EXERScience & Technology

The Anti-Science Hoax of 'Global Warming'

Peter Toynbee exposes the lying methodology of the UN's Intergovernmental Panel on Climate Change (IPCC), which has become "the authority" for global warming propaganda.

Mr. Toynbee is a retired engineer in Wellington, New Zealand, and a former director of the Coal Research Association. He writes frequently on scientific topics in the national press, in particular on questions of energy and resources and the extremist policies of New Zealand's greens, as well as the government. This report is adapted from his article "The Scientific Feet of Greenhouse Clay," which appeared in The Free Radical, a New Zealand publication dated December 1999/February 2000.

In the mid-1980s, a group of scientists raised the concern that increasing levels of carbon dioxide in the atmosphere would increase the "Greenhouse Effect." Earth's stable temperature is maintained by transmitting thermal (infrared) radiation out into space, to balance the incoming solar radiation. It was claimed that higher CO_2 levels would increase the atmosphere's absorption of this thermal radiation, increasing the temperature of the atmosphere and the re-radiation of energy back to Earth. The horrendous estimates of the resulting global-temperature increases scared the pants off a gullible public who too easily accepted the claim that this would be due to man's increasing use of his fossil fuels.

A few years before this, publicity had been given similarly to scientists' fears of an early appearance of the next Ice Age. Despite its scientific inevitability, this scare did not catch on with the public as the warming one did, and most of the scaremongers transferred their energies to the new bogey.

Responding to this concern, the United Nations established its Intergovernmental Panel on Climate Change—"the

cornerstone of an action which assumed climate change to be the great threat of the next century"—and the stage was set for the growth of the largest environmental industry ever. The first IPCC reports of 1990 and 1992 startled the world with their assumptions, scenarios, computer models, and predictions of permanent temperature rises of between 1.5 and 4.5°C in just 50 years. (It should be recorded that the temperature record for the last 1 million years shows great variations, especially as ice ages alternated with interglacial periods, but the trend in Earth's average temperature change over that million years, has been only about 1°C!)

IPCC organized its meeting for concerned nations at Rio in 1992. The assembled bureaucrats agreed that something should be done to reduce the perceived problem, but the resulting "Rio Treaty" embodied nothing more specific or official than that.

IPCC's eagerly awaited "Second Assessment of Climate Change" was planned for publication in 1996. Grand meetings were held in 1995 by the participating scientists in Madrid and by the full IPCC in Rome—their draft 1995 report was accepted as the official "consensus" view. It was characterized by many doubts, expressed by the scientists involved, as to whether the technical information could support the greenhouse fears. But when the report was finally released in June 1996, there was an immediate uproar, when it was

^{1.} Frederick Seitz, "A Major Deception on Global Warming," Wall Street Journal. June 12, 1996.



Today's climate scaremongers ignore the known long-term astronomical cycles, which indicate that the Earth is leaving the warmer, interglacial period and entering a new Ice Age. Shown here: Glacier National Park, Patagonia, Argentina.

realized that the report finalized in Madrid and Rome had been changed to suit a few further up the tree of authority. All mention of the doubts originally expressed had been expurgated.

The IPCC has been careful always to be seen as conforming with the best scientific principles, quoting only from "peer-reviewed" papers in their acclaimed search for the scientific truth. Independent scientists have always been rather skeptical, and this alteration of a scientific report to something more politically acceptable, was the first real demonstration that IPCC was not the paragon of scientific virtue as claimed.

The hullabaloo that arose would normally have destroyed any scientific body guilty of such misconduct. But somehow, IPCC was sheltered from the public criticism—and it just kept its head down until the furor blew over.

Dishonest Science

The remodelled report, released in June 1996, contained the subtly worded and much-quoted conclusion: "The balance of evidence suggests a discernible human influence on global climate." This was released to the international media, not by IPCC, but by Greenpeace, which said that "world scientists and governments have agreed for the first time, that some global climate changes are caused by humans." The resulting headlines read—"Humans Blamed for Climate Change." (In fact, despite the Greenpeace words, this conclusion had been considerably watered down from previous official state-

ments.) Independently of this, it was becoming obvious that not one of the computer models on which the greenhouse theory was based, had been validated. Many of the underlying assumptions were incorrect and other unacceptable facets of the greenhouse fallacy were emerging. As pressures came on to IPCC to justify their faulty predictions, there were indications of further relaxation of their scientific standards—examples of bad, and even dishonest, science, ^{2,3,4} should have destroyed the credibility of IPCC completely.

