
Letters

We welcome letters from readers, particularly commentaries that reflect upon or take issue with material we have published. The writer's name, affiliation, address, and telephone number should be included. Because of space limitations, letters are subject to abridgment.

Warming the Debate

TO THE EDITOR:

In "Global Warming: The Nature of the Alleged Scientific Consensus" (Vol. 15, No. 2), Richard Lindzen misrepresents the National Research Council's recent study on global warming, citing it as evidence that even if global warming were to occur at a level of a few degrees centigrade, it would have no serious consequences. Although he correctly notes that I was on this study and also correctly characterizes it as "by and large fair," he nonetheless seriously distorts its conclusions. What that study said, and it was controversial and internally debated, was that (for a smoothly evolving, noncatastrophic scenario of climate change at the middle of the possible range of uncertainties) wealthy countries such as the United States could probably adapt their agriculture and water resources with relatively little impact on the gross national product (perhaps a few percent losses or less). The report emphatically mentioned that this controversial optimism is not true for natural ecosystems, which could not adapt easily. The report also stressed that poorer countries (which are more vulnerable to climate changes and have less economic capacity to develop infrastructure to deal with them) could be seriously impacted by even the low- to mid-range climatic change scenarios. Neglecting to report those conclusions of the NRC assessment raises the question of the objectivity of the reporter. Lindzen

also neglects the fact that the committee, the very people who argued that the U.S. economy (not its ecology) could with modest damage sustain climate change from a modest warming scenario, urged that cuts in carbon dioxide emissions by 10 to 40 percent should be seriously considered since they could be achieved at no net cost! Thus, the NRC group argued that despite the uncertainties (and this group included representatives from industry, economists, and others), the United States should seriously consider a carbon tax as a form of climate insurance—something the Bush-Quayle administration has vigorously opposed, and in doing so at the Environmental Summit stood virtually alone against other OECD nations.

Lindzen maligns the credentials of many global warming proponents. For example, he describes global warming advocate William Kellogg as "a minor scientific administrator," despite the fact that Kellogg was twenty years ahead of his time—having run the "Study of Man's Impact on Climate" meeting in Stockholm in 1971—or the fact that Kellogg was subsequently elected by his peers as president of the American Meteorological Society. Lindzen says climatologists have used weak evidence to support concerns over global warming. He then flatly asserts with *no evidence* another social scientific conclusion of his own: "the popular media in Europe and the United States were declaring that 'all scientists' agreed that warming was real and catastrophic in its potential" (emphasis added). He goes on to assert that there is "compelling evidence for all the known feedback factors to actually be negative [i.e., stabilizing]." Yet, on the very next page of his article he says there is only "growing evidence" that one of the widely believed destabilizing feedback mechanisms is (he believes) stabilizing.

When one reads Richard Lindzen in *Regulation*, it is easy to get the impression that most people concerned with global warming are part

of a vast conspiracy that includes politically correct scientists, opportunistic politicians, environmental extremists, and nonexpert popularizers. How such a conspiracy of disconnected characters could ever be organized and maintained is, of course, never explained. Lindzen, an atmospheric physicist, decries sarcastically the climate disaster scenarios propagated by such alleged nonexperts as Sens. Al Gore and George Mitchell ("an outpouring of popularization by individuals who do not understand the subject in the first place"). Then, ironically, Lindzen, a nonexpert himself in the social sciences, offers up a scary social scientific disaster scenario of his own: "Such weak predictions feed and contribute to what I have already described as a societal instability that can cascade the most questionable suggestions of danger into major political responses with massive economic and social consequences." For this apocalyptic assertion, no scientific foundation is given.

Nowhere does Lindzen address the fundamental reason most prudent people buy insurance: to mitigate potential negative consequences of plausible risks. He never says in this connection what he believes the likelihood to be of global warming greater than two degrees centigrade. The reason I mention two or more degree centigrade warming is that at a global scale it is a temperature level larger than that experienced by human civilization or those species, ecosystems, and habitats that have evolved naturally since the end of the last ice age some 10,000 years ago. Many ecological studies have suggested that sustained global changes of two degrees centigrade or larger in a century or less could be catastrophic to the stability of natural systems. Lindzen, in a debate with me at the National Academy of Sciences in January of 1990, publicly admitted that he felt there was a 25 percent chance of at least a two degree centigrade warming—one wonders whether he would eat a dessert that had "only" a 25 percent chance of causing botulism.

