

REVIEW.

* STUDIES, SCIENTIFIC AND SOCIAL.

IN these two volumes, Dr. Wallace has collected together many of the more important articles he has written during the last five-and-thirty years, and it says much for his value as a writer that those articles contributed in the sixties to contemporary reviews should bear re-printing in permanent form to-day. That they do will be apparent to anyone who reads the book, though the volume suffers as all such collections of articles on more or less cognate subjects must inevitably suffer, from overlapping, notwithstanding the careful way in which the author has revised them. Various subjects are dealt with, and to each the author has evidently given much thought and study. It is impossible to deal adequately with all of them in a brief notice, and we must therefore reluctantly pass over without comment his geological, zoological, and anthropological articles; nor is this the place to discuss matters political. Those subjects connected with education, ethics, and sociology are more suited to these pages. But first we will briefly examine one or two other problems to which Dr. Wallace has paid special attention.

One of these is human selection, a subject continually to the fore; in this, the question as to the heredity of acquired habits is much concerned. Dr. Wallace elsewhere discusses that fully, and here briefly dismisses it as a possible factor in the improvement of our race (in which category he also includes education), and confines his argument solely to the possibility of improvement by some form of selection. Reviewing the various proposals made by others, while praising Galton's somewhat Utopian scheme, as being less objectionable than others, he rightly observes that even supposing it could be carried out it would merely tend to raise the standard of our highest and best men, and leave the great bulk of the population unaffected, and remarks truly: "What we want is not a higher standard of perfection in the few, but a higher average," and hints that this can best be

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produced by the elimination of the lowest of all, but strongly condemns the drastic measures proposed by Mr. Hiram S. Stanley; the well-known views of the late Grant Allen he also vehemently opposes, and stigmatizes them as "detestable." His own ideas on this important subject may be briefly summarised thus: Social advance will result in improvement of character, and then a system of selection will come spontaneously into action, which will steadily tend to eliminate the lower and more degraded types of men, and thus continually raise the average standard of the race; natural checks to rapid increase will also be the result in a state of society where all will have their higher faculties fully cultivated and fully exercised, and the later average period of marriage will also tend to bring about an equilibrium between the birth and death rates, so that the fear of over-population will no longer exist.

No one who reads Dr. Wallace's chapters on human selection will fail to study also what he has to say on the question of acquired characters being inherited, or on the method of organic evolution, both of which have an important bearing on this problem.

Another interesting problem which we may briefly notice is that of utility: are specific characters always or generally useful? The principle of utility and the theory of selection are closely connected. Briefly, the problem of utility is this: In the great majority of species definite characters do exist, by which any single individual can be recognised, and the species to which it belongs be determined. The question is whether or no the characters, or combination of characters, which thus differentiate it are now useful, or were useful at the time of its origination, or were correlated with some useful characters. Dr. Wallace's opinion is that characters fixed by natural selection must be useful, and his conclusion on the whole matter amounts to this: firstly, species which have been differentiated as such by the laws of variation and survival of the fittest, must be characterised by certain peculiarities whereby they have obtained an advantage in the struggle with their fellows. These peculiarities constitute their "specific characters," and these *must* be useful; secondly, although non-utilitarian characters do undoubtedly appear in the normal course of variation, no agency has yet been detected adequate to the extension of these useless peculiarities to all the individuals which constitute a species, and, further, to prevent their extension to any of the varieties which are destined to become new species. Unless the power in question can have this twofold effect, it cannot lead, except by accident, to the

production of useless specific characters; finally, there is an overwhelming probability in favour of the statement that every truly specific character is or has been useful, or if not useful itself, is or has been strictly correlated with some useful character.

One more problem must be mentioned before passing on to the "studies" in the second volume, and that is the ever-interesting one of instinct. For his text Dr. Wallace takes Professor Lloyd Morgan's work "Habit and Instinct," which he characterises as "an admirable introduction to the study of a most important and fascinating branch of biology, now for the first time based upon a substantial foundation of carefully observed facts and logical induction from them." The short chapter he devotes to a criticism or rather appreciation of the professor's volume is full of instruction, if somewhat at variance from popularly conceived ideas on this subject, and it is with great regret that from want of space we can do no more than draw the reader's attention to this portion of the book.

Coming to the educational, ethical, and sociological topics which are dealt with in the second volume, we shall only be able to take one chapter from each of these, and as briefly as may be, give the trend of the author's arguments. Of the seven chapters devoted to education, that on "Museums for the People" is well worth the attention of the authorities at South Kensington, for it is of natural history museums that Dr. Wallace treats. These, he says, should contain a series of objects to illustrate all the sciences which treat of the earth, Nature, and man, viz., geography and geology, mineralogy, botany, zoology, and ethnology, and he proceeds to give some detailed account of how such departments should be conducted. We cannot say more here, than that Professor Ray Lankester's attention might advisably be drawn to this instructive article.

"Why live a moral life?" is the title of the second of Dr. Wallace's ethical problems. In existing society the cause is due to one or more of four causes: A natural upright and sympathetic disposition, the influence of religious belief, the fear of punishment or public opinion, and the idea that morality means happiness, or, in other words, is the best policy. The last two are distinctly selfish reasons, and the second, discarded by the agnostics, is an argument in favour of religion, even supposing it may chiefly be from fear of future punishment. The first is one which does not involve any process of reason, and whether a large or small proportion of moral actions depends on it is a matter of opinion. "The general answer I would give to the

question 'Why lead a moral life?' " says Dr. Wallace, "is—from the purely rationalistic point of view—first, that we shall thereby generally secure the good opinion of the world at large, and more especially of the society among which we live, and that this good opinion counts for much, both as a factor in our happiness and in our material success. Secondly, that in the long run morality pays best; that it conduces to health, to peace of mind, to social advancement, and at the same time avoids all those risks to which immoral conduct renders us liable." These reasons are certainly of a somewhat low character, and Dr. Wallace goes to some pains to prove that the only adequate incentive to morality is based upon the conception of a future state of existence taught by modern spiritualism. Without expressing acquiescence, or the reverse, in this novel suggestion, we must leave it to the discerning reader to sift the matter for himself from the arguments adduced by the author in his contribution to the solution of such a knotty problem.

Lastly, we come to the question of human progress, mental, not material. Dr. Wallace, after carefully examining the case from an impartial view, concludes that there has been on the whole a decided advance in the intellectual and moral character of humanity, and the agencies under which that advance may be continued in the future, are not, he says, education or training, which can do nothing to affect permanently the march of human progress, but the process of elimination, already referred to, and "that mode of selection which will inevitably come into action through the ever-increasing freedom, joined with the higher education of woman."

We should much like to notice the other interesting chapters on sociological studies in Dr. Wallace's book, but we must content ourselves with concluding this review with a quotation from the last page of the book: "Let us unflinchingly demand Social Justice. This will be a work of such grandeur, of such far-reaching influence, so deeply founded in Right, so absolutely impregnable against the attacks of logic, or theology, or expediency that it must succeed in a not far distant future. Knowing that we are striking at the very roots of our social evils, that every step we take will make the next step easier, let us work strenuously for the elevation and permanent well-being of our fellows, and let our watchword be—not Charity, but Justice."