

phagocytes they are also called—rush to the breach to repel the invader. It reminds one of the lines in Milton's "Paradise Lost"—

"Thenceforth on all sides to his aid was run
By angels many and strong."

So the phagocytes rush to save the system from being overcome by the marauder, the tubercle bacillus, which once safely lodged and entrenched, will ultimately capture the whole body. The phagocytes make a strong fight, and endeavor to oust the invader, not by throwing him from the battlements, but by quietly surrounding him, enfolding him, eating him. Now, it all depends upon the relative strength of the phagocytes and tubercle bacillus as to which shall gain victory. If the phagocytes be weakened by disease, vice, intemperance, want, or *heredity* in the person of the man, woman or child in which they exist, then they may either decline the conflict, or risking the battle, be overcome by the stronger adversary, the tubercle bacillus. Then the citadel is won, and the tubercle bacillus, having gained an entrance and lodgement, begins at once to reproduce himself, to make his way to other spots where new foci are established, and worse than that, begins to manufacture an insidious poison, a toxin which circulates in every part of the body of the individual infected, producing weakness, lassitude, fever, want of appetite, bloodlessness, pains, headache, diarrhea, loss of flesh, night sweats, and other dread symptoms of the horrible scourge which we call tuberculosis. The point I wish to emphasize is this, if we wish to avoid disease we must keep our white blood corpuscle—which for our present purpose, is equivalent to saying our systems—in the strongest possible condition, so that they may be efficient to do battle, not only with the tubercle bacillus, but with many other kinds of germs, such as pneumococcus, which produces pneumonia, the Klebs-Loeffler bacillus, which produces diphtheria, and hosts of others which are constantly threatening the integrity of our health. I said just now that the tubercle bacillus gets to the system from without. The number of cases recorded in which it has been found in the new born at birth is so few that, considering the total number of cases of tuberculosis, they may be put down as zero in the mathematical sense of the term, or as an infinitely small number, and so disregarded. Thus we see that the disease is always contracted.

This brings me to my second point:

(b) What is the influence of heredity in this disease? We can most of us remember the time when consumption was regarded by both laity and the profession as entirely hereditary. The great Koch had not yet discovered the tubercle bacillus. The bacteria were practically unknown. Their life processes and their causative influence in various processes, such as fer-