Life on the Brink

Environmentalists Confront Overpopulation

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CHAPTER 12

Abundant Earth and the Population Question

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In *One with Nineveh,* Paul and Anne Ehrlich identify "civilization's most fundamental challenge" in two parts: one, "making it possible for everyone in a growing population to have an adequate diet while [two] reducing human impacts on the global environment" (2004, 25). Indeed, food production will have to roughly double by midcentury in order to meet rising demand (Gillis 2011). This necessity, however, makes the second part of civilization's challenge—"reducing impacts on the global environment"—all but unrealizable, since meeting people's needs invariably takes precedence over the protection of nonhumans and their homelands. Therefore, providing "an adequate diet for all" will inevitably be achieved (if it *can* be achieved) through the ongoing displacement and extermination of nonhumans that human food procurement, production, and transportation entail.

As unpromising as this looks for Nature, it is barely the first chapter of the future swiftly coming our way. What must be added to the picture is the present-day trend well beyond the provision of an adequate diet for people: namely, the heavy footprint of the global consumer class—which has been growing by hundreds of millions of people in recent decades—coupled with the social objective that the standard of living of the world's poor be raised. While "raising the standard of living" may be nebulous shorthand for the worthy aim of ending severe deprivation, translated into shared understanding and policy the expression is a euphemism for the

global dissemination of consumer culture—the unrivaled model of what a "high standard of living" looks like. But to feed a growing population *and* enter increasing numbers of people into the consumer class is a formula for completing Earth's overhaul into a planet of resources: for ever more intensified uses of land and waterways for habitation, agriculture, and farming; for the continued extraction, exploitation, and harnessing of the natural world; and for the magnification of global trade and travel.

The concomitant of Earth's human zoning (and receiving virtually no mention in mainstream media or the leftist and social justice literature) is the genocide of Earth's wild nonhumans. I use the word *genocide* here in its literal sense: the mass violence against and extermination of nonhuman nations, negating not only their own existence but also their roles in Life's interconnected nexus and their future evolutionary unfolding. This planet-wide holocaust is marching on virtually unabated, despite its extensive and decades-long documentation, driven by the lifeways of *both* the world's rich and poor, and most especially by their Faustian economic partnerships. The ongoing and escalating genocide of nonhumans is shrouded in silence, a silence signifying disregard for the vanquished. Silence is how power talks down to the subjugated. Silence is how power disdains to talk about their extinction (see Jensen 2006).

To talk back to power from the standpoint of nonhumans has proven extremely difficult. Part of the difficulty lies in the fact that *one* constituency—for example, men, Western culture, or corporations—cannot be held solely accountable for the dire plight of the greater-than-human world. The domination of Nature cannot be pinned on a particular constituency that derives power and profit from it. Rather, culpability lies in broad human participation, exceeding any particular group or (at this historical juncture) culture, and crossing class, race, religious, national, ethnic, and gender boundaries. Thus, those who have defended the nonhuman world against the violence and destruction it has suffered have sought to place the blame on anthropocentrism: the omnipresent set of taken-for-granted sensibilities and orientations that always prioritize (ethically, pragmatically, and usually unreflectively) human interests.

Anthropocentrism can be described as a worldview rather than an ideology, because human-centeredness is far more encompassing and consensual than a set of ideas that serve some dominant group. Identifying this particular culprit, however, has not turned out to be medicine for curing humanity's rampage. Given the ubiquity of anthropocentrism, it has been

impossible to find the Archimedean point—the place outside the dominant normative order—from which to launch a critique that can actually touch, let alone move, the whole. *Nothing* seems to sway the global social collective from its presumptuous intent to constitute the entire planet as a human resource domain and to reify and impose that constitution as reality.



While the anthropocentric worldview can be held accountable for the historical trajectory into the present ecological catastrophe, the magnitude of Life's crisis today, in conjunction with the deafening silence enveloping it, renders the idea of anthropocentrism too feeble and academic for the critical-analytic task of opposing the human domination of the natural world. Undergirding the tyranny of this domination is something more deadly than anthropocentrism, or a highly virulent strain of it: the open or tacit stance of human supremacy. The foundational pillar of human supremacy is the belief that human beings are the superior life form of the planet and Earth's entitled owners. From the foundation of this lived, widespread belief flow the ruling conceptions of and actions toward the greater-than-human world. Human supremacy fuels the top-down conceptualization of Nature as a resource base, a domain to be used for our ends.

