## A GREAT SCIENTIST'S PESSIMISTIC REFLECTIONS ON HUMAN PROGRESS.



N his book on "The Wonderful Century," published ten years ago, Alfred Russel Wallace, the distinguished scientist and co-discoverer with Charles Darwin of the theory of evolution, asserted

his conviction that, in the matter of mechanical discovery, the human race had made more progress in the nineteenth century than in all the preceding eighteen centuries. It is somewhat difficult to reconcile this statement with the attitude he takes in his latest article on "Evolution and Character" in *The Fortnightly Review.* He has evidently grown more pessimistic. He declares now that it is doubtful if there has been "any considerable improvement in man's average intellectual and moral status during the whole period of human history"; and he says further:

"In comparing a savage with a civilized race, we must always remember that the amount of acquired and applied knowledge which we possess is no criterion of mental superiority on our side, or of inferiority on his. The average Zulu or Fijian may be very little lower mentally than the average Englishman; and it is, I think, quite certain that the average Britain, Saxon, Dane, and Norseman of a thousand years ago—the ancestral stocks of the present English race—were mentally our equals. For what power has been since at work to improve them? There has certainly been no special survival of the more intellectual and moral, but rather the reverse. As Galton points out, the celibacy of the Roman Church and the seclusion of thousands of the more refined women in abbeys and nunneries tended to brutalize the race.

"To this we must add the destruction of thousands of psychics, many of them students and inventors, during the witchcraft mania, and the repression of thought and intellect by the Inquisition; and when we consider further that the effects of education and the arts are not hereditary, we shall be forced to the conclusion that we are today, in all probability, mentally and morally inferior to our semi-barbaric ancestors!"

The Romans and the Greeks, Mr. Wallace reminds us, looked down on their ancestors with just as much contempt as we look down on Kaffirs and Red Indians. It is quite superficial to conclude that because people are in a savage or barbarian state as regards knowledge and material civilization, they are necessarily inferior intellectually or morally. "I am inclined to believe," says Mr. Wallace, "that an unbiased examination of the question would lead us to the conclusion that there is no good evidence of any difference in man's average intellectual and moral status during the whole period of human history at all corresponding with differences in material civilization between civilized and savage races today. . . There is good reason to believe that some of the lowest savages today (perhaps all of them) are the deteriorated remnants of more civilized peoples." Moreover:

"If we turn to the facts actually known to us about early man, historic and prehistoric, they

certainly point in the same direction. Whence came the wonderful outgrowth of art manifested by the Germans and Celts in their Gothic architecture, admirable alike in structure, in design, and in ornament, and which we, however much we pride ourselves on our science, cannot approach in either originality or beauty? Going further back, the Roman architects, sculptors, poets and literary men were fully our equals. Still earlier, the Greeks were our equals, if not superior, in art, in literature and in philosophy. The Aryans of Northern India were equally advanced, and their wonderful epic-the Maha-Bharata-introduces us to a people who were probably, both in intellect and in morality, no whit inferior to ourselves. Further back still, in ancient Egypt, we find in the Great Pyramid a structure which is the oldest in the world, and in many respects the most remarkable. In its geometrical proportions, its orientation, and its marvelous accuracy of construction, it is in itself the record of a people who had already attained to a degree of high intellectual achievement. It was one of the most gigantic astronomical observatories ever erected by man, and it shows such astronomical and geometrical knowledge, such precision of structure, and such mechanical skill, as to imply long ages of previous civilization, and an amount of intellect and love of knowledge fully equal to that of the great mathematicians, astronomers, and engineers of our day."

Turning from the domain of the intellect to that of morals and conduct, we encounter facts that lead to a similar conclusion. Mr. Wallace thinks it is fair to judge any epoch by its highest exponents, and on the basis of this supposition proceeds:

"If we compare the two greatest ethical teachers of our age with their earliest prototypes whose works have been preserved, it is impossible to maintain that there has been any real advance in their respective characters. Tolstoy can hardly be ranked as higher than Buddha, or Ruskin than Confucius; and as we cannot suppose the amount of variation of human faculty about a mean value to be very different now from what it was at that remote era, we must conclude that equality in the highest implies equality in the mean, and that human nature on the whole has not advanced in intellect or in moral standards during the last three thousand years, while the records of Egypt in both departments—those of science and of ethics—enable us to extend the same conclusion to a period some thousands of years earlier."

