

# William Happer

## DETAILED RESPONSE

### FOCUSED **CIVIL** DIALOGUE

## On Global Warming




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*[Ed. Note: Mostly recovered from the wayback machine, minor types fixed. Andy May]*

## Introduction

Let me begin by congratulating Dr. Karoly for a well-written [Statement](#). That said, I don't agree with it.

Dr. Karoly begins his Statement, not with evidence to support the title, "Climate change is harming nature and humanity," but with a summary of what happened in the "21st Conference of Parties to the United Nations Framework Convention on Climate Change in December of 2015." What a mouthful!

If Dr. Karoly, a genuine scientist, was one of the attendees, he would have been in the minority since most attendees were publicity-seeking politicians and movie stars, government bureaucrats, representatives of Greenpeace and other alleged environmental-advocacy organizations, yellow journalists, and others who make a good living from the immense sums being squandered to address the non-existent threat of human-caused climate change. The situation was well summarized Donna Laframboise in her book, *The Delinquent Teenager Who Was Mistaken for the World's Top Climate Expert* (Kindle & CreateSpace, 2011).

The Paris extravaganza was more like the Council of Clermont in 1095, also in France, when Pope Urban II urged the powers of Western Christendom to retake the Holy Land from the Muslims. The Pope's entreaties worked, and the Crusades began. In the end, there was little good to show for the great expenditure of blood and treasure. The Christian Crusades provoked counter-offensives from the Muslim world. Today, jihadis of the Islamic State of Iraq and the Levant (ISIL) are continuing this sad tradition.

In this Dialogue we are discussing another international crusade. In the first paragraph of his [Statement](#), Dr. Karoly explains that the goal of this new crusade is "to reduce global greenhouse gas emissions in order to 'prevent dangerous anthropogenic interference with the climate system.'" As I pointed out in my [Interview](#) and [Statement](#), there is no scientific evidence that global greenhouse gas emissions will have a harmful effect on climate. Quite the contrary, there is very good evidence that the modest increase in atmospheric CO<sub>2</sub> since the start of the Industrial Age has already been good for the Earth and that more will be better.

### **"An overwhelming consensus."**

So why is Dr. Karoly so concerned about CO<sub>2</sub>? Because, says he, "an overwhelming consensus of climate scientists agree that human-caused climate change is happening and that global warming will continue throughout the current century, with many adverse impacts on human and natural systems." Truth has never been determined by "an overwhelming consensus," and in fact, consensuses have often been completely wrong. In my Interview, I mentioned Michael Crichton's assessment of consensus:<sup>[1]</sup>

“I want to pause here and talk about this notion of consensus, and the rise of what has been called consensus science. I regard consensus science as an extremely pernicious development that ought to be stopped cold in its tracks. Historically, the claim of consensus has been the first refuge of scoundrels; it is a way to avoid debate by claiming that the matter is already settled. Whenever you hear the consensus of scientists agrees on something or other, reach for your wallet, because you’re being had.” Michael Crichton

Let’s be clear: the work of science has nothing whatever to do with consensus. Consensus is the business of politics. Science, on the contrary, requires only one investigator who happens to be right, which means that he or she has results that are verifiable by reference to the real world. In science consensus is irrelevant. What is relevant are reproducible results. The greatest scientists in history are great precisely because they broke with the consensus.

“There is no such thing as consensus science. If it’s consensus, it isn’t science. If it’s science, it isn’t consensus. Period.” William Happer

In 1692, sanctimonious graduates of Harvard College accused more than 200 people of witchcraft and hanged 20 of them. Even when the hangings were stopped, belief in witches remained the strong consensus of the best and brightest. In the early decades of the twentieth century, a solid consensus of America’s intellectual leaders opposed “race suicide.” The prominent academic eugenicist, E.A. Ross, explained that race suicide meant the unrestrained immigration of supposedly inferior “Latins, Slavs, Asiatics, and Hebrews.”<sup>[2]</sup>

Absurd? Yes—in hindsight. But at the time the eugenics movement was fervently supported by presidents of Stanford and Harvard Universities, by the Rockefeller Foundation, by the Carnegie Institution, and by many local eugenic’s societies. Defending the righteous from witches, saving the superior Anglo-Saxon race, and now saving the planet! Who would not want to be part of such noble bandwagons?