And on a personal note, for the umpteenth time Lindzen repeats the false charge that my 1976 book, *The Genesis Strategy*, promoted a "cooling hysteria." That charge is repeated despite the fact that I have pointed out to him in face-to-face debate that this sixteen-year-old book

was then relatively neutral on when human activities would cause warming or cooling, but rather the purpose of that book was to argue that any large climatic variations, whether warming or cooling, could be (and I still believe this to be true) threatening to both natural and managed environmental systems if those changes occur as rapidly as a few degrees centigrade in a century. Meanwhile, sixteen years of scientific progress have led a substantial majority of knowledgeable climate scientists to consider significant global warming as the more likely outcome.

Richard Lindzen has a reputation for indulging in ad hominem polemics that misrepresent people and ideas. He repeatedly ignores the question of the probability of serious climate changes. He seems to think he knows better than most of the scientific community where in the spectrum of uncertainty (from mild to catastrophic) surrounding global warming projections will eventually end up. He says mild, and he gets lots of press as “the other side” of the global warming issue—despite his hollow protests that the media ignores this everything-will-be-just-fine viewpoint.

My view is that the reader should discount most of his conclusions. In fact, I hope you will be wary of polarized debates by Lindzen, Schneider, and other *individuals* and go instead to a balanced source—like the National Academy of Sciences’ report (*Policy Implications of Greenhouse Warming*, 1991) or the Intergovernmental Panel on Climate Change’s report (*Climate Change 1992: The Supplementary Report to the IPCC Scientific Assessment*, 1992). Honest, curious readers can go to those sources to find out what responsible and balanced groups of scientists, economists, industrialists, and others have to say on the subject. I suspect most readers who make this modest effort to be well informed will discover little overlap between these carefully worded, broad-based assessments and the myopic and shrill invectives of the warming conspiracy advocates like Richard Lindzen.

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LINDZEN replies:

Schneider’s letter helps illustrate several of the points I made in my article. Schneider objects to my description of the National Research Council’s study, *Policy Implications of Greenhouse Warming*. Presumably, according to Schneider, I should have mentioned that the report “emphatically mentioned that this controversial optimism is not true for natural ecosystems.” This “emphatic mention” consists of a few sentences, the most emphatic of which were, “For a variety of reasons, the adaptation of natural ecosystems to climate change is more problematic than that of managed systems like farms or plantation forests. The principal impacts of climate change are expected to be on plants.” Even here, there follows the expansion: “Climate change may make some species extinct, but the diversity of ecosystems would probably protect those functions that are carried out by many species. For example, diseases removed first the chestnut and then the elm from eastern forests, but the loss of their capacity to absorb CO₂ was quickly made up by other species.” I am sure that the environmental advocates on the panel fought hard to get even those gentle caveats into the report. To refer to this page or so as “emphatic” is clear exaggeration. As concerns poorer nations, the report pointed out that its charge was only to consider the United States, and that conditions might differ elsewhere. To refer to that as “stressing” is misleading at best.

What is Schneider trying to do here? First, he suggests that I am using the NRC report as evidence that global warming would have no serious consequences. Although the report does suggest that the effects of even substantial warming would be well within our capacity to adapt to, I cited the report primarily as evidence for evolving views. Such reports rarely contain new information, and as such, constitute evidence mostly of viewpoints. However, it has, indeed, become commonplace for environmental advocates to cite such reports as broader evidence—even for positions the reports do not take. Second, Schneider argues that not to accept these exaggerations marks one as lacking in “objectivity.” These

remarks are reminiscent of the recent suggestion by Sen. Al Gore and Paul Ehrlich that journalists self-censor environmental evidence that is not alarming.

