

duce, from the tenet of the transmutability of the species of organized beings, such a state of things as we see about us, and such a succession of states as is evidenced by geological researches. And here, again, we are brought to questions of which we must seek the answers from the most profound physiologists. Now referring, as before, to those which appear to be the best authorities, it is found that these additional positive laws are still more inadmissible than the primary assumption of indefinite capacity of change. For example, in order to account, on this hypothesis, for the seeming adaptation of the endowments of animals to their wants, it is held that the endowments are the result of the wants; that the swiftness of the antelope, the claws and teeth of the lion, the trunk of the elephant, the long neck of the giraffe have been produced by a certain plastic character in the constitution of animals, operated upon, for a long course of ages, by the attempts which these animals made to attain objects which their previous organization did not place within their reach. In this way, it is maintained that the most striking attributes of animals, those which apparently imply most clearly the providing skill of their Creator, have been brought forth by the long-repeated efforts of the creatures to attain the object of their desire; thus animals with the highest endowments have been gradually developed from ancestral forms of the most limited organization: thus fish, bird, and beast, have grown from *small gelatinous bodies*, "*petits corps gelatineux*," possessing some obscure principle of life, and the capacity of development; and thus man himself with all his intellectual and moral, as well as physical privileges, has been derived from some creature of the ape or baboon tribe, urged by a constant tendency to improve, or at least to alter his condition.

As we have said, in order to arrive even hypothetically at this result, it is necessary to assume besides a mere capacity for change, other positive and active principles, some of which we may notice. Thus, we must have as the direct productions of nature on this hypothesis, certain monads or rough draughts, the primary *rudiments* of plants and animals. We must have, in these, a constant *tendency to progressive improvement*, to the attainment of higher powers and faculties than they possess; which tendency is again perpetually modified and controlled by the *force of external circumstances*. And in order to account for the simultaneous existence of animals in every stage of this imaginary progress, we must suppose that nature is compelled to be *constantly* producing those elementary beings, from which all animals are successively developed.