

# Ecology's Contribution to Ethics

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## Introduction

### Thou shalt not transgress the carrying capacity.

Garrett Hardin calls this "The Eleventh Commandment: Ecology's Contribution to Ethics." I understand the term "carrying capacity" to mean the ability of an ecosystem to sustain a population of a given size and composition at a given standard of living over time. What may be the earliest reference to this concept is found in the thirteenth chapter of Genesis, which tells of the separation of Abram and his nephew, Lot, together with their respective families and servants and flocks and herds and tents, "for the land could not support both of them dwelling together." (RSV)

Today, I offer for your consideration my ruminations on a quartet of topics that may seem somewhat unrelated apart from the fact that they all have to do with the environment. But I hope that as you listen you will be able to discern that what I have to say about each one is a variation on a single theme: Thou shalt not transgress the carrying capacity.

Before I get into these four topics, I think I owe it to you to take a few moments to let you know just where I'm coming from—theologically, ethically, politically, economically, and ecologically:

Theologically, I am a Christian. Together with Jews and Moslems and other theists, I believe that the material universe was created by benevolent design as a storehouse of natural opportunity for us to use and care for; that it is not our personal property to employ or dispose of any way we choose, but rather a sacred trust of which we have been made stewards. As I shall explain shortly, a compelling case for ecological responsibility can be made on purely humanistic grounds. But, for me at any rate, at the deepest level ecological responsibility is a deduction from religious pre-

mises.

Ethically, I am a teleologist. That is to say, I am someone who believes that the rightness or wrongness of acts depends upon the goodness or badness of their reasonably foreseeable consequences, their ends. More specifically, I am a rule teleologist. I believe that consequences are affected by circumstances, but that one need not wait until one is in a situation to know what course of action that situation calls for morally. I hold it is both possible and necessary to establish rules that tell us in advance what conduct is most likely to result in favorable consequences in respective situations and combinations of circumstance as they arise — favorable not merely for the agent but for all parties, actual or potential, who might be affected.

In terms of background and training, I am an ethicist, not a scientist. For all I know, some environmentalist fears and warnings may very well be exaggerated. But the responsible approach is the conservative approach. The conscientious bread-winner does not wait to take out life insurance until he knows that he has a terminal illness; by then, of course, it will be too late. In the absence of definitive proof, so long as there is even a little credible evidence to support these fears and warnings, I hold that it is our duty to hope for the best but prepare for the worst.

Politically, I am a libertarian. I advocate a rigorously restricted role for government as a coercive force. I maintain that the sole legitimate function of government as a coercive force is to keep people from interfering with one another's freedom. But I take a more comprehensive view than do many libertarians of what it means to interfere with other people's freedom. For example, as I see it, interference includes not just obvious aggression or predation but also such things as depriving others of the chance to avail themselves on equal terms of the opportunities afforded by Nature, whether the depriving be by preempting, by degrading, or by exhausting those opportunities. It includes the foisting of unwanted burdens by some persons upon others or upon the general public. To rely on government for the prevention or rectification of such evils may not always be expedient, since government is a blunt instrument the impact of which is not easily confined to its intended objects. Where other approaches are feasible, they should be preferred. Yet such reliance is not unjustified in principle.

Economically, I am a Geogist. In other words, I am one who follows Henry George in insisting that what individuals produce should be theirs to consume, to exchange, to bequeath, in short, to do with as they please, so long as the rights of others are not thereby infringed upon. But since Nature (or "land," as economists call it) was not produced by human labor, and since its value, economic rent, is produced,

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not by the owner as such but by the community (in combination with its intrinsic qualities), that value ought to be appropriated in lieu of taxes on labor and capital, to meet the community's legitimate needs. I suspect that this would be a sufficient source of public revenue to meet those needs, but if not, that is no excuse for failing to use it as far as it would go before turning to other potential sources.

Finally, I am an environmentalist. This does not necessarily mean that I'm a "tree-hugger" or a worshipper of Mother Earth. Our biosphere is a highly complex living organism, a tissue of intricately related parts. Whether this makes it a sort of cosmic being with intrinsic rights is an interesting philosophical question, but one that need not detain us here. Anthropocentric considerations are sufficient to justify a stringent environmental ethic. Personally, I tend to feel that, unless it be clearly metaphorical, mystical, sentimental language about Nature is likely to repel potential friends of the environment whose temperament is more prosaic, and thus be ultimately self-defeating. Anyway, such language isn't necessary. A perfectly good case can be made for preserving the integrity of the ecosystem solely in terms of human well-being. To transgress carrying capacity spells ruin for us and for our progeny, and that should be reason enough to refrain from doing it.