Schneider also misrepresents the NRC recommendations. As I stated, the council concludes that the present evidence does not warrant expensive mitigation strategies. The council then outlines a methodology for assessing expense and concludes that it may be possible to effect significant emissions reductions at low cost. The council’s tentative suggestions have been seriously questioned as to actual cost; however, the report did not claim to have analyzed the situation completely. Rather, the NRC was illustrating its recommended methodology. I believe that my summary of this document (the full document amounts to over 900 pages) was fair; I know that the description that Schneider would have one present is not.

Schneider claims that I malign the credentials of many warming proponents. I only mention a few, and I simply describe their credentials, which is essential if one is to assess their views. As concerns Will Kellogg, he is a well-liked individual, but the fact that he chaired a session over twenty years ago or served for one year as a president of the American Meteorological Society (an unpaid position that does not involve leaving one’s normal position) does not, in any way, invalidate my statement.

Anyone following the warming issue knows that my description of the media coverage in 1989 is essentially correct. At the New England Environmental Conference in March 1989, several speakers, including Thomas Stoel (then of the Natural Resources Defense Council), John Devillars (then secretary of the environment for Massachusetts), and Michael Connally (then secretary of state for Massachusetts) all expressed awe at the purported unanimity of the normally fractious scientific community on this issue. Perhaps Schneider is referring to the difference between “all scientists” and Sen. Gore’s allowance that perhaps 2 percent of credentialed researchers question greenhouse emergency claims. As Gregg Easterbrook has noted, however, “[t]his simply isn’t true.” Anyone attending scientific climate meetings will be



immediately struck by the widespread questioning. As concerns my remarks on feedbacks, my main point was that the positive feedbacks were essential to predictions of significant warming, and that the model treatment of the processes leading to these feedbacks was significantly lacking in basis. That there is compelling evidence for these feedbacks to be negative, and that this evidence is growing, are hardly contradictory.

Schneider imputes to me a suggestion of a vast conspiracy of "politically correct scientists, opportunistic politicians, environmental extremists, and nonexpert popularizers." Schneider completely misses my point. Rather, the confluence of interests among perfectly ordinary scientists, scientific administrators, politicians, environmental advocates, and journalists at this particular moment in history, coupled with the inhibition of normal sources of resistance, leads to an unstable response to even weakly founded suggestions of environmental danger—

without any need for conspiracy whatever. I hope I can be forgiven for observing this, even without suitable social science credentials. The guidelines of *Regulation* did not call for extensive referencing, but many economic analyses of proposed measures suggest impacts on the order of a trillion dollars. I suppose it is a matter of opinion as to whether one regards this as massive or not. I do.

Schneider frequently emphasizes the prudent need for insurance. Although the notion seems inviting, one must not forget that insurance scams are legion. In particular, Schneider never offers the necessary information for assessing the appropriateness of insurance: for example, the risk involved, the cost of insurance, the extent of the coverage, the credentials of the insurer, etc. According to the *IPCC Update*, the effect of proposed OECD emission controls will negligibly affect total emission growth over the next century. What exactly are these controls

insurance for? As concerns risk, Schneider frequently claims that there is no question that increased greenhouse gases will lead to warming; the only doubts are about how much, where, and when. In science the absence of quantitative knowledge at this level is tantamount to saying one does not know at all. That hardly allows much risk assessment.

In relating global mean temperatures to past climatic change, Schneider is, in my estimation, guilty of a technical error. Major climate regimes of the past such as the major glaciations and the equable climates were all associated with tropical temperatures similar to today's and large changes in the difference in temperature between the tropics and higher latitudes. This strongly suggests changes in the flux of heat between the tropics and higher latitudes, which, in turn depends on the geographic distribution of heating. Changes in global mean temperature, of necessity, arise from such changes; the global mean temperature, however, is not the causal agent. The comparison of predicted changes in mean temperature with the changes associated with major changes in past climate thus seems ill-founded.

