

*“Let us apply the stomach pump to the doctrines of economic growth that we have been force-fed for the past four decades,” writes Herman Daly with a more pungent metaphor than is typical of the professional economist. But then Daly is a most unusual economist.*

*Formerly at the World Bank, he is now a professor at the University of Maryland School of Public Policy, and an outspoken critic of mainstream economic theory and practice. A founder of the discipline of ecological economics, his slight southern drawl and gentle manner belie the keen edge of his critiques. Daly is convinced that conventional economics is adrift in a Neverland where promoting infinite growth on a finite planet is seen as not just reasonable but as incontrovertibly good. The resulting economic policies, he claims, are poisoning both the living world and the human economy to which it is connected.*

*So, what would he have us eat instead? Daly has coined the term “steady-state economics” and is actively promoting the idea of a dynamic economic system that rewards innovation while maintaining or reducing human consumption and population. This idea and others for a new economic direction are described in his several books, including Valuing the Earth, Steady State Economics, For the Common Good (with John Cobb Jr.), and Beyond Growth. Daly has received many prizes and honors, including the Honorary Right Livelihood Award (Sweden’s alternative to the Nobel Prize), and is the co-founder of the journal Ecological Economics.*

*Wild Earth’s senior editor and staff writer, Joshua Brown, spoke with Herman Daly on September 3, 2004.*



YEARINGTON

# HERMAN

**JOSHUA BROWN:** You have just put out a new textbook, *Ecological Economics*. What is the undergraduate in Econ 101 going to read in your book that is different from the standard texts?

**HERMAN DALY:** They'll get a different vision of what economics *is*. Ecological economics views the human economy as a subsystem of the larger world ecosystem—while conventional economics hardly acknowledges that there is an ecosystem.

There are three basic problems that economics must address: allocation, distribution, and scale. Allocation is the traditional economic problem: How are resources apportioned among different products? How many resources go to cars, how many to beans, to clothes, and so forth? Distribution is a measure of how these goods and resources are apportioned among people. How many of the cars and beans and clothes go to you, how many to me, how many to somebody else? And, finally, the problem of scale is captured in the question: How big is the human economy—how many cars, beans, and clothes—relative to the total system that it is a part of?

The measure for a good allocation is efficiency. Is it what people want and are willing to pay for? The measure of a good distribution is justice. Is it fair? And the measure of a

good scale is sustainability. Does the scale of the economy impose on the larger ecosystem a “through-put” or depletion greater than can be regenerated?

Ecological economics does talk about efficiency of allocation—that's the overlap with standard economics—though we focus much more on distribution than standard economics, where distribution gets second fiddle. It's the problem of scale where we see a true parting of ways between ecological economics and conventional economics. Scale is the defining issue of ecological economics, because all other problems are conditioned by the scale of the economy, while standard economics doesn't even consider it.

**Wouldn't many economists bridle at this characterization? Imagine, for a moment, what a mainstream, neoclassical economist *would* say about the issue of scale.**

They don't usually think in those terms, but let me try to put on a neoclassical hat. They might say, “Scale is total. We don't conceive of the economy as a subsystem of the larger system. We conceive of the economy as everything. All your wildlife, down to every amoeba, is a part of the economy and we're going to hitch 'em up to pull the human wagon.” So, for them, it is

DALY



COURTESY HERMAN DALY

not a matter of some things being outside of the human economy and other things being inside and setting the right boundary—there is no boundary—everything is the economy.

**I get a bit queasy at the notion that “everything is the economy,” but how would you articulate the deficiencies of that perspective?**

Number one, that perspective is extremely arrogant. They want to manage the whole ecosystem and take it to market! Enormously intricate natural systems we don’t understand at all—do you want to bring that all into the economic calculus?

So arrogance is one reason why conventional economists have forgotten about scale. Historically, it’s quite the opposite answer. In the past, their approach has been to say, “Well, the scale of the economy is so small—it’s tiny relative to the total ecosystem—that the ecosystem is a free good and doesn’t enter into economic calculations because it is not scarce. If it’s not scarce, its proper price is zero; if it doesn’t have a price, it’s not part of economics” and so on. That made sense in some periods of human history. It makes less sense everyday. In my lifetime—I’m 66 years old—the human population has tripled globally and energy and materials consumption has gone up a factor of 12 or 15. So what used to be an “empty” world is now a “full” world.

In this full world, the economy is a very large subsystem of the total, so the feedback between the ecosystem and the economy is very significant. Standard, neoclassical economics says, “just leave that aside,” or, using the professional lingo, “the ecosystem is an externality.”

What’s an externality? It’s something that doesn’t fit in the theory but has become so important that you can’t ignore it! When you have to classify the very capacity of the Earth to support life as an “externality” then it is time to rethink your theory.

