

an individual man, or of any other individual land animal, they have each and every one of them, both men and animals, rudimentary gills and rudimentary branchial arteries. These undeveloped organs are of course of no use to man or any other land animal; why then do they find a place in their bodies? Such anomalies as these might be mentioned by scores. I will refer briefly to just one more: You know that man has twelve pairs of ribs, that is twelve ribs on each side, but many other animals lower in the scale of creation have a much larger number. Many reptiles have twenty, thirty, even fifty or more pairs. But besides man's twelve ribs on each side he has running across the body below these in the situation in which other ribs would exist if we had them a certain variable number of white lines (technically called *linie albæ*). Anatomists are agreed that these white lines correspond to the abdominal ribs of reptiles. But will anyone tell me, on the supposition of man having been a distinct and separate creation, for what purpose they were placed in his body?

I have said that the great value of the study of medicine is not the cure or even the prevention of disease, but the liberation of the human mind, and you may now catch a glimpse of one way in which it effects this liberation. The fear of disease and death forces man to seek means whereby these may be warded off; this search leads, along with much else, to the study of human anatomy; in studying anatomy we encounter the anomalies to which I have just referred and innumerable others like them; in order that light may be thrown upon these apparently meaningless freaks of nature, general or comparative anatomy must be and is studied; a knowledge of this leads to such results as I have set forth; from these and other analogous indications flow the vast and splendid speculations which light up with starlike beauty the pages of such writers as Darwin, Spencer and Haeckel, whose radiance carried forward and increased from age to age, shall yet illumine the darkest recesses of nature.

(2nd.) The second series is the Histological, a large subject upon which only a few words can now be said. You are, probably, many of you, aware that each one of our bodies is built up of millions and millions of cells; every organ, every tissue, every part of us is composed of these minute, generally