The standpoint of human supremacy is incapable of conceptualizing the world in its ontological self-integrity: rather, it always grasps the world in terms of how it can serve the needs and wants to which we presume ourselves entitled. Indeed, the foundational belief of supremacy, in its interlocked conceptual and action-orientation dimensions, manifests most clearly in the attitude of total entitlement: an entitlement, moreover, that can hardly be challenged because it claims both consensual power *and* morality on its side. Human supremacy is so deeply entrenched, so taken for granted, that the concept of *resources* has attained the epistemic status of a *natural kind*:[1] calling soil, water, forests, coal, oil, livestock, fisheries, wildlife, and so on resources appears as a realistic, normal description of some aspect of the world. The toxic import of the very idea of resources is masked by its normality—a normality instilled by the mode of existence humanity has constructed in accordance with the shared belief in our superiority. Thus the tyranny of viewing and treating the natural world as

composed of resources is shrouded through the latter's tacit metaconceptualization as a normal and realistic description.

The assumption embedded in the concept of resources is that the natural world always is graspable in terms of its disposability to human ends: conceptually, actionably, open-endedly, and in perpetuity. The pervasive use of the concept reflects its entrenchment; even those who regret human unrestraint feel compelled to talk about resources as a counterfeit referent for things, living beings, and natural conditions on Earth. The concept of resources is an abstraction, for it says nothing specific about any real aspect of the world. It pretends to point at real things, but it points at nothing except back at the pointer: us. The concept of resources inscribes the world, conceptually and instrumentally, as a usable field, and by refusing all concreteness it makes itself all-inclusive and endlessly rapacious. It serves human colonialist attitudes and ends, and all of us are complicit in its ubiquity and ramifications.

The concept of resources is composed of *re* and *sources*. What various *sources* are reduced to ostensibly having in common is that they can be earmarked as reservoirs of things (living or dead, simple or complex, big or small, readily available or technologically accessible) that are useful or profitable for people. *Re* as a prefix of sources suggests that such reservoirs can be disposed of over and over again. The abstraction of resources—being merely functional diction for human-user purposes—governs most ideas and actions related to the living world.

The very idea of resources, however, prefigures the living world's *physical* erasure. The plunder of the oceans, for example, has been ideationally prefigured in the resource-derivative words *fisheries* and *fish stock*. The same goes for the word *livestock*, which has conceptually anticipated the infernal treatment of animals in the industrial food system. Similarly, the worldwide devastation of freshwater life (Dudgeon et al. 2006) is utterly unsurprising, given that rivers and lakes have been conceptually conflated with, and instrumentally reduced to, *freshwater*. Fisheries, livestock, freshwater—they are all for the taking, and our ability to take them is testimony to our superior nature, and our superior nature entitles us to the taking, and the rightfulness of the taking is ciphered to be reflected back to us in our very words.

The process of objectification of living beings and their homelands is a sine qua non of human domination, always accomplished linguistically along with its real-world destruction and infliction of suffering. The concept of resources works as a discursive incarceration of the living world, because it does not present itself as a renaming but rather, in feigned innocence, offers itself as a realistic and normal referent. As a renaming with denotative pretensions, the concept of resources inscribes human totalitarianism upon the biosphere. Thus, resources along with its sundry cousins (such as *natural capital*) substantially evacuate the living world of its immanent ontological substance. The concept of resources has become a gaping wound on the face of language that has engraved the delusion of human supremacy into commonsense, science-sense, technocratic, and political thinking, policy discourse, and other social arenas.

The transfiguration of the world into resources shapes the human understanding of reality in such a way, and at such a pervasive level, that we end up perceiving the totality of what is through resource-laden thought. This not only devastates the living world but also vastly diminishes humanity as well by boxing us into a virtually inescapable way of life through structuring our collective experience on Earth. (Martin Heidegger called this self-inflicted constriction "the danger" [1977]). In other words, the aggressive and parochial claim that human beings make on Nature by renaming it *resources* lays a suffocating claim upon humanity itself, by constricting thought, cutting us off from the wonders of the biosphere, and extinguishing the possibility of yet-to-be-imagined (sane, harmonious, beautiful) ways of being on Earth.

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It is within this resource-saturated collective mindset that "the population question" gets framed: How many people can Earth support?[2] This is the ruling question. Implicit in the question, and explicit in most quarters in which it is posed, is the quandary: What is the maximal number of people for whom Earth can provide resources without severely degrading those resources for future people? This question menaces Earth. The question we should be asking instead is, How many people, and at what level of consumption, can live on Earth without turning Earth into a human colony founded on the genocide of its nonhuman indigenes? The latter is rarely posed because the genocide of nonhumans is something about which the mainstream culture, including the political Left, observes silence. Academics largely follow suit, perhaps because they view raising an issue about which silence is observed as a non sequitur. Instead, the stan-

dard query we encounter is, How many people can Earth support? and its spinoffs. For example: How many people can Earth feed? Can Earth support nine billion people? Ten billion people? More?