Over and above this is the obligation to refrain from inflicting needless suffering upon any sentient creature. But this does not mean that we need place the rights of cattle and livestock, let alone the rights of rats and roaches, on a level with the rights of men and women. Aldo Leopold was correct in emphasizing that humanity, animals, plants, soils, waters, and the air constitute together an interdependent community. To abuse any part of it is to upset the symbiotic balance that sustains its viability. One should also recognize, however, that this community is a hierarchy, and that its parts have different functions, with correspondingly different and unequal rights and freedoms.

## Intergenerational Ethics and our Obligations to Posterity

Now that you know where I am coming from, I want to turn to the first of my four topics—intergenerational ethics and our obligations to posterity. It was John Trumbull, the early American painter, who, upon being asked to do something for posterity, retorted: "What has posterity done for me?" To this cynical query, which one hears echoed not infrequently today, my rejoinder is to ask: "What has posterity done against you?" If posterity hasn't done anything against us (and how could it?), while we may not owe it a world better than the one we found, surely, at least we

owe it one that we have not made worse!

There are those, however, who maintain that obligations presuppose rights, that rights presuppose existence, and that posterity, since it doesn't yet exist, can have no rights. One wonders if the peddlers of this callow sophistry would care to live under a legal system that declined to recognize the rights of the future self on the grounds that the future self does not exist and that there is no absolute assurance that it ever will. Indeed, a society that took account only of currently living beings would be difficult to imagine and impossible to live in. Deeds could not be executed, contracts could not be entered into, insurance could not be written, nor could any state exist, for a state, according to Burke's eloquent definition, is "a partnership, not only between those who are living, but between those who are living, those who are dead, and those who are to be born."

The free market has been characterized as a democracy in which there are no losers, in which people vote with their dollars and every vote counts. In general, I agree with this. Insofar as it is truly free and not monopolized, the market is a wonderful mechanism; it represents the reciprocal exchange of satisfactions, voluntary cooperation in its purest and also most efficient form. But there is no way in which the market can reflect the choices of generations yet to come. Since these generations have no input into the market, their putative interests cannot be entrusted solely to market forces. Individuals may deny themselves short-run satisfactions for the sake of their own immediate progeny, sometimes even when that progeny is still to be conceived; they may do so with respect to children, grandchildren, and (in rare instances) great-grandchildren. But the anonymous progeny of others, or their own in the far future, is another story.

Garrett Hardin sums up the problem incisively: "Demagogues," he says, "derive their power by appealing to the selfish interests of many individuals. Individuals vote: this is the reality. The abstraction called 'the community' cannot vote. But, in time, the abstraction called 'community' becomes the reality of posterity, which must suffer for the lack of imagination and courage of its ancestors."

Hardin is right, as usual. Electorates are seldom possessed of any greater vision or willingness to sacrifice than are the individuals who compose them. Yet, as a corporate body with historical dimensions, the state must serve as guarantor of the interests of its future members as well as of its present ones. Thus, a well-ordered constitution will provide for structural features such as an independent judiciary that are intended to fulfil this function by counterposing the permanent well-being of the body politic to the evanescent wishes of majorities. And this means, above

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all, assuring that the environment is left in no worse condition by any given generation than that in which it was received.

## **Takings Theory** **—A "Strange Doctrine"**

Let's move on to my second topic: takings theory. This is an interpretation of the Fifth Amendment to the Constitution, to the effect that when the use of land is restricted by law or administrative order for environmental or other public reasons, causing a decrease in its market value, a "taking" is thus constituted, analogous to condemnation under eminent domain. Just as condemnation, to be constitutional, requires full compensation, so any decrease in land value resulting from restrictions imposed by public authority should also require full compensation. Such, as I see it, is the gist of the position; of course, individual theorists have added their own subtleties and refinements.

Now, I'm quite ready to concede that certain kinds of takings do call for compensation. If, for instance, a public highway is constructed adjacent to a quarry, and terrain and soil conditions are such that further digging on quarry land might undermine the highway next to it, a ban on such digging would, in my opinion, carry with it a mandate to compensate the owner of the quarry. I'm also ready to concede that government agencies have been, all too often, guilty of heavy-handed over-regulation and restriction. James Bovard's recent volume, Lost Rights: The Destruction of American Liberty, is filled with horrifying examples.

