ministration as having "had a considerable amount of experience in the courts with its sampling procedures." The facts are that the Food and Drug Administration regularly condemns products on the basis of their agents' inspection of samples of shipments. Unfortunately, owing to the lawyers' naivete concerning statistics, counsel for the defendants have too infrequently attacked the Government's cases as being based on inadequately designed samples. Kennedy points out that the burden of the proof of the adequacy of the sampling procedure is the Government's.

Kennedy, in addition to other references, cites certain actions involving the Federal Trade Commission wherein sampling devices were used in order to better arrive at the facts. One of us has recently been involved as an expert in hearings of an organization before an examiner of the Federal Trade Commission. The case in point was an antitrust action, and the basis of the charge depended in part on the size of the total market of the product involved; this fact could not be definitely ascertained from any source, governmental or private. Other than estimates which were admitted to be sheer guesswork, there were no public "statistics" on the size of the market. It so happened that the respondent, in the usual course of business, had made market research studies on a random sampling basis. Along with the expert knowledge of company employees in the use of the collected data, these could be projected to a rather precise estimate of the total market. The point of interest here is that the very competent legal counsel available to *both* sides in the case were out of their depth when it came to understanding the testimony concerning these relatively simple statistical techniques.

As Kennedy concludes, "The use of sampling in the courts is increasing." The use of statistics is increasing in many areas where the legal expert must be at home. Statistical methodology and theory, tied up as it is in all scientific investigation, is becoming a more important technique to have at one's command.

It is especially important that the lawyer, if he is to represent properly his client in any of a host of civil or criminal actions, make himself familiar with this basic logic which, in essence, is similar to his own. The lawyer who does not is falling behind the pace of his times and failing the clients who place their confidence in him.

Be it understood that we have no intention of suggesting that lawyers must become technically proficient in scientific and/or statistical method. But some concerted effort, by responsible individuals and groups of scientists, is in order to get these ideas across to similar individuals and groups in the legal profession. The single most evident group on each side seems apparent. The AAAS, as the largest and most influential organization of scientists in the United States, might well consider the possibility of approaching the various bar associations with a fixed objective: the aiding of the members of the legal profession in becoming acquainted with the elements of scientific method and reasoning. Such a *rapprochement* could lead only to better understanding of science in the courts, better hearings, better decisions; it could be the beginning of the end of such farcical exhibitions as those in the hearings to which allusions were made in the editorials in *Science* mentioned earlier. Indeed, this could be the alternative to despair.

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Of Books and Reading

Many persons were greatly shocked at the conclusions of the American Institute of Public Opinion which were referred to in the editorial "Of books and reading" [Science **123**, 703 (27 Apr. 1956)]. In an effort to become better informed on the subject, I have on four occasions requested additional information from the institute.

Points covered in these letters were as follows:

1) Have background studies been published on how the statistics were compiled, and are detailed tables available to the general public or libraries?

2) Has Gallup written a general article describing the techniques that would be applicable to a better understanding of the results?

3) Has the information contained in the institute's releases been expanded, commented upon, or amplified in any published work?

4) How many people were interviewed and what mode of sampling was used?

In response to my first inquiries, two news releases were received without comment and, finally, a brief letter from one of the editors, which indicated that to his knowledge the information in the release had not been expanded or commented upon. A letter sent for the personal attention of Gallup elicited no response. None of the information provided by the institute gave a definite answer to any of the questions raised.

It seems to me that an institution which is so widely regarded as an authority in the field of public opinion has a responsibility to provide its readership with at least some basic facts on how such a poll is conducted. If the institute is unwilling or unable to do so, it is my opinion, and that of many of my business and professional associates, that the institute's methods, perhaps unjustly, are open to criticism. I am taking the liberty of communicating this information to *Science* because the aforementioned editorial had, no doubt, great weight with readers and might be considered an endorsement of the findings. Should the matter be permitted to rest?

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Periodically we study the book-reading habits of the American public and those of the people of other countries where we have affiliated organizations.

In the studies which have been reported, the results were based on this question put to all persons interviewed: "Do you happen to be reading any books or novels at present?" Those replying "yes" were then asked: "Which one(s)?"

In the tabulations we exclude reading of the Bible. In the most recent of these studies, we found that 17 percent were reading a book.

To find out how long it has been since the respondents have read a book, we have asked: "When, as nearly as you can recall, did you last read any book other than the Bible?" And then: "Can you recall the name of the book you last read?"

Every sample has been based on a true cross-section of the adult population of the country. These samples are based on from 1500 to 3000 personal interviews. In the language of statisticians, we use a "modified probability" sample.

Our standard procedure is to ask each respondent a great many "control" questions: education, age, sex, and religion, and so on. It is possible in this way to make certain that each cross-section is representative of all segments of the population, and it is possible to discover the reading habits of each segment.

Our methods have been described *ad nauseam*.

A few years ago the Survey Research Center of the University of Michigan undertook a national survey which provides data on book reading. The findings are contained in a book *The Library's Public* by Bernard Berelson. I strongly urge Wallerstein to consult this report.

One of the unfortunate features of our work in the Gallup Poll is that we do not have the time or the money to incorporate our findings in magazine or book form. Someday we hope we can interest a foundation in providing the funds for this purpose.

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