For now, this modern crusade is only targeting the beneficial molecule CO<sub>2</sub>. But human opponents of the crusade may soon be targets, too. In TheBestSchools [Interview](#) Professor Karoly states:

“I strongly support the freedom of speech of scientists and of all people. However, freedom of speech should not be used as an argument to support the dissemination of misinformation.” David Karoly

Who defines “misinformation”? Defending his wife Elizabeth during the Salem witch trials, John Proctor, a formerly respected local citizen, had the temerity to challenge the existence of witches. For disseminating this misinformation he was hanged.<sup>[3]</sup>

## Using the RICO laws to silence climate change critics

United States Senator Sheldon Whitehouse (D-RI) has demanded that anyone who questions the apocalyptic message of global warming be prosecuted as a racketeer.<sup>[4]</sup> Attorneys general of many states are doing just what the Senator demanded—they are preparing to bring criminal charges against businesses, organizations, and individuals who have refused to support the climate crusade.<sup>[5]</sup> [Ed. Note: Whitehouse’s RICO effort ultimately failed. (May, 2020c, pp. 152-170).]

I am glad to report that the Senate of the State of California recently rejected a bill that would criminalize climate heretics and remove any statute of limitations for this heresy.<sup>[6]</sup>

But the attorneys general already have the legal tools to drive companies and private citizens like me to bankruptcy. They have the enthusiastic support of trial lawyers, who are licking their lips at the huge contingency fees they expect to extract from blackmailing Exxon and other targets with deep pockets.

This all reminds some of the closing verses of a Woody Guthrie song I learned as a youth in western North Carolina:<sup>[7]</sup>

“Yes, as through this world I’ve wandered  
I’ve seen lots of funny men;  
Some will rob you with a six-gun,  
And some with a fountain pen.” Woody Guthrie: *Pretty Boy Floyd*

No wonder there is a consensus of climate scientists, or that few scientists are willing to question the established dogma!

Some climate scientists, including Dr. Karoly, are doing praiseworthy work. I especially admire high-quality, year-by-year measurements of properties of the atmosphere and oceans. But if they have doubts about climate hysteria, most practicing climate scientists keep these to themselves because of the ferocity of the attacks they know will come to those who question the party line.



Dr. Judith A. Curry

A fairly recent example is [Dr. Judith A. Curry](#), formerly a member in good standing of the climate establishment, who has been viciously attacked for raising questions about IPCC procedures and other areas where some reforms would help a lot.<sup>[8]</sup> In my [Interview](#), I mentioned the attacks on me by Greenpeace. No wonder there is a consensus of climate scientists, or that few scientists from other fields are willing to question the established dogma!

Even though creative scientists are not greatly impressed by them, claims of consensus work wanders with educated elites. In Stratagem 30 of his [Art of Controversy](#), Arthur Schopenhauer accurately states:<sup>[9]</sup>

“There is no opinion, however absurd, which men will not readily embrace as soon as they can be brought to the conviction that it is generally adopted.” Arthur Schopenhauer

Groupthink is alive and well in the year 2016!

If all your right-thinking friends accept the need for immediate action to stop climate change, what right do you have to challenge the consensus or encourage evil “deniers”? Groupthink is alive and well in the year 2016!<sup>[10]</sup>

Widespread scientific illiteracy and innumeracy exacerbates this problem. As physicist Alan Sokal showed so brilliantly,<sup>[11]</sup> few people today can tell the difference between traditional,

self-critical science and the self-congratulatory pompousness of “post-modern science.” Common people are willing to admit their lack of expertise. The elites are not, and the problem is particularly bad for the scientific elite, most of whom know no more about climate science than their right-thinking friends on Wall Street, in journalism, or in other privileged professions.