Schneider refers to a debate with me at the National Academy of Sciences in January 1990. Oddly enough, there never was any such debate. Indeed, in the fifteen years I have been a member of the Academy I do not recall the Academy's ever sponsoring or hosting such a debate. What I believe Schneider is referring to is a meeting of the panel preparing the above-mentioned report, *Policy Implications of Greenhouse Warming*. About a half-dozen scientists of various persuasions were invited to offer five-minute summaries of their views. The panel then asked questions. I do not recall that Schneider was particularly active in that questioning. However, I remember one panel member, Jessica Matthews (vice president of the World Resources Institute), urging me to acknowledge that global warming would be a catastrophe. There was also a question from another panelist, Richard Cooper (professor of economics at Harvard), to all the invited scientists to give an estimate of the range of equilibrium temperature changes they thought likely to be associated with a doubling of carbon dioxide. I personally do not recall whether the request was for that

temperature change below which the odds were 90 percent or 75 percent that the actual change would lie. There was, however, general agreement that there was no current basis for stating any such odds. Cooper, however, insisted that we at least offer guesses. Eschewing my own feelings on the matter, I tried to come up with a basis for such a guess. Given the uncertainty over feedbacks, I thought the fairest starting point would be the change expected from the doubling of carbon dioxide alone (namely, .5 to 1.2 degrees centigrade). The lower bound I felt would be about .1 degree centigrade, and the upper bound might conceivably be as high as 2 degrees centigrade. Upon subsequent reflection, I would certainly have set this bound lower, but at the time it hardly seemed important to quibble over what was an instant guess. Schneider's transformation of this guess into a belief expressed in some non-existent debate is surprising to say the least. As concerns botulism, I suppose that if someone told me that a dessert had a 25 percent chance of giving me botulism in 110 years, I might indeed eat it—assuming the dessert were appealing in the first place. It should be added that the NRC panel used a higher value of warming to reach their own sanguine conclusions.

Schneider's personal note is fairly typical. Schneider's book *The Genesis Strategy* extensively quotes Reid Bryson's predictions of profound cooling with attendant higher variability of weather (something now suggested as likely to accompany warming). Schneider then admits to sharing Bryson's concern, but not being so certain of the explicit prediction. Promotion can take many forms. For example, Lowell Ponte's book with the unambiguous title *The Cooling* contains the following endorsement from Schneider: "[T]his well-written book points out in clear language that the climate threat could be as awesome as any we might face, and that massive worldwide actions to hedge against that threat deserve immediate consideration. At a minimum, public awareness of the possibilities must commence, and Lowell Ponte's provocative work is a good place to start." In fact, Schneider's promotion of concern for cooling has at times been even more concrete. In

1971 in a paper in *Science* (Rasool and Schneider, Vol. 173, p. 138), it is stated that increasing dust in the atmosphere could lead to a cooling of 3.5 degrees centigrade, while increasing carbon dioxide by even a factor of ten would not lead to warming of even 2.5 degrees centigrade. To be sure, the focus of climate concern has shifted to warming. However, I am not clear as to what specific aspect of the very limited progress of the past sixteen years Schneider is referring. Nor do I know how he ascertained the views of a "substantial majority of knowledgeable scientists." Perhaps the secret lies in Schneider's unstated definitions of "knowledgeable," "significant," and "likely." On a personal note of my own, I should add that I have not publicly addressed these items "umpteenth times"; once again, Schneider is exaggerating.

Schneider is correct that the media have, in the past year or two, been giving somewhat more balanced coverage of this issue. He apparently regrets this, and suggests that readers should discount views countering his should they somehow manage to get published (presumably since they are merely the "myopic and shrill invectives of the warming conspiracy advocates" who "misrepresent people and ideas"). Somewhat more evenhandedly, he suggests that readers should be wary of discussions by individuals and rely on committee reports instead. All of this sounds disturbingly familiar. My article discusses the nature of balance in the NRC panel and on the IPCC. Nevertheless, given the degree to which these documents have been misrepresented, reading them could prove useful. Of course, Schneider fails to mention that the full NRC report comes to 918 pages, the IPCC *Scientific Assessment* comes to 365 pages, and the IPCC *Update* comes to 200 pages. Fortunately, the NRC synthesis is reasonably representative and comes to only 83 pages. Unfortunately, the Policymakers Summaries that introduce the IPCC reports are profoundly unrepresentative.

