

progeny of tuberculous parents, on the contrary, is often precocious in development and mentally peculiarly bright and alert, of good, suspiciously good, complexion, but with poorly-developed chest. Not to discuss the other conditions, it would seem that the parasymphilitic mental condition is one of dulling of the nerves, the paratubercular, that grade of mental instability which renders the higher centres more easily stimulated. It is very generally held also that the children of tubercular parentage are more prone to subsequent infection by tuberculosis. The most brilliant man it has been my fortune to know was himself the son of a tuberculous mother, and succumbed to tuberculosis in middle age.

Is it, therefore, that different poisons act differently upon the germ cells, and that thus different parental intoxications lead to the inheritance of different orders of disturbances? Time forbids that I should enter into the full discussion of this subject, for it is most complex and, for a full comprehension, requires a discussion and analysis of the various theories of inheritance. Those who hold Weismann's theory, with its complicated series of imagined "ids," "idants," and the like, deny its possibility. As I pointed out in 1901 in an address which I gave before the Brooklyn Medical Club,\* that theory is of proved incompetency; it cannot stand. The ultimate theory of inheritance must not be morphological but chemical or physical in its terms. We must regard the idioplasm, or controlling living matter of the germ and body cells as a chemical substance, which grows by taking up non-living matter and converting it into matter like unto itself, and possessing like properties. In thus taking up other matters, it must be subject to continual modification. If we accept this as the basal conception and the foundation of our theory, then it becomes possible to recognise that this or that substance absorbed into the cells may permanently modify the constitution of their most complex idioplasm, and, that so, the idioplasm of the germ cell, modified in one or other direction by the action of a definite toxic substance upon it, when it fuses with the idioplasm of the conjugating germ cell, may modify the growth and properties of the resulting individual in one or other direction.

More than this time forbids me to say. I can but ask you to accept as possible that infectious diseases in the parent influence the offspring in one or other direction, and to accept as my belief that parental tuberculosis, for example, has a definite specific influence upon the offspring. These same considerations, however, lead to further complications. If the germ cells are acted upon by toxins, just as are

\* *New York Medical Journal*, Jan. 1st, 1901; *British Medical Journal*, Jan. 1st, 1901.