Martin Luther's 95 Theses

In the year 1517, the German monk, Martin Luther, had the audacity to disagree with the overwhelming consensus of the Catholic Church by nailing a copy of 95 Theses critical of Church doctrine on the door of All Saints' Church [known as the *Schlosskirche*, or “Palace Church” — eds.] in Wittenberg.<sup>[12]</sup> Luther was particularly offended by the sale of “indulgences,” a big moneymaker for the Pope. If you had sinned in one way or another, the Church would sell you an “indulgence,” a pardon for your sins. Then you did not have to earn forgiveness the hard way, by repentance and reform.

Indulgences were remarkably similar to “carbon offsets” for the contemporary sin of being alive, breathing out about 1 kg/day of CO<sub>2</sub>, and also releasing 50 kg/day or so from the conveniences of modern life: transportation, heating and cooling, electrical appliances, etc.

Al Gore claims that he buys a lot of CO<sub>2</sub> indulgences to atone for his exceptionally expensive lifestyle.<sup>[13]</sup> He will even sell some to you, if you want to be a good environmental steward without the inconvenience of living like a third-world peasant.

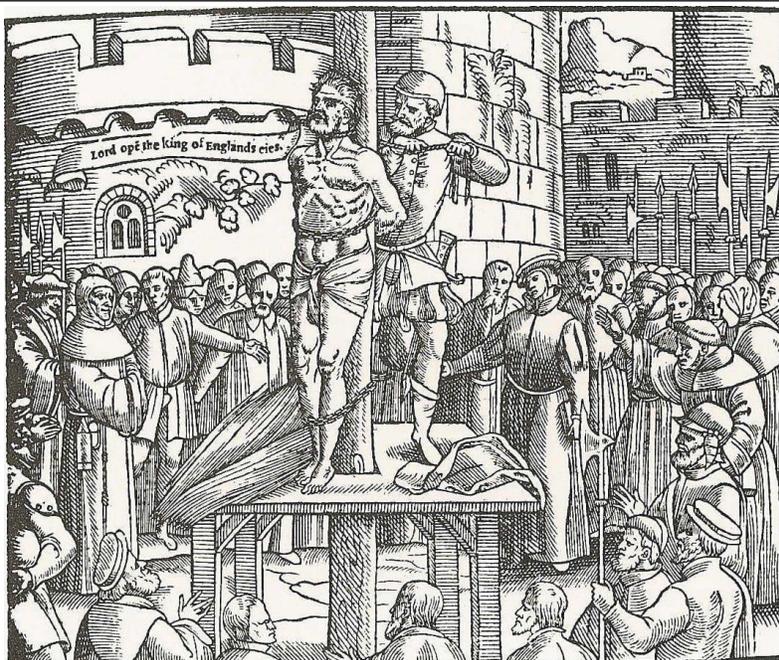
Even scientists from other fields have a hard time cutting through Gordian knot of jargon, models, confessions of faith, and other peculiarities of the climate-science establishment. One of Luther's first acts was to translate the original Greek New Testament, and mostly Hebrew Old Testament, into vernacular German. Since many ordinary Germans of Luther's day could read their own language, Luther's bible freed them from any need to accept self-serving interpretations of the Latin, Greek, and Hebrew scriptures that had so long been the monopoly of Catholic priests.

The established Church of Luther's day quickly recognized the existential threat to their power and income posed by vernacular bibles. The English clergyman, William Tyndale, made admirable translations of the scriptures into English soon after Luther's translations into German. Tyndale quickly got in trouble with the religious establishment of his day, one of whom said to him:<sup>[14]</sup>

"We are better to be without God's laws than the Pope's."

Tyndale's memorable response was:

"I defy the Pope and all his laws. If God spare my life ere many years, I will cause the boy that drives the plow to know more of the scriptures than you."



