REVIEWS

The Age of Global Warming: A History, by Rupert Darwall, London: Quartet Books Limited, 2013, 448 pp., \$45.00 hardbound.

The CO2 Wars

William Happer

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Robert Darwall's recent book, *The Age of Global Warming: A History*, would be a fitting addition to *The Story of Civilization*, the monumental series by Will and Ariel Durant, with its volumes on *The Age of Faith*, which had much in common with our current "Age of Global Warming," and *The Age of Reason*, which could hardly be more different. There has been precious little reason in the frenzy over global warming.

Darwall has presented the first systematic history of the origins and growth of the global warming movement following the 1987 report by the United Nations Commission on Environment and Development (the Brundtland Commission), which launched the concept of "sustainable development" into the vocabulary of the world's political leaders and the 1988 emergence of "global warming" as a supposed existential crisis. Zealots like Al Gore and NASA's Jim Hansen promoted belief in this crisis with the same zeal that Peter the Hermit promoted the First Crusade. The whirl of international conferences that have followed ever since are beyond the patience of most of us to track, but that whirl has become a fearsome tornado, funneling billions of dollars into thin air. Darwall has, in effect, played the role of one of those storm-chasers who get closer to the dangerous mess than most of us would want to be in order to keep us informed.

The book's first chapter, "The Idea," introduces Darwall's style at its best:

According to Karl Popper, the twentieth's century's leading thinker on the theory of science, the essence of the scientific method is critical argument and genuine attempts to refute theories with empirical

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tests yielding reproducible data. We cannot be sure of what is truthful. We can know what is false. Truth is therefore approached by discarding what has been proven false. What hardened into the scientific orthodoxy of global warming does not meet the threshold of being a scientific theory because its predictions are not capable of being tested against nature and therefore refuted by evidence. (p. 6)

The Age of Global Warming traces what has become the modern faith of global warming from Malthusian antecedents to current desperate attempts to paper over the spectacular failures of computer models to agree with observations. The globe has warmed and cooled many times over the 4.5 billion years that Earth has orbited the sun. But for the new global warming faith, the many influences that controlled the climate in the past, before humankind appeared on the scene, have been replaced by one demonic force: atmospheric levels of the "pollutant" CO2. Never mind that each human being exhales about 1 kilogram of this "pollutant" per day, that atmospheric levels of CO2 since the Cambrian (550 million years or so

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ago) have been measured in thousands of parts per million—much higher than preindustrial levels of 280 ppm or current levels of 400 ppm—or that more of this "pollutant" has been shown again and again to substantially enhance agricultural yields.

A dispassionate observer would probably conclude that two or three times more CO2 in the atmosphere would be good for the world. But we are still urged to reduce our "carbon footprint," much as believers from the age of faith were admonished to sin no more. Refraining from real sin was a good idea. Refraining from the use of fossil fuels is a bad idea, since it will condemn disadvantaged people around the world to continued poverty, enrich a well-connected few, and provide no benefit to the climate.

The Age of Global Warming begins with an interesting review of the early history of environmentalism, from Teddy Roosevelt and Gifford Pinchot in the United States, to the quasi-religious German reverence for nature, which continued under the Nazis, to bizarre and little-known British movements like the Kibbo Kift. Early leftists were indifferent or hostile to the environmental movement because it had been embraced by the upper class, the right-wing, and the bourgeoisie. Although contemporary political parties on both the left and the right have tried to take advantage of environmentalism—and of "fighting global warming" in particular—the beneficiaries continue to be the wealthy, and the sacrifices continue to be made by the poor in the form of much higher energy bills to reimburse well-to-do investors in green energy.

Darwall focuses on the human players in the global warming drama, on their personalities and interactions with one another. He offers an interesting discussion of the first scientists-John Tyndall, a prominent nineteenth-century physicist, and Svante Arrhenius, a turn-of-the-century Swedish physicist and chemist and one of the founders of physical chemistry-who pointed out that more CO2 in the atmosphere might warm the Earth. Their speculations preceded Max Planck's momentous discovery in 1900 of how thermal radiation is really produced. The properties of "blackbody radiation," which plays such a central role in cooling the Earth, were first explained by Planck. Others, notably Albert Einstein in his 1905 paper on the photoelectric effect, recognized that Planck had discovered quantum mechanics.

Max Planck does not appear in the book's index, but Darwall does mention British steam engineer and inventor, Guy Stewart Callendar, the first to include the quantum theory of radiation in estimates of global warming in the 1930s. To a man, these early researchers believed that more CO2, and the modest warming they estimated it would bring, would be a benefit, especially to agriculture in northern latitudes. They were almost certainly correct. By many estimates, some 15 percent of the enormously increased yields of agriculture in the past century have come from increased atmospheric CO2, an essential nutrient for plants. More CO2 also makes plants more resistant to drought.