**Do you find that many economists are moving in your direction, moving toward seeing ecological economics as an insightful and powerful tool?**

That’s my hope, but I may be tainted by wishful thinking. We do have a society of ecological economics and a journal and chapters in major countries, including Brazil, China, and Russia, as well as Canada and the U.S., so I am hopeful. But if you look at economics curricula in major universities you don’t see much acknowledgement of ecology and if you look at people at the World Bank and the training they get to come in, there is not a whole lot of new thinking.

At most, what is available at most universities is what has been called “environmental economics” or sometimes “resource

economics.” These are basically the application of standard neoclassical economics tools to allocation problems having to do with natural resources, pollution, or environmental contamination—instead of viewing the economy as a subsystem of the larger system and rigorously dealing with the issue of the total limits to growth.

For ecological economists, growth of the economy—in its physical dimensions—has to be limited, but for the neoclassical economist, growth is the end all and be all. They don’t make much distinction between physical dimensions and monetary dimensions of the economy.

**A growth-based, capitalist economy has dominated in the West for several centuries, and has come to dominate economic theories and economies around the world. Can you imagine a replacement for this system—without massive upheaval?**

Yes, it’s something we call a steady-state economy. I’d have your readers take a look at the work Brian Czech is doing [at the Center for the Advancement of the Steady State Economy, [www.steadystate.org](http://www.steadystate.org)].

If nothing else, we should face the fact that economic growth and preservation of wildlife are on a collision course. The only way we are going to preserve wildlife—if you are really serious about it—is to limit economic growth. As long as the conservation movements fail to confront that issue they may be somewhat effective in a few minor skirmishes but will not come to grips with the real problem.

**You recently wrote an article titled, “Population, Migration, Globalization.” I imagine economists mostly would identify their realm in that third term—globalization—but not in the first two. How are they linked?**

It is strange, but economists have a way of narrowing their discipline whenever something gets too difficult to deal with; they say, “Well, that’s not really economics.” If you look into an earlier era of economics, say 50 or 60 years ago, all textbooks—at least the classical texts up through Alfred Marshall—would have a chapter on population. That was just part of basic economic theory, and under the issue of population there would be a subheading on migration. Not any more.

**Why?**

First, the very popular—and convenient—demographic transition theory suggested that “population will take care of itself.” In other words, just have economic development and by corre-



lation people will have fewer children. Well, unfortunately, that is a shaky proposition. There is some statistical support for it, but recent thinking, which has more support, goes like this: when people get richer they want more of everything—including children.

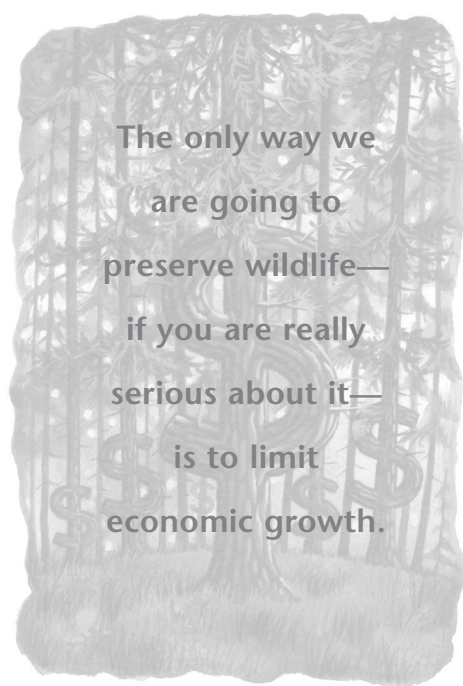
**So along comes the demographic transition theory and, phew, planners and politicians breathe a sigh of relief because now we don't have to worry about population growth—as long as the economy grows. But you're saying it may be just the opposite.\***

It's not that simple. Children have become more expensive as civilization has required parents to invest more in them to bring them to maturity. It's not just because you're getting richer that you have fewer children. That's kind of a dumb conclusion. There is a gross statistical correlation but when you break it down, and control for a variety of factors, that's not what drives people's decisions about reproduction.

The reason for the misleading correlation is that as people get richer, they only get richer in part; the price of children goes up even as total income goes up. As you can have more of everything, the relative price of children—because of educational standards, and general standards in civilizations moving from agrarian to industrial economies (where children are not economically useful until much later)—also goes up. There is a price effect and an income effect. As the price of children goes up, people have fewer children, and if income goes up they tend to have more children. If they expect that economic times are going to be good, they tend to have more children; if they expect bad times ahead, they tend to have fewer children. It's a rational response.

**So a misplaced trust in the demographic transition hypothesis is part of why population control dropped out of the conversation. Why else?**

Because it is so difficult to deal with! Across the ideological spectrum, people have a visceral problem of facing up to the



challenge of human population growth. We don't really know how to deal with the problem and, making things worse, efforts in India and other places have been, at best, unhappy experiences, with a history of brutality and force.