The prevailing question takes as given that our numbers will keep climbing, even though the strategies for reversing population growth are well understood. An international financial, technological, knowledge, and informational campaign to bring the full range of modern contraceptive methods, safe abortion, professional counseling, and sex and health education throughout the world—and especially to the places where they are most urgently needed—would make a difference of billions within this century (see Potts 2009). Stabilizing and then reducing our numbers, *globally*, demands proactive measures, implemented at the grassroots level so as to reach people in all places and walks of life.[3] These measures involve two dimensions: delivering services that enable people to plan their childbearing choices and removing obstacles that prevent people from accessing such services.

Wherever modern family planning is made available and barriers to access are lifted, women and their partners almost universally choose to have far fewer children. As Robert Engelman puts it, "few people are aware that easy access to good family planning services is most of what's needed to achieve a sustainable world population" (2008, 210). This trend is so striking that leading-edge population analysts like Engelman and Martha Campbell propose that women are, by nature, mostly disinclined to have many children but are rather intent on successfully raising the child or children they already have.[4] Campbell discusses a "latent desire" in women for fewer children, which swiftly surfaces when women are given affordable access to family planning, reliable counseling for modern contraception options, safe abortion services, and, last but far from least, a sociocultural climate receptive to the choice of fewer or no children (see Campbell and Bedford 2009).

The implications are profound: the most important dimension of addressing population growth is simply to make resources for the control of fertility a political, economic, social, and cultural top priority, while also acting to remove or preempt financial, informational, cultural, and normative barriers to access. In numerous countries where such measures have been spearheaded by governments, backed financially and implemented competently, fertility rates swiftly declined. Iran is perhaps the most striking case of the results of a successful population policy: from an average

of 5.5 children per woman in 1988, fertility declined to 1.7 in 2009. The catalyst of this transition was the reinstitution of Iran's family planning program in 1989, coupled with an educational, cultural, and healthcare crusade to encourage and enable the choice of smaller families. Among other measures, this all-out effort included the creation of fifteen thousand health clinics to service rural populations, a campaign to raise women's literacy, media programming to raise consciousness and disseminate information, and the provision of all forms of birth control free of charge (Brown 2011).[5]

I offer the Iranian case as a dramatic example of how drastically, in Lester Brown's words, "a full-scale mobilization of society can accelerate the shift to smaller families" (2011, 159). Indeed, *immediate full-scale mobilization* is what the Earth's forests, prairies, oceans, rivers, animals, and climate are crying for (see Foreman 2011). And population growth everywhere would decelerate as soon as this were made the concerted goal of an international campaign, involving the partnership of aid organizations, financial and UN institutions, governments, and grassroots healthcare providers and activists. Instead of the estimated nine or ten billion people of UN demographic projections, we would peak at eight billion and then take the road to declining numbers—perhaps thereby averting the sixth mass extinction, a dilapidated global ecosystem, climate catastrophes, and the real possibility of immense human suffering.

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Making voluntary family planning available, affordable, safe, and culturally normal is an achievable intervention that can be implemented immediately (Prata 2009). But instead of pursuing this rational, ethical, and prudential path—that would foster ecological protection and restoration, support women's right to plan their childbearing, and, additionally, possibly preempt or alleviate famine, disease, and resource wars—mainstream discourse and the political Left hold the population increase in the pipeline, under current policies, as our inexorable fate.

As a consequence, the question How many people can Earth support? morphs into the quest to "resourcify" Earth in new and ever intensified ways. Thus, for example, the quandary of whether more than nine billion people can be fed becomes the pursuit (already fully underway) of a second Green Revolution, with its extensions and technological innovations

beyond the first. For Earth to meet the subsistence demands of many billions of current and future people—let alone the demands made when these billions achieve modern consumer lifestyles—involves scaling up the rational-instrumental enterprise of late modernity: increasing the efficiency of crop cultivation and rotation, maximizing arable land (both already in use and new), stretching out water supplies via, for example, adopting irrigation-efficient technologies, optimizing fertilizer and pesticide applications, proliferating industrial fish farms, scaling up animal confinement and through-put operations, and creating higher-yield or stress-resistant crops by traditional breeding or genetic engineering. The entire face of Earth, in other words, with nary a thought for the self-integrity of the greater-than-human world, must be harnessed to provision however many billions we end up becoming: but heaven forbid that we should collectively consider the possibility of reducing our numbers.

