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EDITORIAL

The Reader Response: Oyvey

Science has recently published a number of issues on special topics, such as women in science, in which we have invited a reader response. Moreover, we published a summary of these responses, for example, saying that 76% of the respondents felt one way about this question and 39% said something else about the other question. This tabulation provoked an avalanche of letters from distinguished statisticians who were not answering the questions we posed but instead were concerned with the use of the words survey or poll for a collection of responses that are not scientifically organized.

It is well known in the social science world that self-selected polls tend to select for groups that are more committed and more opinionated than would be representative of a general population. Therefore, a statistically accurate survey of AAAS members' opinions would involve a random selection of members from whom opinions would then be solicited. Such an accurate scientific survey, however, was not what the editor or staff had in mind. We were simply interested in hearing from those members who felt strongly and had an opinion—especially an opinion that had been provoked by the material in our special issue. Like others before us, we are neither for nor against apathy, but on the other hand there is a place for those who are committed and passionate. We made no attempt to present these reader responses as an accurate poll, nor did we put them in that section of the magazine devoted to peer-reviewed scientific articles. When we pointed out this segregation to the irate statisticians, they paid us the ultimate compliment, saying that anything published in *Science* was viewed with such respect that even a report in our news columns or letters section would be highly regarded by many and would be quoted as though it were a paper in a peer-reviewed journal. In short, it would take on the seriousness of a fact when it was indeed nothing of the sort.

Surveys are not only of importance in presidential elections and in basic social science research, but are also crucial in shaping and carrying out national policy, where sampling a fraction of the national population is extremely useful in forming a basis for social policy. Federal statistics are used, for example, in determinations of fiscal policy, the allocation of domestic assistance programs to states and local governments, planning of child care and senior centers, epidemiological studies on lung cancer, lead in drinking water, and increases in tuberculosis. Such surveys are complicated and expensive to plan and carry out; they cannot be done casually if they are to yield useful results. The danger of presenting a self-selected poll as if it were capable of yielding data that can be generalized to a population is twofold. First, it gives the mistaken impression that such informal methods are as accurate as true random samples. If one can achieve accuracy so easily, why bother with more difficult methods? Hence bad data-collection practice threatens to drive out good. Second, when a self-selected poll gives results that are found to be in error, the fact that the poll was done poorly is lost sight of and the failure blackens the reputations of even well-done surveys. Hence the desire of statisticians to maintain the terms survey and poll for accurately determined and statistically random polls is worthy of respect.

The scientific aspects of a survey need to be preserved, but the self-selected response also has its virtues. Because a reader-response survey is valuable to a magazine as a gauge of the opinions of its most committed readers and because it increases a sense of bonding in an organization, this editor does not want to discontinue these interactions with our readers and therefore suggested to statisticians that we coin a new term. They accepted the idea with enthusiasm. I am therefore suggesting the term "Oyvey" for any kind of self-selected response, such as a reader response, in which it is understood that those readers who care passionately or even semipassionately about a subject can be heard by their editor or their organization without implying the accuracy or generalizability of a random poll. The value of the Oyvey is based on the recognition that the people who self-select because of their strong feelings may have thought most clearly about an issue or may be most knowledgeable about it. They deserve to be heard, as long as they are not presented as a true cross section. In this regard, it is ironic that it was an Oyvey of statisticians that led us to modify our terminology and perhaps clarify the role of reader response versus accurate surveys in the general literature.

Daniel E. Koshland, Jr.