

stead of the general physiologist, there are the neurologist, the students of the physiology of secretion, or nutrition, or of circulation, each one working in his own particular field of research, which, as investigation goes on, is found to be of vaster extent than supposition allowed.

What I have said with regard to the progress of knowledge of animal physiology is true to a great extent also of histology, bacteriology, and pathology; and it is quite possible that were I as much conversant with the literature and progress in those sciences, an appreciative description of the advances in them, and especially in bacteriology, would meet with a greater assent from you, because of the general recognition, on the one hand, of the immense strides that surgery has, on account of it, made within the last fifteen years, and, on the other, of the fact that through it we know the causes of a very important group of diseases. I do not wish to diminish one whit the recognition of merit which that science has justly as its due, but I would like to point out that it has not been the cause of all the progress which has obtained for the last ten years, for had our knowledge of physiology remained as limited as it was in 1880 there would have been no triumphs in brain surgery; we would not have the knowledge of diseases of the nervous system that we now possess; and the medical treatment of functional diseases would have been as largely empirical as it was in 1880. Bacteriology, indeed, suddenly opened to surgery fields of work from which it was hitherto excluded, and the bountiful harvest that it has reaped has absorbed so much of popular attention that little is given to the unostentatious progress that medicine has made—a progress, let me say, with all due respect to the surgeon, greater than that made by surgery in the last thirty years.

Now, a comparison of the advances in physiology and pathology for the last thirty-five years shows that in both there has been an immense acquisition of knowledge, and that in each decade the increase has been made in arithmetical, if not in geometrical, proportion to that of the preceding ten years. Bacteriology has also since 1880 in its expansion exhibited the same rate of progress. This advance is one element upon which we must rely in the forecast of the future.

The other element is the appreciation of medical science which obtains at the present day. By this do not understand me to mean popular appreciation, but that enthusiasm which is shown in investigation in all departments of medical science. The additions that are made annually to our stock of knowledge in this line indicate that a host of scientific workers are constantly experimenting, observing, and recording, and that every year the number in the rank and file of investigators is increased by the accession of fresh recruits. That is an appreciation that is certain to continue whether the state countenances it or not.