ously inaccurate" in reporting the annual meeting at which these resolutions were passed, and that it showed gross bias in devoting 36 lines to birth control and only 19 to animals for research.

As to the facts of the reporting, there hardly is any room for inaccuracy in the *Science* account since it consists merely of a very short paragraph stating that the two resolutions were passed and then quotes each of the resolutions. The reason why 36 lines are devoted to birth control and 19 to animals for research is very simple: the birth control resolution required 36 lines to print, the animals for research resolution, 19 lines. Everyone admits that both resolutions passed and that well over a quorum was present, even under the new constitution, which more than doubled the number required.

I have reread both the new and the old constitution and can find no suggestion, much less requirement, that motions passed by the members at the annual meeting should be sent to absent members for a mail vote.

How much confusion there really was is a debatable point. A motion was offered favoring governmental support for research and medical training in the field of birth control. Only two or three people spoke against it. I myself, perhaps unfortunately, then urged an amendment, but the majority felt it weakened the resolution, which passed in its original form, 39 to 25. Thus 61 percent favored the resolution in its "strong" form. Presidents of great nations more than once have been carried into office on far slimmer margins. Nevertheless, the matter was still further discussed, and it was finally agreed, almost, but not quite, unanimously to accept the motion but with the provision that it should be reworded by a committee before publication. This was done. I was appointed to the committee myself.

Of course it is possible to argue that the customarily small number of people who show up at annual business meetings is not a representative sample. However, there are good reasons, based on past experience, for believing that, at least in the American Society of Zoologists, the members who attend are, in fact, reasonably representative.

It is also possible to argue that to advocate research and free access to scientific knowledge in the field of birth control is wrong because a scientific organization should remain morally uncommitted. This is clearly not Nace's view, because he strongly favors society action against Senate Bill 3570.

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Institutions and Scholars

The article "Personality and scholarship" [*Science* **133**, 362 (10 Feb. 1961)] by Paul Heist, T. R. McConnell, Frank Matsler, and Phoebe Williams, of the staff of the Center for the Study of Higher Education, University of California, Berkeley (except for Matsler, who is at Humboldt State College), contains the following incorrect statement (p. 363, col. 2): "The institutions are listed in the order of the Knapp and Greenbaum indices of productivity. It may be noted that about 70 percent of the 216 male students attended the ten most productive institutions." [As stated by the authors, the Knapp and Greenbaum index of productivity was the "number of students per thousand graduates from 1946 to 1951 who later received either (i) Ph.D. degrees, (ii) university fellowships, (iii) government fellowships, or (iv) private foundation fellowships exceeding $400 per year."] Table 1 in the article is not arranged in the "order of the Knapp and Greenbaum indices of productivity," as stated. It is arranged according to the ratio of

Table 1. Institutions listed according to production of scholars, as described in the definition of the Knapp and Greenbaum indices of productivity.

School	Scholars per 1000 graduates (*N*)
Males	
Swarthmore	61
Reed	53
University of Chicago	48
Oberlin	40
Haverford	40
California Institute of Technology	38
Carleton	35
Princeton	32
Antioch	32
Harvard	27
Yale	27
Queens	26
Grinnell	24
Wesleyan	22
Kenyon	22
Johns Hopkins	21
Massachusetts Institute of Technology	21
University of the South	20
Knox College	20
Cornell	20
Cooper Union	18
Beloit	18
Columbia	18
Pomona	17
Wooster	17
Augustana	17
DePauw	17
Females	
Bryn Mawr	40
Barnard	26
Radcliffe	20
Vassar	17
Cornell	16
University of Pennsylvania	16
McMurray	12
Mt. Holyoke	12
Smith	11
Sienna Heights	11
University of Chicago	11

National Merit Scholarship students per thousand students enrolled. The actual "order of the Knapp and Greenbaum indices of productivity" [R. H. Knapp and J. J. Greenbaum, *The Younger American Scholar* (Univ. of Chicago Press, Chicago, 1953), pp. 16, 70] is as shown here in Table 1.

