Gaia and *Il y a*: Reflections on the Face of the Earth

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Emmanuel Levinas is well known as a critic of Western philosophy and of its persistent failure to do justice to the alterity of the other. But when it is a question of regarding nature as *alter*, Levinas’s thought often appears to be little more than a repetition of the anthropocentrism that all too frequently stamps the discourse of the West. However, if we take seriously Levinas’s remarks about the importance of the body in his ethics, we might find that such anthropocentrism is less unshakeable than he would have us believe. That is, if the vulnerability and mortality that give rise to the “Thou shalt not kill” is written in the flesh, if “the whole body ... can express as the face,” then it seems that any living (which is to say, mortal) body is capable of calling me to responsibility, that every body, insofar as it is an expression of that corporeal frailty and poverty that Levinas refers to as “face,” is the other. When understood as an ethic of embodiment, then, it is arguable that the apparent anthropocentrism of Levinas’s work gives way to a biocentrism in which the first imperative of ethics is engraved not only on the human face and skin, but on the living flesh in all its myriad forms, human and otherwise.

These cursory remarks suggest that there may be resources in the texts of Levinas that would allow us to speak of obligations to other living beings, yet they leave us to wonder whether such biocentrism marks the absolute limit of a Levinasian environmentalism. Does Levinas’s thought render meaningless all talk of violence to the landscape or of the inviolability of the land? Or could it be that obligation somehow extends to the non-living world, that rocks and rivers, sea and sky are also, in their own way, capable of voicing a call to responsibility, capable of calling into question human powers of violence and violation? Could it be that the “Thou shalt not kill” is inscribed on the “face of the Earth”?

**The Gaia Hypothesis: “A New Look at Life on Earth”**

Since we are asking about the possibility of a responsibility that takes us beyond our responsibilities to living beings, we would do well to pay special attention to precisely that which seems to fall outside the province of the ethics to which Levinas’s thought appears to lead. Let us take a moment, therefore, to consider the work of James Lovelock, whose *Gaia: A New Look at Life on Earth* provides us with a “new look” not only at life but also at the non-living world, the Earth upon which life has found a home.

In the early 1960s Lovelock was a member of a team of scientists who were trying to devise ways to test for life on Mars. Testing for life, however, required a working definition of what life is, and Lovelock understandably took his cue from the natural sciences: life involves entropy reduction, which is to say that living beings exist in, and actively maintain, states of disequilibrium with their surroundings. Lovelock’s thought was that the neg-entropic activities of living beings might “spill over” into the atmosphere, and that one might therefore be able to take atmospheric disequilibrium as an indicator of the presence of life. Using Earth as a model, Lovelock determined
that it would be expected to have a near-equilibrium atmosphere composed almost entirely of carbon dioxide, with less than two percent nitrogen and only a trace of oxygen. However, the atmosphere is in fact far from this near-equilibrium state, being dominated by the presence of nitrogen, with twenty-one percent oxygen and less than one-tenth of one percent carbon. Moreover, given the chemical reactions that take place when such gasses are present together, such disequilibrium would quickly move toward equilibrium were it not for the presence of something to keep it constant. Lovelock’s conclusion was that life must be the cause of Earth’s anomalous atmosphere, since “there’s just no way lifeless chemistry can do it. There would have to be something there—presumably life—that was doing this job.”

Intrigued by his findings, Lovelock shifted his attention from Mars to Earth, and tried to articulate precisely what the relation between life and the non-living environment is. In doing so, he frequently employed organicist metaphors, claiming that we are to regard the biotic and abiotic features of Earth as collectively comprising a single organism, “a kind of mega-organism” or “superorganism.” On this organic model, the non-living world is comparable to the shell of a snail or the bark of a tree: “not formally alive,” but nevertheless an integral part of the planetary organism, a “protective layer” produced by the biota. Thus, Lovelock’s proposal was that the abiotic Earth be regarded as “something life makes, to sustain for itself a chosen and comfortable environment.”

