microorganisms may play an important role in the deterioration of rubber products. The life of rubber products which come in contact with moisture may be prolonged if ways can be found to retard or prevent the activity of rubber oxidizing microorganisms.

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STATE BOARD STATISTICS AS A BASIS FOR COMPARISON OF MEDICAL SCHOOLS

A RECENT article in SCIENCE,[1] by Albert E. Casey, compares 15 medical schools with respect to quality of teaching. A definite rank in the group is assigned to each school. Several features of the article appear to deserve comment.

(1) The state board statistics, cited as a basis for the comparison, do not agree with the annual tabulations of such data published in the *Journal* of the American Medical Association.[2] Three of the discrepancies concern the number of graduates listed from individual schools and are too small to be important. But Dr. Casey attributes to Loyola 53 failures, on foreign state board examinations, during the five-year period covered by his study. The annual tabulations in the *Journal* of the American Medical Association list only 32 such failures for Loyola. We have examined each individual state board report, published and indexed in that journal, for the years in question; but have not been able to confirm Dr. Casey's figure.

(2) Any comparison of schools from state board statistics is complicated by two facts. They are (a) that the geographical distribution of graduates is not the same for any two schools, and (b) that the rate of failure, for all candidates examined, is consistently higher in some states than in others. Dr. Casey does not indicate the distribution of candidates or of failures by states. According to the annual tabulations in the *Journal* of the American Medical Association,[2] more than half of all the failures listed by Dr. Casey occurred in two states, New York and Massachusetts. Each of the 15 schools had a higher rate of failure in those two states (taken together) than elsewhere, and for the entire group of schools there were 202 failures out of 986 examinations (20.5 per cent.). In all other states combined (excluding, as Dr. Casey does, candidates locally graduated) there were 154 failures out of 3,974 examinations (3.9 per cent.). The several schools were not represented in New York and Massachusetts by equal quotas of graduates. One school had 5.5 per cent. of its listed graduates examined in those two states, another 35.3 per cent. Quotas for the remaining schools varied between these extremes. For the five schools highest on Dr. Casey's list the average quota was 12.3 per cent.; for the five lowest, 25.6 per cent.

Now the reason for the disparity of failure rates, from state to state, is a matter of opinion. We may assume that examination standards are everywhere uniform; but this logically implies that the weakest graduates from all schools show a conspicuous preference for certain states, a phenomenon which might be difficult to account for. If we assume, alternatively, that examination standards vary from state to state, then obviously the number of failures charged to a given school must be determined largely by the geographical distribution of its graduates. It thus becomes somewhat difficult to compare any two schools, and considerably more so to compare fifteen. Dr. Casey ingeniously avoids these complications by using both assumptions at the same time. He excludes all examinations taken by candidates in the states where they were graduated, and calculates from the remaining data the percentage of failures for each school. If examination standards are uniform, there is no reason to exclude local examinations; if they are not uniform, failure percentages calculated from the remaining data are not fairly comparable.

(3) If all candidates were examined by the same board, variations of failure rate from school to school would no doubt appear. It does not follow, however, that such differences would be due entirely to variations in the quality of teaching, unless it can be shown that the schools are on an equal basis with respect to the quality of classes entering. The applicants annually accepted by the medical schools of the country are, in the judgment of admitting officials, the best available; but Dr. Casey offers no proof that the class entering at Harvard, for example (the first school on his list), is a representative cross-section of the larger group of students admitted to all the schools.

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WHAT PRICE GLORY?

IN a recent issue of the *Journal* of the American Medical Association (July 25, 1942, page 1041), Dr. Rendich, of Brooklyn, has stated that the more prominent physicians—those whose death notices head the weekly list in the *Journal*—die on the average 4.7 years earlier in life than do those whose demise receives only a bare mention. This rather markedly shortened life span he infers to be the price of success or prominence in the medical world.

[6] On sabbatical leave from Brooklyn College, New York. Assisted by grant No. 555 from the American Philosophical Society.

