

philosophical view, that which commends itself to the grander and higher style of mind; but neither he nor his opponent were in a position to see fully the bearings of the question. Owen himself, though largely in advance of most other writers of this time, is not free from misconceptions. He clearly sees, with all the more profound thinkers among naturalists, that whichever view we adopt, the problem can be solved only on the hypothesis of a "predetermining intelligent Will." Without this, nature is only a riddle without a solution—man himself a contradiction and impossibility. But, admitting this, are those resemblances which we call homologies, those adaptations which we call analogies, results of direct creative acts or of the operation of secondary causes? If the former, they are ultimate facts, referable directly to will; if the latter, we may study their more immediate causes, and the laws under which these operate. Cuvier and many of his most illustrious disciples have been content to adopt the former alternative. Owen declares that in this he has been led to differ from his great master. The reasons which he gives under this head are, it must be confessed, feeble. He found it necessary to assume an "archetype" or ideal type in explaining the vertebrate skeleton; but this would have been equally suitable under the hypothesis of direct creation or that of secondary causes. He saw in the recurrence of similar segments in a vertebral column and other cases of repetition of similar parts, something analogous to the repetition of similar crystals, as the result of "polarizing force in the growth of an inorganic body." But there is scarcely more philosophy in this than there is in the process by which a savage, ignorant of manufacturing processes, might explain, as the result of some unknown process of crystallization, the recurrence of forms in the pattern of a piece of calico or in the beads of a necklace. Still we are willing to allow due value even to the impressions made upon the minds of naturalists by such facts, and to go on to the next question of the series. Before doing so, however, we must take exception to one expression of the great English naturalist, which, in various forms, recurs in several places. He calls the theory of derivation a principle "more especially antagonistic to the theological idea" of creation. Now, if by the theological idea he means that promulgated in the first chapter of Genesis, he should explain wherein the antagonism consists. The object of the writer in Genesis is obviously to illustrate and enforce the existence and