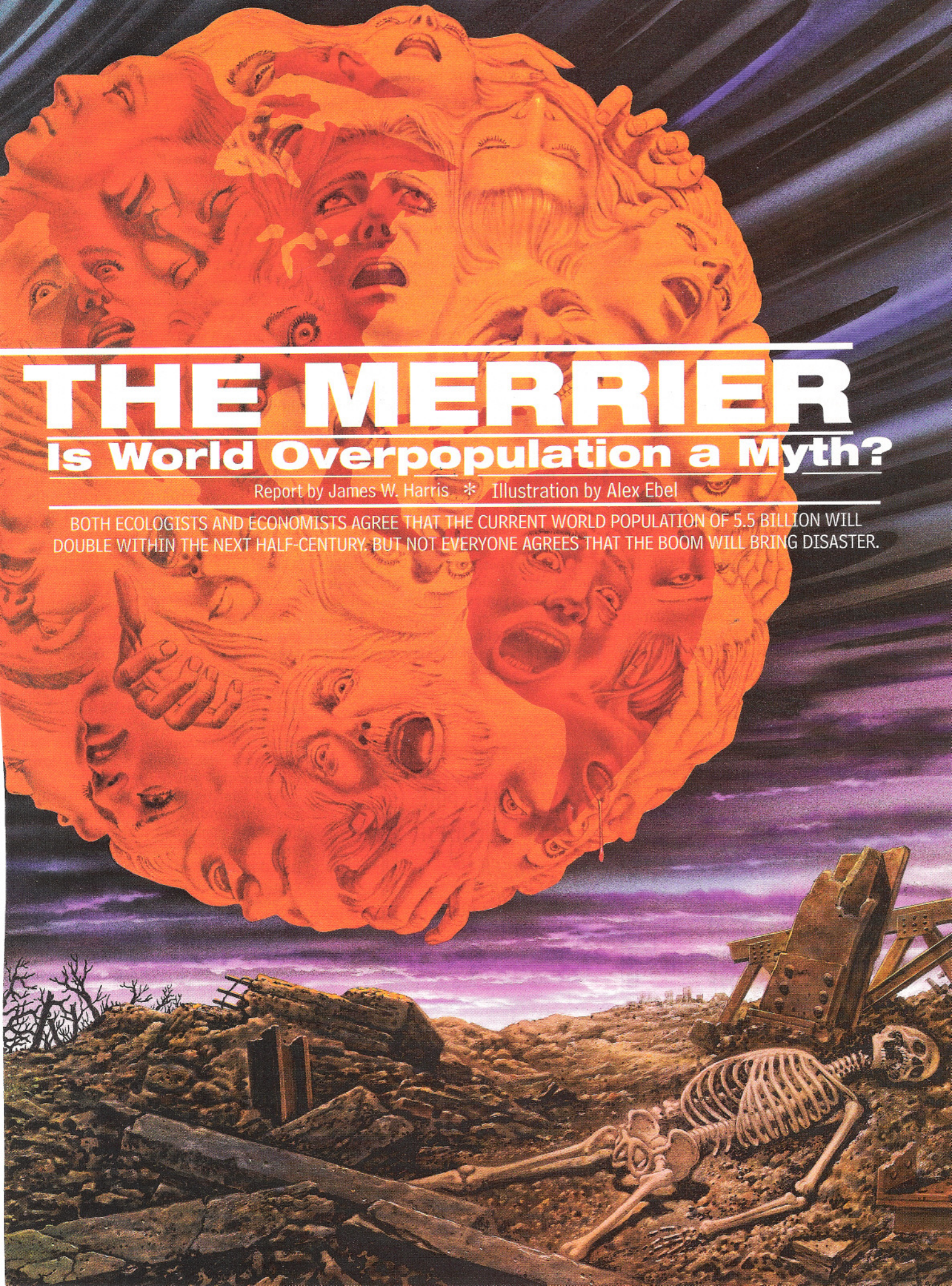

THE MORE



THE MERRIER

Is World Overpopulation a Myth?