When the Chinese wised up and said, "Good grief, we have a billion people, we can't continue growing like this," it was totally against the Maoist view that more mouths bring more hands. That ideology thought: the more people, the better; population is only a problem under capitalism, once you have socialism and sharing then there is no such thing as any scarcity of nature, no such thing as natural limits.

**Mao and [unlimited growth proposition] Julian Simon saw the world somewhat the same.**

Yes, Mao and the *Wall Street Journal* crowd might find it surprising that they are in bed together. At least on that. But the Chinese were pragmatists too, so they went for the one-child family policy. And, as we know, some of the things that happened under that policy were bad for human rights. For example, the one-child family policy led to selective abortion of females because of the preference for males in Chinese society.

That's a problem—it inflicts a hardship on future generations when you upset the sex ratio—but where does the problem reside? It resides with the preference for males, not with the need to limit population.

**Population issues have fallen out of economics instruction and the mainstream economics debates—but perhaps even more so they have fallen out of the environmental mainstream. In this Madison Avenue era of "positive messaging" population has become a third-rail issue for conservation groups.**

That's right. In the late '60s and into the '70s, the central focus of the environmental movement was population. Paul Ehrlich's *Population Bomb* drew on a line of thinking that went back into the '40s. But, just like in economics, the envi-

\* Virginia Deane Abernethy's article in the spring/summer 2004 edition of *Wild Earth*, "Fertility Decline No Mystery," also addressed the weakness of the demographic transition hypothesis.

ronmental movement has set the population question aside.

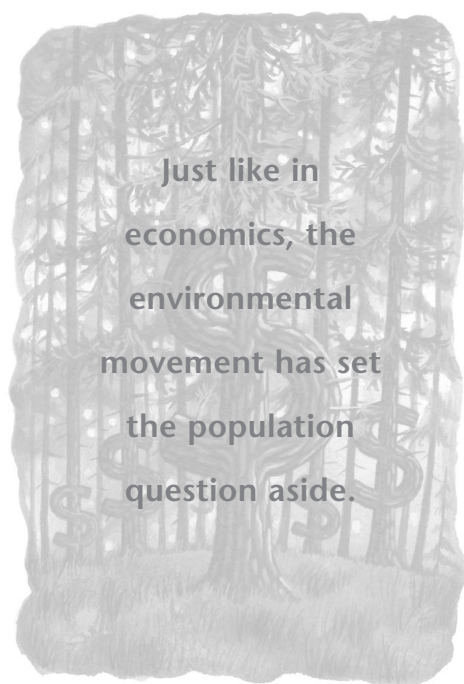
Many environmental NGOs [non-governmental organizations] do not want to alienate groups that contribute to them, and population is too hot. There is also a religious tie to this through the abortion controversy because population control leads you right next to abortion. But you don't have to be in favor of abortion to favor population control. Indeed, you can argue that voluntary birth control programs result in reduced rates of abortion, because most abortions are a result of absence of birth control. There are lots of reasons why population should be more part of the conversation in many political camps.

Then human migration comes in—and the issue gets really hot in the United States. Take the Sierra Club and their brouhaha about the club's stance on population. They had taken the position that the U.S. should limit its population growth—but that was thinking in terms of natural increase. Later on, with migration becoming the major source of population increase in the U.S., population control would mean limiting net immigration. That was a political issue they were unwilling to tackle because of historical associations of anti-immigration politics with racism. That's a complicated story, but, as a thought experiment, paint everybody the same color all over the world and we still have a huge problem of the increasing number of people.

**OK, but the issue of absolute global population—with its impact on carrying capacity—is quite distinct from the specific issue of regional migrations and national immigration policies.**

All countries have some immigration policy. That debate is over numbers. No nation has an absolute principle that “there shall be no immigration” or “there shall be totally free immigration.” It's really a matter of numbers and the criteria for determining numbers. In our country there are legitimate arguments and points of view, but the dominant interest recently has been the cheap labor lobby that wants easy immigration to keep wages down.

**But isn't the political left also a strong force for liberalizing immigration laws?**



That's true. At its root, our immigration policy is a class issue which has created some unexpected bedfellows. The cheap labor lobby within the business world says, “We need to open up immigration because we have a labor shortage.” What that means is a shortage of *cheap* labor. Just raise the wage rate and you'll find people to work, but if you raise the wage rate then profits go down. The *Wall Street Journal* wants the easiest immigration policy. For very different reasons, liberal NGOs, church organizations, and folks of good will have a visceral feeling that easy immigration is a good policy. This is an issue that needs a lot more hard thought.

