

HUBRIS

*The Troubling Science, Economics,
and Politics of Climate Change*

MICHAEL HART

Hubris:

The Troubling Science,
Economics, and Politics
of Climate Change

Michael Hart

Compleat Desktops Publishing

2015

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First printing 2015

ISBN 978-0-9949038-0-8 Pb
978-0-9949038-1-5 digital
978-0-9949038-2-2 pdf

Compleat Desktops Publishing, a division of
Compleat Desktops R&D Inc.
27 Saddle Crescent
Ottawa K1G5L4
Canada

Cover design: Edward Hart, based on "The fall of Icarus," 1891,
Ceiling mural by Merry Joseph Blondel (Louvre Museum, Paris),
photo by Marie-Lan Nguyen, Wikimedia Commons

Book design: Edward Hart
Set in Book Antiqua and Calibri
Figures: derived from sources as indicated for each figure and
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Joseph Ratzinger,
Pope Benedict XVI
Address to the Congress
held on the
10th Anniversary of Pope
John Paul II's Encyclical
Fides at Ratio, Rome, Oc-
tober 16, 2008.

The hubris of reason ... can acquire characteristics that are dangerous to humanity itself. Science, moreover, is unable to work out ethical principles; it can only accept them and recognize them as necessary to eradicate its potential pathologies. ... This does not mean restricting scientific research or preventing technology from producing the means for development; rather, it consists in maintaining vigilance about the sense of responsibility that reason possesses in regard to science, so that it stays on track in its service to the human being.

G.K Chesterton
The Flying Inn (1914)

There is no great harm in the theorist who makes up a new theory to fit a new event. But the theorist who starts with a false theory and then sees everything as making it come true is the most dangerous enemy of human reason.

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Preface

Imagine a movement so bent on achieving its political objectives that it is willing to corrupt science to meet them. Imagine governments around the globe, first adopting and then promoting this *official* science for more than two generations. Imagine that they are willing to use their regulatory power to implement a massive program of social engineering in order to “save” the planet. Imagine the United Nations leading this movement and insisting that a global effort is required. Imagine the movement’s leaders believing that people around the globe must *change* their eating, heating, cooling, lighting, toilet, transportation, manufacturing, entertainment, even housing habits and reject values that are critical to their prosperity, happiness, and welfare, confident that humans can adapt and revert to simpler, more primitive, more local lifestyles, have fewer children, and embrace lives presumed to be more in harmony with nature.

Imagine thousands of scientists engaged at public expense in developing a convincing rationale for this unprecedented project. Imagine that these scientists are willing to compromise their integrity in pursuit of the role of a single factor that they insist controls the most complex and chaotic earth system, a molecule – carbon dioxide – that is literally the building block of all of life. Imagine that they believe that by reducing its miniscule – .04 percent – presence in the atmosphere, the planet will cool and climate will stabilize at an optimum level, a level seen only in micro-seconds of geological time. Imagine scientists who dismiss the work of hundreds of their colleagues and believe that their work must be suppressed. Imagine a scientific movement dominated by greedy grant farmers and cheered on by the media, insisting that there is no further need to study the science and that governments need to start implementing its preferred policy of worldwide social engineering.

Imagine that many leaders of this movement believe that the world’s population needs to be thinned down to a billion people within a generation or two. Imagine that some of the movement’s most revered leaders, even as they advocate that ordinary people must curb their consumption and live simpler lives, pursue lifestyles that consume more energy and other commodities in a year than an ordinary family of four would need over its lifetime. Imagine a movement whose leaders habitually dissemble and mislead and justify this on the claimed greater good they are pursuing. Imagine politicians, civil servants, scientists, activists, and the media flying from one exotic location to another as they

plan what must be done to coerce changes in our lifestyles, even to the point of sacrificing human freedom and democracy.

Most thoughtful people would conclude that only Hollywood could come up with such a bizarre plot. A little more thinking, however, and they might connect the dots. There *is* such a movement, and it has demanded our attention for more than thirty years. It has devoured billions of dollars in public money and has inserted its menacing tentacles into every aspect of modern life. The UN and all its organs are the leading force behind it, but most governments of the world support it in one way or another. Elites, the media, and even religious leaders, have embraced it, even though they seem poorly informed and ignore its demands while urging others to adopt sharply reduced lifestyles.

The public face of this science, climate science, is part of a worrying new trend: the emergence of “official” or consensus science. In this perversion of real science, policy becomes the goal of scientific enquiry rather than its result. Over the last thirty years and more, public policy has focused increasingly on dealing with risks to health, safety, and the environment. Much of that policy ostensibly relies on scientific findings. In their decision-making, governments increasingly look to scientists and have resorted to funding science that meets their political need for certainty. Consensus on controversial issues is critical to governments. Ever since Rachel Carson published *Silent Spring* in 1962, activists have stood ready to convince governments of all manner of risks to humanity and nature, and scientists have obliged by reporting findings that satisfy activist political needs. Once governments acquiesce, it is critical that scientists not undermine their decisions with awkward new findings. Public policy is not easily reversed. The result is a potential monster spewing out more and more regulations, presumably making us safer and healthier and safeguarding the environment, but also substituting social for personal responsibility, reducing freedom and choice, and creating an ever larger, more costly, and intrusive public footprint.

For many years it seemed that the public agreed that there was a need to take action to control the globe’s climate, but that support has steadily eroded as people have begun to realize the enormity of what is being demanded, the flimsy ground on which this demand is based, and the impact of what would need to be imposed. Public support has declined further as sceptical scientists have pointed out more and more problems with the underlying scientific hypothesis, as engineers have indicated the extent to which purported energy substitutes are not up to the job, and as economists have calculated the enormous costs and minimal benefits. Only general scientific illiteracy has kept the project afloat.

The movement advocates fundamental changes in lifestyles and succeeds by spreading *alarm* based on the alleged adverse consequences resulting from human-caused (anthropogenic) changes in the climate system. The movement points to the prospect of catastrophic results if those changes are not imposed by public authorities. *Alarmism* best describes this phenomenon. Critics of the movement are characterized as *sceptics* because their criticism is grounded in scepticism of various aspects of the science, the economics, and/or the politics of climate change alarmism. Some alarmists refer to sceptics as deniers, a term used in the pejorative sense. Sceptics do not *deny* climate change or the role of greenhouse gases (GHGs). As explained further in the scientific chapters, many sceptics consider the role of anthropogenic GHGs to be relatively minor and the prospect of catastrophic changes to the climate to be minuscule, thus obviating the need for anything other than appropriate adaptive measures.

This book dissects the global warming/climate change movement in all its ramifications. It analyzes the evolving science of climate change and places its pursuit and findings within the broader context of modern scientific praxis, identifying its strengths and weaknesses and areas of agreement and disagreement. Unlike the popular meme that the science of climate change is settled, the book demonstrates that in proper scientific practice, no issue is ever settled; scepticism is at its heart. Climate science is no exception. The book further argues that, as with other ambitious UN agendas, from the New International Economic Order (NIEO) of the 1960s to sustainable development in the 1990s, embrace of these movements by governments has a predictable life cycle, starting slowly, building momentum, and then gradually fading as a more realistic appreciation of the issues intrudes. While the primary movement is withering on the vine, its effects linger for generations. Governments may never meet the primary objectives of the global warming movement, but they have succeeded in embedding many of its tentacles into public regulatory policies and programs. Multiple interests have become dependent on these policies and will fight to maintain them, including thousands of officials whose careers are wedded to them. As so often happens in public policy, the unintended and harmful consequences become accepted practice, despite their costs and annoyance.