Report by James W. Harris * Illustration by Alex Ebel

BOTH ECOLOGISTS AND ECONOMISTS AGREE THAT THE CURRENT WORLD POPULATION OF 5.5 BILLION WILL DOUBLE WITHIN THE NEXT HALF-CENTURY. BUT NOT EVERYONE AGREES THAT THE BOOM WILL BRING DISASTER.

Population

"Why do we listen to fools?" asks syndicated columnist Walter Williams. "It's not just these recent doomsayers who have been wrong—doomsayers always have been."

"The battle to feed all of humanity is over. In the 1970s, the world will undergo famines—hundreds of millions of people are going to starve to death in spite of any crash programs embarked upon now."—Paul Ehrlich, *The Population Bomb* (1968)

"One thing seems safe to predict: Starvation and epidemic disease will raise the death rates over most of the planet."—Paul Ehrlich, *The Population Explosion* (1990)

* * *

In 1968, Stanford University biologist Paul Ehrlich published an apocalyptic work that shook the world. In *The Population Bomb,* he declared that, because of overpopulation, civilization was doomed.

Throughout the 1970s, Ehrlich predicted that 65 million Americans would die of famine, and a worldwide total of four billion people would perish between 1980 and 1989. U.S. citizens might have to wear gas masks simply to walk outside in the polluted air. The oceans would be totally dead by the summer of 1979. The environment would be destroyed beyond repair. The only way to save the world would be to slash the world population, said Ehrlich: "We might, for instance, institute a system whereby a temporary sterilant would be added to a staple food or to the water supply."

Such dire scenarios made Ehrlich a household name, an international celebrity and a regular guest on *The Tonight Show.* However, around the same time, a University of Maryland economist named Julian Simon declared that Ehrlich's predictions were, simply, bunk. In particular, Simon maintained that none of Ehrlich's major predictions regarding vanishing resources would come true. Simon predicted that the price of vital resources, far from skyrocketing because of scarcity, would actually decline indefinitely—despite a fast-growing world population—as technology became more efficient.

Ehrlich scoffed. But in 1980, Simon challenged him to put his money where his mouth was. He made Ehrlich a bet: Pick $1,000 worth of any five metals, then check the prices for that same quantity of metal ten years later. The loser would pay the difference in prices, up or down.

Ten years later, Ehrlich quietly mailed Simon a check for $576.07. During the period of the bet, the world's population had grown by almost a billion. Yet the price of every metal Ehrlich picked had plunged by over 50%—proof, Simon declared, that the world was becoming richer in resources, not poorer. Subsequent events have proven Ehrlich's major predictions similarly wrong across the board.

* * *

"Why do we listen to fools?" asks syndicated columnist Walter Williams. "It's not just these recent doomsayers who have been wrong—doomsayers always have been."

Plato worried that the earth was getting too crowded. In the second century A.D., the Christian writer Tertullian expressed fear that there were too many people for the earth to support. In 1798, the British economist Thomas Malthus did some mathematical calculations and came to the conclusion that the booming population of the world would shortly outstrip the earth's ability to provide food and shelter. Thus, civilization was irreversibly, inevitably doomed.

Although Malthus was wrong—and in fact, later recanted—the notion that the world faces imminent catastrophe because of overpopulation is still commonly believed today.

At the 1994 convention of the American Association for the Advancement of Science, David Pimental, professor of agricultural sciences at Cornell University, declared that the growth of the world's population—estimated by the United Nations to reach 10 billion in the next half-century—is heading the planet toward "absolute misery, poverty, disease and starvation." The solution, he says, is to limit families around the world to an average of 1.5 children, and help cut the current world population of 5.5 billion down to a more manageable 1 or 2 billion.

And Paul Ehrlich, three decades after *The Population Bomb* appeared, warns that if the population problem continues to be ignored, the world "will be trapped in a downward spiral that may well lead to the end of civilization in a few decades."