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The Role of Antitrust in Eastern Europe

TO THE EDITOR:

Paul Godek has become obsessed by the possible harm that antitrust policy can do to the newly emerging market economies in the former socialist countries. He argued, first in *International Merger Law* and then in a current in this magazine (*Regulation*, Winter 1992) that antitrust policy is "one U.S. export [that] Eastern Europe does not need." His argument for that position is twofold and may be summarized as follows.

First, in a small economy producers of tradeable goods ought to be subject to the competitive discipline of free international trade. If they are, all will be well. If they are not, antitrust policy will be powerless to compensate. Producers of nontradeable goods—services, distribution, and the like—cannot be disciplined by international trade, but such markets are easy to enter and are therefore "likely to be intensely competitive under any circumstances."

Second, antitrust authorities, like other government authorities, may abuse or misuse their powers. Potential investors and entrepreneurs in East European countries, facing massive uncertainties in any case, "do not need to labor under the scrutiny of antitrust bureaucrats."

The first argument is incorrect on both empirical and conceptual grounds. The evidence from the United States, the European Community, and Japan indicates that it is simply not the case that open borders or large numbers of competitors or easy entry or ensconced competitive values have prevented the formation of cartels. The benefits to consumers of government prosecution of cartels are generally conceded—even by such critics of antitrust as Robert Bork—to be enormous. How much more of a tendency to collude will exist among newly formed firms in economies where competition, far from being encouraged for years, has been illegal? And how much more valuable will the education and prosecutorial efforts of the antitrust authorities be in discouraging such behavior and ensuring that the fruits of the newly free economies accrue to the population as a whole rather than simply to a small class of producers? Moreover, there is evidence from Eastern

Europe—Poland, in particular—that the severe economic downturn is creating pressures for “recession cartels” and “orderly” (read “collusive”) rationalization of production. Who, in Mr. Godek’s view, will defend those economies against the forces of recartelization?

Conceptually, the problem is that Mr. Godek takes the simplistic view that open borders and easily entered markets are exogenously determined phenomena, mercies that drop “as the gentle rain from heaven.” In fact, there is every reason to believe that both freedom of international trade and ease of market entry are to a great degree endogenous with other political and economic conditions in a country, and that effective antitrust policy can assist in the introduction and preservation of those desirable conditions.

Consider first free trade. In all market economies the openness of borders to particular imports tends to be the result of complex political maneuvering involving both private interests and government bodies. In the United States both the Antitrust Division of the Department of Justice and the Federal Trade Commission regularly find themselves arguing in legislative or regulatory settings for open borders against not only the relevant producer interests but also other government bodies sympathetic to them.

The young antimonopoly offices of Eastern Europe are performing a similar, though even more important, role. Press commentaries report that foreign firms proposing joint ventures with East European enterprises frequently seek assurances of oppressively protectionist policies as a condition for entering into the venture: in particular, prohibitive tariffs and tiny quotas on the import of competing products. The privatization ministries may be institutionally inclined to favor acceding to those demands in the interest of promoting a quick infusion of foreign capital, and in the negotiations it is left to the antimonopoly offices to question the conditions imposed and to seek better terms for the country’s consumers. There appears to be real value in the creation of a government ministry whose constituency is competition.

The situation with respect to ease of market entry is broadly similar. It is true that in the United States we

tend to assume that many local markets, such as those for product distribution and some services, are characterized by ease of entry. (There are many local service markets, of course, for which that is not the case.) But the assumption is premised on the existence of many structural factors that are not present in the developing market economies of Eastern Europe: functioning markets for capital, labor, and land, and the existence and enforcement of commercial and contract laws, for example. Where those factors are not present, *no* market may be easy to enter.