The world will be a better place when governments agree to tame this monster and refocus their energies on issues within their competence; when religious leaders and other elites accept that they have fallen prey to a movement whose motives are much darker and more damaging than they realize; and when the media adopt a more bal-

anced approach and provide the public with the critical assessment that is often missing from their reporting. It is time for all three to accept that the UN is pursuing a path that can only result in a less prosperous and more divided world.

This book is the product of nearly a decade of reading, thinking, and discussion. It originated in a request in the fall of 2007 from some of my graduate students at the Norman Paterson School of International Affairs at Carleton University to discuss the implications of climate change policy for Canadian trade. This led to a draft paper outlining some of the issues and a special class at the end of the term to discuss those issues. The discussion was lively and indicated that much more reading and thinking might be in order.

During my final years as an official in Canada's Department of External Affairs and International Trade, climate change came up occasionally in the morning meetings of the executive committee as an issue being followed by officials in the Legal Bureau who were involved in negotiating the 1992 UN Framework Agreement on Climate Change. At the time, I thought the idea of an international accord governing climate change rather bizarre; I had learned that UN-sponsored regimes on such topics were also often of little importance. Over the following years, however, climate change gained momentum with the media and the public, including my students, hence their interest in a special class.

By 2010, I had read much more and discussed the issue more widely. Seventeen graduate students joined me in a summer seminar, reading a wide range of sources, making presentations, and discussing the science, economics, and politics of climate change. I enjoyed the seminar, as did they, and I repeated it in the summers of 2011, 2012, and 2013, and in the winter of 2015, involving 48 more students. For the last seminar, I circulated a draft version of this book as the basis for class discussion, much of which had been prepared during my 2013-14 sabbatical. In all five seminars, class discussion was lively, and the book benefited immensely from that discussion and from the presentations and reports prepared by the 65 students. I also benefited from the presentations made to each seminar by my colleague Tim Patterson of Carleton's Earth Science Department. He introduced the students to the basic science of climate change and described the contours of some of his research on climate change in the high Arctic and on Canada's west coast. Tim is one of those scientists who gets his hands dirty and his feet frozen as he researches climate change over both geological and histori-

cal time. Like many geologists, he is deeply sceptical of the alarmist claims made by some climate scientists.

By the end of 2014, as the text took final shape, I had added over 300 books to my research library and had downloaded more than 3,000 articles on every aspect of the issue. Many of these are mentioned in the notes in this book, but many more added to my education on the multiple dimensions of this complex issue. I read material from a wide range of perspectives, from the highly sceptical to the deeply committed. Never before has an issue of science and public policy commanded such detailed attention from so many different angles.

Once the text took shape, I benefited from comments from Derek and Joan Burney, Keith Cassidy, Tony Halliday, Fen Hampson, Peter and Helen Hart, Chris Maule, Tim and Liz Patterson, and Cornelis (Kees) van Kooten, all of whom read the text in whole or in part and provided invaluable comments. Kees van Kooten was kind enough to provide me with detailed, constructive comments, in addition to the many details and insights I gained by reading his own thoroughly researched book on the economics of climate change policy. Three anonymous readers provided comments for UBC Press, which decided not to proceed to its publication, despite their earlier successful experience with three of my previous books. As discussed in chapter three, peer review no longer serves the constructive role it may once have played.

My wife, Mary Virginia, went through the text with a fine tooth comb not once, not twice, not three, but four times. Together with our friend Gus Heidemann, a retired colleague from the English Department at Carleton, they ensured that the text is as clear, readable, and unambiguous as possible. No author could ask for a better pair of editors. Any remaining errors or omissions are my fault, the product of my stubborn Dutch temperament.

With the decision self-publish, it became critical to ensure that not only the text but also the overall appearance of the book would be clear and attractive. My son Edward helped in designing the book, enhancing the quality of the graphics, and ensuring a faithful rendering in the format used by Lulu. In today's world of political correctness and squeamish publishers, services such as Lulu have become indispensable, and more and more authors are turning to them.

Ottawa
September 2015

1

The Problem Stated

To the improver of natural knowledge, scepticism is the highest duty; blind faith the one unpardonable sin.

Thomas Henry Huxley, 1860

We have found it of paramount importance that in order to progress, we must recognize our ignorance and leave room for doubt. Scientific knowledge is a body of statements of varying degrees of certainty – some most unsure, some nearly sure, but none absolutely certain.

Richard Feynman, *The Value of Science*, 1955

In 1977, a month after his 70th birthday, my father succumbed to his fifth and final heart attack, a victim of cardiovascular disease. After his first heart attack in 1962 his doctor had prescribed a strict diet aimed at reducing his intake of animal fats, considered at the time to be the prime contributor to high levels of serum cholesterol, which in turn was considered to be one of the leading causes of cardiovascular disease. For the final 15 years of his life my mother watched his diet like a hawk but continued to feed him cookies and cake with his morning coffee and afternoon tea; carbohydrates were not proscribed. He quit smoking cigarettes but continued smoking a pipe and an occasional cigar. He also maintained his life-long aversion to exercise. My mother survived him by 18 years and died of complications from a stroke at the age of 87. For the last 20 years of her life, she also maintained a diet low in animal fats but not in carbohydrates. Since both of my parents died of cardiovascular-related causes, my genes suggest a predisposition to cardiovascular disease.

Having learned from my father's experience, I have been careful all my adult life to limit my intake of animal-based fats. Unlike my father, I maintained a moderate exercise regime and quit smoking in 1967. Nevertheless, measurements of my blood chemistry in the early 1970s indicated higher than desirable levels of cholesterol and other lipids – perhaps a genetic factor at work, since five of my siblings exhibited the same traits. After a diagnosis of Crohn's disease a few years later, I was motivated to adhere to a balanced, low-fat, alcohol-free diet. My GP monitors my blood chemistry annually and, in 2006, prescribed Lipitor – a powerful statin – to reduce my “bad” cholesterol and triglycerides. He was satisfied with the results. In 2009, however, I suffered a mild stroke. A CT scan indicated two earlier mini-strokes. This came as a surprise, as did the neurologist's conclusion that I suffered from an advanced case of arteriosclerosis. I listened to her admonitory lecture, which included many of the same things my father had been told nearly five decades earlier. She also quadrupled my dosage of Lipitor and added blood pressure and blood thinning drugs to my regimen.

Further investigation using some of modern medicine's advanced diagnostic tools revealed that neither my carotid nor cardiac arteries were blocked or narrowed to any appreciable degree and that the state of my cardiovascular system was normal for someone my age, i.e., perhaps some hardening of the arteries but no signs of narrowing or blockage. Reassuring as this information was, I determined that I needed to know more about cardiovascular disease and the role of diet in causing and controlling it.

