School students to a questionnaire, that for the median student the word "possibility" in probability estimation had a value of 20 percent (with quartiles of 10 and 50 percent). Thus about half the students thought "possibility" meant 20 percent or less. Cliff (*2*), in his article "Adverbs as multipliers," found that the multiplying effect of "very" is about 1.25. I have no way of knowing the multiplicative effect of "real," but "decidedly" has a factor of 1.16, "unusually" of 1.28, and "extremely" of 1.45. I personally would consider "decidedly" as similar to "real" in multiplicative effect. This would give as a median estimate $1.16 \times 1.25 \times 20 = 29$ percent (with quartiles of 14 and 73 percent). (A more careful effort would require a transformation that would keep all percentages between 0 and 100.) Is not 29 percent one reasonable summary of the four estimates 2, 10, and 35 percent and "less than even"? If so, the official rhetoric seems to be right in line with the reported probability estimates, at least for the populations studied. I would like to see us much better able to make translations of the sort Boffey tries to make, and to encourage others to inform us of work done in this area of quantifying everyday language.

FREDERICK MOSTELLER
Department of Statistics,
Harvard University,
Cambridge, Massachusetts 02138

References

1. J. Selvidge, "Assigning probabilities to rare events," thesis, Harvard University (1972).
2. N. Cliff, *Psychol. Rev.* **66**, 27 (1959).

Antiviral Agent: Abbott Tests

The article "Chemotherapy: Antiviral agents come of age," by Thomas H. Maugh II (Research News, 9 Apr., p. 128), attributes to some anonymous investigators the suggestion that Abbott Laboratories is not pursuing the investigations of phosphonoacetic acid as actively as it might because "it is not a patented drug, but rather is in the public domain."

We wish Maugh had reviewed these suggestions with us before he reported them in *Science*, particularly in light of the evidence cited below.

The facts are that Abbott Laboratories has been actively investigating phosphonoacetic acid for some time now to establish safety evidence required both by our own scientific standards and by the Food and Drug Administration before clinical testing can be done. Sound animal studies prior to human testing represent a responsible approach to the development of a potential new therapeutic agent and should not be interpreted as "reluctance" on Abbott's part to undertake clinical studies.

The unjustified conclusion by Maugh and his anonymous "investigators" is also based on a false premise—that phosphonoacetic acid is not a patented drug. Abbott Laboratories does have a *method* patent on this agent covering its use in herpes simplex infections—U.S. Patent No. 3,767,795 (1973). This, too, is a fact which Maugh could—and should—have checked before his article was published.

We believe that Abbott Laboratories has made many significant contributions to virus research and is deserving of more accurate representation.

JOHN H. BIEL
Abbott Laboratories,
Abbott Park,
North Chicago, Illinois 60064

Moral Periodic Table

It is very encouraging to see the interest recently directed to the moral qualities of the element plutonium (News and Comment, 23 Apr., p. 356; Letters, 21 May, p. 738). There is little doubt that the singular properties of this metal as a poison, together with its origin in the nuclear caldron and its unique explosive qualities, justify some moral questions or at least some moralization. But why limit ourselves to the baneful transuranics? We should be grateful to the National Council of Churches for originating the concept of a moral periodic table, to which some further additions suggest themselves. Gold is clearly connected with the most known immoral tendencies and has been accused of being the root of all evil. Sulfur, while good when compounded in sulfa drugs, is clearly evil as a component of pollutants and such obnoxious compounds as mercaptans, and historical tradition gives good reason for supposing elemental sulfur to be the main constituent of Hell. Oxygen, however, is more difficult to rank; it is at once the supporter of Life and the element of Fire. The difficulty is even greater when one considers its allotropic modification, ozone, which is simultaneously a main component of smog and also our sole protection from the carcinogenic effects of solar ultraviolet. Perhaps the Council will issue a ruling on this question.

D. H. DOUGLAS-HAMILTON
39 Pinckney Street,
Boston, Massachusetts 02114