

Fifty years on, The Population Bomb is as wrong as ever

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This year marks 50 years since Stanford University biology professor Paul R. Ehrlich published *The Population Bomb*.

This highly influential book went through a number of editions, sold millions of copies and was translated into many languages. The early editions included the now infamous statement: "The battle to feed all of humanity is over. In the 1970s hundreds of millions of people will starve to death in spite of any crash programs embarked upon now. At this late date nothing can prevent a substantial increase in the world death rate..."

Ehrlich believed that population growth and the concomitant rise in consumption would lead to an environmental collapse, exhaustion of natural resources, food shortages and mass starvation. Population control – including coerced sterilisation and financial penalties for excessive fecundity – along with consumption limits in rich countries, would be needed in order to prevent catastrophe.

The University of Maryland business professor Julian Simon rejected Ehrlich's thesis. In his 1981 book *The Ultimate Resource*, Simon argued that humans were intelligent beings, capable of innovating their way out of shortages through greater efficiency, increased supply or development of substitutes.

He wrote: "It is your mind that matters economically, as much or more than your mouth or hands. In the long run, the most important economic effect of population size and growth is the contribution of additional people to our stock of useful knowledge. And this contribution is large enough in the long run to overcome all the costs of population growth."

Human ingenuity, in other words, is "the ultimate resource" that makes other resources more plentiful.

"Our supplies of natural resources are not finite in any economic sense. Nor does past experience give reason to expect natural resources to become more scarce. Rather, if history is any guide, natural resources will progressively become less costly, hence less scarce, and will constitute a smaller proportion of our expenses in future years," Simon predicted.

These were, to put it mildly, two very different visions of humanity's future. Ehrlich's gloomy view, it should be noted, was shared by other influential biologists. They included Garrett Hardin

from the University of California, Santa Barbara, who developed the "tragedy of the commons" theory, and Jared Diamond from the University of California, Los Angeles, who penned such bestsellers as *Guns, Germs, and Steel* and *Collapse*.

Their analyses of human societies, noted Lester R. Brown from the Worldwatch Institute in Washington D.C., were influenced by "the carrying capacity of natural systems". In the animal world, a sudden increase in the availability of resources, such as grasslands after unusually plentiful rains, leads to an animal population explosion; the population explosion then leads to the exhaustion of resources; and, finally, the exhaustion of resources leads to population collapse.

Economists, as Brown argued, tend to be much more sanguine about humanity's future prospects. Unlike other animals, humans have developed sophisticated forms of cooperation that increase their wealth and chances of survival.

Consider, for example, trade or exchange. As Matt Ridley observed in his 2010 book, The Rational Optimist, "There is strikingly little use of barter in any other animal species. There is sharing within families, and there is food-for-sex exchange in many animals including insects and apes, but there are no cases in which one animal gives an unrelated animal one thing in exchange for a different thing."

Trade is particularly important during famines, such as those feared by Ehrlich and other biologists. A country stricken by drought, for example, can purchase food abroad. This is not an option available to other animals.

Let us now return to Ehrlich and Simon. After sparring with one another in print for most of the 1970s, Simon finally challenged Ehrlich to a wager. Ehrlich would choose any raw material he wanted and a future date, and Simon would bet on the inflation-adjusted prices decreasing rather than increasing. Ehrlich chose copper, chromium, nickel, tin, and tungsten.

The bet was agreed to on September 29, 1980, with September 29, 1990 being the payoff date. In spite of a population increase of 873 million over those ten years, Ehrlich lost the wager. All five commodities that he selected declined in price and Ehrlich mailed Simon a cheque for \$576.07.

Since Simon won the bet, Ehrlich's supporters have argued that his opponent got lucky. Had the bet taken place over a different decade, the outcome might have been different, they argued.

As it happens, economists Michael Cox and Richard Alm revisited the Simon-Ehrlich wager in 2016. In a paper titled *Bringing 'The Bet' Up to Date*, the two economists found that, adjusted for inflation, Ehrlich's metals were 22.4 per cent cheaper in 2015 than they were in 1980.

Taking the wager a step further, the two scholars looked at the prices of the five metals from the perspective of wages, which tend to rise faster than inflation. They found that "hourly-wage price" of commodities fell by 41.8 percent. In terms of the amount of time that people must spend working to earn enough money to buy something, Simon won the wager every year from 1980 to 2015.

Simon died unexpectedly in 1998. Ehrlich, on the other hand, is still alive and, in spite of 50 years of faulty prognostications, his message of impending doom continues to resonate. Just last year, he was invited to address a Vatican workshop on "Biological Extinction".

"You can't go on growing forever on a finite planet. The biggest problem we face is the continued expansion of the human enterprise," he said. "Perpetual growth is the creed of a cancer cell... It's the aggregate consumption that ruins the environment," Ehrlich continued.

Ehrlich's scaremongering aside, 50 years of evidence clearly show that facts are on Simon's side.

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