There is another sort of compensation to which owners of real estate, the value of which is adversely affected by environmental restrictions, are legitimately entitled. That is the reduction in their assessments and consequently in their ad valorem taxes, which they

do, in fact, normally receive as a matter of course. Under a full Georgist regime, in which all taxes were replaced by societal collection of something approaching the entire annual economic rent of land, the owner's public revenue obligation could be lightened very substantially (indeed, in some cases virtually obliterated) by this reduction.

Nevertheless, I contend that no one is justified in demanding compensation for being made to stop doing things that violate the rights of others. At our house, we drink bottled water. We got into the habit of doing so because our city water comes from a lake that was for many years fouled by waste from cattle belonging to a man who defied or evaded orders to contain them until finally he was faced with penalties stiff enough to induce him to spend what was necessary to correct the problem. Do the taxpayers owe this man some sort of recompense because public authority forced him to desist from contaminating our drinking water?

In 1994, a bill sponsored by the Alabama Farmers Federation, the Alabama Forestry Association, and the Alabama Poultry and Egg Association unanimously passed the relevant committee of the State House of Representatives without a public hearing. Although it was not enacted in that legislative session, I have no doubt that it will resurface in one form or another. According to this bill, restriction of land use to prevent pollution lessens the value of land and thus constitutes a taking, which requires compensation. In arguing against this bill, our then-attorney general (of whom I am not ordinarily a fan) pointed out that the owner of property near a school who was prohibited by regulation from opening a snake farm could demand that the state pay him for not raising snakes. "Why," he asked, "don't we all dream up something gross to build, and when

the government tells us we can't do it, we all draw a state check?"

These examples represent clearcut, easy cases; in other instances, gray areas and complex factors may be involved. I do not want to "set up a straw man." But the proposed legislation was framed in blanket terms that allowed for no qualifications or exceptions, and the same is true of that presently under consideration at the national level.

A strange doctrine is abroad, voiced by people who claim to love the land which may have belonged to their families for generations, but who think nothing of abusing it to make a quick buck; people who prate piously about the inviolability of private property, but who feel that they should be paid for not spoiling their neighbors' property with toxic runoff or with noxious fumes.

This "strange doctrine" to which I have alluded has a striking parallel in other quarters — a parallel which no one, to my knowledge, has remarked. This is the notion that Third World nations are entitled to demand blackmail for halting practices that have a detrimental impact on the global environment. Were anyone to propose that we demand payment from Canada for reducing our discharge of industrial pollutants into its atmosphere in the form of "acid rain," the proposal would be met with universal indignation, and rightly so. Yet let a comparable demand be made of us by some Third World country, and it takes on an aura of moral respectability. What I have just said may not find favor with everybody who nodded agreement with my comments on takings theory, but, for the life of me, I can discern no logical difference between the two positions. And the arguments advanced, respectively, on their behalf strike me as being equally hypocritical.

Whereas, on the one hand one encounters cant about attachment to the land, and about the sacredness of prop-

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erty, on the other it is the impoverished native peasant farmer who is the object of rhetorical solicitude. To take what is probably the paramount case in point, Brazilian spokesmen may admit that continued destruction of the Amazon rain forest could spell ecological disaster for the world, but, they ask plaintively, what would become of the poor farmers if clearing were to be halted? What, indeed? Why doesn't Brazil do something about the land monopoly that drove them to the Amazon basin in the first place? Anyway, this region is no good for agriculture; a few crops and the thin soil is exhausted. Is it really the poor farmers for whom the hearts of these spokesmen bleed, or is it the land-grabbing cattle barons who want to be able to go on raping the land until all Brazil has become like the parched, famine-stricken Nordeste, and who don't hesitate to get rid of anybody like Chico Mendes who might stand in their way?

If we go along with a "debt-for-nature swap," as Vice-President Al Gore proposes in his book, Earth in the Balance, we'd be well-advised to make sure who its real Third World beneficiaries are, and to see to it that it actually accomplishes its stated ecological objectives. Should it, in fact, truly satisfy the latter criterion, a debt-for-nature swap might be warranted pragmatically even though the justice-regarding arguments for it are spurious and untenable. After all, if our slaveholders had been compensated, as was done in Britain, it would have cost the nation far less money than was spent to fight the Civil War, and think how many lives would have been saved! But let no-one contend that compensation was due them as a matter of right.

Before I drop this topic, I must respond to the argument that it is unfair for the First World to hold the Third World to a standard more rigorous than that to which it lived up itself historically. The "taming of the West,"

for example, was accomplished with little or no regard for environmental consequences. But most of this environmental degradation took place before the age of ecological awareness—an excuse that no longer obtains. Most of it took place when world population was much smaller, and its global impact therefore far less serious. And finally, even apart from the difference in population size, none of the earlier degradation, regardless of scale, had the potential for global devastation in terms of climatic distortion or disappearance of valuable species that characterizes what is happening today in Amazonia.