Attributing purposiveness to the activities of the biota was, of course, bound to meet with opposition from the scientific community. Consequently, as the Gaia hypothesis developed Lovelock was pressed to explain more carefully how life could create the planetary environment. He responded by offering the “Daisyworld” model which, in its simplest form, asks us to imagine a planet inhabited by two species of daisies, one light-colored and one dark. Assuming that there is a limited range of temperatures in which daisies can grow, with an optimal point near the middle, one could postulate that when the planet’s surface became minimally warm enough, growth would begin. The dark daisies would have an advantage, however, as their color would allow them to trap heat and thereby create for themselves temperatures closer to the optimal mean. Thus, they would grow and spread more rapidly, warming not only themselves but eventually the entire planet. As temperatures rose, however, dark daisies would be at a disadvantage as they would create for themselves conditions that were farther and farther from the mean. Light daisies, however, would now be at an advantage as their ability to reflect light would tend to create more optimal conditions. Hence, the light daisies would become more populous and bring the temperature of the planet back down. But when temperatures dipped too low the light daisies would no longer have an advantage, and the dark daisies would again begin to spread. Over time, this “push and pull” between daisy populations would have the effect of producing temperatures that approximate the mean.

What is significant about this model is that it explains how the activities of living beings could produce planetary conditions comfortable for life without introducing teleology into the equation. In Lovelock’s words, Daisyworld operates according to
“simple competition and natural selection of the two daisy species,” and thus it is “a system that has no purpose in it. It does not require committees or anything like that; rather it follows from the process of natural selection tightly coupled into the physical evolution of the planet.” This statement is echoed by Dorion Sagan and Lynn Margulis, who claim that “the radical insight delivered by Daisy World” is that regulation of planetary environmental conditions “is in principle possible without the introduction of any but the well-known tenets of biology.”

From Chaos to Proliferation

A large part of the controversy over the Gaia hypothesis is the potential conflict between gaian science and the Darwinian worldview. This conflict is often depicted as the clash between, as we have seen, the gaian vision in which nature as a whole is thought to be purposive and the Darwinian view in which nature “progresses” aimlessly. When understood in conjunction with the Daisy world model, however, it is arguable that the Gaia hypothesis does not really challenge Darwin on this point. The gaian challenge to Darwin lies, rather, in the divergent picture that it paints of the relation between life and the non-living environment, and the new understanding of the abiotic world that accompanies such a change.

The Darwinian view is of a world of lifeless chemistry to which living beings are challenged to adapt, an Earth that is set on an unwavering course against which life ceaselessly struggles. Lovelock describes this “very Victorian theory of the Earth” by saying that “the Earth scientists see the evolution of the material world proceeding strictly according to the rules of physics and chemistry with organisms on the planet merely passengers.” Gaian science, on the other hand, tries to mend this split by seeing life to be more directly involved with the abiotic environment, where the non-living world is not simply that to which life adapts, but is to whatever degree modified and shaped by life itself. For gaian scientists, “life doesn’t inhabit a dead world of geochemistry and try to adapt to it. It is, rather, adapting to and adapting a living world that it, itself, has made.”

Levinas, while almost certainly not familiar with the Gaia hypothesis, is clearly influenced by Darwin in his thinking about the natural world. His most basic characterization of nature comes in his analyses of il y a, analyses that are not to be taken as scientific hypotheses, but rather as phenomenological descriptions, the purpose of which is to reveal the “brute but impassive” materiality of nature. Il y a describes, that is, the anonymous forces at play in the natural world, the material ebb and flow that ceaselessly pulses, building mountains and carving landscapes only to tear them down and begin again. Importantly, in contrast to the Heideggerian es gibt, for Levinas il y a is characterized not by generosity but by a cold lack thereof, an utter indifference to the existents whose lives are played out within a dispassionate cosmos. In the context of the present discussion it is interesting to pay special attention to Levinas’s repeated use of the phrases “it is hot” and “it is raining” to describe il y a. The “it” to which such phrases refer is not a “someone”; it is neither demiurge nor divine intelligence
who, with planning and foresight, oversees such activity with a view to some cosmic purpose. The “it” in “it is raining” designates, instead, an “impersonal ‘field of forces’”; it rains in an endless and aimless play that plays here one way, here another until the day the Earth is swallowed by an expanding sun, at which point the chaos will continue to play unaffected by the loss. The forces of nature discharge with an indifference that could only be called absolute.

In keeping with this understanding of the cosmic indifference of nature, Levinas, despite his strong ties to the Judaic tradition, does not link the emergence of life from out of the il y a to the activity of a creative and benevolent God. Life is lived without divine backing or guarantee, and on this point Levinas is well aware of the influence of Darwin on post-nineteenth century thought. Prior to Darwin, he claims, existence was understood as having been given to beings “by divine decree,” but for Darwin “there is the objective of existence itself, bare existence, the possibility of pure and simple existence becoming an objective.” Life, cut off from any communication from on high, must “struggle to survive.”