It is hard to understand, in the light of all this, how the greenhouse scare has been sustained. But sustained it has been—because IPCC and their associates have been able somehow, to maintain some scientific standing.

IPCC leaders, challenged with the truth and their incorrect predictions, are likely quietly to excuse themselves by (correctly) stating that their predictions are only scenarios. They then leave it to their "associates"—bureaucrats, Greenpeace, etc.—to make definite statements assuming the predictions to be correct. These are the statements that the public continue to hear—and assume to be official IPCC statements.

In the detail of the 1996 report, the IPCC prediction of the rate of temperature increase was reduced to about one-third

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^{2.} B.D. Santer et al., "A Search for Human Influence on the Thermal Structure of the Atmosphere," *Nature*, 382:39, 1996.

^{3.} Patrick J. Michaels and P.C. Knappenberger, "Human Effect on Global Climate," *Nature*, 384:522, 1996.

^{4.} Arthur B. Robinson, "Dishonesty in Science," Access to Energy, July 1997.

of the original figure,⁵ but the change was not publicized for the public ear. Even now, the original level of 1.5 to 4.5°C is commonly stated.

And a gradual, subtle change in the technical qualifications of the IPCC spokesmen was occurring. Economists, lawyers, accountants, diplomats, and bureaucrats in general, admitting their lack of technical understanding, seemed to be taking over the responsibility for the official statements. They were able to state their acceptance of the technical issues, excusing the scientists from having to argue those opinions in the light of the developing knowledge that refuted their greenhouse theory. If they have to make an official statement, the IPCC scientists tend to state that no one could be sure of these complicated issues, and the possibility of calamity could not be ignored.

But we should not be condemning all the IPCC scientists—those, numbering some 2,500, who are claimed to support the IPCC consensus. Most of these are reviewers and authors of internal reports who express their views to IPCC. They could perhaps be criticized for their passive acceptance of the omission or manipulation of their submissions, but they are largely earnest, honest scientists such as expressed their "doubts" in 1995. (The two such New Zealanders in this category known to the writer, whose feet are not in the greenhouse trough, certainly cannot be accused of such passivity. But their voices seem largely to be ignored.)

It seems certain that the main fault of the IPCC reporting lies with the upper echelon, such as lead authors and those who write the "Executive Summaries" and "Policymakers' Summaries" to the reports — for the consumption and satisfaction of governments and politicians who have little concern for the exact truth on which science depends—and for the media.

The terminology of the IPCC doomcasters typifies their chicanery. Their original theme was the danger of "greenhouse warming"-warming from an increased greenhouse effect. But the term "global warming" came generally to be adopted in its place—it obviously describes the world average, but it includes all the natural changes in temperature. Even then, the "increased" temperatures failed to come anywhere near the level of IPCC's predicted rises, and the problem was redefined as one of "climate change," so as to include every extreme of climate—hot or cold, wet or dry—that TV brings into our living rooms. The doomsayers had no compunction in blaming extreme cold conditions on an increase in greenhouse warming! And the gullible public, who should have realized that there's nothing more natural and changeable than weather, just accepted it all. The Royal Society of New Zealand, in supporting the IPCC, said, "There are likely to be more severe droughts and/or floods in some places, and less severe droughts and/or floods in others." Everything was to be blamed on greenhouse warming!

These IPCC scientists are destroying the standing of their profession in the eyes of a public becoming more and more critical of the overall greenhouse process—they are discouraging recruits from entering the profession, and leaving the public unwilling to trust their technical advice on even more important issues.

