

the body cells, then we have to recognise two possibilities. Infection may lead to one or other effect upon the body cells. Either it may weaken and eventually destroy those cells, or, if the constitution be strong and the virus not too potent, the cells eventually gain an increased power of neutralising the toxine, whereby immunity is developed. The individual, for example, is either killed by small-pox, or, if he survives, is protected against another attack, and what happens to the individual is the resultant of what happens to the cells composing that individual.

If, therefore, in these matters the germ cells are affected like the rest, then, to take a concrete example, tuberculosis in the parent must affect the offspring in one of two directions. If there is severe and progressive parental intoxication, the germ cells may be regarded as being weakened, and the offspring weakened also and rendered more susceptible to tuberculous infection in particular; if, on the other hand, the parental economy has reacted successfully and by the production of increased antitoxic substances has arrested the advance of the disease, then the germ cells may also be regarded as participating in the acquired power of increased resistance to the tuberculous toxins, and the offspring as showing greater refractoriness towards the disease. In other words, it becomes possible that we have to deal with two sets of individuals the offspring of tuberculous parents (1) those who are weakened and whose lives are likely to be shortened, and (2) those who have gained an increased immunity to the disease, whose lives to this extent tend to be lengthened above the normal. Indeed, there are those already who urge that parental tuberculosis confers increased immunity. At the meeting of the British Congress of Tuberculosis in London in 1901, a paper was contributed, in which the author showed, by a careful statistical examination of several families, that such increased resistance is recognisable, and the same has been suggested by more than one German observer.

In confronting you with this dilemma, you will, I fear, gentlemen, regard me as a very Balaam, and will return to me, with compound interest, the compliment paid by the prophet to the Moabites, or rather not paid by him to the children of Israel.

There is, however, it would seem, a way opening out of this difficulty, and it may well be that, in showing you this way, I perform a greater service than I can do by merely discussing this subject of inheritance, if, indeed, the actuaries have not forestalled me.

Both those of us who are studying this matter from the standpoint of pure science, and those of you who are doing the same for its direct practical bearing in insurance matters, are anxious to have something