**What is the role of nations in our globalizing economy? It seems as if the idealistic vision of the 1960s radicals—“one world”—is, in a most unexpected way, being actualized by transnational corporations.**

The institutions of community—of mutual caring for people and places—exist mainly at a national and subnational level. It's a grand phrase to speak of the “world community” but really the world community is a quilt of national communities. If you try to erase national boundaries, that corrodes communities. If you have thrown everything into a single global pot, you have smashed many of the institutions of community.

There is a reaction when I speak against globalization: folks say, “You're an isolationist, you're a xenophobe.” No. I am in favor of internationalization. That's not isolationist, that's countries cooperating, getting together, having treaties and protocols, but they remain separate units of policy.

Globalization is to internationalization as marriage is to friendship. Marriage is a union, you're integrated; with friends, you're close but separate. The idea that we are going to have a multilateral economic marriage of all countries is disrespectful of very real differences in ideals and interests among countries. By all means let's be friends, but, hey, keep your distance!

Globalization makes friendly independence difficult for nations because with free mobility of goods and capital it's very hard to maintain national standards like industrial policy, minimum wage, and environmental standards—to name a few.

**Do you think within economics, or at least ecological economics, there is a place for the intrinsic value of other life forms beyond people? Can you have an economic theory that gives standing to trees?**

Yes, but that question has largely been excluded from standard economics. When the issue does rarely come up, economists have generally made what is considered the hardheaded argument that nature has nothing but instrumental value to people.

In contrast, John Cobb [with whom Daly co-authored *For the Common Good*] argues that all sentient creatures have intrinsic value by their capacity to feel and enjoy life. A consequence of that perspective makes some people angry: not all creatures have equal capacity to experience. It may have something to do with the development of a central nervous system, but in any case it is probably a mistake to equate the intrinsic value—in terms of the capacity to enjoy life—of a clam with a whale.

This idea of total species equality, which the deep ecologists have sometimes stated, is very problematic. They may say, “You think a whale is worth more than a clam, but then how many clams does it take to equal a whale?” I don’t know and I am not going to think in those terms, but I do know that given a choice between doing something for whales and doing something for clams, I’d give more to the whales.

Now, when you go back to instrumental value, it may be that for the whole ecosystem the clams perform filtering services that are instrumental to all other species, and whales don’t. There are tremendously difficult issues here, and I have thought about some of them but I can’t claim any burning clarity—and I am wary of those who claim they can.

**Here economics and conservation biology both bump into that most humbling and profound of questions: What does life mean?**

There is a real problem in the environmental movement that I have written about in the journal *Conservation Biology*: If you take a pure materialist, determinist perspective—think of Richard Dawkins and *The Selfish Gene* and of some of the writings of E.O. Wilson—it cuts the legs out from under conservation. If everything is an accident, if everything is a kind of robot—your consciousness is simply a little picture show running in your head—if purpose is not causative in the real world, only atoms in motion—that is the death knell for any policy, including environmental policy. I raised that issue with some of my biologist friends, who are in the grip of a

kind of deterministic materialism, but I haven’t gotten very far. People don’t want to talk about metaphysics very much.

**It seems as if conservation biology has proudly staked out territory apart from the rest of the biological sciences—particularly molecular biology—by saying “We are an activist discipline; we do bring values to our science” and yet the underlying philosophical framework for defending those values, as you say, seems on shaky ground, if they stick with this kind of bleak materialism.**

For many biologists, there is an enormous reluctance to reconsider anything that falls under the heading of Darwinian. Certainly there is a lot true there, but some implications of a rigid materialist Darwinism are awfully hard to square with other values we are not willing to give up. There is a lot of rethinking that needs to be done in the conservation biology community to free themselves from some of their inheritance from molecular biology and think a little more in terms of purpose and where it comes from or at least make room for it in their metaphysics.

**I had a chance to interview Paul Ehrlich last year. He’s deeply passionate about saving life forms and yet sticks by this pure materialism. He seemed to have an internal conflict about that issue.**

He does. The same with E.O. Wilson, whose work I admire very much. Incidentally, I have a review of Ehrlich’s new book [*One with Ninevab*] in *BioScience*. I have known Paul for a long time and he is wonderful person. I have had short meetings with Wilson and was prepared to dislike him, but he is such a nice man. He is really fine. And when I raised this question about purpose with Wilson he just said, “That’s the mother of all questions.”

**What do you imagine the world is going to be like for your grandchildren?**

Unlike my lifetime, I doubt that they will see the world population triple. I hope not. And I doubt that they will see a 15-fold increase in energy and resource consumption, although it may be close, the way things are going right now. I am concerned about the way things are going. I don’t think the world will be an easy place to live in their lifetimes. I hope I am wrong, but I don’t see things getting better and better.

We have to face up to some limitation on growth, which, right now, is politically beyond the pale. But that won’t continue; it has to change. ☞