Since Darwin, then, existence is seen as itself an end, a task to be accomplished, and this is a characterization of other-than-human life with which Levinas agrees. When Darwinian terms, saying that “a being is something that is attached to being, to its own being. That is Darwin’s idea.” In the living being there is, we are told, “a self-contraction, a for-itself, an ‘instinct of preservation,’ already struggling for life....” Other-than-human beings are thus seen by Levinas as beings whose whole effort is given to the “persistence in being,” the endless striving to ensure the uncertain future of their own existence.

Although these statements are for the most part intended to convey Levinas’s belief that ethics is absent in the other-than-human realm, when we consider them in conjunction with his descriptions of il y a, we are able to understand more clearly how he envisions the relation of other-than-human life to its non-living surroundings. Living beings have imposed upon them the task of existing, and hence are placed in a position of opposition to, among other things, the non-living environment. Levinas himself describes this opposition in Entre Nous, claiming that in being “there is the persistence and the effort of being, as if in the fact of being, a kind of unforgivable seniority of non-being, against which being strives, somehow resonated and threatened.” The “non-being” mentioned here is not pure nothingness, but rather the anonymous, depersonalizing materiality of the il y a which both precedes and continually haunts the living, like a dense atmosphere that invades every security that life chances to find. This agonistic relation between life and the non-living world is again indicated in Totality and Infinity, where Levinas says of the other-than-human animal that its “need is inseparable from struggle and fear; the exterior world from which it is liberated remains a threat.” Like Darwin’s own example of the plant that struggles against the bare, dry desert, Levinas sees living beings as inhabiting a world that ceaselessly challenges them either to adapt or to die.
For Levinas, then, there is something akin to a “thrownness” of other-than-human beings into existence, a dereliction of life in a world that existed prior and which took no measures to prepare for its arrival. The stage upon which the drama of life is enacted was not set beforehand with a view to making the performance run smoothly. Gaian science, however, encourages us to reconsider this scheme; it asks us to recognize that there is a host of interactions both between living beings and between living beings and the non-living world that has molded the abiotic features of the Earth in such a way that the entropic progression of planetary conditions toward uninhabitable states of near-equilibrium has been countered and a degree—if only temporary or slight—of stability, order, and hospitality have been attained.

These features of the non-living world are, of course, not the end product of the activity of an “ordering agent.” There is no “council of beings” that decides upon methods of creating an atmosphere, no gaian architect—terrestrial or divine—who planned the seasons or designed the seas with a view to promoting life. Nevertheless, as Peter Bunyard writes, the Gaia hypothesis provides us a view of life on Earth as “somehow transforming a chaotic system into one that has a measure of order.” Such a transformation gives the non-living world a decidedly “pro-life” trajectory; it is the structuring of chaos into a system that is “fit” for living beings, and not simply something against which organisms must struggle. This “fit” is so remarkable, and improbable, that the presumption of design seems almost forgivable. Indeed, Sagan and Margulis claim, cautiously echoing the famous “teleological argument” of William Paley, that if we were to look solely at the results of gaian processes and not the mechanisms by which they operate “it would look as if the organisms had conspired to ensure their own survival.”

What we find in the Gaia hypothesis is therefore a statement about the prolific character of the abiotic Earth. To continue the stage metaphor, we could say that although the drama of life may have no director, the Gaia hypothesis suggests that the stage has somehow been “set,” that the scenery is up and the lights are on. Unlike Darwin, and unlike Levinas as well, the gaian vision is of a planetary environment that has been modified by living beings such that it too is integrated into the dynamics of life, “prepared.” Gaian science is thus, in essence, ecological thinking that takes the etymology of the term “eco-Iogy” seriously, seeing in the non-living world the logos of the oikos. Matter, invigorated, becomes Earth.

**Bio-Geo-Philia**

What, then, of ethics? Does the shift in thinking that is prompted by the Gaia hypothesis demand a corresponding shift in our thinking about who or what the other may be, about who or what makes demands of us? Does a transformed understanding of the non-living world allow us to hear anything like the call of responsibility coming from the abiotic Earth, anything other than the terrible rumbling of *Il y a*?
Perhaps it is appropriate in addressing these questions to repeat what was said above, that Levinas tends to view the *conatus essendi* in terms of the opposition between, among other things, life and the non-living, the antagonism between the entropic forces at work in the world and the neg-eatropic forces of the living body, the tension between the cold anonymity of matter and the tenderness of the living flesh. Our discussion of the Gaia hypothesis is in no way intended to deny the ethical resistance of the flesh, but that we recognize the way in which this protest in the name of life, this bio-philia at the heart of ethics, is not primarily a protest against the non-living world, but is a protest *in the name of the Earth*, a bio-geo-philia which pays heed to the non-living Earth that is woven into the living world.