William Tyndale at the Stake

English King Henry VIII, who was eager to show off his piety in spite of (or because of) his less-than-Christian treatment of a series of wives, orchestrated Tyndale's capture in Antwerp. Tyndale was strangled and burnt at the stake. It is reported that his last words were: "Lord, open the King of England's eyes."

Then as now, dissemination of misinformation was frowned upon. But I hope this Dialogue will open some eyes.

Just as ordinary people of Luther's day had no idea of how badly the practices of the Established Church differed from the original scriptures, few people outside of the climate establishment today realize how badly climate models disagree with data or what liberties the modelers have taken with the physics, chemistry, geology, oceanography, and biology on which

the models are based. Those who try to explain the truth can expect to be treated like Luther or Tyndale.

## Karoly's Six Key Points

I turn now to a brief discussion of the six key points of Dr. Karoly's Statement:

*1. Observed global warming of the climate system over the last 100 years is beyond any reasonable doubt.*

I agree.

*2. Observed increases of greenhouse gases in the atmosphere are primarily due to human activity: burning fossil fuels, other industrial activity, deforestation, and land clearing.*

I agree.

## Recent global warming is due to humans

*3. The observed large-scale increase in surface temperature across the globe since the mid-twentieth century is primarily due to human activity, the increase of greenhouse gases in the atmosphere, and other impacts on the human climate system.*

I disagree. This statement is based on excessive faith in computer models. The wide availability of computers and powerful software to make color displays has been a serious problem, since it has blurred the lines between reality and virtual reality. These are not the same. In my [Statement](#) and [Interview](#) I tried to stick to real satellite pictures of visible and thermal radiation from the Earth, real measurements of ocean pH, real records of tornados, hurricanes, floods, droughts, etc. Essentially all of Dr. Karoly's claims of warming from greenhouse gases come from computer models, with lurid, threatening reds to represent the supposedly harmful effects of the demon gas, CO<sub>2</sub>.

The temperature rise after the mid-twentieth century is not very different from the temperature rise before the mid-twentieth century. And there is the awkward fact that the Earth cooled slightly from about 1940 to 1975, even though CO<sub>2</sub> levels continued to grow steadily. The Earth has been in a warming trend since the end of the Little Ice Age, around the year 1800. One of many pieces of evidence for this is Figure 1, which shows the extent of ice in Glacier Bay, Alaska.<sup>[15]</sup>

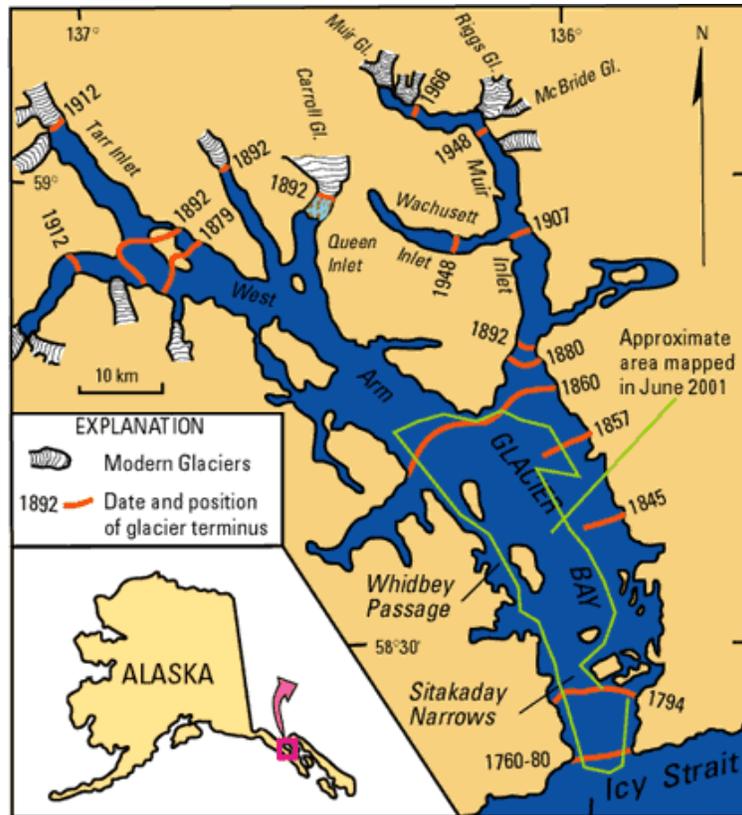


Fig. 1 Glacier end locations at various times since Glacier Bay was first charted by Captain George Vancouver in 1794.

