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Introduction

“NOTHING COMES FROM NOTHING”

BRUNO LATOUR, among the foremost philosophers and sociologists of science in his generation, argued that to untangle the intricate yet urgent problem of human beings’ environmental impact on the planet will require “sensitivity,” which he defines in terms of systems science as “detecting and reacting rapidly to small changes, influences, signals.” Organisms that lack such sensitivity, as evolutionary processes make abundantly clear, do not survive. Ancient peoples, despite all their pillaging and plundering, had an advantage over us in this regard: They were preindustrialized. They were predigital. They were precapitalist, prereductionist, prepostmodern, preposthuman. Of necessity they lived closer and with greater sensitivity to both the perils and the prospects of their environments. Innocent of our technology-enhanced disconnectedness from Nature, the Greeks and the Romans, like their Mediterranean neighbors, retained an earthiness and proximity to the sources of their survival that most people living in highly industrialized countries

no longer possess today. As heirs to their estate—and in today's Westernized world all peoples are in some sense inheritors—we have much to relearn from them, and not only from their mistakes.

Here's an example of what I mean that is indicative of many other suggestions offered up over the course of this book.

In a recent paper, noted environmental philosopher J. Baird Callicott argues that to achieve socioeconomic sustainability in terms consistent with the Earth's biogeochemical cycles requires that we follow Nature's example: "Ecological sustainability," he writes, "is a matter of adapting human economic systems to and modeling them on the economy of nature in which the globalized human economy is embedded and in relation to which it should stand as microcosm to macrocosm." Insofar as Nature's economy runs on solar energy and all of Nature's elemental substrates—hydrogen, oxygen, carbon, nitrogen, and so on—are recycled, the human economy, Callicott argues, will only be sustainable with respect to Nature if it is a dynamic but closed-loop system, powered by solar energy, in which all materials are reabsorbed or dissipated such that there is no non-biodegradable waste.

The argument is a page out of Lucretius.

Lucretius was an Epicurean, whose cosmology pictured everything in the universe as comprised of tiny particles called atoms. The cornerstone of Epicurean physics, upon which its ethics were also based, is the doctrine sprung from empirical demonstration that "nothing comes from nothing or returns to nothing." Earth's life cycles, Lucretius argues throughout his poem, the *De Rerum Natura*, provide ample proof of this postulate. "Whatever you see," he sings, "does not wholly pass away, since Nature re-creates one thing from another and does not

allow anything to be born except that fostered by the death of something else.” In the language of modern science, what Lucretius is describing here and throughout his poem is an early adumbration of the Law of the Conservation of Energy as it unfolds in photosynthesis and other biogeochemical systems. But growth and decay are also phenomena ordinary observers in the agrarian societies of antiquity would have seen transpiring every day. Lucretius’s handling of this topic—and his poem teems with examples drawn from agricultural *milieux*—might thus be more aptly described with a correspondingly humbler phrase—the philosophy of compost—by which is meant an understanding of closed-loop systems that involve symbiotic interrelationships between landscapes, plants, animals, and humans in which nothing is ultimately lost in the process of organic transfer.

Callicott’s idea, it turns out, is old.

Lucretius’s scientific reasoning reflects a typical ancient way of thinking—of inferring from Nature’s observable processes what our human disposition and course of action should be. Nature, on this view, far from being red in tooth and claw, provides us with a template for living, and scientific knowledge of its workings offers consolation for the psychic banes of existence. Lucretius himself minces no words on this point: “The mind’s darkness and dread must be dispelled,” he insists—not by shafts of light from divine revelation or by feats of positive thinking, but “by the outward form and inward laws of Nature.”

Lucretius’s empiricism is a species of analogy, but one might justly call it also, in more modern parlance, a form of biomimicry. It certainly reflects the kind of sensitivity that Latour has in mind. This style of thinking, prescientific in and of itself, remains useful and has practical, ethical, and indeed scientific value for