Here we must be cautious. Lovelock often writes as if there were an organismic integrity at the planetary level; that is, he portrays the coupling between the biotic and the abiotic as the very close coupling found between the various constituent parts of an organism. The Daisyworld model, however, appears to work against such strong organismism. Instead of positing a gaian superorganism, what Daisyworld suggests is that there is something like a second-level order to be found in the non-living world, a structure that is not itself a living organism but rather, to use Lovelock’s term, the “product” of the collective activities of living beings. Proponents of the Daisyworld model see an Earth upon which individual organisms work to maintain their vital corporeal boundaries, but it is also an Earth that has been provided with a definite structure, a structure that is not itself a part of the organisms’ own somatic integrities, but a dynamic extension of them. Daisyworld theorists have therefore caught sight of the ways in which the bodily integrity of living organisms extends into the non-living world such that an extra-somatic context is delimited, a point that could perhaps be summarized by saying that for gaian thinkers biology is understood to be productive of a “biosphere.” What Daisyworld proposes is that the abiotic environment is integrated into the patterns of life, not as the cell is integral to the organism, but rather in the way that life is defining of a world.

It is within this extra-somatic context that the potential of living beings can be realized, and this is so because, as the Gaia hypothesis shows, the Earth is not a chaos of dead chemistry, but a chemistry vitalized, structured, worked over by the living world, not alive but enlivened by living beings. This extra-somatic integrity can give rise to a sort of extra-bio-philia, a kind of meta-responsibility that takes us beyond our responsibilities to living beings. Levinas speaks of just this sort of meta-responsibility when he writes:

> Over the hands that have touched things, places trampled by beings, the things they have held, the images of those things, the fragments of things, the contexts in which those fragments enter, the inflections of the voice and the words that are articulated in them, the ever sensible signs of language, the letters traced,
the vestiges, the relics—over all things, beginning with the human face and skin, tenderness spreads. 34

What is important here is not Levinas’s anthropocentrism, which we have already suggested is insufficiently radical to capture the fullest sense of his thinking, but rather the indication of another sort of responsibility, a responsibility that extends to “things,” to “places” and “contexts.” This is a responsibility that begins in the face, but is not contained there, a responsibility that traces off of the body and into the places that the body inhabits, just as the body itself is not contained within its own fleshy boundaries, but traces off into the world. The tenderness of the flesh that calls me to responsibility spreads across all things, like a penumbra of inviolability that illumines the spaces beyond the living body, a light that originates in the other, but whose rays are reflected by the surfaces they touch.

Hence the obsession with the other, this obsessive preoccupation with caring for the other, becomes an obsession for the things the other touches, a responsibility that spreads out into the places where the other has passed, the contexts in which the other dwells. “Matter,” Levinas writes, “which is invested as a tool, and a tool in the world, is also, via the human, the matter that obsesses me with its proximity.”  35 An obsession with matter! This is an obsession that issues in an attentiveness to the patterns and rhythms of a world that is patterned by the other, a world whose contours follow the contours of the hands that trace it, the bodies that inhabit it.

Consider now the Gaia hypothesis, which takes on new, and fundamentally ethical, meaning in light of these reflections on Levinas. Lovelock writes that “the air we breathe, the ocean and the rocks are all either direct products of living organisms ... or else of rocks that have been greatly modified by the presence of life, and this even includes the igneous rocks coming from volcanoes.”  36 Thus, it is not only the matter that is “invested as a tool” that belongs to a world inhabited by others, but matter itself: dirt, rocks, water, air, “earth” with a lower case “e.” All of these things make up a planet invested by others, an Earth with an atmospheric composition that is composed by life, a planet with physical patterns that are patterned by living beings. These are all things to which I am also called to respond: the sweep of landscapes, the fold of mountains, the meandering bends of streams—all part of an other-than-human world, all things to which my own conatus is called to yield. Obligation follows the other to the far reaches of the Earth, transforming the bio-philia of ethics into a bio-geo-philia which asks that I shape my own movements to conform to a world that is shaped by others, a love for the Earth that shoulders responsibility for the abiotic world, bearing a task worthy of Atlas himself.