In reply to this argument it may be urged that the period stretching from these early civilizations to our own day is only a fragment of man's whole history, and that in the remains of neolithic, paleolithic and eolithic man we have certain proofs that his earliest condition was that of a low and brutal savage. But "this," says Mr. Wallace, "is pure assumption, because the evidence at our command does not bear upon the question at issue." He explains:

"Material civilization and inherent character

are things which have no necessary connection. There is no inconsistency, no necessary contra-diction, in the supposition that the men of the early stone age were our equals intellectually and morally. As Mr. Archdall Reid well argues, if a potential Newton or Darwin were occasionally born among savages, how could his faculties manifest themselves in that forbidding environment? With an imperfect language and limited notation, and having to maintain a constant struggle for existence against the forces of nature, and in combination with his fellows against wild beasts and human enemies, either of them might have made some one step in advancemight have invented some new weapon or constructed some improved trap. He must necessarily work on the lines of his fellows and with the materials to his hand. Perhaps in the rude drawings of animals on stone or tusk we have the work of a potential Landseer; while the equal of our Watt or Kelvin might have initiated the polished stone axe or invented the bone needle. That a people without metals and without written language, who could therefore leave few imperishable remains, may yet possess an intellect and moral character fully equal (some observers think superior) to our own, is demonstrated in the case of the Samoans, and some other tribes of the Pacific. . . Even the so long despised Australians-almost the lowest in material progress -yet show by their complex language, their elaborate social regulations, and often by an innate nobility of character, indications of a very similar inner nature to our own. If they possess fewer philosophers and moralists, they are also free from so large a proportion of unbalanced minds-idiots and lunatics-as we possess. On the other hand, we find in the higher Pacific types men who, tho savages as regards material progress, are yet generally admitted to be-physically, intellectually, and morally—our equals, if not our superiors. These we are rapidly exterminating through the effect of our boasted civilization!

But while it may be true that there has been no general advance of character during the whole period of which we can obtain any definite information, there is every reason, says Mr. Wallace, in concluding, to believe that human nature will undergo a decided improvement in the not distant future. For the first time in history we are becoming conscious of our destiny; we are taking in our hands the world to re-create it; we are constituting ourselves the agents of "natural selection," instead of trusting blindly to natural forces. Two great influences, Mr. Wallace prophecies, will operate in the future more powerfully than ever before to uplift humanity-education and selection by marriage. To quote, finally:

"As yet we have no true and effective education. The very first essential in the teachertrue love of, or any sympathy with, the children —is not made one of the conditions of entering that great profession. Till this is made the *pri*mary qualification (as it was by Robert Owen at his schools in New Lanark) no real improvement in social and moral character can be effected. Mere intellectual instruction—which is all now given—is *not* a complete education, is really the least important half of it.

"The other and more permanently effective agency, selection through marriage, will come into operation only when a greatly improved social system renders all our women economically and socially free to choose; while a rational and complete education will have taught them the importance of their choice both to themselves and to humanity. It will act through the agency of well-known facts and principles of human nature, leading to a continuous reduction of the lower types in each successive generation, and it is the only mode yet suggested which will automatically and naturally effect this.

"When we consider the enormous importance of such a continuous improvement in the average character, and that our widespread and costly religious and educational agencies have, so far, made not the slightest advance towards it, we shall, perhaps, realize, before it is too late, that we have begun at the wrong end. Improvement of social conditions must precede improvement of character; and only when we have so reorganized society as to abolish the cruel and debasing struggle for existence and for wealth that now prevails, shall we be enabled to liberate those beneficent natural forces which alone can elevate character."