Regarding Earth as our resource base embeds the reigning belief that Earth is our *property*: humanity's commonwealth. The affiliated presumption is that Earth can, and even should, be maximally populated by people, as long as the consequent exploitation of resources does not endanger people themselves. Because humans are spellbound by the idea that Earth is our planetary real estate, cognitive and pragmatic activity is funneled into working with the *plasticity* of resources. As Julian Simon (1981) rightly pointed out, with much anthropocentric pomposity, resources are highly malleable. Consider the ways. The resource base can be enlarged: for example, more land under the plough, more groundwater discovered, more oil and mineral reserves found. The services of previously depleted or forsaken resources can be accessed through new or alternative ones: for example, biofuels, tar sands, wind energy, electric cars, artificial meat, hydroponics. Resource-use efficiency can be intensified or revolutionized: for example, by eliminating food waste, dematerialization, recycling industries. Resources can be technologically manipulated to amplify or prolong their productivity: for example, hydrofracking, genetic engineering of crops and animals, fish factory farms, genetically modified bacteria for mineral extraction. And the pricey extraction or conversion of resources might eventually be made affordable: for example, desalinization, solar fuel cells, extraterrestrial mining.

As long as such a "resource enhancement portfolio" can be developed and implemented, then an increasing and eventually very large stable population *might* be supportable; maybe such a large population can even

be provided with a high-consumption way of life. Environmentalists' objection to this Simonian reverie, of billions of people enjoying a global consumer culture and expanding the human empire to the universe at large, is that limitlessly enhancing the resource base eventually results in breaching biophysical limits, with consequences like climate change, agricultural and industrial pollution, peak oil, and the severe degradation or loss of ecological services. This critique is more than justified, no longer as a set of projected forecasts but by the daily realities of droughts, floods, mudslides, environmental cancers, and oil and food price hikes. But a response to this oft-rehearsed critique is that the very civilization at work prospecting, expanding, and diversifying the resource base is also increasingly engaged in the parallel work of correcting the side effects of its own excesses. This is the reason that Julian Simon embraced recycling, solar energy, environmental remediation, and pollution cleanup as important components of the civilizational toolkit for moving forward. We could update Simon's "ecofriendly" list by adding the imminent possibilities of geoengineering, synthetic biology, genetic engineering, laboratory-made meat, and sundry adaptation projects to keep climate change under control and food on the table. More serious than modern society's potential ability to technologically fix or muddle through problems of its own making is people's apparent willingness to live in an ecologically devastated world and to tolerate dead zones, endocrine disruptors, domestic animal torture (aka concentrated animal feeding operations or CAFOs), and unnatural weather as unavoidable concomitants of modern living.

I am presenting a picture of the present and intensifying human-colonized world. But in contrast with many of my colleagues, I do not necessarily foresee a world that collapses by undermining its own life-support systems. It may instead turn into a world that is molded and propped up by the strengths that advanced industrial civilization has at its disposal: the rational-instrumental means of technical management, heightened efficiency, and technological breakthrough. It is possible that by such means a viable "civilization" might be established upon a thoroughly denatured planet. What is deeply repugnant about such a civilization is not its potential for self-annihilation, but its totalitarian conversion of the natural world into a domain of resources to serve a human supremacist way of life and the consequent destruction of all the intrinsic wealth of its natural places, beings, and elements. "Project Human Takeover" has proceeded acre by acre, island by island, region by region, and

continent by continent, reaching its current global apogee with the final loss of wild places and the corollary sixth mass extinction underway. What the near future heralds, if we stay on the present trajectory, is the sealing of this nonhuman genocide by means of Earth being *put to work*, 24/7, to serve a master, populous race. The proverbial water will be squeezed out of stone, metaphorically and literally, not only to bring people bread but circuses too. As Max Horkheimer and Theodor Adorno foresaw decades ago, the culmination of what we have come to call *civilization* "radiates disaster triumphant" (1972, 3).

The dominant culture (pardon the repetition: including the Left) is so myopically centered on human affairs that Earth has become merely a stage for humanity's dramas. Human supremacy has ensconced widespread indifference toward the plight of nonhumans and their homes; it ignores, and keeps itself ignorant of, the question of *their* reproductive rights, as individuals and as species. The dominant culture thus seems unable to grasp the moral evil of erasing wild nature just to accommodate more and more people to live, *all at once*, on a planet occupied as a resource satellite. Our conceit has made us so imagination-poor that we cannot fathom that future people, disabused perhaps of our own species-small-mindedness, will desire to live in a world rich in kinds of beings and kinds of places.

