

the two come together, there is a different result. The male cell apparently is absorbed and disappears in that of the female;—apparently only, for the result is neither male nor female, but neuter; and, as a neuter, it takes on the power of growth in a specific direction. Regardless of everything save actual violence, this soft and tiny germ keeps steadily on its course. Sheltered from the awful powers of nature; never warped by the environment of myriads of growing shapes, it moulds itself in imitation of a body it cannot see; and, when that imitation is complete, it stops,—now no longer a neuter, but a male or a female and ready to begin its course of reproduction, decline, and death. What is a plain statement of this process? It is, that two cells, neither of which had at the outset any suggestive character, combine; and then reproduce the complex organism from which they sprung. Here is man, who properly is called a little world, produced from a cell. The only organic connection between father and child is a cell, a spermatozoon; and yet we see children taking absolutely after the father in physical structure and in mind. The only connection between grandfather and grandchild is a single cell from among thousands of millions of cells, which thousands of millions were, many years before, influenced in their growth by a single cell from that grandparent. And yet, again, we see children having no likeness to their father but evidently taking after their grandfather.

If, however, a cell (spermatozoon) can determine the structure of a grandchild, we have this dilemma:—(1) Each cell carries potentiality to do anything. (2) Many millions of cells may be ruled by one of their number, which is no better than they. Or, to speak more generally, if each cell contains in itself power for every development (as by the theory of development it must, because all forms are evolved, one out of another, and what we call species are but temporary halts in evolution), then such cell is by itself really more powerful than in combination with others; for, as soon as it combines with others, most of its powers become latent, and only such of them remain active as are employed in building the structure intended—for example, a Beetlehead plover. From this it follows:—(1) That organised matter attains its greatest power in its smallest size and in a solitary state. (2) That the living kingdoms being made up of a quasi-infinite number of such smallest organised units of matter;—of cells, to wit,—each cell is all-powerful, and of course equally potent with every other cell. (3) That these all-powerful and equal cells agree to make combinations, and thereupon cease to be all-powerful and become, for the time being, limited in power.

The history of a cell has been given above, and it is only a history: a bare statement of the development, or evolution, of certain matter under given conditions. Hence it follows that all theories of growth, development, or evolution, have simply an historical interest, and very little philosophical. Every human being has grown from two cells, and that growth is nourished by the same material that nourishes the growth of other