And if no market is easy to enter, then even free international trade may not guarantee the access of consumers to competitive prices. Incumbent monopolists, left over from their days as state firms, may use exclusive dealing arrangements or other vertical restraints to deny access by potential competitors to either critical inputs or distribution channels. Challenges to such monopolistic practices—far from “only hinder[ing] the efficient distribution of goods and services,” as Godek claims—may be essential to the creation of efficiency and competition. So may challenges to the preservation of monopoly positions in the privatization process. And it is the antitrust authorities who are most likely to bring either such challenge.

Of course, as Mr. Godek states, a critical policy need in those countries is to attack the structural deficiencies directly: to create and promote the fundamental conditions under which markets may operate to facilitate entry throughout the economy. But that policy is a complement to antimonopoly policy, not a substitute: both help consumers and welfare, and there is no reason that one cannot be pursued simultaneously with the other. Mr. Godek pleads limited policymaking resources, but in that case he should be promoting U.S. technical assistance, not arguing against it.

Mr. Godek’s second argument is no more compelling. Certainly antitrust authorities may act unwisely or abusively, with resultant harm to an economy. That underscores the critical importance of careful drafting of statutes and judicious enforcement strategies. But any such mistakes and missteps are only one side of the balance sheet; they must be weighed

against the real benefits to an economy of antitrust enforcement—the lower prices and enhanced choices accruing to consumers who would otherwise face cartelized or monopolized markets.

Mr. Godek may believe that there are no entries on that side of the balance sheet. It is clear, however, that the governments of many East European countries believe otherwise. Bulgaria, Czechoslovakia, Hungary, Kazakhstan, Latvia, Poland, and the Russian Republic *already have* antitrust laws, and others are likely to follow. Indeed, it may come as a surprise to Mr. Godek, but both Hungary and Poland adopted antitrust statutes *before* the communist regimes in those countries were abolished! To us it is clear that we must use our experiences to help guide the new antitrust agencies away from poor enforcement decisions and toward more desirable ones: away from *per se* treatment of vertical restraints, away from attacks on “price gouging,” and toward strong restrictions on cartel behavior to ensure that the privatization process results in a competitive economy. We can help them to learn what kinds of evidence are useful in enforcing the law in their economies and how most effectively to gather it. We can help them to learn how to publicize their laws to achieve maximum feasible deterrence of anticompetitive behavior. We can assist in setting enforcement priorities and strategies for the laws that they have adopted of their own volition.

In all of those ways we can help to make antitrust enforcement one of the forces acting to improve and protect efficiency and welfare as the East European economies make their historic transformation.

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Defending the Merchant Marine

TO THE EDITOR:

I am responding to defense-related issues in Mr. Rob Quartel’s “America’s Welfare Queen Fleet: The Need

for Maritime Policy Reform" (Vol. 14, No. 3) on behalf of the Department of Defense. Mr. Quartel suggests that we "sever the linkage" among shipbuilding, commercial shipping, and military planning. That appears to conflict with his recommendation to consolidate decisions for commercial sealift with other defense programs. Notwithstanding, I do not agree with severing those linkages. The Merchant Marine Act explicitly allies shipbuilding, shipping, and military planning in the interest of national defense and to foster foreign and domestic commerce. Further, the interdependence of those elements is particularly important as the military relies upon the U.S. maritime industry for the transport of sustainment cargo.

Consistent with maintaining the linkage between commercial shipping and military planning, the concept of consolidating aspects of commercial sealift with other defense programs appears to have merit. Long-range planning for the future of the nation's strategic mobility needs has already been accomplished in an ongoing mobility requirements study. In addition, the president's January 1991 budget proposed the creation of a national defense sealift fund. The purpose of the fund is to allow for the accumulation of all U.S. government sealift support into a single mechanism to centrally execute and finance sealift investments and operations.

As noted by Mr. Quartel, our sealift effort during Operation Desert Shield was successful and unparalleled. The United States moved more

ocean cargo farther and faster than at any other time in history and accomplished that formidable task with remarkably few difficulties. Today, and for the future, use of the oceans will be vital to protect the national security of the United States. Continued federal support of a U.S. merchant marine is necessary to ensure that American flag shipping may serve as a reliable source of strategic sealift in time of war or national emergency.

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NOTE: This letter was written on May 15, 1992, when the author was secretary of the Navy.