The Kyoto Conference

The next item on the IPCC program, after the debacle of the Second Assessment, was the Kyoto Conference in Japan (1997), the latest ploy of the international assembly of bureaucrats, their previous wounds licked and forgotten. This conference featured largely non-scientists, who were promoting the claim that the signatories to the Protocol can profit, through a nebulous scheme for the international trading of carbon emissions, in an (as-yet undefined) agreement to control the level of the "pollutant" CO₂ in the atmosphere. Certainly, someone would have to pay for the utterly unnecessary carbon tax (by whatever name) which they promote; but they encourage the countries to sign the Protocol, telling each of them that there's a profit in it for every one of them.

The Kyoto Protocol envisages the international control by bureaucrats, with no concern for the technical truth, of the energy use of all the signatories to the Protocol—surely a

'Nobody Wants the Kyoto Protocol Except Us'

In an April 12,2000 article in the New Zealand newspaper The Independent, Peter Toynbee noted the absurdity of the nation's zeal in signing on to the Kyoto Protocol, requiring the reduction in "emissions" from fossil fuel plants, in the name of alleviating "global warming." Here are excerpts from his article.

The Kyoto Protocol seeks to persuade most developed countries to undertake a substantial reduction in their carbon-dioxide emission. No country has, as yet, ratified the Protocol. None, for various reasons, seems likely to do so in the future.

If we were to assume that the world had to reduce its emission of carbon dioxide, why does little old New Zealand have to be involved? . . . Why is this international body encouraging such a small country to sign the Kyoto Protocol?

New Zealand is a small country, with a population about 1% of that of the United States, a carbon-dioxide

^{5.} S. Fred Singer, "A Preliminary Critique of IPCC's Second Assessment of Climate Change," a chapter from *The Global Warming Debate* published by the European Science and Environment Forum, 1996.

^{6.} Royal Society of New Zealand, "Major Points from the IPCC 1995 Assessments," press release, Dec. 18, 1995.

gravy train to surpass all gravy trains.

There is no official international pressure for New Zealand to sign the Kyoto Protocol—our 80% power generation from renewable sources and our relatively small industrial activity ensure that our carbon emission is one of the lowest. Bangladesh and Nigeria are excused from Kyoto responsibility because their carbon emission is no more than 1% of that of the U.S.A.; and New Zealand's is less than one-half of one percent!

The pressure for New Zealand's involvement comes from within—from New Zealanders seemingly motivated only by the personal benefits available from their selfish gravy train—bureaucrats from some 15 government services and sundry other vested interests.

These are the people who claim that New Zealand is committed to the Kyoto Protocol (through their irresponsible, unofficial undertakings at expensive international conferences) while, at the same time, their publicity tries to persuade the government to ratify their unofficial undertakings.

Fortunately, the powers that be seem to be seeing the technical light—for instance, from recent presentations at the International Institute of Economic Affairs and, subsequently, at the New Zealand Institute.

Most of the countries look to United States for a lead in this Kyoto-ratification business. It would be unlikely that any U.S. ratification would occur when the Senate, which has to approve any such international agreement, has stated its unanimous opposition to any agreement which applies only to 20% of the world's nations, and which excludes several of the most rapidly developing economies—China, Mexico, South Korea, India, and Singapore. These countries would not sign any Kyoto agreement and are not being asked to.

One important factor in the Senate's decision is the realization that the United States would have to compete with these free-loaders for international markets and they would be voluntarily hog-tying themselves thereby. That thought seems not to have occurred to the New Zealand gravy-trainers—motivated only by their shameful "public choice" aspirations.

More of the Same To Come

The IPCC is now preparing its Third Assessment, ^{7,8} which threatens more of the ridiculous same. They have authors preparing draft reports calculating predictions up to the year 2100, based on various scenarios and assumptions on carbon emissions, population levels, etc. Given their dismal failure to predict to the year 2000, with what confidence can they contemplate 2100? But that doesn't seem to stop them pro-

emission per capita of about a half of that of the United States, a relatively trivial consumption of fossil fuel in industry, and 80% of its power generated from renewable energy.

It's not the international body that's applying the pressure, but the local scientists, their feet deep in the greenhouse trough, with a vested interest in sustaining their research activities.

It's not for them to worry about the damage that abandoning traditional science—the search for Truth—is doing to their once-proud profession, or to the economy of their country. At every opportunity, these local people stress that New Zealand is letting the world down by not complying with this international movement.

