

becomes protonuclein, after the analogy of Prof. Huxley's nomenclature, which represented its real origin. This substance is rich in phosphorus, and has been separated in active form from the lymphoid structure of the body, as we shall see later.

We are brought now face to face with one of the most formidable problems of physiology, the solution of which will destroy many of our old pathological ideas, upon which so many therapeutic systems have been wrecked. Up to a very recent date in the history of pathology leucocythemia was considered a specific disease. Upon the *post hoc, propter hoc* principle of medical philosophy, the rush of leucocytes to any point of irritation was regarded as a feature, or even as a distinct stage of the disease. How vividly can the memory of some of you recall the old professional saws, as they were called by those of us who sat at the feet of the Gamaliels of those days, among which there was none more familiar than the *Ubi irritatio ibi fluxus*! We answered almost all questions upon inflammation with this single axiom, as we believed it. Often have I heard the venerable Gross straighten his lofty form and declare in stentorian voice that inflammation consisted pathologically of the rapid afflux of leucocytes! How startled would he be to learn that modern physiology has demonstrated that rapid afflux to be nature's reinforcing battalions. Every white blood corpuscle which gathered about that point of irritation bore with it the materials of repair, and as still later investigation has proved, also the power of overwhelming toxic germs, themselves in their incipency, and protecting the organism against their poisonous and deadly exudations.

As to the phagocytic action or cell-eating power of the leucocytes, which has been strongly claimed by some observers and as strenuously denied by others, it is after all a mere question of difference in the manner of destroying toxic germs which has developed antagonism among physiological observers. It is, as I have upon a previous occasion already remarked, not at all necessary that because the physiological or pathological function of one cell is lost in that of another, we should in speaking of such action as a phagocytic or cell-eating process, imagine a mouth and teeth and all the paraphernalia of mastication, deglutition, etc. The result is the same, whether the pathological germ is swallowed, destroyed, or neutralized; so long as the cellular influence of the leucocyte is the agent which accomplishes this, it is immaterial whether we use the term "phagocytic" literally or metaphorically, but notwithstanding all the adverse criticisms of the word as used in this connection, there is none given us which more emphatically expresses the idea we wish to convey, and