Common Wealth: Economics for a Crowded Planet, by Jeffrey D. Sachs (New York: Penguin), 2008, 386 pages, \$27.95.

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In 1992 the Roman Catholic Church, via Pope John Paul II, issued a formal statement at the Pontifical Academy of Sciences: The Earth moves around the Sun! Galileo's views to that effect had been judged "false and erroneous" by the Church, and he had been placed under house arrest even though, under threat of torture, he officially recanted. The Pope's startling scientific discovery set the stage for releasing Galileo from house arrest, except for the unfortunate fact that Galileo had met with an untimely death (at the age of 77) 350 years before (Cowell, 10/31/92).

In 2007 the United States of America, via George W. Bush, issued a formal statement at the United Nations in which "we acknowledge there is a problem" involving "greenhouse gas emissions" (CNN, 9/28/07). At an April 2008 climate-change summit in Paris, Mr. Bush described an action plan (or inaction plan) that was immediately renounced by the other world leaders at the summit (*Agence France-Presse*, 4/17/08). Germany mocked it as "Neanderthal," and accused Mr. Bush of turning back the clock: "His speech showed not leadership but losership. We are glad that there are also other voices in the United States." South Africa blasted Mr. Bush's proposal as a disastrous retreat by the planet's number-one polluter and a slap to poor countries. Mr. Bush's proposals "will not contribute to the fight against climate change," said European Union Environment Commissioner Stavros Dimas, adding that he hoped the United States would "reconsider its options and policies. ... Time is running out and we have the duty to reach an agreement in Copenhagen in 2009." "There is no way whatsoever that we

¹ The remaining quotes in this paragraph are all from the 4/17/08 Agence France-Presse article.

can agree to what the US is proposing. ... In effect, the US wants developing countries that already face huge poverty and development challenges to pay for what the US and other highly industrialized countries have caused over the past 150 years," said South African Environment and Tourism Minister Marthinus van Schalkwyk, who described the Bush administration as "isolated." White House spokesman Tony Fratto shrugged off such comments from leaders of countries that are not the United States of America, claiming that world leaders responded to Mr. Bush negatively because they were seeking "short-term political benefit" from the "rhetoric."

Why have many of the world's leaders, who have important things to do, taken time out of their busy schedules to engage in such rhetoric? I find Wikipedia's current entry regarding rhetoric to be useful: "Rhetoric is the art of harnessing reason, emotions, and authority, through language, with a view to persuade an audience and, by persuading, to convince this audience to act, to pass judgment, or to identify with given values. According to Plato, rhetoric is the 'art of enchanting the soul.'" Why is it important to persuade people (or enchant their souls) of the importance of human-induced climate change? And why is it so important how the leaders of the United States speak and act regarding human-induced climate change?

"The UN's Intergovernmental Panel on Climate Change, gathering top climate scientists, last year urged rich countries to slash their emissions by 25-40 percent by 2020 compared with 1990 levels. The European Union has pledged a 20-percent cut by 2020, and offered to deepen this to 30 percent if other developed countries follow suit. At present, US emissions are already more than 16 percent above the 1990 benchmark.

The United States by itself accounts for roughly a quarter of global carbon emissions, but it is closely followed -- and by some estimates already surpassed -- by China" (*Agence France-Press*, 4/17/08). So a substantial change in US policy and actions regarding greenhouse gases would immediately lead to a change in Europe's emissions, too, and would have a very substantial impact on human-induced climate change. Cooperative efforts from other countries, including China and India, are also necessary.

Is it worth getting excited about? Yes. On the day of this writing (May 11, 2008), in an opinion piece entitled Civilization's Last Chance, Bill McKibben writes, "All of a sudden it isn't morning in America. It's dusk on planet earth. ... A few weeks ago, NASA's chief climatologist, James Hansen, submitted a paper to *Science* magazine with several coauthors. The abstract attached to it argued -- and I have never read stronger language in a scientific paper -- that 'if humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleoclimate evidence and ongoing climate change suggest that CO2 will need to be reduced from its current 385 ppm [parts per million] to at most 350 ppm.' Hansen cites six irreversible tipping points -- massive sea level rise and huge changes in rainfall patterns, among them -- that we'll pass if we don't get back down to 350 soon; and the first of them, judging by last summer's insane melt of Arctic ice, may already be behind us."

What then must we do? I have been driving a hybrid car for years. I have installed a photovoltaic system to power my home and office, installed a solar water heater, switched to energy-efficient light bulbs, and reduced my consumption of meat

and dairy (see especially Weber & Matthews, 2008; summarized online at Engelhaupt, 5/15/08). Such personal choices significantly affect my carbon footprint, but personal choices alone will not suffice. Moreover, unlike ordinary economics (where the person who dies with the most toys wins), a successful policy to reduce humans' negative impact on climate change will require cooperation, not competition.

