cal areas of the world, and they take different forms according to the state of development of a country and its social and scientific resources. As a massive consumer of energy and goods, the United States is directly or indirectly responsible for many of the decisions regarding mining, harvesting, fishing, processing, and marketing, all of which can lead to unplanned and uncontrolled pollution of rivers, lakes, and oceans as well as the extinction of species and the destruction of ground cover. Since many of these processes are irreversible, the predictive capacities of science and technology become crucial. Global problems are those of worldwide pollution or environmental modification which are amenable to solution only by international agreement and a willingness of nations to act in concert for their common betterment.

U.S. scientists can contribute to these problems such as research on improved methods for measuring and monitoring pollutants and environmental quality changes, on methods for predicting and evaluating trends in environmental effects on weather, diversity of plankton, soil fertility and mutation rate, and improved models for dealing with the interactions of environmentally related phenomena and their behavior under alternative procedures of management. Just as the interpretation of the biological consequences of continued atmospheric nuclear weapons testing has led to international agreements limiting such testing, so the interpretation by knowledgeable scientists of ecologically disruptive practices such as defoliation, biological warfare, and oceanic dumping of wastes can lead to effective international agreements.

It is also reasonable to expect that cooperative international research on selected matters will be agreed upon next year in Stockholm. Among important (but not well enough known) examples are the International Biological Program (IBP) which is stressing biological adaptation and unique biological species. The report of the work of the International Agency for Research on Cancer by Higginson (*2*) describes another example of a significant program of biological research.

Forecasts of political agreements to which the work of the UN Conference might lead have been published by the David Davies Memorial Institute of International Studies (Thorney House, 34 Smith Square, London S.W.1). They include "Draft Rules Concerning Changes in the Environment of the Earth," "Oceanic Pollution: A Survey and Some Suggestions for Control" and the Annual Lecture for 1970 by J. E. S. Fawcett on "Priorities in Conservation."

There is every reason to hope that the columns of *Science* and the operations of the AAAS can continue to assist the scientific community in this country to play a more significant and active role in dealing with environmental problems on a worldwide scale.

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1. "Problems of the Human Environment," United Nations Economic and Social Council, 26 May 1969.
2. J. Higginson, *Science* **170**, 935 (1970).

Professional Performance of Women Physicians

The Carnegie Commission on Higher Education's report, *Higher Education and the Nation's Health: Policies for Medical and Dental Education* (McGraw-Hill, New York, 1970), will be regarded as a definitive and scholarly treatise. It is regrettable that a grievous error in citation presents a grossly distorted view of the professional performance of women physicians. Such an error is likely to be used, both wittingly and unwittingly, in "justification" of present prejudicial medical admission policies. Clark Kerr, the Commission chairman, has assured me that the error will be removed from future printings. Unfortunately, tens of thousands of copies are already extant.

On page 26, after noting the low percentage (6 percent) of U.S. physicians who are women in contrast to Germany (30 percent) or the Netherlands (20 percent), the report states: "Increasing the proportion of women in medical and dental schools, in the absence of other changes, would not increase the supply of physicians' and dentists' services, since many married women in these professions who have young children work only part time or drop out of the labor force entirely." This statement is "documented" by a footnote which reads: "Among female medical school graduates active from 1931 to 1956, 45% were working full time or part time in 1964." If, however, the reader consults the paper by Powers *et al.* (*1*) cited as the reference for this "datum," he will discover that 45 percent is the figure for *full-time practice* and that the correct figure for *full-time and part-time practice* (page 483) is

91.1 percent! These findings are corroborated by an unpublished study of Radcliffe alumnae who have entered medicine (*2*).

The Powers *et al.* study estimates that the male physicians in the sample work an average of 30 percent more hours and attend about one-third more patients than the women respondents (page 485). These data must be evaluated in relationship to differences in practice patterns, with women more often than men found in salaried than in private practice, a pattern likely to become more common for male physicians as well in the future. If we consider the obstacles that face women in entering medicine, in obtaining training in certain specialties, and returning to practice after bearing children, this record should be regarded as an extraordinary accomplishment rather than as an indication of limited potential. If we consider how much greater their professional output is likely to be, once these obstacles to training are removed, when day care becomes more widely available for women with children, and when problems of reentry into professional life for those who elect to withdraw temporarily for child-rearing are simplified by the provision of rational job and retraining opportunities, then it becomes abundantly clear that womanpower can contribute in a major way to meeting the national shortage of medical care. . . .

Perhaps a psychiatrist may be forgiven the speculation that so egregious an error could hardly have been overlooked had not the author of the section, the editor who followed him, and the proofreaders been all too ready to nod at statements that reflect hoary belief. After all, this is no mere misprint of a number; both the text and the footnote supply distorted information. . . .

There are other aspects of this report with which I take issue, but I limit this letter to a caveat to readers, lest they, too, give continued life to the canard that educational investment in women physicians is an unproductive endeavor. . . . This society can ill afford the waste of the talents of women.

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References

1. L. Powers, R. D. Parmelle, H. Wiesenfelder, *J. Med. Educ.* **44**, 481 (1969).
2. P. A. Williams, "Women in Medicine: Some Themes and Variations," unpublished manuscript.