Most of the retreat of the ice in Glacier Bay occurred before the year 1900, long before there was much change in atmospheric CO<sub>2</sub>. There has been almost no retreat since “the mid-twentieth century,” when Dr. Karoly’s Key Point 3 implies that increasing CO<sub>2</sub> began to control the Earth’s climate.

## Global warming will continue

*4. There will continue to be significant global warming over the 21st century with its magnitude depending on the emissions of greenhouse gases from human activities.*

I disagree. Again, this is a statement based on computer models. No one knows how the temperature of the Earth will change over the twenty-first century. It is just as likely that the Earth will cool, since whatever mechanism caused the Little Ice Age could act again and could overwhelm the small warming expected from increased CO<sub>2</sub>. In both my **Statement** and my **Interview**, I pointed out how much most models overestimated the warming of the Earth since the year 2000, when there was a hiatus or pause in warming, which may not be over yet.

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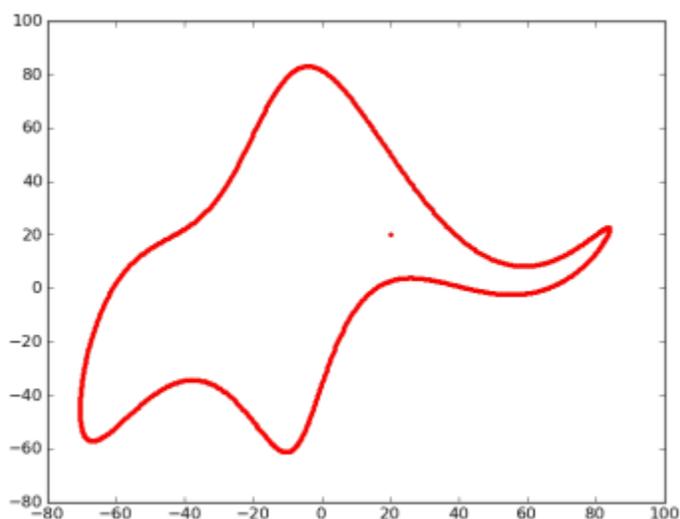
As the old Danish proverb goes:<sup>[16]</sup>

“Prediction is hard, especially of the future!”

Figure 7 of Dr. Karoly’s **Statement** compares observational estimates of the mean surface temperature of the Earth with models. As I explained in connection with **Fig. 5 of my Interview** [now Figures 19-21], I don’t think measurements of surface temperature are as reliable as satellite measurements of the temperature of the lower atmosphere. But satellite measurements only began in the year 1979. There are measurements (with thermometers) of surface temperatures on land and sea since the early 1800’s. The limited number of sites does not give a very good sampling of the entire surface of the Earth, especially of the 70 percent or so that is ocean, but it is all we have from the pre-satellite era.

The many model temperatures shown in Figure 7 of Dr. Karoly’s **Statement** are not really predictions until about 1990. For the years before 1990, the models were fit to observational data from the past. Not surprisingly, the models fit pre-1990 observations very well!

The great mathematician John von Neumann once said:<sup>[17]</sup>



How to fit an elephant

“With four parameters I can fit an elephant, and with five I can make him wiggle his trunk.”

There are dozens of parameters that can be adjusted in the models, so it is hardly surprising that all the models fit past temperature records. But the important part of the Figure 7, which Dr. Karoly showed with admirable honesty, is the growing divergence between model predictions of temperature and observed temperatures since the year 2000. I made this same point with Fig. 13 and Fig. 14 of my **Statement**. The models are predicting far too much

warming. All of the painful policies proposed to reduce emissions of CO<sub>2</sub> are based on models that don't work.