Health and environmental risks, public policy, and science

Among the books that I read was Gary Taubes, *Good Calories, Bad Calories*.¹ Taubes had spent a decade investigating the extent to which science understood the relationship between diet, obesity, diabetes, and cardiovascular disease. He concluded that scientists had made significant progress in understanding these modern killer diseases²

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1. Gary Taubes, *Good Calories, Bad Calories: Fats, Carbs, and the Controversial Science of Diet and Health* (New York: Alfred A. Knopf, 2007). See also Harvey Levenstein, *Fear of Food: A History of Why We Worry About What We Eat* (Chicago: University of Chicago Press, 2012) and Nina Teicholz, *The Big Fat Surprise: Why Butter, Meat, and Cheese Belong in a Healthy Diet* (New York: Simon & Schuster, 2014).
 2. They are characterized as “modern” killer diseases because they are considered to be the products of modern civilization's lethal combination of sedentary life styles and easy access to rich, refined food. They have replaced the lethal infections that killed our ancestors but that have been conquered with antibiotics.

and had isolated some of the principal culprits in their growing modern incidence: smoking, lack of regular exercise, the increase in our diets of refined carbohydrates, and the human body's penchant for storing the metabolites of carbohydrates as fat. Their investigation had clarified that animal fats, rather than leading to high levels of serum cholesterol and other lipids, are critical to providing our bodies with energy and necessary nutrients for various bodily functions. Serum cholesterol does not increase because we eat fatty foods but because the body manufactures it for one reason or another. Nevertheless, public health authorities and the medical profession have remained firmly attached to ideas about diet and disease that owe little to science and much more to aggressive marketing of ideas first advanced in the 1950s and never subjected to rigorous scientific investigation. (See Box 1-1) Taubes concludes:

The urge to simplify a complex scientific situation so that physicians can apply it and their patients and the public embrace it has taken precedence over the scientific obligation of presenting the evidence with relentless honesty. The result is an enormous enterprise dedicated in theory to determining the relationship between diet, obesity, and disease, while dedicated in practice to convincing everyone involved, and the lay public most of all, that the answers are already known and always have been – an enterprise, in other words, that purports to be a science and yet functions like a religion.³

Conventional expert wisdom, even when wrong, can be remarkably “sticky.” Not surprisingly, the lay public remains thoroughly confused about the role of diet in the incidence of modern killer diseases. The interaction between science and diet has become a commonplace of journalism, frequently in ways that are not helpful. The need for funding has disposed scientists to announce every new discovery and insight based on their laboratory investigations, while the media's need for sensation and alarm has led to newspaper stories transforming minor insights into major stories. Industry groups are quick to seize on those they find helpful and to discredit those that are not. Missing from the media's enthusiasm for reporting research that may not be ready for prime time is the surge in retractions of articles published in scientific and medical journals, not because subsequent research has brought earlier conclusions into question but because of fabrication, plagiarism, error, and irreproducible results.

3. Taubes, *Good Calories, Bad Calories*, 451-2.

Box 1-1: Lipophobia and Cardiovascular Disease

In the years immediately after World War II, Ancel Keys, a University of Minnesota physiologist, was struck by the number of heart attacks among middle-aged, professional men. After testing a cohort of 286 men, he suspected that the presence of high levels of serum cholesterol was the culprit causing arteriosclerosis – hardening of the arteries leading to fatty deposits and narrowing of arterial walls. In his mind, the hypothesis was confirmed when he examined data from the World Health Organization (WHO) showing that countries with diets rich in saturated (animal) fat had higher levels of cardiovascular disease.

He discussed his theory with Paul Dudley White, a prominent Harvard cardiologist, who agreed that this was exactly the common sense explanation he was seeking. In the years to come, White and Keys proved a convincing team. Not everyone shared their enthusiasm, particularly after some researchers looked at the WHO data and learned that Keys had used only 7 (8 in a later study) of the countries for which the WHO had gathered relevant data. Had he used data from all 22 countries available in the WHO files, the correlation he observed between diet and cardiovascular disease would have disappeared. He ignored, for example, evidence that the Inuit in the Arctic and the Masai in Africa, both of whose diets consisted largely of animal fats, exhibited very low levels of cholesterol and rarely suffered from heart disease.

But these reservations came too late: the word had spread and became the gospel for medical practitioners. Sixty years later it remains deeply embedded in popular discourse, reinforced by public health authorities and heart and stroke societies in virtually every country.

Lipophobia becomes official science

Lipophobia became further embedded in medical practice as the basis for dietary advice promoted by public health authorities. In the 1970s, the US federal government began to prescribe recommended diets and, with strong media support, launched what became a steady drumbeat for the next sixty plus years: saturated fat in your diet will lead to obesity and heart disease and kill you!

By following this dietary advice, people were getting more of their energy from processed carbohydrates rather than from fats. In order to make low-fat food more palatable, the food industry used more salt as well as highly processed vegetable fats and carbohydrates (sugars and starches). This diet leaves people less satisfied and craving for snacks, which the food industry also supplied, most based on highly processed carbohydrates: sugary drinks, fatty chips, and similar products. Portions in restaurants became larger at the same time that changing lifestyles disposed people to get more and more of their calories from restaurant meals, whether sit-down or take-out, or in fully prepared form from food retailers such as Whole Foods.

The results were predictable, but the denial of the public health authorities continued: the recommended diet was leading to higher intakes of processed carbohydrates that were being metabolized and stored by the body as fat. Even more damning, studies repeatedly showed that diets higher in animal fats led to weight loss while those low in animal fats led to weight gain. Advances in biochemistry that allowed scientists to study the metabolic process at the molecular level confirmed that much of the conventional wisdom that went into public health policies related to nutrition and chronic diseases such as type II diabetes, obesity and cardiovascular disease was misguided.

Pharmaceutical solutions

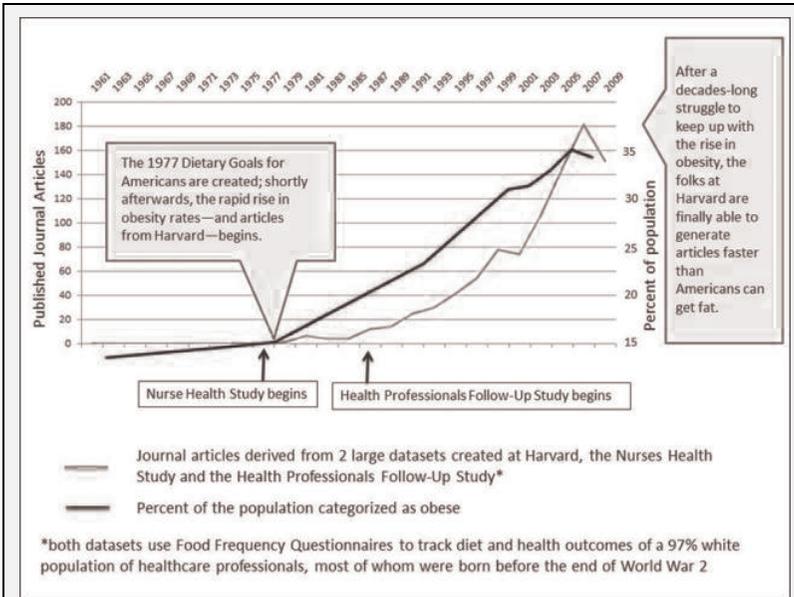
The diet/cholesterol/heart disease theory became even more deeply embedded in medical practice when the pharmaceutical industry introduced drugs that could lower serum cholesterol. The discovery of a group of drugs called statins proved efficacious in lowering serum cholesterol and, by implication, in reducing cardiovascular disease.

Based on intensive marketing, drug firms convinced doctors to test cholesterol levels in all their older patients and to put them on statins if those levels were high. The medical profession cooperated, and soon millions of men, and then women, were saddled with a life-long commitment to statin therapy. The level of serum cholesterol and other lipids was indeed successfully lowered, and the number of patients mushroomed. Within a decade, statins had become the pharmaceutical industry's most prescribed and profitable drugs.

Confounding research

Bio-medical research, however, kept rolling along and identified a number of problems with the Keys theory and with the widespread use of statins. With increasingly sophisticated measuring techniques, researchers identified the much more complicated structure of serum lipids, fractioning them into "good" and "bad" cholesterol. Research also showed that the body manufactures lipids in the liver, brain, and elsewhere because it needs them for a variety of functions. Interfering with the chemical process that leads to the production of lipids also interferes with the production of other chemicals that the body needs. Increasing reports of undesirable side effects – including muscle deterioration, nerve damage, and memory loss – suggested that interfering with that chemical process was not necessarily beneficial.