The notion of a population crisis is so ingrained that most people are unaware that there is even an opposing view. Yet many scientists, economists and journalists today argue that there is no population crisis at all, and that the earth can easily support many billions more people, at ever-rising living standards. These population revisionists, derisively dubbed "cornucopians" by their opponents because of their belief in a prosperous future world, argue that the doomsayers have engaged in simplistic mathematic progressions—just as Malthus did at first—and ignored the way technology, human ingenuity and powerful market forces have always made past dire predictions meaningless.

(continued on page 114)

(continued from page 104)

Population

"We had a breakthrough during the Green Revolution," allows Pimental, "but that's over now. There's no technology around that can keep up with [current] population growth."

As Princeton University demographer Ansley Coale points out, "If you had asked someone in 1890 about today's population, he'd say, 'There's no way the United States can support 250 million people. Where are they going to pasture all their horses?'"

* * *

Population alarmists worry about exceeding the world's "carrying capacity"—the ecological ceiling beyond which the land cannot support life. They have observed populations of squirrels and Lapland reindeer exceed local carrying capacities and collapse, and they predict a similar fate for humans.

But, remarks journalist Ronald Bailey, the author of *Eco-Scam,* "Unlike most other species, we modify the world to suit our needs; we don't have to adapt to its given restraints."

Take food, for example. According to a report by the Washington, D.C.-based Carrying Capacity Network co-authored by Cornell's David Pimental, Americans will be forced to become vegetarians by the year 2050 because of overpopulation and shrinking cropland due to soil erosion and urbanization.

"In the next 60 years," says Pimental, "[the U.S.] population will double, while at the same time 120 million acres of farmland will be lost. Under those conditions, you're not going to be able to grow enough grain to feed the huge number of livestock that will be needed to satisfy the meat appetite of 520 million Americans."

Pimental, who is a member of *Vegetarian Times* magazine's editorial advisory board, predicts that the amount of land for producing food will drop from 1.8 acres per person to 0.6 acres in the year 2050—not enough to continue supplying the variety of foods Americans are used to, including vegetables. The little available cropland will be used to grow high-calorie, high-protein grains and legumes, and food will cost up to five times more than it does today.

But Dennis Avery, director of the agricultural arm of the Hudson Institute, a conservative think tank in Indianapolis, Indiana, notes that new discoveries in biotechnology make farming more efficient, mitigating the problems of shrinking cropland and soil erosion. He points to the development of bioengineered pork-growth hormone. Hogs treated with the hormone produce low-fat pork using one-fourth less feed grain.

"In effect," says Avery, "the growth hormone will manufacture 30 million to 40 million tons of feed corn a year." In addition, he maintains, developments such as improved hybrid seeds, chemical fertilizers and herbicides can double the yield on good cropland—and taking more from fewer acres will *build* topsoil.

"There's every reason to believe we should be able to feed the growing U.S. population...from less land than we're farming today," he asserts.

While these are projections, past examples show what technology has already accomplished.

In the 1970s, India was regarded as an international "basket case" that would always have to rely on outside food sources. Anti-population growth guru Paul Ehrlich dismissed as "drivel" and "illusion" arguments by other scientists that new agricultural techniques could help India and other developing nations feed themselves. Yet the "Green Revolution"—the name given to the development of new high-yield varieties of grains—doubled yields in India and enabled that nation to become a grain *exporter* by the early 1980s.

Thanks to this and other technology, per capita global food production rose more than 10% from 1968 to 1990—that is, it grew faster than the population—according to the Food and Agricultural Organization of the U.N. And according to *U.S. News & World Report,* the world price of food has dropped by one half since 1970—not a sign that food is a dwindling resource.

While the population alarmists concede these past and current successes, they believe that a ceiling has been reached.

"We had a breakthrough during the Green Revolution," allows Cornell's David Pimental, "but that's over now. There's no technology around that can keep up with [current] population growth."

Echoes Lester Brown, president of the Worldwatch Institute, a Washington D.C.-based environmental-research group: "Much of the world *is* better fed than it was in 1950. But that period of improvement is ending rather abruptly." Brown points to a drop-off in per capita grain production as evidence that technological progress has peaked. Although grain production rose 30 million tons a year from 1950 to 1984, production per capita fell 12% between 1984 and 1993.