Typical of the local subterfuge, is the recent exercise in which they expressed each country's increase in carbon emission as a percentage.

Expressed in tonnes of carbon per year, New Zealand's contribution is one of the lowest of the OECD [Organization for Economic Cooperation and Development] countries considered, but when the annual increase in emission is expressed as a percentage of this low figure, this new criterion shows us as the second highest "polluter" on the list.

We were ten times worse than U.S.A.! In a blare of publicity, the results of these shonky calculations by Ministry of Commerce, were blazoned through the New Zealand newspapers.

The list of countries that are being asked to sign the Kyoto Protocol does not include China, India, South Korea, Mexico or Singapore, which would certainly not agree to sign anyway.

It is thus not surprising that the U.S. Senate has voted unanimously not to sign. Without the U.S.A.'s example, no other country is likely to sign—except perhaps New Zealand.

Absolved from any responsibility to conform with international requirements for reduced emissions, are Nigeria and Bangladesh, because in each case, their carbon emission is less than 1% of that of the United States. Each has a population some 20 times that of New Zealand, and a potential for much greater industrial activity in the future.

In comparison, New Zealand has a carbon emission of less than one-half of one percent of the United States. You don't see Nigeria and Bangladesh insisting that they be players in the Kyoto Stakes—they're too clever to mess up their economy in that way....

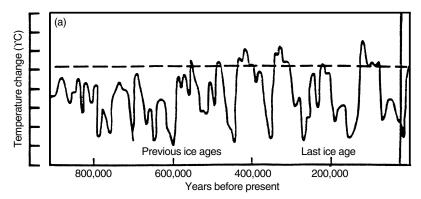
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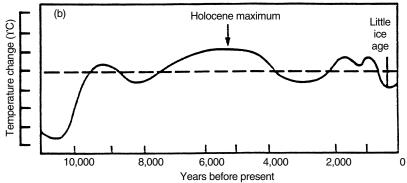
^{7.} Fred Pearce, "All Bets Are Off," New Scientist, Sept. 18, 1999.

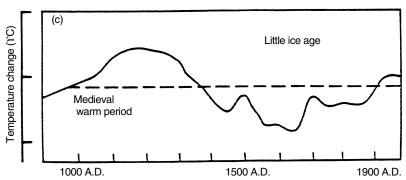
^{8.} Vincent R. Gray, *Greenhouse Bulletin* No. 125, September 1999, published also as "Forecasting Climate Disaster," *The New Australian*, Oct. 4, 1999 (No. 136)—and as "IPCC Scenarios Old and New" in John Daly's website, www.vision.net.au/~daly.

FIGURE 1

Global Temperature Variations on Three Time Scales







These are schematic diagrams of global temperature variations since the Pleistocene: a) the last million years, b) the last 10,000 years, and c) the last 1,000 years. The horizontal dashed line represents conditions near the beginning of the 20th Century.

Source: Intergovernmental Panel on Climate Change, 1990. J.T. Houghton, G.J. Jenkins, and J.J. Ephraums (eds.), *Climate Change: The IPCC Assessment* (Cambridge: Cambridge University Press), Figure 7.1.

ceeding with this latest exercise, which might be interpreted as an admission of the failure of Kyoto and of the previous assessments.

We can see it all happening again. IPCC, without accepting responsibility for the reports of its agents, will present them in their report as IPCC scenarios. Then, other associates,

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maybe Greenpeace again, will publicize the report, praise the findings, still leaving IPCC with an option to say that the opinions expressed are those of their associates, should their scientific reputation be questioned. Again, they will select a few scenarios, varying in the conditions promoting climate change, on which to base their projections. If they repeat past operations, they will arrange these in descending order of assumed levels of carbon emission, each deliberately overstated, with the anticipated average condition at the lowest level. When they come later to assess the average condition, obviously they will look to something in the middle of the range. Thus, they will have—subtly, dishonestly-achieved an unreasonably high prediction of the most likely event.