Bio-chemical research into human metabolism was demonstrating in much more detail the relationship between diet and levels of serum cholesterol. The simple, "common sense" explanation favoured by Keys and White had no basis in science. The many types of fat in the human diet all fulfill a need, some more critical than others. In addition, the body's ability to manufacture lipids does not appear to be closely related to dietary intake of fat. At the same time, growing use of highly processed vegetable fats, particularly trans fats, were creating their own problems.



Obesity and the Output of Articles from the Harvard Nurses Health Study.
Source: Adele Hite, "As the calories churn" at eathropology.com, July 2013.

Research also stubbornly failed to confirm the relationship between diet, serum cholesterol, and cardiovascular disease. A 2010 meta analysis of 21 earlier studies covering 347,747 subjects failed to find any association between saturated fat consumption and cardiovascular disease. A 2014 meta analysis in the March issue of the *Annals of Internal Medicine* covering 72 studies involving over 600,000 individuals in 18 countries similarly found no evidence to support current public health guidelines recommending that people restrict their intake of saturated fats.

Research into the relationship between serum cholesterol and cardiovascular disease was also steadily undermining the Keys-White hypothesis. "Good" and "bad" cholesterol were indeed present in the fatty deposits in arterial walls thought to be critical to heart attacks and strokes, but in a beneficial rather than a malign way. Cholesterol serves to heal lesions that arise in the artery wall from other mechanisms.

Finally, the results of epidemiological studies looking at the association between statins and morbidity due to strokes and heart attacks were also ambiguous, with different studies reaching different conclusions. Studies sponsored by drug companies seemed to be more supportive than independent studies. The drug companies were now admitting that the cholesterol-lowering effect

of statins might be less prophylactic than claimed. Fearing loss of the golden goose, there was now a new claim that statins also fight inflammation of the arteries, a more important effect. Time will tell whether or not this new claim survives continuing scrutiny.

No doubt there are other factors contributing to cardiovascular disease, such as our modern sedentary life style. Although changes in diet based on epidemiological studies may be key to understanding the rise in obesity and type II diabetes, they have failed to provide useful information on cardiovascular disease. In a turn-around-is fair-play moment, nutritionist Adele Hite provides a wonderful graphic showing the correlation between the output of the Harvard Nurses Health Study – instrumental in convincing public health authorities of the benefits of a low saturated fat diet – and the increase in obesity (See Figure below). Did the Harvard study “cause” the increase in obesity? Perhaps not, but the association is certainly more robust and suggestive than many epidemiological studies that have gained considerable credence.

From four directions, research has steadily undermined the Keys-White hypothesis. As an object lesson in the stickiness of established wisdom, however, none of this research has in any way dulled the enthusiasm of public health authorities, heart and stroke societies, and many medical practitioners for prescribing statins and telling cardiovascular patients to pursue an even stricter version of the low-fat diet. Is the continued reliance on statins and low-fat diets good science or bad science? If nothing else, the issue is highly suggestive of the difficulties encountered in trying to reverse “official” science.

For more detail, see Gary Taubes, *Good Calories, Bad Calories*, Harvey Levenstein, *Fear of Food*, Nina Teicholz, *The Big Fat Surprise* (New York: Simon and Schuster, 2015), Malcolm Kendrick, *The Great Cholesterol Con* (London: John Blake, 2007), Mary Enig, *Know Your Fats* (Bethesda, MD, Bethesda Press, 2000), and Adele Hite, “As the Calories Churn,” Episodes 1-3. each with copious notes pointing to the medical and scientific literature.

Weary of the oversimplification and selective reporting that characterize many of the stories about diet and disease, the general public has learned to discount much of the hype. Who can blame them? Warnings one year about the need to restrict our intake of eggs is followed a year later by a new study indicating that moderate consumption of eggs poses no significant issue for cardiovascular health. Similar examples abound, from oat bran to corn oil. The general population has learned to discount such dire warnings, and not just those about health and diet. On the whole, consumers would be well served to ignore most media stories about scientific issues. The media have long played a leading role in perpetuating medical and other supposedly science-based myths, even frauds. More particularly, however, as Stanford’s John Ioannidis has

demonstrated, “for many current scientific fields, claimed research findings may often be simply accurate measures of the prevailing bias.”⁴ Unfortunately, the media have also become attracted by what can only be described as junk science, and the dividing line between it and serious evidence-based science has become increasingly difficult to find as research scientists politicize their findings and make common cause with activist nongovernmental organizations, industrial interests, and others with an agenda.

The media’s sensationalist reporting would be of little moment except for the extent to which it feeds into activist agendas and the perceived need for public policy responses. Over the course of the last five or so decades, the focus of government regulatory activity has shifted from seeking to determine economic outcomes to addressing risk, perceived or real, arising from health, environmental, and safety concerns. Over that period, risk-related regulation has become a dominant concern of national, state, and provincial governments. Much of that regulatory activity is, we are told, grounded in science, but much of that science is rarely as clear as claimed by activists or as clear-cut as governments assert. Governments have increasingly become captive of what economist Ross McKittrick characterizes as “official” science: science that is in many ways a caricature of real science.⁵ Rather than a dynamic quest grounded in a perpetual attitude of scepticism, it asserts that the claims of science can bring certainty and point confidently to solutions. Public health policy provides a troubling example as does much of environmental policy.

Social tolerance for risk has declined markedly in recent years, further skewing the equation. In response, governments now frequently rely on the so-called precautionary principle as the basis for making difficult decisions, responding to a perception that the public would rather be safe than sorry. The implications of this approach for economic well-being and material progress are profound. In these circumstances, the role of science has become critical. Not surprisingly, interest groups have learned to manipulate the work of scientists in order to press their political and economic agendas,

4. John P. Ioannidis, “Why Most Published Research Findings Are False,” *Public Library of Science (PLoS): Medicine* 2:8 (August 30, 2005), 124. His findings are discussed further in chapter 2.

5. Ross McKittrick, “Bringing Balance, Disclosure and Due Diligence into Science-based Policymaking,” in Jene M. Porter and Peter W.B. Phillips, eds., *Public Science in Liberal Democracy* (Toronto: University of Toronto Press, 2007).

and scientists have learned to manipulate public discussion in order to enhance funding for their research. Management of risks to public health and the environment has, of course, always had to grapple with making decisions under uncertain conditions. Science deals in probabilities; much of science-based public policy seeks to address fears and uncertainties by finding a socially acceptable balance between risks and benefits, a judgment that requires governments to make assessments about risks, costs, and benefits, informed by science, politics, and economics.⁶

Environmentalism and public policy

My encounter with the neurologist coincided with reading that I was doing to prepare for a new course I planned to introduce in the summer of 2010 about scientific uncertainty and the public policy implications of the debate about anthropogenic global climate change. Even more than public health, concerns about the environment have become a favourite focus of sensationalist journalism. For more than two generations, the public has been fed a steady diet of stories about the role of humans in the alleged deteriorating state of the global commons, statements that are more political than scientific in nature. The natural world is in a constant state of flux, and human interaction with it is but one of many influences. Whether those influences are benign, malign, or indifferent is a matter of values, not science.⁷ The concept of an ideal state of nature is, again, political.