World grain production *has* slowed, acknowledges *U.S. News & World Report* writer Stephen Budiansky, but not because of resource limits or technological slowdown. "Grain is in surplus," he explains, "and 46 million acres of U.S. farmland and

(continued on page 120)

Population

(continued from page 114)

11 million acres in Europe have been deliberately idled under government programs to boost farmers' incomes."

"The world has not reached, nor is it near, the upper limits of production capacity," declares B. H. Robinson of the U.S. Department of Agriculture's Economic Research Service.

* * *

The doomsayers' fear of "running out" of food extends to natural resources and raw materials. In the late 19th century, the U.S. Geological Survey stated that there was "little or no chance" of oil being discovered in Kansas, California or—of all places—Texas. In 1977, President Jimmy Carter declared that the country had perhaps ten years of natural gas left; today the American Gas Association says there is enough gas to last between 1,000 and 2,500 years at the current rate of consumption. In 1972, an influential best-seller called *The Limits to Growth* predicted that the world would run out of gold by 1981, oil by 1992 and copper by 1993.

The *Limits to Growth* predictions were obviously off base, as *Eco-Scam* author Ronald Bailey notes. The U.S. Bureau of Mines estimates that current world reserves of copper, for example, will last 65 years.

But the abundance of this resource is almost irrelevant, says Bailey. Fiber optics and satellites, which allow for the transmission of thousands of telephone calls, have largely replaced copper cables, which transmit only scores of calls. So even if the world were to run out of copper, a readily available and better substitute has already been found, at least for telecommunications. And, adds Bailey, "telecommuting saves millions of barrels of oil." As with food, humans' ingenuity allows them to adapt the environment to their needs.

"People not only consume, they produce," observes Karl Zinmeister, an adjunct fellow of the American Enterprise Institute (AEI), a Washington D.C.-based research organization.

Resources are constantly becoming obsolete, new ones discovered, old ones put to new use. During the 17th century, when the demand for firewood was causing England's deforestation, there were fears of an energy shortage. The impending scarcity led to the development of coal. Two hundred years later, a coal

(continued on page 130)

(continued from page 120)

Population

"Today—and it has been true for most of this century—famine deaths are political, not natural, phenomena," says the American Enterprise Institute's Karl Zinmeister.

crisis led to the development of an even more desirable fuel: oil.

And, maintains futurist Max Singer, author of *Passage to a Human World,* barring new discoveries, there is a readily available energy source that ensures against any disastrous future shortage: "That source is solar energy, which everybody agrees will be available for millions of years in very large quantities."

* * *

Regardless of the quantities of food and resources available, and the potential for even more food and resources, shortages still exist worldwide. Cornucopians acknowledge, for instance, that hunger remains a great concern—but maintain that it is not due to environmental factors or too many people per se.

"Today—and it has been true for most of this century—famine deaths are political, not natural, phenomena," says the AEI's Karl Zinmeister.

He points to the 1984 to '85 famines of Ethiopia, which killed an estimated million people. In 1975, the Ethiopian dictator, Mengistu Haile Mariam, nationalized all land, collectivized farming, forced the few remaining independent farmers to sell all crops to the government at prices below the cost of production, and shot Ethiopians found "hoarding" (storing grain harvests) and "profiteering" (shipping grain to places without food). Ethiopia, once a grain-exporting nation, quickly became a land of starving millions.

"Fifteen years ago, when I was in those high plains [in Ethiopia], I saw corn that was the envy of Iowa," said Ed Hullander of the U.S. Agency for International Development in 1985. "You don't see that today. It was the policies that stopped agricultural production, that stopped the availability of food per capita, that were the major precipitations of this famine."

Similar attempts at replacing free markets and private farms with authoritarian political programs have helped to create other major famines in the past 50 years. The Russian Ukraine was once called the "breadbasket of Europe," exporting grain throughout the continent, until Josef Stalin collectivized Soviet agriculture in 1929, seizing tools and farm animals and declaring all future production the property of the state. Food output fell. In the absence of any natural disaster, 10 to 15 million people died, mostly by starvation and forced labor.