## Adverse impacts of Global Warming

*5. There are substantial adverse impacts on human and natural systems from global warming.*

I disagree. I don't know of a single adverse impact that can be confidently ascribed to more CO<sub>2</sub>. There are plenty of phony claims of damage, which quickly fall apart when scrutinized.

Take the much-ballyhooed "ocean acidification." In Figure 20 of my [Statement](#), I showed that the expected pH decline of ocean surface waters from a doubling of CO<sub>2</sub>, about 0.3 pH units, is well within the natural range of pH variation from place to place and even from day to night in today's oceans. At the very earliest stages of life on Earth, cells invented ways to actively control the pH inside their membranes. Cell membranes— notably those of mitochondria in our own bodies—are studded with "proton pumps" that control internal pH values.<sup>[18]</sup>

The only clear effect of more CO<sub>2</sub> has been a general greening of the Earth, which has been one of the reasons for the spectacular increase in agricultural productivity. In Fig. 18 of my [Statement](#), I showed that there has been no change in droughts, floods, snow cover, hurricanes, or tornadoes in the second half of the twentieth century, when alleged adverse impacts are supposed to have become apparent.

As summarized by [Fig. 1 of my Statement](#), the Earth has been in a CO<sub>2</sub> famine for several tens of millions of years. There is evidence for plant starvation during the peaks of ice ages.<sup>[19]</sup>

## Rapid reductions in greenhouse gas emissions are needed

*6. Rapid, substantial, and sustained reductions in greenhouse gas emissions from human activities are needed to slow global warming and stabilize global temperature at a level that would minimize dangerous human influence on the climate system.*



The Real Carbon Footprint

I disagree. We are being exhorted to "reduce our carbon footprint," although to Dr. Karoly's credit, he does not use this silly slogan. To the extent that "carbon footprint" includes soot (small particles of elemental carbon), and CO, carbon monoxide molecules, I would be glad to be part of the crusade. For example, according to the World Health Organization:<sup>[20]</sup>

Indoor air pollution—generated largely by inefficient and poorly ventilated stoves burning biomass fuels such as wood, crop waste and dung, or coal—is responsible for the deaths of an estimated 1.6 million people annually. More than half of these deaths occur among children under five years of age. In developing countries with high mortality rates overall, indoor air pollution ranks fourth in terms of the risk factors that contribute to disease and death. World Health Organization

Soot, carbon monoxide, and other indoor air pollution are a serious problem for the poor of the world, who do not have access to inexpensive, relatively clean-burning fossil fuels. But, alas, “carbon footprint” refers to CO<sub>2</sub>, a beneficial—indeed essential—gas of life. Observations show that CO<sub>2</sub> has much less effect on the climate system than models predict and has a very positive effect on the biosphere. More CO<sub>2</sub> allows plants to grow more efficiently and with less vulnerability to drought.

Let me close with a few general comments about Dr. Karoly’s **Statement**. His reference Note 6 is to the 1896 paper by Svante Arrhenius.<sup>[21]</sup> In my own **Statement**, I cite this same paper as my Note 39.

The paper is the first one I know of that included a quantitative estimate of the warming or cooling from increasing or decreasing CO<sub>2</sub>. It predicts that doubling CO<sub>2</sub> concentrations would increase the mean temperature of the Earth by 5.8 K. In my **Statement**, I also point out that 10 years later, Arrhenius made a sizable downward adjustment of his estimated climate sensitivity from 5.8 K to 4 K.<sup>[22]</sup>

Arrhenius did not know all of the basic physics associated with thermal radiation, since most of his work predated Planck’s discovery of quantum mechanics. But at least he sensed that his estimates needed to be revised downward. And he correctly conjectured that the response to more CO<sub>2</sub> would be logarithmic, with every doubling of CO<sub>2</sub> giving the same increment of temperature.