Among these stories, concerns about global warming have succeeded in grabbing the greatest attention but not for lack of effort by activists concerned with other environmental issues. Today's generation of students has been force-fed from kindergarten the dire consequences of human interaction with nature. Universities have gotten on the bandwagon with new programs, new departments, or newly revamped and refocused disciplines. Geography departments, for example, have morphed into environmental studies programs. "Sustainability" has become the mantra of university admin-

6. See, generally, G. Bruce Doern and Ted Reed, eds., *Risky Business: Canada's Changing Science-Based Policy and Regulatory Regime* (Toronto: University of Toronto Press, 2000); H.W. Lewis, *Technological Risk* (New York: W.W. Norton, 1990); and Howard Margolis, *Dealing with Risk: Why the Public and the Experts Disagree on Environmental Issues* (Chicago: University of Chicago Press, 1996).

7. Jeffrey Foss provides an excellent overview of the unscientific basis of much of modern environmentalism in *Beyond Environmentalism: A Philosophy of Nature* (Hoboken, NJ: John Wiley & Sons, 2009).

istrators and has also permeated the core curriculum.⁸ Not unlike public health, much of the resulting activism, public policy, and even some of the university-based teaching rest on the slimmest of evidence-based research. Much of it is based on the false allure of scientific certainty, a reality that rarely exists in the world of serious scientific investigation.

In the early 1990s political scientist Aaron Wildavsky, together with his graduate students at Harvard University, compiled a fascinating study on the problem of scientific certainty and public policy. They surveyed a series of public policy concerns that had originated in alarming scientific conclusions about environmental health and safety issues and that had succeeded in capturing significant media attention and activist concern. For each problem, they asked: "But is it true?"⁹ Closer scrutiny revealed that many of the scientific claims being made, each of which had been critical to the case for public action, were open to serious doubt based on subsequent, evidence-based scientific investigation. Wildavsky's quest rested on the premise that a well-educated citizenry should be able to make an informed judgment about most health- and environment-related scientific issues. In his words, his quest involved "understanding the scientific bases for rival claims, engaging in informed discussion, and making reasoned judgments ... [not] as apprentice scientists ... [but] as reasoned deliberators capable of taking informed action in fields not necessarily determined by but infused with conflicting scientific and technological assertions."¹⁰

His case studies, which ranged from DDT and PCBs to the role of rodent studies in predicting cancer in humans, indicated that many of the claims were based on shoddy or incomplete work, much of which had been sensationalized by the media and activists. Political responses were often premature, lacked informed risk analysis, and were predicated on ensuring political survival rather than averting serious harm. In the twenty years since Wildavsky's book appeared, society's aversion to risk and the media's attraction to alarm and sensation have increased the field for further case

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8. See Rachelle Peterson and Peter W. Wood, *Sustainability: Higher Education's New Fundamentalism* (New York: National Association of Scholars, 2015) for a thorough discussion of the extent to which the totalitarian demands of the sustainability movement have permeated the modern university.
 9. Aaron Wildavsky, *But Is It True? A Citizen's Guide to Environmental Health and Safety Issues* (Cambridge: Harvard University Press, 1995).
 10. Wildavsky, *But Is It True?* 1.

studies. The activist preference for the precautionary principle has made political authorities even more prone to act.

One of the issues that Wildavsky studied was anthropogenic climate change or, as it was framed at that time, global warming. His examination, and that of the graduate students who worked on the issue, indicated that the case for public action was very weak. In the intervening years the case has seemingly become more robust, or has it? Those calling for action have clearly succeeded in creating a very broad base of public support and, in response, governments have created an international, UN-based public policy process that has taken on a life of its own, increasingly divorced from scientific principles and focused on progressive goals. Distinguished MIT atmospheric physicist Richard Lindzen, one of the leading critics of global warming alarm, concludes that “global warming is about politics and power rather than science. In science, there is an attempt to clarify; in global warming, language is misused in order to confuse and mislead the public.”¹¹ In the quest for power, the UN is one of the key players, using alarm about climate change as a prime vehicle for advancing its progressive agenda.

The United Nations and the progressive agenda

The founding of the UN in 1945 was a response to the outrage of two world wars, and the UN’s charter provides it with a mandate to broker peace and global order and to limit war and disorder. That mandate includes an economic and social dimension predicated on the idea that a more prosperous and socially cohesive world will be a more peaceful one. On the political side of its mandate, the UN has had moderate success. On the economic and social side, however, it has focused on an increasing array of fads, cajoling member governments into adopting a wide range of agendas and resolutions favoured by the so-called international community, a term adopted by the media to describe activists with agendas.¹² The UN adopted the climate change agenda in the 1980s and has since developed it into an all-consuming, ambitious framework through which to tackle a number of earlier progressive causes, from gender inequality to sustainable development.

11. Richard Lindzen, “Global warming, models, and language,” in Alan Moran, ed., *Climate Change: The Facts* (Melbourne, Australia: Institute of Public Affairs, 2015), kindle edition.

12. I explore these themes in more detail in Michael Hart, *From Pride to Influence: Towards a New Canadian Foreign Policy* (Vancouver: UBC Press, 2008).

The UN's efforts to establish a New International Economic Order (NIEO) in the 1960s and 1970s and its current focus on "saving" the planet give one a strong sense of *déjà vu*. Then too, there was much earnest talk by governments at a succession of major international conferences, and much written by "experts", but in the end the NIEO suffered the fate of most simplistic ideals based on weak intellectual foundations: the dustbin of history. The focus for much of this effort was the UN Conference on Trade and Development (UNCTAD), established in 1964. Its high point was the fourth conference in Nairobi in 1976, at which governments agreed to establish the Integrated Program for Commodities (IPC). By the time of the Manila (1979) and Belgrade (1983) conferences, governments were losing their enthusiasm for the NIEO. Over the course of the 1980s, more and more developing-country governments realized that their development goals were more likely to be met working through the trade regime embedded in the General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organization (WTO), than through UNCTAD. The WTO now has twice as many members as GATT had during UNCTAD's heyday, and many developing countries have embarked on serious efforts to open their markets to global competition. Most have turned their backs on the *dirigiste* policy preferences of the NIEO and are beginning to see positive results. UNCTAD still exists but is now a mere shadow of its earlier self, its many meeting rooms standing idle for much of the year.

In the 1970s, the intellectual foundations of economics were being bent to meet the requirements of UNCTAD's agenda. Governments rode with it but kept a wary eye on the real world. Over the past few decades, the focus on sustainability and the climate change agenda raise suspicions that a similar phenomenon is at play. This time it is science that is being harnessed to meet the political objectives of those committed to warding off the alleged crisis of global warming and the equally alleged deteriorating state of the global commons, with the goal of ushering in a world more to their liking. Climate change professor Mike Hulme from the UK's University of East Anglia baldly asserts: "We need to ask not what we can do for climate change, but to ask what climate change can do for us. ... Rather than trying to 'solve' climate change, ... we need to approach climate change as an imaginative idea, an idea that we develop and employ to fulfill a variety of tasks for us. Because the idea of climate change is so plastic, it can be deployed across many of our projects

and can serve many of our psychological, ethical and spiritual needs.”¹³ For Hulme, the climate change “crisis” provides a convenient basis upon which to tackle such UN perennials as population control, income redistribution, and sustainable development. Christiana Figueres, the Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC), has enthusiastically taken up this theme. At a Brussels press conference, she explained that climate negotiations are “probably the most difficult task we have ever given ourselves. ... This is the first time in the history of mankind that we are setting ourselves the task of intentionally, within a defined period of time to change the economic development model that has been reigning for at least 150 years, since the industrial revolution.”¹⁴ The NIEO appears to have morphed into the quest for sustainable development, with all its questionable economic assumptions intact but now covered with a new coat of environmentalist paint.