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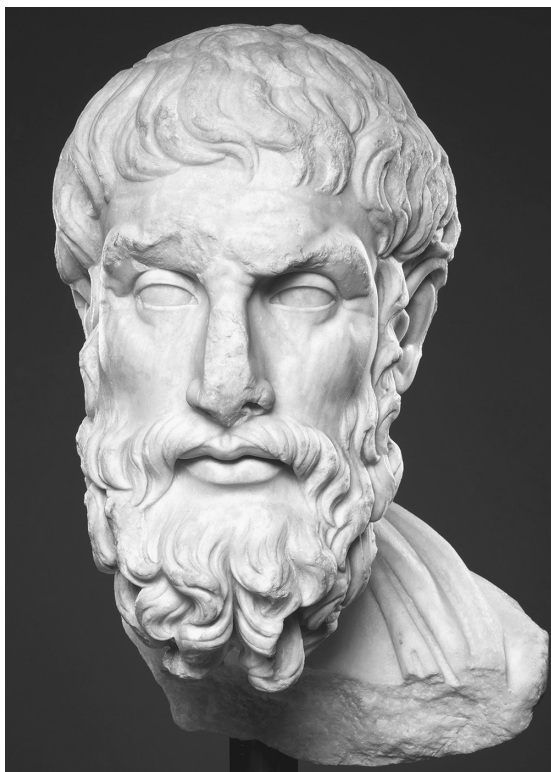


FIGURE 0.1. Bust of Epicurus (second century CE).

us today. If nothing else, Lucretius's investigative method can and should disabuse us of our blind, uncritical allegiance to presentism. From his perspective as a nuclear physicist, J. Robert Oppenheimer once weighed its benefits in these terms:

Analogy is indeed an indispensable and inevitable tool for scientific progress. . . . I do not mean metaphor; I do not mean allegory; I do not even mean similarity; but I mean a

special kind of similarity which is the similarity of structure, the similarity of form, the similarity of constellation between two sets of structures, two sets of particulars, that are manifestly very different, but have structural parallels.

This book concerns what is arguably the mother of all analogies—the relationship of parts to systemic whole, of human beings to the biosphere and, indeed, to the universe. All schools of ancient philosophy based their arguments on the premise that human behavior should align with states of affairs found in Nature, a principle epitomized by Latin authors with the catchphrase *secundum naturam*—“following Nature’s lead”—the title of this book. In choosing how to live, work, and interact on an imperiled planet it is imperative that we do the same.

Of course, our scientific understanding of the natural world is much better now than it was in antiquity, and so our ethical positions and behavioral responses should be adjusted accordingly. On the other hand, the consequences of scientific and technological interventions today are also greater, precisely because our understanding is better (and yet still imperfect and incomplete). One might say those consequences are, potentially, exponential, for good and for ill. But lifestyles and social practices that aim to mesh harmoniously with natural systems could save us from ourselves in this regard. Ancient ways of being in the world just might provide the counterbalance we need to find a productive alternative to unlimited technological, economic, and scientific growth.

What counts as ancient is of course in the eye of the beholder. For some people the 1990s are ancient history. I find that ideas from a few generations or even a few hundred years

ago are often as fresh and even more relevant today than when they were first formulated, so, in addition to the usual roster of classical writers, other oldies that fall into the tradition of following Nature loom large in this book. In my view, the actual source of a beneficial idea, whether ancient or modern, is of no consequence. Ultimately, what we should all be after is a shared way of life that manages to embrace the plurality and diversity of the world we inhabit, while respecting and preserving the processual unity of Nature.

A climate emergency, however, threatens to prevent us from realizing those or any other ideals. Judging by the data on where we're at versus where we need to be with climate mitigation, the problem seems intractable. "We are on a pathway to global warming of more than double the 1.5-degree (Celsius; or 2.7 degrees Fahrenheit) limit that was agreed to in Paris in 2015" is the United Nations' official assessment. Lucretius's maxim "nothing comes from nothing" speaks to that impending disaster, too. Shakespeare's *King Lear* offers surprising testimony. The play is littered with overt allusions to the Lucretian tag, where its meaning is ironic in that it is used to describe human motivations and actions, not biogeochemical processes. In Lucretius the already paradoxical idea (with its confounding double-negative) serves as a soundbite to convey a natural law of physics. In the Bard's hands it becomes a vehicle for exploring the all-too-human inability to see things clearly, interpret them correctly, and act appropriately. The parallels to our contemporary predicament are nearly exact.

King Lear is an old man, set in his ways, who has ears to hear only what he wants. Throughout the play he therefore constantly misinterprets what's really going on around him, seeing "nothing" as "something" and vice versa. Shakespeare announces this

pervasive motif in the play's opening scene, where Cordelia, Lear's youngest, unmarried daughter, is asked to elaborate on her filial love for him as her sisters Regan and Goneril have done just prior with effusive speeches. What's at stake is the division of Lear's kingdom among the three. When it's Cordelia's turn and Lear asks "what can you say to draw a third more opulent than your sisters? Speak." Cordelia's reply takes him aback: "Nothing, my lord." "Nothing!" Lear explodes, to which Cordelia repeats meekly, "Nothing." "Nothing will come of nothing," her father retorts with the Lucretian allusion. "Speak again."

