

weight that should be given to evidences of inheritance of one or other condition in estimating the probable duration of life of the individual.

It seems to me all the more necessary at the present time to bring these matters before you when educated men in general are discussing this subject of inheritance, and when, owing largely to the teaching of Weismann, the popular opinion is that after all, inheritance plays a very small part in development of disease, and more especially when Weismann's teaching concerning the non-inheritance of characters acquired by the individual has been, as I firmly believe, extensively misapplied, so that there is at the present moment a state of very general uncertainty as to whether we are right in taking parental disease into account in estimating the probable duration of life of the offspring.

To note one example, what is to be our position with regard to tuberculosis? We are told that this disease is very, very rarely inherited. Nay, I would go further and say that tuberculosis as such is never truly inherited. But is this to lead us to assume that, therefore, because there is no direct inheritance, the child of tuberculous parents is to be treated identically the same as the child of a family in which there is no tuberculous history? All these are matters which, it seems to me, directly interest you, and I shall feel satisfied if to-night, in the short time at my disposal, I may be able to give you a certain amount of information which may lead you to comprehend these matters and their bearing.

In the first place, it is necessary to have a clear understanding of what inheritance really is, and this because even among medical men and in medical writings, not to speak of the laity, there are the vaguest ideas upon this matter. We have to recognize that it is wrong to consider that everything is inherited which is the property of the child at the moment of birth. There are, in fact, two very distinct conditions to be recognized, as I can best explain to you by a brief reference to the development of the individual. The whole body of each individual is, I need scarcely tell you, composed of a collection of cells, and these cells have different structures and different functions, according to the organs of which they form a part. For example, a bone cell has a very different appearance from a liver cell or a nerve cell, although each of these has certain properties in common with all other cells, namely, it possesses a central body or a nucleus, which is the controlling portion of the cell, and this lies in and controls the surrounding cell substance. One special set of these cells thus forms an essential constituent of the male and female reproductive glands, namely, of the ovaries and the testes respectively.