The UN and climate alarmism

Over the last 25 years a whole industry has developed at universities and multiple specialized research institutions devoted to the study of climate change in all its ramifications. The literature has become immense and is well beyond the capacity of any single individual to grasp. It is also relentlessly one-sided in its orientation. Research funds flow to those prepared to examine the assumed malign aspects of climate change – imagined or real. Funding for research that takes a more critical approach or that examines the possibility that there may be benefits to climate change is much more difficult to obtain. Studies that reach findings at odds with mainstream dogma routinely add a sentence or two in the abstract or conclusions to reassure readers that the findings do not invalidate the politically correct orthodoxy, even when they do. Rent-seeking behaviour has become one of the distinguishing features of the modern academy. Much of the best critical literature comes from older, even retired, academics who are no longer as involved in the chase for research funding. Its dissemination and discussion take place at a few conferences and, more importantly, in the blog-

13. Mike Hulme, *Why We Disagree About Climate Change* (Cambridge: Cambridge University Press, 2009), 326 and 329.

14. “Figueres: First time world economy is transformed intentionally,” UN Regional Information Centre for Europe, February 3, 2015.

osphere. The weight of numbers, however, should not be taken to be dispositive. A discerning eye can differentiate quality from rote.

Climate alarmism is based on four interrelated assertions: global temperatures are climbing to unprecedented levels; human activity is largely responsible for this increase; climate change of this order is exceptional and will have catastrophic impacts on the earth's biosphere; and policy-induced changes in human behaviour can stabilize the climate and ward off calamity. From this perspective, "climate change represents a 'tragedy of the commons' on a global scale. The nations of the world, and individuals within them, over-exploit the planet's atmosphere because they gain all the material advantages from the activities that contribute to global warming but suffer only a fraction of the environmental costs. In turn, nations and individuals typically are unwilling to reduce their greenhouse gas emissions unilaterally, because in doing so they would pay the full price of abatement but gain only a fraction of the benefits."¹⁵

Contrary to popularly held views, the scientific underpinnings of many of these assertions are far from settled. Additionally, many researchers are not convinced that the technology needed to replace current sources of energy exists or that the cost of implementing even a modest version of the preferred policy prescriptions is justified by any benefits that could reasonably be attained. Indeed, many are convinced that most of the solutions offered would have either catastrophic effects of their own or remain technologically impossible. Nevertheless, through the work of the UN's Intergovernmental Panel on Climate Change (IPCC) and the 1992 UNFCCC, many of the world's governments have committed to pursuing costly national programs and international mitigation strategies with the goal of essentially altering global climate patterns. Ironically, the

15. Kathryn Harrison and Lisa McIntosh Sundstrom, "The Comparative Politics of Climate Change," *Global Environmental Politics* 7:4 (November 2007), 1. Similar paragraphs can be found introducing books or articles by thousands of ecologists, geographers, political scientists, economists, sociologists, and other social scientists who have all accepted the mantra of global warming and hitched their research programs to exploring its malign effects. In addition to the millions poured annually into climate research programs, these ancillary research programs swallow up millions more. The claimed thousands of scientists who contribute to the work of the IPCC include many more social scientists than climate and other natural scientists. See Donna Laframboise, *The Delinquent Teenager Who Was Mistaken for the World's Top Climate Expert* (Toronto: CreateSpace, 2011) and *Into the Dustbin: Rajendra Pachauri, the Climate Report & the Nobel Peace Prize* (Toronto: CreateSpace, 2013). Cheeky as her titles and her website are, Laframboise is a seasoned researcher whose findings are well-documented.

same environmentalists who rail against human interference with natural systems have enthusiastically embraced an effort to alter fundamentally one of nature's most complex and critical systems, a fact indicating that much more than the environment is involved.

The stakes in both national and international discussions are very high because the policies advocated by many in the alarmist community would require substantial changes in lifestyles and standards of living and necessitate fundamental changes in the nature of modern economies and in the prosperity they provide. As suggested by the UN's Figueres, only a social engineering program of unprecedented dimensions can "save the planet." Efforts by the alarmist community to reduce doubt have met with considerable success at official levels but at the expense of scientific integrity. Ethicist Thomas Sieger Derr observes: "One would never know there are dissenters of distinguished credentials in the scientific community. Even where their existence is admitted, they are thoroughly marginalized, accused of being in the pay of the oil companies (Gore slyly and meanly implies this in his movie, *An Inconvenient Truth*), or dismissed as over-the-hill retirees out of touch and perhaps a bit senile. Their articles are denied publication in *Science* and *Nature*, those two so-called flagship science journals of high reputation despite some embarrassing lapses."¹⁶

The increasing intensity of the campaign, however, has sown doubt in the general public. Commitment to action remains most pronounced in Europe, consistent with broader European preferences for risk aversion and statist solutions. Governments in developing countries, while perhaps sceptical about the issue, are prepared to milk it as a new source of financial aid. Governments in North America initially limited their commitments to politically calculated lip service rather than to action, a situation that changed with the Obama administration's increasing preference for a more activist approach. To date, neither the Canadian nor the US government has implemented a policy approach responding to the demands of the alarmist community. In its second term, however, the Obama administration has begun aggressively pursuing steps within its executive powers, stepping around the continued reluctance of Congress to mandate the preferred policies. In Canada, only provincial governments, particularly in Ontario, have taken significant

16. Thomas Sieger Derr, "The Politics of Global Warming," *First Things*, August/September, 2007.

steps to pursue a climate mitigation strategy with results that pose a sober lesson for future governments.

A major milestone in international discussions took place over the course of 2009, culminating in Copenhagen, Denmark, in December when parties to the 15th of the UNFCCC's annual Conference of the Parties (COP) tried to see if a broader policy consensus on action could be developed than had been achieved at the previous two such meetings in Bali, Indonesia (2007) and Poznan, Poland (2008). The change of administrations in the United States injected a high level of expectation into the conference – and its preparatory meetings – and added to pressures on the governments of Canada and others to respond more enthusiastically than they had to date. At the same time, lack of any perceptible warming for over a decade made the case for immediate action increasingly difficult to sustain.

In any event, more than 45,000, counting media, officials, and activists came, but little was accomplished. The prospect of an overreaching, new climate change treaty faded quickly as government leaders wiggled out of the mess of expectations they had created. Instead, they issued an anodyne political statement and a promise of cash for developing countries. In effect, governments provided themselves with the political breathing room to stand back and take a fresh look at the issues rather than be stampeded by the activist community at a time of economic turmoil. They also resorted to another familiar UN technique: agree to meet again, this time in Cancun, Mexico in 2010. In the UN world, *process is progress*.

Cancun has come and gone, as have subsequent conferences. The faithful still come, but the media have decided that these annual festivals of alarmist hype no longer provide sufficient news to warrant full coverage. As in their dealings with UNCTAD, ministers and heads of state are now also much more circumspect, keeping expectations low and attendance to the bare minimum that is politically acceptable. The meetings themselves have done little more than confirm what had been agreed at Copenhagen: more talk and promises of more cash for developing countries. Based on past UN form, the Copenhagen results may have marked the high point of international activism; follow-up meetings suggest a slow decline into the same obscurity that has befallen UNCTAD, notwithstanding a full court press by the UN to insist that the December 2015 meeting in Paris will witness a major breakthrough.