IPCC's nebulous statement that "the [new] scenarios are neither predictions nor forecasts, but alternative images of how the future may unfold," may serve to placate some. It may bring some hope that they have given up predicting temperature increases, but it seems unlikely that they will depart from past practice—or the practice of their associates. No doubt, they expect to keep the gravy train rolling for another year at least.

Over the decade there have been several statements by independent, established scientific organizations condemning the greenhouse theories, seeking a reappraisal by governments of the technical issues involved. But always, IPCC's opposition has been such that no notice is taken of the earnest pleas, even though these have been steadily gaining universal credibility. The latest example was last year's petition organized by Access to Energy and headed by Frederick Seitz, U.S. arch-doyen of the physical sciences. The petition, accompanied by an eight-page review of greenhouse warming,9 urged the government to reject the global-warming agreement that was written in Kyoto, and other similar proposals. Low-cost circulation amongst scientists gathered signatures for this petition, the

number exceeding that of the claimed supporters of the IPCC consensus by a factor of seven. IPCC put up spurious arguments in opposition and, as they had done so often

^{9.} Arthur B. Robinson et al., "Environmental Effects of Increased Carbon Dioxide," *Access to Energy*, February 1998.

in the past, seem to have won out over the efforts of the inspired organizers.

Simple Facts That Destroy the Greenhouse Fallacy

Man's knowledge of weather and climate is steadily increasing—take for instance our new appreciation of the Southern Oscillations (El Niño/La Niña), a natural phenomenon which has existed just about forever. But even as his knowledge expands, it becomes more and more doubtful that man will ever come to grips with all the complications.

This acquired scientific knowledge through the decade of the 1990s, has not only failed to validate the wild greenhouse theories—it has proved them to be very wrong.

Reasoned discussion of the greenhouse claims between the opposing factions will be achieved only by keeping to the simple issues. But unfortunately, it is a common ploy for the doomcasters to downplay the expertise of the disbelievers, confusing them by introducing unnecessary complications—attempting to destroy their confidence in their ability to comprehend.

In these circumstances, the disbeliever must frankly admit that he does not comprehend the issues raised (or the multitude of acronyms used!)—and insist that the doomsayer speak in a language he understands. Even better, the skeptic can specify the subjects for discussion, by posing a series of simple questions.

Anyone with a modicum of scientific understanding, who has studied the subject, must marvel at the departure from the scientific truth which enables these scientists and hangers-on to maintain their lucrative existence on the greenhouse gravy train. The closing sequence of this article is devoted to a description of some simple basic facts, well within the grasp of an intelligent layman, which destroy the greenhouse fallacy.

These facts are all that is required to prove that mankind need not be concerned about any greenhouse calamity of his own making. Study them, understand them; the greenhouse doomsayers, if you can restrict them to your argument, will have no answer to your knowledge. But make sure that you're not arguing with a greenhouse advocate with a vested interest in the scare-mongery on which his gravy train depends.

- 1. CO_2 not a pollutant. Within the limits of its concentration in the atmosphere, real or imaginary, CO_2 has no adverse effect on mankind. (Its concentration has always varied—currently the level is less than 0.04% by volume.) It is produced by animals' oxidation of the carbon in the food eaten to provide energy, by combustion of fossil fuels, and, most important, from a multitude of natural sources. It is consumed by plant photosynthesis where, with water vapor, it is converted by sunlight into plant material to provide food for the animal kingdom.
 - 2. The greenhouse effect. If it were not for this phenome-

non, whereby most of Earth's thermal radiation is absorbed by greenhouse gases, and some 50% of the absorbed energy is returned to Earth, the temperature of the planet would be so low that man would not have developed in the way he has—if he had developed at all. The greenhouse gases—water vapor is by far the most important, CO₂ is much less effective—have their own specific wavelength bands at which they can absorb, but generally, the concentration of the gases is sufficient, that practically all of the thermal radiation within the specific absorption bands, is already being absorbed. Hence, no matter how much the concentration of the CO₂ might increase, the radiation it can absorb cannot increase above the virtual 100% that is now absorbed.

Some 10% of the Earth's total thermal radiation passes out directly into space—it is of the radiation bands at which no greenhouse gas absorbs—escaping out through the "radiation windows." The greenhouse effect could increase only by reducing this 10%, but, there is no greenhouse gas which absorbs at the right wavelength.