Dr. Karoly’s **Statement** has 17 literature citations. Besides the reference to the Arrhenius paper just discussed, and another to the alarmist blog, *Skeptical Science*, the remaining 15 citations are to government reports: the IPCC, Australia’s Climate Commission, etc.

Сила есть, ума не надо.

We have power, no need for intelligence.

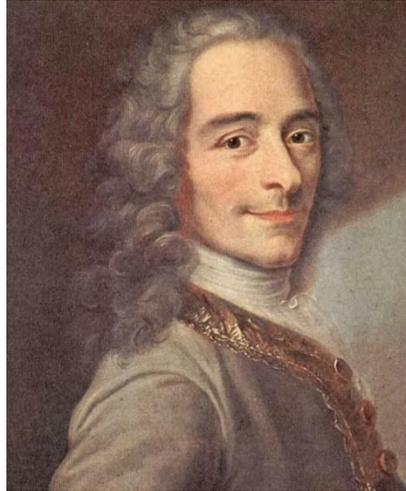
My **Statement** had 64 citations. I, too, cited many government reports, including those of the IPCC, but I also cited at least 16 peer-reviewed papers by independent scientific researchers. Dr. Karoly’s overwhelming focus on government reports looks like fully developed groupthink. Or maybe it is better described by the old Russian proverb:

If you have the government on your side, why should you worry about getting the science right?

In Figure 8 of his **Statement**, Dr. Karoly presents 13 supposedly successful predictions by climate models of “global warming.” These include head-scratchers like: “more fossil-fuel carbon in coral” and “more fossil fuel carbon in trees.” What these have to do with warming is beyond me. In this connection, it is worth repeating the comment from Karl Popper from my **Interview**:<sup>[23]</sup>

I found that those of my friends, who were admirers of Marx, Freud, and Adler, were impressed by a number of points common to these theories, and especially by their apparent explanatory power. These theories appear to be able to explain practically everything that happened within the fields to which they referred. The study of any of them seemed to have the effect of an intellectual conversion or revelation, open your eyes to a new truth hidden from those not yet initiated. Once your eyes were thus opened you saw confirmed instances everywhere: the world was full of verifications of the theory. Whatever happened always confirmed it. Thus, its truth appeared manifest; and unbelievers were clearly people who did not want to see the manifest truth; who refuse to see it, either because it was against their class interest, or because of their repressions which were still “un-analyzed” and crying aloud for treatment.

The most characteristic element in this situation seemed to me the incessant stream of confirmations, of observations which “verified” the theories in question; and this point was constantly emphasize by their adherents. A Marxist could not open a newspaper without finding on every page confirming evidence for his interpretation of history. ... Karl Popper



Voltaire

In Voltaire's novel, *Candide*,<sup>[24]</sup> Dr. Pangloss repeatedly assured young Candide that he was living in "the best of all possible worlds," presumably also with the best of all CO<sub>2</sub> concentrations. That we are (or were) living at the best of all CO<sub>2</sub> concentrations seems to be a tacit assumption of the Global Warming Establishment.

Enormous imagination has gone into showing that increasing concentrations of CO<sub>2</sub> will be catastrophic. Cities will be flooded by sea-level rises that are 10 or more times bigger than even the IPCC predicts. There will be mass extinctions of species; billions of people will die; "tipping points" will render the planet a desert.

That we are (or were) living at the best of all CO<sub>2</sub> concentrations seems to be a tacit assumption of the Global Warming Establishment.

If you wrote down all the ills attributed to global warming, you would fill up a very thick book. And all of this despite the fact that in the history of higher life forms on Earth (the Phanerozoic), CO<sub>2</sub> levels were four or more times higher than today, but life nevertheless flourished at least as abundantly on land and in the sea as it does today. It's an ill wind, indeed, that blows no good.

In summary, Dr. Karoly is a good scientist who means well. But he lives in an echo chamber of like-minded people who are convinced that they are saving the world.

### **Acknowledgement**

My son, James W. Happer, made many helpful suggestions on how to improve this response.

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