Science and public policy

Public policy is a matter of identifying problems and opportunities that would benefit from government attention and action, of developing appropriate policies and programs, and of weighing their costs and benefits. As Lindzen points out, the fact that something has been identified as an issue does not necessarily lead to a need for public action.¹⁷ Nevertheless, the public in the prosperous, industrialized countries have become so accustomed to activist government that few stop to think whether or not climate change is an issue that governments can or should address. In order to warrant action, therefore, governments need to consider such questions as:

- To what extent is climate change natural? Are current patterns of change outside the boundaries of previous human experience? Do we know enough about climate change to warrant decisive action?
- What are the real, long-term effects of climate change – natural and/or anthropogenic – and to what extent will adaptation and voluntary changes in behaviour reduce negative effects? Are there any offsetting benefits associated with these problems?
- What tools and instruments are available to control climate change, mitigate its negative effects, or facilitate adaptation? How effective are they likely to be?
- What are the costs and benefits of deploying such tools and instruments? How do the costs of mitigation and adaptation compare?
- How do these costs and benefits stack up against the costs and benefits of addressing other global and national problems?

By framing the issue in apocalyptic terms, alarmists have sought to avoid consideration of these questions and to rush governments into considering radical approaches to what increasingly appears to be a non-problem or one easily addressed through gradual adaptation and supportive policy measures. Suggesting that the IPCC has answered all questions borders on the risible. The release of thousands of emails in late 2009 demonstrated the extent to which the IPCC and the climate scientists associated with it were deeply committed to a single perspective and were working assiduously to freeze out all who questioned that perspective. The *Sum-*

17. Richard Lindzen, "Issues in the Current State of Climate Science," SPPI, March 2006, 27.

maries for Policy Makers of its five assessment reports – 1990, 1995, 2001, 2007, and 2013-14 – have become steadily shriller, while their scientific foundations have become less and less convincing.

Climate change is inevitable; it is an integral part of the chaotic natural world. Understanding the extent of that change, its time frame, and its causes may be critical, however, to determining whether there is a need for a public policy response. Until the 1980s climate change was not part of public consciousness; to the extent that governments considered climate change at all, the focus was on resilience, i.e., ensuring that infrastructure was suited to current and possible future circumstances. Since the 1980s, however, alarmists have succeeded in raising public anxiety, and governments have become much more focused on the issue. Over the past 25 years, alarmists have managed to seize the commanding heights of media and public policy discussion and have convinced many governments that human activity *is* a major driver of climate change and that there is, therefore, an urgent need to impose solutions. But the solutions being considered are fraught with difficulties and show all the hallmarks of haste, alarm, and religious zeal rather than a careful weighing of costs, benefits, and alternatives.

The scientific basis for alarmist claims is grounded in the greenhouse gas (GHG) theory of climate change. To many IPCC-affiliated scientists, GHG-induced climate change is a problem to which they claim to have an appropriate, science-based solution. Much of the science, however, has been politicized in order to strengthen the case for action because the ability to implement responses is embedded in the political economy of nation states. The IPCC hypothesis may be based on science, but it lacks observational confirmation; rather, it is based on computer models, and the numbers generated by models do not reflect anything more than the built-in assumptions and data fed into computers and manipulated with statistical programs. The resulting numbers may be useful to scientists in their research, but they do not provide a basis for making policy. Under these circumstances, it is critical that policy makers reach informed assessments of the certainty with which some climate scientists are willing to attribute the planet's ever-changing climate to human factors, i.e., to factors that are amenable to policy measures.

IPCC-affiliated scientists, in simplifying the climate system for analytical purposes, focus much of their attention on quantifying fluxes in the Earth's radiation budget – the difference between incoming short-wave radiation from the sun and outgoing long-wave

radiation from the Earth's surface. They tell policy makers that the global climate is controlled by the balance between these fluxes, referring to changes in that balance as the result of the impact of a forcing agent (positive or negative). The IPCC process was set up to investigate the role of humans as the principal forcing agent of change. The models upon which IPCC scientists rely are designed and parameterized on the basis of minimal natural variation, whether resulting from changes in total insolation, changes in coupled atmospheric-oceanic circulation systems, or changes in cloud cover, all three of which play a critical role in the way the climate system distributes heat. Surprisingly, careful reading of the underlying scientific reports issued by the IPCC over the past 25 years indicates that the evidence to justify the alarm set out in the IPCC's press releases and *Summaries for Policymakers*, in media reporting, in political speeches, and at ENGO websites, is simply not there. In these advocacy documents, the basic science is being twisted and exaggerated to support a political agenda. Butos and McQuade, after a review of the funding and scientific output of climate science, conclude that:

A confluence of scientific uncertainty, political opportunism, and ideological predisposition in an area of scientific study of phenomena of great practical interest has fomented an artificial boom in that scientific discipline. The boom is driven and sustained by the actions of Big Players, the IPCC and various government entities, in funding the boom and singularly promoting one among a number of plausible hypotheses describing the relevant phenomena. Given the scientific uncertainties inherent in the system under study and the incentives for continued political involvement (even in the face of widespread failures in government-supported businesses whose activities were premised on the reliability of the AGW hypothesis), it is possible, even likely, that the boom will persist for a considerable time, not unlike previous booms in eugenics and nutrition science.¹⁸

Critics of the IPCC hypothesis, on the other hand, see earth systems – including climate – as dynamic and chaotic. They regard climate science as relatively immature with understanding of the various chaotic processes involved still at an early stage. Computer models that show the effects of increases in greenhouse gases remain crude, simplified versions of the global climate system and are

18. William N. Butos and Thomas J. McQuade, "Causes and Consequences of the Climate Science Boom," forthcoming in *The Independent Review*. Prepublication text at *The Libertarian Alliance Blog*, March 6, 2015.

not capable of providing the certainty that the IPCC community generates in its projections or story lines. In each instance, too many assumptions are required to reach these kinds of projections, as well as “tuning” with fudge factors to get the right answers. This problem is compounded by the poor quality of data and the questionable nature of some of the statistical methods employed. The kind of data needed to feed models is only now being generated, starting with the satellite era and gaining sophistication and detail over the years. Thirty-five-plus years of data are not enough to understand a system as complex and chaotic as the climate system, nor are the data good enough to provide the precision claimed by IPCC scientists. The usefulness of models as research tools is clear, but their usefulness in providing governments with policy advice is still highly overrated, breeds misunderstanding, and suggests unrealistic levels of certainty.

Critics of the IPCC perspective concede that human activity may well contribute to climate system dynamism and chaos but point out that it is difficult to separate the human signal from the many natural forcings and feedbacks. Their challenge to IPCC scientists, therefore, is to demonstrate that late 20th century warming – which on geological timescales is exceedingly small – is outside natural boundaries and not part of natural ever-changing climate patterns. The scientific controversy boils down to the sensitivity of the climate system to small changes in the composition of the atmosphere, particularly the fraction made up of the greenhouse gas carbon dioxide (CO₂), which has risen from about 0.03 to 0.04 percent since the beginning of the Industrial Revolution. Many scientists insist that increased understanding will only come when observations confirm model results based on the normal path of science as it advances hypotheses and tests them against real-world observations.

A major and very inconvenient fact for the alarmists is that following the giant El Niño of 1997-98, there has essentially been no global warming. While the global temperature anomaly – the metric of choice for alarmist scientists – has fluctuated from year to year and month to month, it has done so within a 1.3°C boundary around a trend-line of zero, a boundary that is much narrower than experience over the Holocene, the geologic period since the end of the last ice age 12,000 years ago. This has made a mockery of the models on which alarmists rely and has forced them to scramble for explanations, including accepting that perhaps their assumptions

and conclusions may need to be refined. They have not, however, conceded that there may be a fundamental flaw in their theory and continue to press for remedial action to control climate change.¹⁹

The alarmist movement often refers to its critics as “deniers.” In truth, there are few scientists who insist that there has been little or no global warming over the past century and a half or who claim that emissions of CO₂ are immaterial. Their scepticism rather focuses on the extent of prospective warming, on the fact that insufficient attention is paid to the interplay of natural factors in the climate system, on the extent of the threats that may result from any future warming, and on the capacity of government action to change climate patterns. In any case, scepticism should be at the very heart of the scientific process. Among scientists, characterizing someone as sceptical is normally considered an accolade.