So it's not a surprise that the greenhouse effect contributes nothing to any global-temperature increase.

- 3. Earth's natural variations in temperature. Our increasing knowledge relates to three natural phenomena which affect the global temperature: solar radiation, the Southern Oscillations (El Niño/La Niña), and volcanic activity, each with its own variable time frame. Scientific research is being devoted to an understanding of the relationship among these three, and to the correlation of the overall effect with the temperature record. Already, such attempts¹⁰ have produced promising results, and some consensus seems certain to emerge from the international discussion.
- 4. The major temperature changes of this millennium. One of the most serious errors in the IPCC's computer modelling was the assumption that the Sun's radiation was constant. The Danish Meteorological Institute was largely responsible for the important breakthrough—first, in 1991¹¹ by demonstrating a correlation between global temperature and the length of the solar cycle. The significance of this finding was not understood at that stage—indeed it was dismissed out of hand by the doomsayers—but the quality of the correlation was so high that it could not be ignored.

The second and even more important discovery was in 1997, 12 again by the Danes, who realized that the small change

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^{10.} Nigel Calder, "The Carbon Dioxide Thermometer and the Cause of Global Warming," *Energy and Environment*, 10:1-18, 1999. Paper presented at a seminar, University of Sussex, Oct. 6, 1998, and subjected to "open review" of online guest papers—available on http://www.microtech.com.au/daly/calder/calder.htm.

^{11.} Eigel Friis-Christensen and Knud Lassen, "Length of the Solar Cycle: An Indication of Solar Activity Closely Associated with Climate," *Science*, 254:698, 1991.

^{12.} Henrik Svensmark and Eigel Friis-Christensen, "Variation in Cosmic Rays and Global Cloud Cover: a Missing Link in Solar-Climate Relationships," *J. Atmospheric and Solar-Terrestrial Physics*, 59:1225, 1997.

in the solar radiation could not, on its own, be responsible for the earlier observed changes in temperature—obviously, the small change in radiation triggered some greater effect. Their solution, was that the change in the solar radiation was associated with sunspots and magnetic variations on the Sun's surface, which affected the level of cosmic rays which, in turn, affected the formation of clouds. So, the small change in solar radiation was amplified by the clouds' reflectance of more or less of the incoming solar radiation.

Beyond the normal solar cycle (9-14 years), these solar variations can explain all the significant temperature variations of the millennium—the Medieval Climatic Optimum, the Little Ice Age, and the temperature rise in the first 40 years of this century. The theory is confirmed by an associated effect of the change in cosmic rays: the variation in the isotopic ratio of atmospheric carbon which is obvious in the wood that grew in those times.

5. The record of global average temperature. Traditionally, surface temperatures are measured at selected sites around the world, and the "global average" calculated. Sometimes the record is only land-based, sometimes temperatures measured at sea are included—opinions vary as to which is the better. Both suffer from an inadequate coverage of the Earth's area, from various factors that limit the accuracy, and from the variety of methods of calculating the world average. The limited accuracy of the surface measurements (and the suspicion that the average figures are being massaged to suit) is the subject of critical assessments by a well-known New Zealand skeptic¹³ and others. In another paper on the IPCC projections,14 the same author concludes, "A combination of exaggeration and unreliability in the IPCC projections makes these unreliable as a guide to future projections."

The introduction, some 40 years ago, of radiosonde measurements, where the measuring devices are carried up into the atmosphere by balloons, gave a greatly improved, universally accepted record—from some 60 such sites around the world.

Then in 1979, satellite measurement of temperature in the lower atmosphere was introduced. ^{15,16} This senses vibrations in oxygen molecules, providing a ready, highly accurate measurement and accurate averaging of temperatures from all over the world, whether over sea or land—overcoming the limiting aspect of the radiosonde system, the number of measuring sites.

Most important, the satellite record for the past 20 years has shown that there has been no trend in the global average. ¹⁷ (There was a sensational increase for year 1998, obvious in all three temperature records, and ascribed entirely to the extreme El Niño conditions of that time; but since then, the record has returned to its stable level.)