By "nothing" Cordelia means that she has nothing to add in words that she does not already feel or has not already shown in deeds, and that she demurs from engaging in an exercise of disingenuous flattery. (We soon learn that Regan and Goneril really think their father to be a senile buffoon and scheme throughout the play to use their newly inherited power to marginalize him and increase their and their husbands' fortunes.) Lear regards Cordelia's answer as impertinent and implies she will get "nothing" of the kingdom in return for her "nothing" of praise. Despite a subsequent, sincere profession of her love, Lear disinherits her:

LEAR

So young, and so untender?

CORDELIA

So young, my lord, and true.

LEAR

Let it be so; thy truth, then, be thy dower.

Lear, however, is spooked by this fraught exchange, and the simmering pot of nothing boils over again and again throughout

the play, notably in an encounter between Lear, the Earl of Kent, and Lear's court jester, the Fool. The nameless Fool, whose job it is to speak truth to power, as Cordelia herself has done, sings a ditty about wise kingship to take Lear's mind off his troubles, to which Kent replies, "This is nothing, fool." "Then 'tis like the breath of an unfee'd lawyer," the Fool parries, "You gave me nothing for't. Can you make no use of nothing, nuncle?" "Why, no, boy," Lear replies, recalling his words to Cordelia, "nothing can be made out of nothing."

Later, as the plot thickens, and the King descends into full-blown madness brought on by his elder daughters' betrayals and regret for his own mistreatment of innocent Cordelia, Lear and his Fool find themselves wandering blindly on the moor, caught in a violent storm. The wind and rain singe the King's gray head, Shakespeare says, making "nothing" of it. Whereupon Cordelia's words surface again to haunt him: Defeated, but still defiant, Lear tries to calm himself and resolves, against all foes: "No, I will be the pattern of all patience; I will say nothing." By the end of the play, however, all the members of his house now dead, nothing really does arise from nothing: Holding Cordelia's corpse in his arms Lear mourns her, wailing

No, no, no life?

Why should a dog, a horse, a rat, have life,
And thou no breath at all? Thou'lt come no more,
Never, never, never, never, never!

What, you might wonder, does any of this have to do with rising global temperatures and environmental devastation in the modern world?



FIGURE 0.2. William Dyce (1806–1864), *King Lear and the Fool in the Storm*.

In *Lear*, Shakespeare transforms Lucretius’s scientific theory that nothing comes from nothing into an affective one, suggesting thereby that human interpersonal actions and reactions comprise a feedback loop that can take on tragically cosmic proportions on the world’s stage. In the Age of the Anthropocene, we now know that human activity does take on such proportions, to the detriment of the biosphere, its plants and animals, and human well-being. We tend to blame trains, planes, and automobiles for our climate predicament. But, as in *Lear*, it’s really misplaced human wants and desires—that is, emotional, psychological impulses—and errors of judgment and overreach—that are the sources of catastrophe.

Because we want to, and because we can, and because we misjudge outcomes, modern humans have created a situation

wherein we are now dangerously dependent on machines and complex devices, to build and operate which we must extract and expend vast amounts of carbon and stored sunlight from the Earth in the form of fossil fuels and precious metals. Our resulting environmental “crisis” is really a long-festering malaise rooted in defective outlooks and priorities. It is not, as Garrett Hardin articulated forcefully in his classic essay from 1968, “The Tragedy of the Commons,” a problem caused by technology, and thus not a problem amenable to a technological solution, even though technology has its part to play. To fix things will require changes in human behavior and values. Literature, philosophy, the arts, religion—what are called “the humanities” for good reason—have been addressing the anthropological problems that have precipitated our current regime long before the caustic industries and technologies we now possess and proliferate without restraint even existed. Shakespeare’s appropriation of Lucretius’s slogan is a powerful allegory for our times.

