

THE RIDDLE OF THE UNIVERSE

certain respects; and that is true both of bodily and mental features. All the chief laws of heredity which I first formulated in my *General Morphology*, and popularized in my *Natural History of Creation*, are just as valid and universal in their application to psychic phenomena as to bodily structure—in fact, they are frequently more striking and conspicuous in the former than in the latter.

However, the great province of heredity, to the inestimable importance of which Darwin first opened our eyes in 1859, is thickly beset with obscure problems and physiological difficulties. We dare not claim, even after forty years of research, that all its aspects are clear to us. Yet we have done so much that we can confidently speak of heredity as a *physiological function* of the organism, which is directly connected with the faculty of generation; and we must reduce it, like all other vital phenomena, to exclusively physical and chemical processes, to the *mechanics of the protoplasm*. We now know accurately enough the process of impregnation itself; we know that in it the nucleus of the spermatozoon contributes the qualities of the male parent, and the nucleus of the ovum gives the qualities of the mother, to the newly born stem-cell. The blending of the two nuclei is the "physiological moment" of heredity; by it the personal features of both body and soul are transmitted to the new individual. These facts of ontogeny are beyond the explanation of the dualistic and mystic psychology which still prevails in the schools; whereas they find a perfectly simple interpretation in our monistic philosophy.

The physiological fact which is most material for a correct appreciation of individual psychogeny is the *continuity* of the *psyche* through the rise and fall of genera-