The IPCC and their associates do their utmost to discredit the satellite temperatures, which are obviously so damaging to their claims based on the surface record. But the nearperfect agreement between the satellite and the radiosonde methods serves to establish, beyond all doubt, the reliability of the satellite methods.

6. A prospect for greenhouse sanity. The last 12 months have seen even more exciting ideas, 10 which turn the whole issue of greenhouse warming on its ear. New information is coming to hand that, instead of CO₂ levels determining the temperature—as per greenhouse theory—natural temperature changes occur, due mainly to solar variations, and also to volcanic activity and El Niño, as already described, and these bring changes in the equilibrium between CO₂ in the atmosphere and that in the oceans. (The quantity of soluble CO₂ in the oceans is some 50 times as great as that in the atmosphere.)

The release of CO_2 from a warmer ocean is exemplified by the bubbles of CO_2 that disengage from a cold bottle of champagne opened, undrunk. The new reasoning explains how changed CO_2 levels are the result of changes in temperature, not the cause of them. It is supported by a ten-year-old paper which showed such a correlation between temperature and CO_2 , with the temperature change preceding the CO_2 change by a period of five months. At the time, scientists accepted this correlation as support for the greenhouse theory, conveniently overlooking the timing of the changes.

Whereas the greenhouse theory has not provided any acceptable correlation between CO_2 and temperature, these new ideas (see footnote 10), with adjustments for the time delays involved, provide an unprecedented reproduction of the effect of natural forces on world climate, unfettered by any greenhouse illusion. Furthermore, they can explain several cause/effect anomalies that always condemned the greenhouse fallacy.

The new theory is still evolving, with details yet to be ironed out by the ever-growing corps of real scientists who can be trusted to examine the new hypothesis in the best scientific traditions. It may well be modified in some way, but already, a reasoned explanation of climate variability, independent of the greenhouse effect, seems a real, thrilling prospect. Not surprisingly, no support is forthcoming from the IPCC or their associates!

^{13.} Vincent R. Gray, *Greenhouse Bulletin*, No. 112, March, and 113, May 1998

^{14.} Vincent R. Gray, "The IPCC Future Projections: Are they Plausible?" *Climate Research*, 10:155, 1998.

^{15.} Roy W. Spencer and John R. Christy, "Precise Monitoring of Global Temperature from Satellites," *Science*, 247:1558, 1990.

^{16.} John R. Christy and Richard T. McNider, "Satellite Greenhouse Signal," *Nature*, 367:325, 1994.

^{17. &}quot;World Climate Report," Sept. 13, 1999.

^{18.} C.C. Kuo et al., "Coherence Established Between Atmospheric Carbon Dioxide and Global Temperature," *Nature*, 343, p. 709, 1990.

FEATURED IN THE SUMMER 2000 ISSUE

21st CENTURY SCIENCE & TECHNOLOGY

■ SDI Revisted: In Defense of Strategy

Lyndon H. LaRouche, Jr.

In order that society might enjoy the benefits of discovered universal physical principles, it is essential to engage cooperation among the higher, cognitive processes of individual persons. The modern concept of "information," embedded in today's educational and scientific practice, makes such further advancement of cognition, and therefore of science, impossible. Such are the kind of underlying matters which must be addressed, to grasp the flaw in the arguments surrounding today's missile-defense debate.

■ It's Time to Tell the Truth About the Health Benefits of Low-Dose Radiation

James Muckerheide

Low-dose radiation is documented to be beneficial for human health but, for political reasons, radiation is assumed to be harmful at any dose. Radiation-protection scientists, and others, who cover up the data that contradict present policy should be investigated for misconduct.

■ Discovery Challenges Existence of 'Absolute Time' Jonathan Tennenbaum

Russian scientists have discovered unexpected regularities in radioactive decay, linked to astronomical cycles.

- AIDS and Infectious Diseases Declared Threat to U.S.National Security

 Colin Lowry
- Yes, the Ocean Has Warmed; No, It's Not 'Global Warming' Dr. Robert E. Stevenson
- Cascade Mountain Uplift May Explain Strengthening Ice Age Cycle Jack Sauers
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