Fortunately, climate scientists are beginning to take the human element seriously and are attempting to incorporate it into their models. A recent comment piece in the journal *Nature*, for example, offers eight “insights” that enjoy strong disciplinary consensus among political scientists and economists that, if factored into climate models, would increase their usefulness to real-world policy decisions and investments. The thread running through all eight is debunking the “oversimplified logic that people are rational optimizers of scarce resources.” “In reality,” the authors insist, “human choice is a darker brew of misperception and missed opportunity, constrained by others’ decisions”—a point not lost on Shakespeare. While it is true that creating more responsive, accurate models based on such constraints—

politicians beholden to the whims of their constituents, for example, or corporations answerable to their profit-seeking investors—will help us better assess the current and future state of the climate, the problem remains that human beings are not rational optimizers of scarce resources. Or at least too many of us aren't. Until human behavior changes in a meaningful way on a meaningful scale, through education, reflective introspection, and social coercion, the only thing more accurate models will show us is the urgent need to, well, modify our behavior. And to do that we need different values. One way to get a new set of values—a rather ecological one, I would say—is to dust off and refurbish the best of the old ones.

Shakespeare invokes Lucretian atomism to portray and explain the fall of the troubled house of Lear. “House” in this context is no dead metaphor: “ecology,” “ecosystem,” “economy”—each is derived from the Greek word *oikos*, which means “house” or “household.” Indeed, Callicott’s proposal to model the human economy on Nature’s economy recalls the title of Linnaeus’s study of ecology from 1749, the *Oeconomica Naturae*, which was itself inspired by approaches to natural philosophy pioneered in ancient Greece and Rome. It is sound science to say, as Aristotle once put it, that Nature is in fact “economical”—thrifty even—like a good housekeeper. We, too, then, if we want to follow Nature’s lead, should put our house in order by perceiving clearly, judging rightly, and acting ecologically, mindful of all aspects of our domestic arrangement with the cosmos. Perhaps after experiencing the home confinements foisted upon

us over the past few years by the COVID-19 pandemic we are now in a better position to respond to this line of thinking. Latour, at least, was hopeful on this point:

We can't escape anymore, but we can inhabit the same place in a different way . . . based on the new ways of *placing ourselves differently* in the same spot. Isn't that the best way, anyway, to sum up the experience of the lockdown? Everyone started to live *at home* but *in a different way*.

But another question still looms: *why* should we do any of this?

On the one hand, the idea that nothing comes from nothing or returns to nothing in Nature can provide psychic defense against existential anxiety about annihilation and extinction, as it did for the Epicureans. All organic matter, in this view, including human beings, will be, as it were, born again, or reincarnated, or—my metaphor of preference—composted into new forms of life, with nothing to fear upon dissolution. But the scientific fact remains that in the larger scheme of things the whole Earth and its systems is dying, and nothing we can possibly dream up and no amount of good will can change that outcome. The Sun will eventually run out of energy, like billions of stars before it, expand into a red giant, and consume the Earth. It's called entropy, and it, too, is an aspect of Nature. The subtitle of this book, *Ancient Ways of Living in a Dying World*, pays this sobering natural law its due. To say that, though, is not an expression of pessimism. To the contrary, I see it as heady optimism, even idealism, to face the reality of impermanence philosophically and to come up with good reasons to live in harmony with Nature, nonetheless.

The usual rationale for climate action is to “save” the planet by reversing global warming. We most certainly should take decisive, impactful action to mitigate and potentially reverse the damage we have caused. There are strong instrumental and deontic reasons for doing so. But save the planet *for what* exactly? To preserve the socioeconomic *status quo* that brought us up to this brink? To go on enjoying the affluent, exploitative lifestyles we currently pursue, or aspire to? So the haves can keep having more and the have-nots somehow find less reason to complain about it? The “for what” question, thus, is all important, and any calculus to fix our problems must factor in the biological, ecological, and ontological necessity of death by embracing an ethos that takes seriously a consideration of whole systems.

This is a tall order, impossible perfectly to achieve. But we should feel emboldened by Lucretius and *King Lear*. *Nothing comes from nothing—or returns to nothing*. Nature is finite and perishable, but also resilient. Change, the only constant in the universe, churns on and on like a great wheel though space and time. The human imaginaries of times past, like spokes adjoining at the hub, form part of that perpetual motion. Whether we like it or not, things will come full circle. Our world of stunning yet precarious complexity is destined at some point for recalibration, as surely as all growth in Nature, once it’s reached its apex, must fall to decline. A Great Simplification awaits, and the wisest course of action is to prepare for it, individually and collectively. Old ideas can help us here, as the following sermons conspire to convince you.

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