Although in general there is a high degree of correlation between the two listings with respect to the schools included, comparison of the two tables will show that there are gross differences between the two in the rankings for individual schools, as would be expected. Moreover, a few of the schools that appear in the listing given here do not appear at all in Table 1 of the article—for example, Antioch, Queens, Kenyon, Cooper Union, Beloit, and Wooster for males and McMurray and Sienna Heights for females. On the other hand, the following schools listed in Table 1 of the article were not among the first 27 for males in the Knapp and Greenbaum index of productivity: Amherst, Williams, Brown, University of Pennsylvania, and Dartmouth. Swarthmore and Grinnell were not among the first 11 for females. It is obvious that this is due to the meager statistical significance of many of the data in Table 1 of the article. More than half of the schools listed in that table had four or fewer National Merit Scholarship students. The table should have indicated that the data were for one year only (1956), and that many of the individual listings were not statistically significant. (Or, obviously, data that were not statistically significant could have been left out, or the table could have included the eight schools mentioned above that were in the Knapp and Greenbaum indices for productivity but did not happen to have any National Merit Scholarship students in 1956.)

There is a critical lack of published information that can give an indication of the comparative qualities of various schools; it is desirable to have information published that can be used to help fill this need. But precisely because of the intensity of interest in this kind of information, because of the use to which any data such as these will be put, and because of the sensitivity of any such ranking as this (involving both productivity and ratio of National Merit Scholarship students), it was incumbent upon Heist *et al.* to make every effort to forestall inaccurate interpretations. In this instance, without knowledge of the Knapp and Greenbaum book, it would be very difficult for the average reader to obtain an accurate impression.

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We want to thank Robert T. Jordan for calling attention to the following incorrect statement in our article: "The institutions are listed in the order of the Knapp and Greenbaum indices of productivity." The title of our Table 1, however, is correct: "Distribution of male and female National Merit Scholarship students among institutions ranked high in the production of scientists and scholars." This table head indicates the basis for ordering the institutions.

The sentence immediately following the incorrect statement is accurate as it stands; the "70 percent of the 216 male students" refers to the number of the ten *most* productive institutions (California Institute of Technology excluded) listed in the Knapp and Greenbaum volume.

Needless to say, we would like to avoid giving the reader a basis for inaccurate interpretation, and we believe that the article does not imply that there are differences in quality among the institutions listed in Table 1. We avoided making any qualitative comparisons among these schools, since our purpose was simply to present differences between the students who entered a group of more productive institutions and the students who entered a group of less productive institutions.

There would be no point in computing the statistical significance of the differences in numbers or proportions of National Merit Scholarship students attending the institutions listed in our Table 1. This would obviously be irrelevant.

For the purpose of simplicity, we included in our Table 1 only those of the 50 highest-ranking institutions in the Knapp-Greenbaum list in which one or more of the 1956 National Merit Scholarship students happened to be enrolled. We see no reason why a careful reader would find any implication concerning the relative quality of institutions in this table.

Knapp and Greenbaum did not include Swarthmore and Grinnell in their final list for females because the two institutions did not have 400 graduates over the period of the study. We included these two colleges in our Table 1 for the following reasons: (i) the number of graduates from these institutions approached the Knapp-Greenbaum criterion figure of 400 (397 for Swarthmore and 372 for Grinnell) and far exceeded the figure for most of the other institutions; (ii) the Knapp-Greenbaum indices of the number of female scholars per 1000 graduates [Knapp and Greenbaum, *The Younger American Scholar* (1953), appendix 1, p. 103] placed these two institutions second and third, respectively, following only Bryn Mawr in order of rank; (iii) both institutions ranked high on the indices for male graduates.

We believe that the text made it clear that the data were for one year only, since it was stated that "the sample . . . consisted of all the winners and a 10-percent sample of those who received certificates of merit (the near-winners) from the National Merit Scholarship Corporation in the spring of 1956."

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Salivary and Motor Conditioning

I was greatly astonished when reading a report by Martin M. Shapiro published in *Science* under the title "Respondent salivary conditioning during operant lever pressing in dogs" (*1*). The result obtained by the author, as formulated in the abstract, runs as follows: "Respondent salivary conditioning was found to occur during operant