

form is represented by the two-layered *Gastræa*. A later embryonic form of the human being *points with equal certainty* to a primitive worm-like ancestral form which is related to the Sea-Squirts or Ascidians of the present day.' What, now, is this we have here at the very threshold of the book! '*At once infer*,' '*safely infer*'—can it be that the great question of man's ancestry rests on no basis more substantial than 'inferences' after all, and on Haeckel's attempts to bolster up these 'inferences?' And how is it, then, that when we see a certain fact of to-day, we may so much '*at once infer*' that another fact existed millions of years ago, that the two are indissolubly connected as cause and effect, that without the one the other could never have been? Why is the inference such a 'safe' one, that the existence of two simple germ-layers in the human embryo, leads inevitably to the conclusion that 'a very ancient ancestral form is represented by the two-layered *Gastræa*?' And if the 'certainty' with which we point to various 'primitive worm like ancestors related to Sea-squirts or Ascidians' is nothing more than 'equal' to the 'certainty' produced by inferences concerning *Amœbas* and *Gastræas*, we may be pardoned for doubting if that 'certainty' is of the highest order.

From the knowledge we have of our own ability to design, and from the necessity laid upon us of believing that the existence of a watch, a chair, or a bedstead, involves the previous existence of a designing mind, we might go further, and '*infer*' that a very rational way of accounting for the existence of a flower, the moon and stars, or of man himself, is to presume the pre-existence of a designing mind mighty enough to conceive such things, and to put its conceptions into visible form. Can science show the groundlessness of such an inference, or *prove*, not merely assert, that there is no such mind? 'But' says science, and notice that at best we have only her word for

it, as represented by Haeckel and others, 'such an inference would be absurd and without any foundation either in common sense or reason.' Because plants, animals and men grow by a process of continuous fission of ultimate particles, Haeckel '*infers*' that there is no design evinced in their production, but only a process of evolution. We have quite as good grounds for the '*inference*' that this process of fission is only the designer's *mode of working*. How would science show that the one '*inference*' is scientific and in every way '*rational*,' but the other wholly unscientific and irrational. It is no breach of charity to suppose, that like humbler people, Haeckel would just need to say that *in his own opinion* his own inference was the best. Doubtless this solution of the difficulty might be comforting to himself, not of necessity very satisfactory to others. We also might '*infer*' that every system of laws involves the existence of a *law-giver*, that evolution itself, that is, the '*law*' under which things are evolved, implies an *evolver*; but no, in the opinion of science, such inferences would be '*wholly unscientific*.' They could not pretend to be nearly so '*rational*' as some inferences of Haeckel's, for example, that certain phenomena in connection with *human life at the present day*, point inevitably to the conclusion that certain other phenomena in connection with the *brute life* of millions of years ago, were the remote, indeed, but at the same time, the only efficient, causes of the former, the necessary antecedents without which these could not possibly have come into existence; and that, *therefore*, to suppose any designing mind in the matter, is unnecessary, and quite out of the question. Science in her own opinion having forever done away with the ancient phantasies of a revelation, and any form of intelligence higher than the human, what possible test has she, capable of convincing anyone, on subjects not open to the demonstrative evidence of the eyesight