Darwall devotes relatively little attention to the outstanding scientists who followed these pioneers. Mentioned in passing are American scientist Charles Keeling, who developed the first instruments to accurately measure CO2 in the atmosphere, beginning about 1958 and continuing over the decades since-thanks to Keeling's persistence in the face of the indifferent funding agencies-and American climate scientists John R. Christy and Roy Spencer, who developed the crucial microwave sounders for measurements of the atmosphere's temperature from satellites. Much more space is devoted to headline-seekers: NASA prophet of doom James Hansen; green saint, Steve Schneider, initially a

global-cooling alarmist; American physicist and climatologist Michael E. Mann, the father of the infamous hockey stick, etc. But measurements with instruments like those designed by Keeling, Christy, Spencer, and others will eventually provide the truth about global warming. Computer models, manipulation of data, and propaganda campaigns will not.

Since Darwall himself is trained in economics as well as in history it is not surprising that economists get as much as or more attention than scientists. Karl Marx, William Stanley Jevons, John Maynard Keynes, William Nordhaus, Robert Mendelson, Paul Krugman, and many others are extensively cited. Nicholas Stern, knighted for his service to the cause, gets a chapter, titled "Stern Review."

Karl Popper's criterion that real scientific theories must be falsifiable has been ignored by the global warming establishment and its agitprop fellow travelers in the mass media. Every quirk of weather, or "global weirding," according to brilliant climate scientist and New York Times columnist Thomas Friedman, is ascribed to increased levels of CO2. Many medieval Europeans and Massachusetts Puritans, both ignorant and learned, attributed various misfortunes to witchcraft. The witches were put to death, but the misfortunes continued. And no matter what bizarre actions are taken by governments to limit CO2 emissions, the climate will continue to change, as it always has.

The Age of Global Warming is heavily focused on government bureaucracy. We meet a parade of presidents, prime ministers, legislators, mega- and mini-bureaucrats, and various hangers-on, from the Sierra Club to the World Wildlife Foundation to the Union of Concerned Scientists, etc., who make a good living from alarm over global warming. Darwall presents blow-by-blow descriptions of various international meetings in exotic (and not so exotic) locations like Rio de Janeiro, Bali, and Copenhagen. Darwall makes clear, perhaps too delicately, that the movers and shakers at these meetings had, and continue to have, only the vaguest understanding of climate-the "problem" they are supposedly solving for humanity. They were, and remain, mostly "toom tabards," to use the old Scots phrase. Other motives for "fighting climate change" are mentioned, including Malthusian concerns about overpopulation and finite resource bases, winning elections, getting a maximum share of green energy stimulus funds by rent-seeking industries, construction of academic and bureaucratic empires, and increasing contributions to various

nongovernmental organizations that promise to save the planet.

Coal, the first widely used and still among the least expensive fossil fuels, plays a central role in The Age of Global Warming. We learn about William Stanley Jevons's 1865 prophesy that Britain's prosperity would soon end because of the exhaustion of coal reserves. Events could not have developed more differently than Jevons predicted. According to Darwall, "Global warming's entrance into politics can be dated with precision-1988; the year of the Toronto conference on climate change, Margaret Thatcher's address to the Royal Society, NASA scientist James Hansen's appearance at a congressional subcommittee and the establishment of the Intergovernmental Panel on Climate Change (IPCC)." We learn that Bert Bolin, the first chairman of the IPCC, "thought Mrs. Thatcher's interest in global warming was motivated by a desire to close Britain's coal mines." The Royal Society has continued to defend Thatcher's party line even as the science looks less and less credible. The pronouncements on climate by the Royal Society and many other professional scientific societies have very little real science behind them. They are mostly professions of faith.

Darwall also outlines the constructive role, probably unintentional, that

China and India have played in curbing excesses of climate fanaticism by proponents from Europe and the U.S. In an amusing aside, we learn that China's representative, He Yafei, commented at the Copenhagen summit: "All of us are sitting for dinner; we finish the main course and then comes the dessert. The poor man walks in and sits down and has dessert. And we say right, you have to pay for the meal."

The Age of Global Warming has thirty-four self-contained chapters with catchy titles like "Green Warrior" and "Hugging Huskies." Having read the depressing follies outlined in one chapter, one is inclined to set the book aside for a day or two to recover some faith in human rationality before moving to the next chapter. There are some ninety-two pages of references and indices for the 350-page text. Not surprisingly for a history of relatively recent events, peer-reviewed scholarly articles are much less cited than sources like newspapers and parliamentary and congressional hearings.

In a closing comment on the repeated failure of doomsday predictions by scientists—from Malthus to the Club of Rome to Paul Ehrlich and his disciples—Darwall writes: "When it comes to learning from their mistakes, collectively scientists vie with the Bourbons." He is presumably referring to Talleyrand's assessment of the Bourbon dynasty: *Ils n'ont rien* *appris, ni rien oublié*—They have learned nothing and forgotten nothing.