DISCUSSION

WHAT PRICE GLORY?

DEATH notices of physicians are recorded each week in the *Journal* of the American Medical Association. The longest obituaries appear at the head of the column, the shortest ones at the end, while the intermediate notices are of regularly decreasing lengths.

Richard A. Rendich[1] reports that the average age of the first ten was 4.7 years less than that of the last ten. The analysis was based on tabulation of thirty successive issues of the Journal. Thus, "the life span of the physicians who attained position of prestige could be compared with that of those who appear to have lived under less stress among their patients."

Clarence A. Mills[2] in an article entitled "What Price Glory?", analyzed 1,036 notices appearing in the same column. He assumes that the number of printed lines in each obituary may be used as a rough measure of the subject's prominence or achievement. The mean age at death was found greater in two groups: those with most lines (21 or more) and those with least (2 lines). The intermediates, with from 6 to 15 lines, die earliest. Mills writes "the great seem not so inclined to die young or break down in the struggle as are the somewhat less successful; instead, their heritage appears more likely to be a ripe old age."

Statistics, being endowed with mathematical accuracy, may be considered infallible. Their interpretation may not be, and particularly so if the basic premises on which the statistics were developed are incorrect. This is reminiscent of the early days of pathology when the gross pathologist had great fun with the clinician, twitting him over his diagnostic errors. There was no one to correct the pathologist. With the advent of microscopic pathology this was changed and the gross pathologist found himself no longer infallible. Some of us still have occasion, now and then, to doubt the finality of statistical conclusions. The question is not of the accuracy of the mathematics but of the human element, the basic premises and the interpretation of the findings. This is especially true in certain problems of medicine and the social sciences which do not lend themselves well to statistical analysis.

The present subject serves as an excellent example. In discussing "What Price Glory?" one must ask, "What Glory?" The only glory that can be truly analyzed statistically is the number of lines devoted to each death. Any conclusion that goes farther is inferential. As a rule the more prominent a man is, the larger will be the number of lines. But, given two men of equal prominence or success, the one who lives longer is likely to have held more positions, joined more societies and received more tokens of recognition. In this case age enters as a factor. Or, take two men of equal ability, one of whom has been active in organized medicine. The larger number of offices held will make more lines. Here, then, politics enters. I realize also that statisticians have check methods by which they believe they can determine whether an analysis is significant. Sometimes I find myself wishing that the statistician, like the gross pathologist, had someone to check him.

My thesis is illustrated in the following death notices which appeared in the *Journal* of the American Medical Association for October 24, 1942, approximately the date of Mills's communication.

Carey Culbertson. Winnetka, Ill.; Northwestern University Medical School, Chicago, 1898; specialist certified by the American Board of Obstetrics and Gynecology, Inc.; member of the American Gynecological Society and Chicago Pathological Society; a founder and member of the Central Association of Obstetricians and Gynecologists; fellow of the American College of Surgeons; for many years clinical professor of obstetrics and gynecology at the Rush Medical College, Chicago, and in 1941, when the school was taken over by the University of Illinois College of Medicine, became professor of obstetrics and gynecology emeritus; served as a major in the medical corps of the U. S. Army during World War I; formerly member of the board of health of Chicago and medical inspector of the public schools; chief of the staff of gynecology at the Cook County Hospital, Chicago, from 1925 to 1937 and for many years attending gynecologist; attending obstetrician and gynecologist to the Presbyterian Hospital, Chicago, from 1908 to 1938; formerly consulting obstetrician to the Norwegian American Hospital, Chicago; member of the Chicago Historical Society, Institute of American Genealogy and the Oriental Institute of the University of Chicago; at one time abstract editor of Surgery, Gynecology and Obstetrics, editor of Gregorio Maranon's book "The Climacteric" and author of "Surgery of the Female Pelvis": aged 71; died October 9, in the Veterans Administration Facility, Downey, of pneumonia.

Regina Flood Keyes Roberts, Chefoo, China; University of Buffalo School of Medicine, 1896; formerly clinical instructor in obstetrics at her alma mater; at one time on the staffs of the Buffalo General and Erie County Hospitals, Buffalo; organized and was head of a base hospital in Salonika, Greece, during World War I; was decorated by the French, Serbian and Belgian governments; aged 72; died July 10, while aboard the S. S. Conte Verde of a ruptured gallbladder.

