38,000 kiloliters of herbicides in Vietnam.

From the ecological point of view, we fear that such wide-scale application of herbicides will deal a deadly blow to tropical forest ecosystems and cause serious damage to human beings and property. Even the report by the Midwest Research Institute admits the danger that the large-scale destruction of the vegetation in the high temperature and humidity of tropical forests may cause rapid erosion of organic matter in the soil and may turn the forest areas with the richest biological productivity into semipermanent lateritic barrens. The report also expressed fear that precious wild animals including the douc langur will be exterminated by the spraying. Moreover, it is possible that these herbicides will either kill small animals and fish, which are the important protein source for the natives, or contaminate them with poisonous residues. We recognize that such methods which cause these dangers are also the means of conducting war.

As ecologists, we share a world responsibility to prevent the destruction of nature by the thoughtless action of humans. At the 15th general meeting of the Ecological Society of Japan held at Ueda City, 2 June 1968, we resolved to demand that the United States immediately stop the large-scale military use of herbicides and forest burning in Vietnam. We also hope that ecologists everywhere will support our stand and take action on it.

YOSIAKI ITÔ

*Division of Entomology,*
*National Institute of Agricultural*
*Sciences, Nishigahara, Kita-Ku,*
*Tokyo, Japan*

(The above resolution was also signed by 121 members of the Ecological Society.)

**Reference**

1. *Assessment of Ecological Effects of Extensive or Repeated Use of Herbicides* (Midwest Research Institute, Kansas City, Mo., 1 Dec. 1967).

## Mathematics: Pro Bono Publico

The Council of the American Mathematical Society at its meeting on 28 August asked me to forward the following comments to *Science*:

Many mathematicians were dismayed and shocked by the excerpts of the speech by Donald Hornig, the Presiden-

tial Science Adviser (19 July, p. 248). His . . . comments about mathematics and mathematicians are . . . uncalled for. Implicit in Hornig's remarks about vacations on the beaches of Rio or the Aegean Islands was a thinly veiled attack on Stephen Smale. The allegations against Smale were adequately disproved by Daniel S. Greenberg in his articles in *Science* on the Smale-NSF controversy (News and Comment, 15, 22, and 29 Sept.; 6 Oct.; and 3 Nov. 1967).
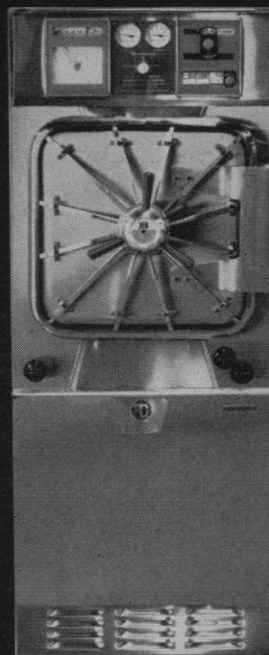
Hornig singles out mathematics in suggesting that the scientific community is one "which, insisting on its purity, will not deign to communicate with the public and justify itself. . . ." On the contrary, many branches of science have recently prepared extensive reports on their disciplines. In particular, the mathematical community, through the Committee on Support of Research in the Mathematical Sciences (COSRIMS), has just completed a comprehensive report, designed for the public and Congress, on the current problems of mathematical research and their relations to the national goals. Aware of the ever-increasing need and utility of mathematics in everyday life, this same community embarked on large programs (beginning with the "new math") to improve mathematical education in the elementary and secondary schools. Surely Dr. Hornig is aware of these, and other, steps to communicate with the public.

Government support has been a vital element in the rapid development of American science. Support by the NSF and other government agencies has in 10 years tripled the annual number of Ph.D.'s in mathematics. These young mathematicians have made a variety of profound and original discoveries ranging from those with direct practical applications (such as the unexpected use of logic in computing machines) to theoretical results which have attracted international acclaim (such as the work of Smale in dynamics and of Cohen in foundations). The future does involve a financial crisis which may have tragic consequences for the next generation of scientists and mathematicians. Hornig's statement is hardly a responsible contribution to the public discussion of this crisis or to the closing of the gap between working scientists and those in government concerned with science.

CHARLES B. MORREY, JR.
*American Mathematical Society,*
*321 South Main Street,*
*Providence, Rhode Island 02904*