Enter Jeffrey D. Sachs, director of The Earth Institute at Columbia University and special adviser to United Nations Secretary General Ban Ki-moon. Sachs writes convincingly that the defining challenge of the twenty-first century is to face the reality that humans share a common fate on a crowded planet: "In the twenty-first century our global society will flourish or perish according to our ability to find common ground across the world on a set of shared objectives and on the practical means to achieve them" (p. 2). Remarkably, Sachs succeeds in making complex issues quite accessible to ordinary mortals. And while the problems and solutions are complex, they are not beyond our ken. He summarizes the problems and solutions succinctly:

The four primary causes for potential crises are the following:

- Human pressures on the Earth's ecosystems and climate, unless mitigated substantially, will cause dangerous climate change, massive species extinctions, and the destruction of vital life-support functions.
- The world's population continues to rise at a dangerously rapid pace, especially in the regions least able to absorb a rising population.
- One sixth of the world remains trapped in extreme poverty unrelieved by global economic growth, and the poverty trap poses tragic hardships for the poor themselves and great risks for the rest of the world.

 We are paralyzed in the very process of global problem solving, weighed down by cynicism, defeatism, and outdated institutions.

Sachs notes that these problems will not solve themselves, and that a world of untrammeled market forces and competing nations offers no solutions. But we humans can forge a path to prosperity if we secure four goals in the coming decades:

- Sustainable systems of energy, land, and resource use that avert the most dangerous trends of climate change, species extinction, and destruction of ecosystems;
- Stabilization of the world population at eight billion or below by 2050 through a voluntary reduction of fertility rates;
- The end of extreme poverty by 2025 and improved economic security within the rich countries as well; and
- A new approach to global problem solving based on cooperation among nations and the dynamism and creativity of the nongovernmental sector.

Sachs convinces me that, although it may seem impossible to some that we could attain such goals on a global scale, it is neither the sheer availability of resources on the planet nor a lack of technological feasibility that hampers achievement of these goals: "The barriers are in our limited capacity to cooperate. ... We need agreements at the global level and attitudes throughout the world that are compatible with meeting our global challenges."

The more that ordinary people understand the impending crisis, the more motivated we become to take steps, including short-term sacrifices, to solve it. The more that world leaders understand the impending crisis and what can be done to stave

it off, the more they can cooperate to set sound economic policies. In this context, sound economic policies are those that provide incentives so that people acting in their own short-term economic interests will make choices that, in effect, value and protect our common wealth: a healthy planet.

Sachs writes convincingly of the severity of the problems inherent in climate change in this age of the Anthropocene. But well-intentioned government policies can have negative unintended consequences. And every time governments consider exercising power to adjust market forces, lobbyists for special interests will attempt to influence the policy in ways that favor one group over another. As we implement economic policies to affect human behaviors that create climate change, we will need to be vigilant and we will need to quickly learn from mistakes we make along the way. But there are already shining examples of success. One that Sachs highlights is how global cooperation saved the planet from chemicals that were harming the ozone layer. Sachs convincingly describes how similar efforts, on an even grander scale, are needed now.

The book is very practical, as Sachs recognizes that humans will take actions that make economic sense. He describes how national and international policies can create incentives so that it will make immediate economic sense for individuals to take steps that will benefit us all. And he shows that at a national level, these dramatic changes will only marginally increase costs in the near term, yet save huge sums of money in the not-so-distant future. I will not attempt to describe specific details (read the book!), but Sachs has imbued me with hope that it can be done. He is currently advising the UN on how to do it.

Over 350 years ago, Galileo publicly described the conclusion from scientific evidence (from Copernicus's observations) that the Earth revolves around the Sun. He was denounced and placed under house arrest by a religious leader. One of that religious leader's successors admitted, 350 years later, that it was a mistake to do so.

In current times, scientists (including the United States' own leading climate scientist, Hansen) are describing conclusions from scientific evidence that human activity is causing changes that will, if they continue on course, devastate human civilization and life on earth. In these advanced times, many world leaders are listening to scientists and are willing to cooperate to solve the problems. While Hansen and others are describing what we are doing wrong and what we would need to do to set things right, Sachs and others are developing economic strategies to get people to implement the changes. We cannot afford to have our leaders muzzle scientists or ignore their findings and recommendations.

When Mr. Bush acknowledged that human-produced greenhouse admissions are a real and significant problem, we in the United States of America reached Pogoconsciousness: We have met the enemy, and he is us. The ideas in Sachs' book can take us beyond Pogo: We are all the solution to the problem. We will know we are truly on the right track when we hear the US's elected leaders, like leaders in other parts of the world, tell us that global problems demand global solutions, and that our survival depends on cooperation, not competition, flag waving, and war. Unlike the human-upon-human attacks of September 11, 2001, which led to entreaties for us to kill more of them than they kill of us, the unsustainable Pac-Man-ization of Gaia necessitates cooperation. We will live green or die.

Reading this book will not solve the problems inherent in human-induced climate change. But, I believe, electing leaders who implement the policies in this book could. Leaders of many of the world's countries are banding together, working cooperatively through the United Nations, right now, to develop policies that could make life on planet earth sustainable. It is absolutely necessary that the elected leaders of the United States of America cooperate fully in this process. It is possible to develop and implement policies that will allow the earth to continue to sustain life as we know it. And it is not too late. In Civilization's Last Chance, McKibben (5/11/08) guotes the Indian scientist and economist Rajendra Pachauri, who accepted the Nobel Prize on behalf of the UN Intergovernmental Panel on Climate Change last year: "If there's no action before 2012, that's too late. What we do in the next two to three years will determine our future. This is the defining moment." McKibben writes, "As long as it's not impossible, we've got a duty to try to push those post-Kyoto negotiations in the direction of reality. In fact, it's about the most obvious duty humans have ever faced, [but] you just can't do this one light bulb at a time."

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