

Willis, Vieussens, Wharton, Sylvius, de Graaf, Swammerdam, Leeuwenhoek, Bartholinus, Mayow, Redi, Boyle, Galileo and Newton, in whom the Scientific Spirit flourished as it never did before. These natural philosophers, as they were called, isolated and scattered over Europe, were not stimulated by the hope of fame or the reward of place to study nature, they were all driven by that internal force, intellectual curiosity, the Scientific Spirit, to seek to know and, considering the difficulties they had to meet, difficulties which came on the one hand from the fact that they were breaking absolutely new paths into the unknown, and on the other, from the hostility of their environment, one is led to regard their attitude of mind and their unwearied search for truth as never to be excelled. It was they who laid the foundations of astronomy, chemistry, physics, biology, anatomy, physiology and pathology.

It is a remarkable fact that in the next century there followed a halt after so brilliant a beginning, and though some progress in all these sciences was made, substantial advances began only about the middle of the nineteenth century. Then the Scientific Spirit developed as it did in the sixteenth century, and we are now at its flood tide which will never again ebb. In the last half century the development of the sciences, chemistry, biology, physiology and pathology was an extraordinary stimulus to the development of medicine. If we strike out of the record of the last two hundred years all the additions to medicine and surgery due to the development of the sciences named, comparatively little of value would remain.

In consequence of all this development of the sciences, physical diagnosis became more exact, the phenomena of disease were more accurately determined and clear ideas were attained as to the processes involved in disease. Because of all the aid furnished by the sciences it is possible for the practitioner of medicine of to-day to deal with disease in a way that no physician either in the days of Hippocrates or of a century ago could have imagined possible. It is, indeed, doubtful if even the most far-seeing physician of 1870 could have forecast the development which has taken place in the last thirty years.

All this progress has depended on the simple methods which the average physician with a moderate amount of laboratory training has been able to follow and even employ. The results of these methods he can understand and thus he is in a position to keep step with advancing knowledge. These simple methods are still serviceable in clearing up dark points, as witness the discovery by Schaudinn of the *Spirochæta* of syphilis, and the identification of *Trypanosoma* as the