

RECENT LITERATURE.

Human Progress, Past and Future. By ALFRED RUSSEL WALLACE. Arena, January, 1892, pp. 145-159. An attempt is being made at the present day by the followers of Prof. Weismann to apply the Neo-Darwinian theories to all departments of scientific investigation. The natural impression has existed among many scientists that an acceptance of these views would lead to a very pessimistic outlook for man's future, but Mr. A. R. Wallace in the article under consideration takes the opposite stand. He points out the two significations of the term progress, which may mean either advance in material civilization, which he believes is cumulative and continuing at the present day, or advance in the mental and moral nature of man, which he thinks may be at a standstill. He contends, as many others have done, that the great works of antiquity have not been surpassed at the present day. Thus he says: "The earliest known architectural work, the great pyramid of Egypt, in the mathematical accuracy of its form and dimensions, in its precise orientation, and in the perfect workmanship shown by its internal structure, indicates an amount of astronomical, mathematical and mechanical knowledge, and an amount of experience and practical skill, which could only have been attained at that early period of man's history by the exertion of mental ability in no way inferior to that of our best modern engineers. In purely intellectual achievements the Vedas of ancient India, the Iliad of Homer, the Book of Job and the writings of Plato, will rank with the noblest works of modern authors." More than this, Mr. Wallace thinks that the high-water mark of intellectual activity has sunk rather than risen

during the past two centuries, although the mean level may have risen. He seems to look upon human progress as advancing along one direct line, and from this point of view it might indeed seem that the high-water mark had not advanced. There is, however, another aspect of the subject. It is customary to represent the progress of life by the analogy of a tree; why not, then, look upon human progress as taking place in the same manner? According to this view the civilizations of Egypt, of India and of Greece represent the terminal buds of their respective shoots. Modern civilization started afresh from the trunk of the tree, and may indeed not yet have grown much above the tips of the old growth of Egypt or Greece; yet there can be no doubt that the new growth is a larger limb and has infinitely greater prospects of future progress.

Mr. Wallace then proceeds to consider the factors which have been operative in the past and those which may be expected to exert an influence on the future advance or deterioration of mankind. He shows how the warfare of tribe with tribe has destroyed the weaker, while the greater vital energy of higher races frequently causes the extinction of the lower. Still more powerful than this warfare of one tribe with another is the survival of the fittest among the individuals of a single tribe. "On the whole," says the writer, "we cannot doubt that the prudent, the sober, the healthy and the virtuous live longer lives than the reckless, the drunkards, the unhealthy and the vicious; and also that the former, on the average, leave more descendants than the latter." He asserts that this process of elimination will raise the mean level, but very properly adds that "it can have little or no tendency to develop higher types in each successive age; and this agrees with the undoubted fact that the great men who appeared at the dawn of history and at the culminating epochs of the various ancient civilizations were not, on the whole, inferior to those of our own age." (p. 149.) This is, however, a very remarkable passage for Mr. Wallace to pen, for he has here virtually given up his customary Neo-Darwinian stand. If the process of natural selection or elimination cannot develop higher types of man by the selection and accumulation of already existing variations, how indeed can natural selection produce higher types of animals, as Mr. Wallace claims, by the selection of fortuitous variations? But he forsakes this position in another place. How, indeed, can the passage just quoted be made to harmonize with the

following: "When this average rise has been brought about there must result a corresponding rise in the high-water mark of humanity; in other words, the great men of that era will be as much above those of the last two thousand years as the average man will have risen above the average of that period. For those fortunate combinations of germs which, on the theory we are discussing, have brought into existence the great men of our day, will have a far higher average of material to work with, and we may reasonably expect the most distinguished among the poets and philosophers of the future will decidedly surpass the Homers and Shakespeares, the Newtons, the Goethes and the Humboldts of our age." (p. 158.)

In no possible way can these two passages be reconciled. He first asserts that natural selection has raised the mean level of humanity but cannot raise the high-water mark, and follows this by another passage in which he says that the elevation of the mean level will furnish a higher class of material for germ combinations to work upon in the origination of a higher type of genius.

Mr. Wallace briefly discusses the theory of the isolation of the germ-plasm, which carries with it the non-inheritance of acquired characters. Education, according to this view, cannot have any direct effect upon human progress. The writer argues that if educational influences could be transmitted it would be reasonable to expect that there would be a progressive improvement in the families of men of genius from generation to generation. He cites a considerable number of notable instances where this was not the case, however. Thus he says: * * * "we find that Dollond, the inventor of the achromatic telescope, was a working silk weaver, and a wholly self-taught optician; Faraday was the son of a blacksmith, and apprenticed to a bookbinder at the age of thirteen; Sir Christopher Wren, the son of a clergyman and educated at Oxford, was a self-taught architect, yet he designed and executed St. Paul's Cathedral, which will certainly rank among the finest modern buildings of the world," etc. All of which may be perfectly true, but one is tempted to stop before completing the list and ask Mr. Wallace if he has forgotten the fact that all these men had mothers. Genius is a very unstable commodity and once the nice adjustment of mental traits by which it was brought about is disturbed by the introduction of a new element the whole organization is apt to be upset. Mr. Wallace might have continued with an enumeration of the sons of men of genius who have been worthless or insane.

The writer combats the view that the non-inheritance of educational culture is a bar to future progress. He goes even further and considers that it is a positive boon to humanity that such culture cannot be inherited. In order to do this he is obliged to take a most uncompromisingly pessimistic view of the present. "If it is thought," he says, "that this non-inheritance of the results of education and training is prejudicial to human progress, we must remember that, on the other hand, it also prevents the continuous degradation of humanity by the inheritance of those vicious practices and degrading habits which the deplorable conditions of our modern social system undoubtedly foster in, the bulk of mankind. Throughout all trade and commerce lying and deceit abound to such an extent that it has come to be considered essential to success. No dealer ever tells the exact truth about the goods he advertises or offers for sale, and the grossly absurd misrepresentations of material and quality we everywhere meet with have, from their very commonness, ceased to shock us. Now, it is surely a great blessing if we can believe that this widespread system of fraud and falsehood does not produce any inherited deterioration in the next generation." There are many who would disagree with Mr. Wallace as to the universality of evil at the present day. Surely there is much less of evil now than in even comparatively recent past historical times. But even granting all that he requires of us, there must, according to his own views, be a time in the future when good will preponderate, at which time it will be as great a disadvantage that acquired virtue cannot be inherited as it now is an advantage that acquired vice cannot be. Yet another objection. According to the writer's views, the evil which he deplors in the present must be innate and due to the inherent properties of the germs, in which event it must be as easily transmitted, or indeed far more easily, than could an acquired character. This evil in man's nature which he sees may in fact be fostered by pernicious social institutions, but it must exist before it can be fostered, and if acquired characters cannot be inherited it must be inherent in the organism.

It may be of interest to inquire what Mr. Wallace considers to be the real factors of future progress. There are two such factors, he says. "The one is that process of elimination already referred to, by which vice, violence and recklessness so often bring about the early destruction of those addicted to them. The other, and by far

the more important for the future, is that mode of selection which will inevitably come into action through the ever-increasing freedom, joined with the higher education of woman." This second must indeed be a factor of great importance, it would seem, although by no means the only one. Selection of the best existing cannot alone produce anything better than the best.

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