

## THE RIDDLE OF THE UNIVERSE

tiary period (the Eocene) are the lowest primates, the *prosimiæ*, which are followed by the *simiæ* in the Miocene. Of the *catarrhinæ*, the *cynopithec*i precede the *anthropomorpha*; from one branch of the latter, during the Pliocene period, arises the ape-man without speech (the *pithecanthropus alalus*); and from him descends, finally, speaking man.

The chain of our earlier invertebrate ancestors is much more difficult to investigate and much less safe than this tree of our vertebrate predecessors; we have no fossilized relics of their soft, boneless structures, so palæontology can give us no assistance in this case. The evidence of comparative anatomy and ontogeny, therefore, becomes all the more important. Since the human embryo passes through the same *chordula*-stage as the germs of all other vertebrates, since it evolves, similarly, out of two germinal layers of a *gastrula*, we infer, in virtue of the biogenetic law, the early existence of corresponding ancestral forms—*vermalia*, *gastræada*, etc. Most important of all is the fact that the human embryo, like that of all other animals, arises originally from a single cell; for this “stem-cell” (*cytula*)—the impregnated egg cell—points indubitably to a corresponding unicellular ancestor, a primitive, Laurentian protozoon.

For the purpose of our monistic philosophy, however, it is a matter of comparative indifference how the succession of our animal predecessors may be confirmed in detail. Sufficient for us, as an incontestable historical fact, is the important thesis that man descends immediately from the ape, and secondarily from a long series of lower vertebrates. I have laid stress on the logical proof of this “*pithecometra*-thesis” in the seventh book of the *General Morphology*: “The thesis