On the Face of the Earth

From a strictly Levinasian point of view, it is perhaps too much to say that the Earth is an “other.” 37 Rocks and rivers, seas and sky, are not “beings for themselves,” not expressions of the conatus essendi that “strive” or “persevere” in being. Such things
are not living beings, not themselves composed of the living flesh whose naked vulnerability is capable of calling into question my own projects and powers. Perhaps this means that there is not a “face of the Earth,” nothing alter in the abiotic realm whose exposure and poverty are capable of speaking the “Thou shalt not kill,” expressing the imperative that commands me to the side of the other.

But despite all of this, we have found that echoes of the “Thou shalt not kill” can be heard coming from the direction of the non-living world, calls that emanate from living bodies, but that come back from the abiotic Earth in the form of new obligations, new responsibilities. The prohibition against violating the naked indigence of the other that is written in the flesh is, by virtue of the body’s own transgressions beyond its surfaces, transcribed into the non-living world, rewritten in air and sea, carved into stones. This amounts to saying that the non-living world consists of various compositions of which life is productive and which are productive of life, and that my obligations do not cease at the bounds of the living flesh, but extend to these extra-somatic integrities, these extra-corporeal compositions. Such obligations, while distinct from those that bind me to the living, are nevertheless not wholly unfamiliar, for they involve an attentiveness to that which is exposed to dis-integration, to compositions that are open to de-composition, to arrangements that require that I arrange my life such that I am not the cause of their falling into dis-array.

Hence, there is in the non-living world a certain prohibitive power. It is not identical to the power of the mortal flesh; it does not voice the “Thou shalt not kill,” but still there can be heard a “Thou shalt not ...,” a call to be responsive to the contours and folds of a world defined by the other, an Earth patterned by the others. Here again we find ourselves crossing paths with Levinas who, despite his claim in Totality and Infinity that the only resistance to be found in the natural world is “the resistance of nothingness,” nevertheless has the intimation that the human is, after all, bound in obligation to the Earth. Commenting upon Job 38:4 in which God asks “Where wast thou when I laid the foundations of the earth?,” Levinas claims that this is not a statement about the limited powers of humans to understand the designs of an omniscient God, but is instead “a statement of deficiency that cannot have meaning unless the humanity of man is fraternally bound up with creation, that is, responsible for that which has been neither his nor his work.” Here the fraternal relation, of which Levinas so often speaks and which is synonymous with the social relation in which all is owed to the other, is described as a relation to creation itself! Levinas’s remarks thus attest to a responsibility for that which is neither myself nor my work, but for the other and for that which is the other’s work, for a creation that I am prohibited from remaking in my own image as it is already made in the image of the others. As the Gaia hypothesis helps us to understand, this is indeed a statement about all of creation: this soil, these hills, the tumble of waterfalls, cascading lights, rolling clouds.

Here I am, responsible for everything.

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Notes


2. Elsewhere, I have developed more fully the claim that one can, within the framework articulated by Levinas, arrive at the conclusion that “every body is the other.” See “Facing Nature: Levinas Beyond the Human,” *Philosophy Today* 44, no. 1 (Spring 2000); and “Natural Disasters,” in *Eco-Phenomenology: Getting Back to the Earth Itself*, eds. Ted Toadvine and Charles S. Brown (Albany: SUNY Press, forthcoming).

3. This is the subtitle of James Lovelock’s *Gaia: A New Look at Life on Earth* (Oxford: Oxford University Press, 2000).

4. See *Gaia*, chapter 3.


25. The following comments are specifically intended to refer to Levinas’s view of other-than-human life. It is clear Levinas believes that the human being has a significantly different mode of being than animals or plants, and he does not characterize the human relation to the non-living world in the terms that follow.


27. Levinas does not mention this point in the passage cited, however elsewhere he often stresses that the “non-being” of *il y a* is not no-thiagness, but rather an anonymous “something” (see *Existence and Existents*, 62; and *Ethics and Infinity*, 48–9).


30. Levinas discusses *il y a* in connection with “thrownness” in *Time and the Other*, 45–6.


37. At this point, it is worth reemphasizing that in this essay I have been attempting to find a way of talking about obligations to the abiotic Earth that is compatible with the general principles of Levinas’s thinking. As such, my comments are not meant to preclude the possibility that there may be more appropriate ways of addressing this subject from non-Levinasian perspectives, or perspectives that make more limited use of Levinasian themes.