[1] Albert E. Casey, SCIENCE, 96: 110, 1942.

[2] *Journal of the American Medical Association*, 98: 1458, 1932; 100: 1240, 1933; 104: 1506, 1935; 106: 1476, 1936; and 108: 1412, 1937.

Rendich's logic may point in the right direction, since the stress of successful activity could well accentuate the physicians' already strong tendency to die of degenerative disease; his facts, however, are inadequate to establish the point. A more complete investigation of the subject brings out some rather striking information.

In Table 1 are given the mean ages at death of physicians awarded, respectively, 2, 3–5, 6–10, 11–15, 16–20 and 21 or more lines in the "Death Notices" columns of the *Journal*. Two hundred cases in each group were considered adequate to give a stable mean, but this number could not be obtained for the two upper classes without going back more than five years; use of older death lists was considered inadvisable because of sharp changes in certain disease mortalities—such, for instance, as has followed introduction of the newer forms of chemotherapy.

TABLE 1

DEATH AGE OF PHYSICIANS ACCORDING TO DEGREE OF PROMINENCE

Number of lines in death column notices	Number of cases	Mean age at death years
2	200	71.2750 ± 0.5134
3– 5	200	67.1750 ± 0.5875
6–10	200	65.2250 ± 0.5384
11–15	200	65.9250 ± 0.5096
16–20	100	68.0000 ± 0.6643
21+	136	70.5885 ± 0.5520

Here is evident a very definite and statistically significant trend in death age according to degree of prominence attained. Those whose deaths received bare mention lived to the greatest age but were closely followed by those whose achievements gained wide attention. Those achieving only mediocre success seemed to pay the highest price in terms of an earlier death age. The difference between the mean death ages of those with 2 lines and those with 6–10 lines is 6.0500 ± 0.7439 years; this difference is 8.1 times its own probable error and would almost never occur by chance alone (only once in 100,000,000 times, more or less). Likewise, the difference in death age between those with 6–10 lines and those with 21+ lines (5.3635 ± 0.7711 years) is 7 times its own probable error and would occur by chance only once in about 500,000 times. The differences between the 6–10 and the 11–15 line groups and between the 2 and the 21+ line groups are only of the same order as their own probable errors and hence are without significance.

Interesting speculation may well be given to these observed differences in the mean life span. Do the really great live longer and achieve more because of a greater vitality and working capacity, or do they reach a higher plane of success as a result of their added years of effort? Since most great physicians have already made a name for themselves in the medical world by the time they are 50 years old, it seems likely that a high vitality of brain and body is the responsible factor. At any rate, 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. This is indeed fortunate for society, for their great intrinsic capability is thus seasoned by a longer lifetime of experience and observation; these are the men whose counsel becomes increasingly valuable with advancing age.

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CORRECTION

THE 1942 U.S.D.A. Yearbook, "Keeping Livestock Healthy," page 1096, fails to give proper credit to the research workers responsible for the experimental production of goiter in poultry. This was first accomplished in 1938 by A. R. Patton, H. S. Wilgus, Jr., and G. S. Harshfield (SCIENCE, 89: 162, 1939).

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SPECIAL CORRESPONDENCE

THE ETHNOGEOGRAPHIC BOARD

As a means of integrating certain types of federal and non-federal research, there has been established in Washington an Ethnogeographic Board under the joint sponsorship of the American Council of Learned Societies, the Social Science Research Council, the National Research Council and the Smithsonian Institution.

The Ethnogeographic Board is an extra-governmental agency concerned with war and post-war problems in the field of ethnogeography, the study of human and natural resources of world areas, particularly with communities and cultural regions outside the continental United States. Its function is that of a useful clearing house between the sponsoring institutions, with their numerous affiliated scientific and educational organizations outside of Washington and the war agencies within the Government. The board functions in cooperation with the Joint Committee on Latin American Studies of the "three Councils"; the Smithsonian War Committee, the Intensive Language Program of the American Council of Learned Societies, the Committees on the Anthropology of