## The Nature of Wealth

For my third topic, I want to suggest that environmental considerations dictate that many of us do some fresh thinking about the nature of wealth. This may seem heretical for a Georgist, but I believe that we need to move beyond the classical definition of wealth as consisting only of material things that result from the application of labor to land, whether directly (as in agriculture and the extractive industries) or indirectly (as in manufacturing). That definition (which also incorporates the stipulations that these things be able to minister to human wants and that they possess exchange value) has its place in political economy, and I am not proposing that it be abandoned. But there are purposes for which it is too narrow, for it tacitly assumes that Nature is inexhaustible.

Al Gore points out that, in calculating Gross National Product, buildings, machinery, and equipment are depreciated as they are used up, but natural resources are not. To me, this is as if a manufacturer, in drawing up his balance sheet, were to leave out of account the depletion of his stock of raw materials. There are, in addition, intangible and immeasurable natural goods, as well as valuable services that

may not find material embodiment in production.

If Henry George's definition of wealth did not include natural resources, whether tangible or intangible, or services that do not result in a material product, it was not because he was oblivious or insensitive to such things; it would be easy to cite passages from his works that show the contrary. But an economic model is constructed for specific functions. The functions of George's model are still legitimate and important, and his restrictive definition of wealth is appropriate to them. It is not, however, appropriate to all legitimate and important functions.

Many people today unthinkingly bemoan the fact that the American economy is becoming increasingly a service economy. Yet the movement away from heavy industry is not properly something to be regretted. A service economy, or one that emphasizes craftsmanship instead of mass production, is ecologically preferable to heavy industry, for it makes a relatively modest draft upon our limited supply of natural resources.

We need to look to the preservation of material goods, not to their indiscriminate production. Instead of a throw-away culture, choked with shoddy merchandise and driven by fads and built-in obsolescence, we need to promote a culture in which functional and tasteful products are made with pride and constructed to last—products that, when necessary, can be repaired or recycled instead of having to be discarded.

Let it not be supposed that most jobs in a service economy need involve flipping burgers in fast-food joints. Information processing is probably the most rapidly growing industry of our time. It is also one that is non-polluting and that requires very little in the way of scarce natural resources—silicone is one of the most abundant substances in Nature. And anyone who imagines

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that well-paid blue-collar jobs are to be found only on oil rigs or automobile assembly lines has evidently not had occasion to call upon the services of a plumber or electrician or mechanic lately!

Not long ago, I bought a plaid sports jacket. Much to my sorrow, my size has changed recently; I have trouble finding anything to fit, so I have to take what I can get. This garment bears the label of a high-end manufacturer, yet the plaids don't line up, the buttons were not sewn on firmly, and loose threads were hanging from the lining. Nowadays, I find this commonplace, even in so-called "better" off-the-rack garments. In contrast, some twelve years ago I bought a Dunhill jacket at the Dunhill company's shop in London. Although it wasn't made-to-measure, the shop wouldn't sell it to me without altering it until it fit me perfectly. It was fashioned with enough let-out in it to allow for additional alteration as needed, and consequently I can still wear it. I don't pretend that it was cheap, but I regard it as being, in the long-run, the best investment of any jacket that I've ever owned.

Now, suppose that one Dunhill, timelessly styled and painstakingly crafted over many, many hours for lasting wear, commands a market price equivalent to that of four schlock-jackets, carelessly cut and sewn in a fraction of an hour, and made without any let-out. Assuming, for simplicity's sake that each garment is produced by a separate single worker, if the Dunhill lasts four times as long, all other things remaining equal, would it provide three-fourths less employment? Hardly, since we have already established that it took many hours to make whereas the other four jackets took only a fraction of an hour apiece. To complete the illustration, let us posit that all the jackets under consideration are composed of some scarce natural resource — say, snow leopard pelts or white rhinoceros hides. As far as depletion of resources is concerned, although slightly more fabric may go into it than into any of the four schlock-jackets, this is more than counterbalanced by the Dunhill's greater durability. Thus in terms of GNP (so calculated as to take Nature into account) the Dunhill represents a net surplus of wealth over the schlock-jackets.