Having read these, one feels that one knows all that was important in the events of the first life. But don't you wish that you had been told a bit more

[1] *Jour.* Amer. Med. Assn., July 25, 1942, page 1041.
[2] SCIENCE, October 23, 1942, page 380.

about the thrills and the accomplishments of the little old lady in far-away China, who fought in the last war and was decorated by three governments?

Obituary notices of prominent people are often written on the basis of information available in "Who's Who in America." Applying the line test to "Who's Who" brings out some interesting figures. Henry Ford has 28 lines; Theodore Roosevelt, Jr., 49; C. F. Williams, Cincinnati, 50; William Fortune, of Indianapolis, 117. Franklin Delano Roosevelt rates only 35 lines.

In 1938 Lily Pons had 11 lines, while Shirley Temple had 22. In 1942 Miss Pons had 19, while Miss Temple had increased to 25. Miss Pons is gradually catching up. In 1938 Jack Benny had 10 lines, Fred Allen 4. The 1942 figures indicate waning popularity of the former with increasing fame of the latter, since Benny now has, 9, Allen 6. In 1938 Douglas Fairbanks had 21 lines, while his son had 26. Jerome Kern rates 53 lines against Fritz Kreisler's 19. E. Phillips Oppenheim has more than twice as many as Ernest Hemingway. One of Koussevitsky's associate directors has 30 lines against Koussevitsky's 26. Toscanini rates 22.

These are glaring discrepancies. There are many others. I realize that the statisticians might try to show that, taking the book as a whole, they are not of statistical significance. Inequalities do not show as much in "American Men of Science," since the data in all cases are much briefer. However, I do gather the impression from hasty perusal that if one is an M.D. one is likely to have a longer sketch. If this is so, we must add "profession" to "longevity" and "political affiliations" as a factor in determining the number of glory lines.

The purpose of the present communication is not to take issue with the conclusions of the two reports under discussion but to call attention to possible discrepancies between "statistical information" and "conclusions based on statistics."

WARREN T. VAUGHAN

RICHMOND, VA.

A NEED FOR MORE UNIFORM USAGE OF WORDS OF INDEFINITE MEANING

ON page 560 of SCIENCE, issue for December 18, 1942, Mr. Ackerman had a communication entitled "A Need for more Uniform Usage of Words of Indefinite Meaning." It seems to me that as soon as we assign mathematical values to the words which he mentioned they lose their meaning as "words." While at first thought the temptation is to agree with Mr. Ackerman, yet after a more careful consideration, it seems as though assigning definite mathematical values to these words were unnecessary and misleading. If one knows the approximate percentage of the occurrence of a phenomenon it is just as easy to use the numbers as words designating them. For example, it would be just as easy to say, "it occurred only one or two per cent. of the time" as it would be to say "it occurred very few times." We could just as easily say "it occurred anywhere from 10 to 25 per cent." as to say "it occurred frequently." Every one of course must agree that "all" can mean only 100 per cent., and that "about half" should mean from 45 to 55 per cent.

The use of such words when the approximate percentage is known might also be misleading. In discussing certain quantities, one invariably thinks of percentages, while in discussing others, numbers may be of greater importance than percentages. Take for example: in the observation of 100 phenomena, let us say one of them did not follow the particular law being investigated. We would then say that "seldom was the law disobeyed." Supposing only ten observations had been made and one did not agree with the general law, how should we express this in words? According to Mr. Ackerman, we would say "The law was frequently disobeyed." Was it?

It seems to me that the difficulty is not with the general meaning of such words as "seldom," "slightly," "frequently," etc., but rather with the men who use them. Since they are only used when the exact percentage or the exact number is unknown, I believe it would be folly to try to assign even approximate values to them.

May I suggest that we should learn to say "approximately 40 per cent. . . . " rather than "very many."

FERDINAND JEHLE

INDIANAPOLIS, IND.

AVIAN MALARIA

IN an article entitled, "The Occurrence of Intravascular Agglutinations in Avian Malaria," which appeared in the issue of SCIENCE of December 4, 1942, Dr. Arthur L. Lack, Jr., reported certain work done by him while an instructor in the department of anatomy in the University of Tennessee. The publication is not credited to the University of Tennessee, but footnotes acknowledging support of the work by the Tennessee Valley Authority through the University of Tennessee lead to the implication that these organizations were cognizant of the publication. Neither the Tennessee Valley Authority nor the University of Tennessee had an opportunity to review the report before it was published and do not assume responsibility for it.

T. P. NASH, JR.,
Dean

SCHOOL OF BIOLOGICAL SCIENCES,
UNIVERSITY OF TENNESSEE