is the rejection of any definable 'nature' of man which would subject his sovereign existence to a predetermined essence and thus make him part of an objective order of essences in the totality of nature" (*PL*, 227–8). In other words, intrinsic to Heidegger's view is a resistance to seeing the human being as subject to nature, and this is the very self-understanding of human existence that has contributed to the *hubris* of technological appropriation and use of the Earth as a mere resource, which has, in turn, fostered our current environmental situation of crisis. While both Jonas and Heidegger share a concern about technology and the disturbing aftereffects of continual technological "progress," Jonas recognizes the roots of this situation in the understanding of the human as somehow above or outside nature and its demands and requirements; that is, as transcendent. Heidegger affirms this view of *Dasein* and fails to consider the connection between human self-understanding and human action. This could be traced to Heidegger's desire to hold onto a notion of *Dasein* as essentially contemplative openness to being, while overlooking the reality that human beings are beings of nature and as such must continually act in the world in order to continue to be at all.

That the human being's essence consists in forming a clearing for being and that clearing or unconcealment is truth, to Heidegger, is a focus of Jonas's essay "Image-making and the Freedom of Man" (*PL*, 157). Jonas begins by questioning Heidegger's definition of truth, claiming he has overlooked the full meaning of *alatheia*, and he argues that Heidegger's definition of truth as "unconcealment" as insufficient. Truth as the unconcealment of being, revealed to *Dasein*, is in danger of falling into subjectivity, and it again seems to place the human at some point outside existence, as a passive witness and observer, rather than situated within the drama of existence. For Heidegger, the human being is not a participant and actor on the world stage unless "fallen prey to the 'world.'"³³ Most importantly, Heidegger's truth is not moral truth, which for Jonas means "truthful dealing with one's fellow man." Jonas points out that the original meaning of *aletheuein* was "to abstain