Hope lies in humanity's coming to realize the immensity of what we are irretrievably losing, which is *not* resources. Hope lies in the fact that we are native to Earth: we have the potential of understanding that we are losing our own family.

So, "How many people can Earth support?" It depends on what we mean when we say "Earth." The Earth transmogrified into a resource domain, I would wager, can support many billions of people. It already does. But Earth as a biosphere with abundant numbers and kinds of free nonhumans, with connected and thriving wild places, with a richly textured biogeography, with domesticated Earthlings not chained to a sickening industrial "food" system, with horticultures healthy for people and friendly to wildlife, with human denizens not living in terror of the specters of hunger, war, and rape, and with the world's oceans allowed to rebound into a semblance of their former largesse and beauty: *that* Earth can support far fewer than billions of people—people who will, almost undoubtedly, want to enjoy many of the amenities of the consumer age. Let's call the first *Resource Earth* and the second *Abundant Earth*.

If human beings choose Abundant Earth, then we also choose embarking on a speedy journey toward a declining world population. In the straight and simple words of Alan Weisman, "the intelligent solution would require the courage and the wisdom to put our knowledge to the test. It would be poignant and distressing in ways, but not fatal. It would henceforth limit every human female on Earth capable of bearing children to one" (2007, 272; see also McKibben 1998). It is an elegant solution—and not an authoritarian one, because in a global human society *actually awakened* to the precipice of Life's collapse, many women and men may well choose none, while others chose one, and a few choose two. It is the average that needs to be one child per woman: by 2100 the human population could be on the way to, give or take, two billion (Weisman 2007, 272).[6] Abundant Earth could then return; not in its former splendor but splendorous enough. By starting on this road today, at the very least we will give future people the choice between Resource Earth and Abundant Earth. They can always choose to be fruitful and multiply and subdue Earth into a resource base all over again.

But hopefully that choice will be as likely as future people deciding to reinstitute human slavery or take away women's vote. For there will yet come a time when the call for freedom resounds with all its magical potency not just for all people, but for Earth's animals, rivers, grasslands, mountains, oceans, and forests too.

NOTES

1. The philosophical term *natural kind* corresponds to a classification of things or entities that do not depend on humans for their existence (see Hacking 1999). The concept of resources is pervasively used with the epistemic force of a natural kind, as though the things and beings we identify as resources are actually and objectively "out there," as such.

2. See, for example, Cohen (1995), Waggoner (1996), and the *Economist* (2011). A recent example of the popularity of this question is David Attenborough's 2009 documentary *How Many People Can Live on Planet Earth?* Attenborough clearly believes humanity should leave room for other species, yet he winds up posing the population question anthropocentrically.

3. I approach the population question as a global question and not a national one because I do not regard "nations" as real entities in the way that Earth is a real entity, and because I support a bioregional, cosmopolitan future in which we inhabit Earth so sparsely and equitably that human migration choices, as such, should have virtually no ecological impact.

4. Given plausible natural selection pressures against a female "reproductive strategy" for numerous offspring (childbearing and pregnancy have carried high

mortality risks for most of our natural history as a species), from an evolutionary biology perspective, this suggestion is cogent.

5. That Iran has recently backtracked and embraced a pronatalist policy does not make a difference to my argument that rapid declines in fertility are possible.

6. The number of two billion, as a first goal in the quest for an optimal global population, is one on which Gretchen Daily and Anne and Paul Ehrlich have also converged (1994). More recently, the Ehrlichs elucidate the rationale for this ballpark figure as follows: "[A]n optimal population size would be one for which the minimal physical necessities of a decent life could be guaranteed for everyone . . . and basic human social and political rights could be ensured for all. . . . [P]opulation should be large and dispersed enough to encourage maintenance and development of humanity's cultural diversity and to provide critical mass in numerous areas of high density so that intellectual, artistic, and technological creativity would be stimulated. But the population should be small enough to permit the preservation of natural ecosystems and biodiversity at a level that could sustain natural services. Hermits and outdoor enthusiasts would find plenty of wilderness to hide in or enjoy; lovers of opera, theater, and fine food could have large vibrant cities" (2004, 184). Of course, no "optimal" population number can be decided once and for all. But a goal of about two billion people is possible and a good one to move toward in the course of the twenty-first century. For a similar estimate and argument, see Smail (1997).

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