Please don't misunderstand me: I am not a Luddite. I have nothing against advanced technology or machinery as such. I am not opposed to mass production where there is no significant sacrifice of quality and where large-scale duplication serves a rational function. Often it makes for more precision and for greater uniformity and interchangeability. But there are many operations that, in order to be done well must be done (or at least finished) by hand. And uniformity and interchangeability, while certainly desirable in some cases, are definitely not desirable in others. I'm not advocating that we adopt a primitive life-style, or seek to go back to the Middle Ages; Miniver Cheevy is not my idea of a worthy

role model. What I urge, rather, is a more sensible balance between quantity and craftsmanship, and a redirection of technology away from profligate excess and toward frugal conservation in the use of resources. This is by no means meant to suggest that such redirection be a matter of governmental fiat except insofar as it may involve revision of government policies that encourage profligacy.

## Demographic Responsibility and World Territorial Rent

My final topic has to do with population. I am one of those atypical but increasingly numerous Georgists who take the threat of overpopulation seriously. George may have successfully refuted Malthus' distinctive formulation of the problem, but that hasn't made the problem go away; in fact, over the past few decades it has become much worse.

I view it as a problem less of economics than of ecology, although, needless to say, there are points at which the two fields converge. George held that what appears to be a population problem is really a land problem, and, in the short run, he is largely correct. As I mentioned earlier, citing the Amazon basin as an example, maldistribution of land tenure has put vast areas suitable for settlement off-limits to most people, who are thereby driven onto areas that ought to be left in wilderness — a process that is leading to environmental disaster in one part of the planet after another. This would, of course, be corrected by the application of George's "sovereign remedy," but unless something were done to halt population growth, it would eventually again press upon the regions that should be reserved to Nature.

The danger of an overpopulated world raises a theoretical issue for the distribution of world territorial rent in a Georgist model. It is merely theoretical, since it applies only to the complete model, and the prospect of implementing the complete model is, sad to say, so remote as to be, for all practical purposes, non-existent. Still, elegance, if nothing more, dictates that the complete model be developed. I offer what follows in this section as a refinement of ideas set forth by Professor Nic Tideman of Virginia Polytechnic Institute in Commons Without Tragedy, a book which I had the honor of editing four years ago.

What Tideman did was to extend Georgism to one of its logical conclusions by spelling out its global implications. In Tideman's system, wages and interest, the returns from the application of labor and capital, respectively, would flow to individuals as private property, while economic rent (the annual unimproved value of land) would flow to the community. This is standard George. But Tideman distinguishes between two types of rent. One type consists of value reflecting urbanization, both current and historical. It would remain in the local community since it stems from the presence and activity of local populations. The other type

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consists of the value of natural resources, natural fertility, and such locational factors as natural access to navigable waters. He calls this second type "world territorial rent," since, not arising from the activity of local populations but rather from natural advantages which no population can claim to have produced, it would be divided equally among the world's inhabitants.

A difficulty arises with Tideman's system once overpopulation is recognized as a potential threat. For if world territorial rent were to be divided equally among the world's inhabitants, nations would have no incentive to exercise reproductive restraint. Indeed, any nation that did so would soon see its world territorial rent siphoned off to nations where untrammelled reproduction were the rule. "The tragedy of the commons" would prevail on a global scale.

To assure demographic responsibility, the allocation of world territorial rent among nations would need to be fixed according to the size of their populations at the time the scheme were adopted. If a nation's population then increased, the share of its allotment going to each inhabitant would decrease proportionately. But if a nation's population decreased, the share going to each inhabitant would increase proportionately. Thus the refinement I propose would not merely make for population stability but would actually encourage a salutary decline in numbers.

For the purpose of accommodating geographical movements of population over time, an additional refinement might be considered—the reallocation of world territorial rent at regular intervals long enough apart (say, every hundred years) that the rise in numbers that would probably be stimulated by each anticipated reallocation would have only a temporary impact that could readily be absorbed.

I have just addressed a theoretical issue related to a hypothetical situation—the global implementation of the Georgist paradigm. Yet the problem of demographic responsibility is very real and very urgent, and the environmental peril that demands its solution is far from hypothetical.

### Conclusion

But the time has come for me to close. Thou shalt not transgress the carrying capacity.

To transgress the carrying capacity is to leave a spoiled and shrunken legacy to those who follow us. To trans-

gress it through pollution of whatever sort is a predatory act the prohibition of which establishes no just claim to compensation. To transgress it through depletion is not economic progress but regression, representing a net loss rather than a net gain of wealth. And to transgress it through refusal to impose upon ourselves whatever measures may be needed to enforce reproductive restraint, is to permit a fallacious, sentimental view of individual rights to stand between us and the moral imperative revealed to the eye of reason by reality.