June 15, 2008

THE WORLD

Malthus Redux: Is Doomsday Upon Us, Again?

By DONALD G. McNEIL Jr.

During the last American food-and-gas-price crisis, in the 1970s, one of my colleagues on the Berkeley student newspaper told me that he and his semi-communal housemates had taken a vote. They’d calculated they could afford meat or coffee. They chose coffee.

The decision was slightly less effete than it sounds now — the Starbucks clone wars were still some years off, so he was talking about choosing Yuban over ground chuck. But it nonetheless said something about us as spoiled Americans. Riots were relatively common in Berkeley in those days. But they were never about food. (That particular revolution was starting without us on Shattuck Avenue, where Chez Panisse had just opened.)

However, elsewhere on the globe, people were on the edge of starvation. Grain prices were soaring, rice stocks plummeting. In Ethiopia and Cambodia, people were well over the edge, and food riots helped lead to the downfall of Emperor Haile Selassie and the victory of the Khmer Rouge.

Now it’s happening again. While Americans grumble about gasoline prices, food riots have seared Bangladesh, Egypt and African countries. In Haiti, they cost the prime minister his job. Rice-bowl countries like China, India and Indonesia have restricted exports and rice is shipped under armed guard.

And again, Thomas Malthus, a British economist and demographer at the turn of the 19th century, is being recalled to duty. His basic theory was that populations, which grow geometrically, will inevitably outpace food production, which grows arithmetically. Famine would result. The thought has underlain doomsday scenarios both real and imagined, from the Great Irish Famine of 1845 to the Population Bomb of 1968.

But over the last 200 years, with the Industrial Revolution, the Transportation Revolution, the Green Revolution and the Biotech Revolution, Malthus has been largely discredited. The wrenching dislocations of the last few months do not change that, most experts say. But they do show the kinds of problems that can emerge.

The whole world has never come close to outpacing its ability to produce food. Right now, there is enough grain grown on earth to feed 10 billion vegetarians, said Joel E. Cohen, professor of populations at Rockefeller University and the author of “How Many People Can the Earth Support?” But much of it is being fed to cattle, the S.U.V.’s of the protein world, which are in turn guzzled by the world’s wealthy.

Theoretically, there is enough acreage already planted to keep the planet fed forever, because 10 billion humans is roughly where the United Nations predicts that the world population will plateau in 2060. But success depends on portion control; in the late 1980s, Brown University’s World Hunger Program calculated that the world then could sustain 5.5 billion vegetarians, 3.7 billion South Americans or 2.8 billion North Americans, who ate more animal protein than South Americans.

Even if fertility rates rose again, many agronomists think the world could easily support 20 billion to 30 billion people.

Anyone who has ever flown across the United States can see how that’s possible: there’s a lot of empty land down there. The world’s entire population, with 1,000 square feet of living space each, could fit into Texas. Pile people atop each other like Manhattanites, and they get even more elbow room.

Water? When it hits $150 a barrel, it will be worth building pipes from the melting polar icecaps, or desalinating the sea as the Saudis do.

The same potential is even more obvious flying around the globe. The slums of Mumbai are vast; but so are the empty arable spaces of Rajasthan. Africa, a huge continent with a mere 944 million people on it, looks practically empty from above. South of the Sahara, the land is rich; south of the Zambezi, the climate is temperate. But it is farmed mostly by people using hoes.

As Harriet Friedmann, an expert on food systems at the University of Toronto, pointed out, Malthus was writing in a Britain that echoed the dichotomy between today’s rich countries and the third world: an elite of huge landowners practicing “scientific farming” of wool and wheat who made fat profits; many subsistence farmers barely scratching out livings; migration by those farmers to London slums, followed by emigration. The main difference is that emigration then was to colonies where farmland was waiting, while now it is to richer countries where jobs are.

Malthus’s world filled up, and its farmers, defying his predictions, became infinitely more productive. Admittedly, emptying acreage so it can be planted with genetically modified winter wheat and harvested by John Deere combines can be a brutal process, but it is solidly within the Western canon. My Scottish ancestors, for example, became urbanites thanks to the desire of English scientific farmers (for which read “landlords and bribers of clan chiefs”) to graze more sheep in the highlands. Four generations later, I got to mull the coffee-meat dilemma while actually living on newsroom pizza.

So it ultimately worked out for one spoiled Scottish-American. But what about the 800 million people who are chronically hungry, even in riot-free years?

Dr. Friedmann argues that there is a Malthusian unsustainability to the way big agriculture is practiced, that it degrades genetic diversity and the environment so much that it will eventually reach a tipping point and hunger will spread.

Others vigorously disagree. In their view, the world is almost endlessly bountiful. If food became as pricey as oil, we would plow Africa, fish-farm the oceans and build hydroponic skyscraper vegetable gardens. But they see the underlying problem in terms more Marxian than Malthusian: the rich grab too much of everything, including biomass.

For the moment, simply ending subsidies to American and European farmers would let poor farmers compete, which besides feeding their families would push down American food prices and American taxes.

Tyler Cowen, a George Mason University economist, notes that global agriculture markets are notoriously unfree and foolishly managed. Rich countries subsidize farmers, but poor governments fix local grain prices or ban exports just when world prices rise — for example, less than 7 percent of the world’s rice crosses borders. That discourages the millions of third world farmers who grow enough for themselves and a bit extra for sale from planting that bit extra.

Americans are attracted to Malthusian doom-saying, Dr. Cowen argues, “because it’s a pre-emptive way to hedge your fear. Prepare yourself for the worst, and you feel safer than when you’re optimistic.”

Dr. Cohen, of Rockefeller University, sees it in more sinister terms: Americans like Malthus because he takes the blame off us. Malthus says the problem is too many poor people

Or, to put it in the terms in which the current crisis is usually explained: too many hard-working Chinese and Indians who think they should be able to eat pizza, meat and coffee and aspire to a reservation at Chez Panisse. They get blamed for raising global prices so much that poor Africans and Asians can’t afford porridge and rice. The truth is, the upward pressure was there before they added to it.

America has always been charitable, so the answer has never been, “Let them eat bean sprouts.” But it has been, “Let them eat subsidized American corn shipped over in American ships.” That may need to change.

1. How does upward pressure add to the problems caused by rising population?

2. Why are subsidies to American and European farmers hurting farmers from poor, less developed countries?

3. How does Malthus’ theory work?