Similar to that of the eugenics movement at the beginning of the 20th century, future generations will study global warming and the role of the IPCC as one of the prime examples of the corrupting influence of motivated reasoning and official science. Among progressive thinkers at that time, eugenics was widely held to be the sane thing to do in the face of a rapidly growing population, particularly the numbers of poor people and other “undesirables.” Israeli historian Jacob Talmon observed more than half a century ago:

[this kind of movement] is based upon the assumption of a sole and exclusive truth in politics. ... It recognizes ultimately only one plane of existence, the political. It widens the scope of politics to embrace the whole of human existence. It treats all human thought and action as having social significance, and therefore as falling within the orbit of political action. ... Politics is defined as the art of applying this philosophy to the organization of society, and the final purpose of politics is only achieved when this philosophy reigns supreme over all fields of life. ... This is the curse of salvationist creeds: to be born out of the noblest impulses of man, and to degenerate into weapons of tyranny. An exclusive creed cannot admit opposition.”²⁰

Climate change, costs, and benefits

Alarmist scientists often take the view that climate change is a scientific/technical issue for which they have a diagnosis, a prognosis,

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19. Climatologist Roy Spencer provides a monthly update of the global temperature as calculated from data derived from satellite observations. See “Latest Global Temp Anomaly,” at droyspencer.com.
 20. Jacob L. Talmon, *The Origins of Totalitarian Democracy* (London: Secker and Warburg, 1952), 1-2 and 253.

and a solution. Chapters four to seven discuss why their diagnosis and prognosis are undermined by inconsistencies and controversy. Alarmist science is largely grounded in computer models rather than in observational evidence. The discussion in chapters eight and nine indicates that their solutions are equally fraught with problems. Alarmists see the problem as being similar to that of a patient with severe cardiac failure facing imminent death and being advised to prepare for a heart transplant; there is little time for debate, for further study, or for cost-benefit analysis. Climate change, however, is not such a straightforward issue: even a patient suffering from severe cardiac failure may wish to seek a second or third opinion and discuss with family members the risks, the costs, and the benefits in terms, for example, of remaining years of good health. The patient may even discover on further examination that the problem is not heart failure but a much more benign and curable condition.

Climate change policy is a complicated issue with many conflicting opinions and a wide range of possible options. Additionally, climate policy needs to be situated within the context of broader societal values and priorities. Alarmists have tried an end run around this inconvenience by insisting that climate change is the most threatening challenge humanity has ever faced. Others may see things differently and believe that there are challenges more deserving of public attention and the expenditure of scarce resources. In these circumstances, political leaders should seek advice from a broader spectrum of expert opinion.

Governments will need more than scientific advice if they are to avoid costly mistakes. They will need advice on the costs and benefits of various alternative responses, including benign neglect. It may well be that the most appropriate response will be to live with natural adaptation and let open markets work as necessary to mitigate any undesirable effects. Making sense of the climate change file is not just a matter of understanding the *science* of global warming, but also of assessing its *political economy*. Whether anthropogenic or natural, benign or malign, the climate will change, and governments will need to decide, individually and collectively, to what extent they are prepared to devote scarce resources at a cost to other societal needs in order to alter the path of climate change (assuming that this is within the realm of scientific, technological, and economic possibility), or to adapt to changes as they arise. In analyzing this issue, officials will learn that those who accept the scientific case for catastrophic anthropogenic climate change (CAGW) are ready to be-

lieve that urgent public action is needed and possible while those who are sceptical about the scientific case find the need for public action either unnecessary or less urgent and prefer a more balanced and analytical approach to the study of climate change. Not surprisingly, given the pervasive scaremongering by IPCC scientists, the UN, and ENGOs, the literature is heavily tilted in favour of proactive public policy on climate.

To date, the public policy response to the issue has suffered from lack of systematic analysis of the available options and from the stifling of open debate. Policy that is hastily conceived and inadequately discussed is unlikely to succeed in meeting its objectives. No government should entertain policy choices with such momentous negative consequences without a much firmer basis in both science and economics. Few national governments have made the effort to provide a comprehensive and credible basis for their decisions. Instead, they have relied on an international process that from the beginning has been dominated by an overwhelming conviction that the "crisis" is too great and urgent to allow time for analysis and debate. Instead, as discussed in chapter five, governments have relied on an IPCC process marred from the outset by commitment to the alarmist side of the debate.

In their assessments of the options governments can accept that there is broad agreement in the scientific community that the global climate has warmed over the past century and a half and that human activity is a contributing factor, but the extent of both and their impacts on the biosphere are hotly debated as is the capacity of humans to control climate change. Given that we live in an age in which the voice of "experts" is very powerful, the argument from authority has proven one of the most effective instruments available to the alarmist community. Having gained control of the commanding public heights of the issue, from government environment and meteorology departments to some of the leading science journals and the two key UN agencies – the UN Environmental Program (UNEP) and the World Meteorological Organization (WMO) – the "experts" have resorted to demonizing their critics as cranks and shills in the pay of questionable business interests, no matter how false the charges. Sceptics have had to fight an up-hill battle. And yet, their numbers have grown, and the claims of the alarmist community have become ever more shrill.

It is not difficult to conclude that the rise of climate alarmism to the top of the global anxiety agenda has been a matter of design.

The means by which a broad section of the public has been convinced that dangerous global warming is occurring are not subtle and include: reports from the United Nations, principally through the IPCC; incessant lobbying by environmental NGOs and allied scientists, political groups, and businesses; pleas for funding from climate scientists who have found that work tied to the anxiety agenda is more likely to be funded; and the obliging promulgation of selectively alarmist climate information by the media. The media are particularly prone to broadcasting correlation studies, omitting the many caveats that accompany them as well as the warning that correlation points to issues ripe for further investigation, not to cause and effect.

The pages that follow place discussion of the public policy of climate change into a broader and more balanced perspective. First, it builds on the idea developed by Wildavsky that sufficiently motivated citizens should be able to understand the basic contours of the underlying science and come to grips with both the theories supporting anthropogenic climate change and the criticisms that have been lodged against it. Second, it insists that many of the investigations of the effects of climate change need to be reconsidered for the simple reason that they have been premised on the most extreme scenarios and have reached conclusions that are not supported by the evidence of past and current experience. Third, the book develops the idea that the economics and politics of public policy are as important as the science. Even if the science case is stronger than I believe it is, global climate change responses still have to satisfy the requirements of sound cost-benefit analysis and technological feasibility. Wishful thinking has no place in public policy. Fourth, climate change has become the driving force of the UN sustainability agenda pursuing the dream of a world governed by technocrats based on progressive, socialist principles and dedicated to sustainable development. Finally, it is important that the wider public gain a better appreciation of the extent to which the climate change movement has become a cult bent on implementing a utopian agenda.

This is an excerpt. The rest of the book can be purchased through Amazon and other online booksellers, or selected bookstores, e.g., Books on Beechwood in Ottawa, Canada.

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Other books by Michael Hart

- From Pride to Influence: Towards a New Canadian Foreign Policy* (Vancouver: UBC Press, 2008).
- A Trading Nation: Canadian Trade Policy from Colonialism to Globalization* (Vancouver: UBC Press, 2002).
- Fifty Years of Canadian Tradecraft: Canada at the GATT 1947-1997* (Ottawa: Centre for Trade Policy and Law, 1998).
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- With Fen Hampson and Martin Rudner, *A Big League Player? Canada Among Nations 1999* (Toronto: Oxford, 1999).
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