Letters

The Salk Institute and Elsewhere

Ann Gibbons' recent article "Salk Institute at a crossroads" (Research News, 27 July, p. 360) points out quite correctly that the Salk Institute today faces many of the "pressures of the real world" that currently confront most research institutions in this country. While we appreciate Gibbons' thoughtful assessment of the problems of funding and space that we share with most of our scientific colleagues, her article conveys several misperceptions about the Salk Institute that I wish to rectify.

First, the article gives the impression that we have a policy of terminating the appointments of researchers who are not funded. This is not the case. In fact, no one has ever lost his or her position at the Institute because of lack of grant support.

A second misleading statement implies that only ten Salk faculty members are in a position to bring into their laboratories graduate students from the nearby University of California, San Diego. The reality is that 29 of our 46 faculty members hold adjunct appointments in various departments of the university and therefore have access to graduate students. There are 44 graduate students currently working here, and we are exploring ways to expand this pool significantly.

As Gibbons says, I believe that we are well on our way toward solving the problems we face. We welcome the opportunity she has provided to share our thinking more broadly with the scientific community and hope that these amendments will help to clarify the nature of our enterprise.

RENATO DULBECCO
President,
The Salk Institute,
Post Office Box 85800,
San Diego, CA 92138

Gibbons' article about the financial stresses at the Salk Institute characterizes a situation that, sadly, many fine research institutions currently face. In the social sciences, just as in the biological sciences and elsewhere, stand-alone research facilities that serve our science industry so well are at that same "crossroads."

NORC (the National Opinion Research Center), a social science research center, approaching its 50th anniversary in the next 2 years, is another outstanding example. NORC competes successfully in the federal grants and contracts marketplace, in recent years doing more than $25 million worth of basic social science annually. It has no contributed endowment and a net equity of only a few million dollars, so it operates far closer to the "edge" than an institution of its fine scientific reputation and market success should need to do. NORC maintains a survey design and management staff and national field staff able to conduct national probability sample surveys of the highest scientific caliber and several analytic think tanks servicing about 80 professional scholars.

Such research institutes have no natural constituency such as alumni, no appealing mission that attracts charitable contributions, and no product that can be sold at a sufficient mark-up to generate a surplus. Thus they have no real opportunity to generate an adequate endowment. Yet these institutions are of vital importance in maintaining the infrastructure, know-how, and capital to conduct high-quality basic science. In the cyclical environment of research funding, they often must dismantle much of that valuable staff and infrastructure just to sur-

vive the troughs while awaiting the next peak in funding.

A wiser national policy toward basic science would appear to be, at least for those institutes that have exhibited their market success and social value for several decades, to provide some financial underpinning or drawing rights to low-interest loans to ensure that their valuable research capital is not lost.

ROBERT T. MICHAEL*
Dean,
Graduate School of Public Policy Studies,
1155 East Sixtieth Street,
University of Chicago,
Chicago, IL 60637

*Member of the Board of Trustees of NORC and its director from 1984 through 1989.

New Greenhouse Report

Both the title and the content of Richard A. Kerr's article about the forthcoming International Panel on Climate Change (IPCC) documents (Research News, 3 Aug., p. 481) suggest the religious nature of the current debate concerning potential greenhouse warming. Anyone who has bothered to familiarize themselves in detail with the gobal warming issue will be suspicious of any claims of unanimity. The notion that the press has "focused on the outlying views without pressing hard on justifying them" turns the truth on its head. Quite the contrary, it is the claims of disastrous warming that have quite clearly been most widely and uncritically disseminated. I would suppose that the article was meant to suggest that my own doubts were somehow "outlying," whatever that might mean. Oddly enough, I have never claimed that there is no evidence of an increase in global temperature over the last century. It is thus somewhat surprising that 200 people associated with the IPCC process disagree with me on this issue.

More to the point, even the IPCC would not claim that there is any evidence of global greenhouse warming in the global temperature record. After all, the same record shows fluctuations of the same magnitude as the purported trend occurring over periods of a few years; it also shows the bulk of the warming occuring before 1940. As the penultimate bullet in the boxed item "The greenhouse consensus" (Research News, 3 Aug., p. 481) notes, the temperature record has a standard deviation of about 0.15°C, which tends to diminish the claims that the 1980's have had the warmest years in the century; they exceeded the previous maxima by less than the standard deviation. Perhaps most important is the fact that all but the smallest predictions for the coming century call for substantially greater warming over the past century than has been observed (even if one attributes the increase in temperature before 1940 to the increases in CO_2 since 1940). To be sure, the oceans' heat capacity might be delaying the expected warming but, for models that predict a 4°C increase, this delay would have to be centuries rather than decades.

Given the above, is it really surprising that many of us question even the meaning of a consensus on this issue? As is becoming evident, consensus is increasingly restricted to relatively trivial points, such as the existence of a greenhouse effect. If this refers to the fact that the earth is about 60°F warmer than it would be without the greenhouse effect, then I know of no one who questions the point. However, even here one merely has to scratch the surface to see that this effect is almost entirely due to water vapor and clouds, not CO_2. If one scratches a bit more, one discovers that if greenhouse trapping of heat were totally effective, then the earth would be 110°F warmer than it is at present. The point is that the existence of a greenhouse effect tells us almost nothing about how the earth will respond to increases in minor greenhouse gases like CO_2. Such points permeate the whole subject of greenhouse warming. How can one not question the issue? Why such questioning causes one to be labeled a "dissenter" is, perhaps, the real issue.

RICHARD S. LINDZEN
Center for Meteorology
and Physical Oceanography,
Massachusetts Institute of Technology,
Cambridge, MA 02139

Kerr's article does the reader a disservice by not simply reporting the scientific conclusions of the working group of the IPCC. Except for straying into policy issues, the IPCC report provides a good representation of today's scientific assessment. Kerr unfairly lumps together all those as "dissenters," and they are many, who feel that it is too soon to take draconian policy actions and that there is ample time, given adequate research resources, to estimate the effects more realistically and to plan action accordingly.

We at the Marshall Institute are not "dissenters" with respect to scientific facts on the greenhouse problem. All the numbers we use lie in the range of the uncertainties listed in the IPCC report, except perhaps for our discussion of the possible effects of solar variations. A good example is the value of the observed global temperature rise in