In another example, one year after Chairman Mao's 1958 "Great Leap Forward" farm-collectivization program, Communist China's grain production dropped nearly 50% during 25 to 30 million people to starve to death in the next two to three years.

"Personal incentives for food production disappeared," explains Zinmeister. He points out that grain production in China did not recover until 1978, when Chinese Communist leader Deng Xiaoping's reforms gave most peasant households a small plot of private land and the partial right to sell products in free markets.

* * *

Linked with the doomsayers' belief that the world is running out of food and resources is their fear that the earth's life-support systems have been permanently crippled under the weight of too many people.

Land, air and water have suffered because of pollution and past unrestrained development, but the damage is not necessarily irreversible. When Europeans first arrived in what is now the United States, forests covered about 50% of the country. By 1920, that figure had fallen to about 33%. Today, it has risen back up to 40%.

As for the quality of the air and water in the United States, both have improved dramatically in the past 20 years, says *Eco-Scam* author Ronald Bailey. Thanks to better technology and restrictions on pollution, dangerous air pollutants have declined markedly: Sulfur dioxide emissions are down 25%; carbon monoxide, 41%; major smog components, 31%. In the late 1960s, Paul Ehrlich pronounced Lake Erie dead. Today it's being fished commercially again.

"You can look at Lake Erie or Detroit and see it's gotten better," counters Dennis Meadows, head of the research group that produced *The Limits to Growth.* "But to leap from that to the conclusion that there has been overall improvement is to look at one person getting rich and say that everybody is better off.

"When a rich country becomes concerned about environmental problems," he continues, "then it can typically develop effective responses."

But that is the point, say the cornucopians. U.S. technological advances, passed along to other nations, help them to produce more food efficiently, and to use land and water wisely and in ecologically sound ways.

"It's not intensive agriculture that's causing environmental degradation in the developing countries," maintains Per Pinstrup-Anderson, director of the International Food Policy Research Institute. "It's a lack of it."

Poverty and a lack of intensive production methods force Third World farmers

(continued on page 156)

Population

(continued from page 130)

to overgraze marginal range land or plow up steep hillsides with primitive methods, says *U.S. News & World Report*'s Stephen Budiansky. On the other hand, modern techniques such as "no-till" farming, which have been widely adopted in developed countries, have both cut soil erosion rates and boosted yields.

"The real threat is not that the earth will run out of land, topsoil or water, but that the nations will fail to pursue the economic, trade and research policies that *can* increase the production of food, limit environmental damage and ensure that resources reach the people who need them," declares Budiansky. "Embracing the myth of environmental scarcity could, ironically, prompt the United States and other countries to adopt policies that virtually guarantee that the apocalyptic future that environmentalists foretell really does come true."

Advances such as those made during the Green Revolution helped increase food yields in developing nations. But money was needed to fund that technology, and continued funding is needed if technology is to be further improved and given to developing nations. U.S. aid to foreign agricultural programs has been on a steep decline since 1980.

At the same time, say cornucopians, removing agricultural trade barriers, which would encourage nations to produce efficiently (as seen in China in 1978), is opposed by the doomsayers. The benefits of world trade in spreading the wealth have been "overwhelmed" by its tendency to encourage "unsustainable consumption by creating the illusion of infinite supplies," maintained a recent report by the Worldwatch Institute.

Meanwhile, says Stephen Budiansky, government policies of self-sufficiency encourage environmentally unsound and unsustainable practices. In Indonesia, for example, 1.5 million acres of tropical forest have been cleared to grow soybeans for chicken feed at a cost above the world price. In Brazil, rain forests have been cleared and the fragile soils, inherently poor in fertility, have been tilled with the encouragement of government subsidies.

* * *

The debate rages on. The cornucopians offer an optimistic vision—and, so far at least, history is solidly on their side.

The population doomsayers argue that the world has merely been extraordinarily lucky—so far. Technology has just bought the planet a little more time.

Who's right? Will it be doomsday or utopia? Stick around for a few more decades and find out.