

and of the community as a whole, depends, not on the competence of individuals to survive unaided, but on the recognition, instinctive or conscious, of each other's value, and the resulting mutual aid, given either under instinct or in conscious exchange. Now, as I understand, Sir O. Lodge has simply pleaded that steps be taken which, while (*pace* Mr. Bulman) not interfering one whit with the education of the 9999, shall lead to the recognition of the one exceptional genius, with a view to mutual aid, *i.e.* so that he may be set free to do the work of pioneer and leader, which he alone can do; and early, because *ars longa, vita brevis*.

We know that genius can be reared in night-schools, and about Palissy the potter; but ought we to count on our potter burning his furniture for our good, if we, with plenty of ordinary fuel, deny it him?

In the essay to which he refers in his letter in *NATURE* of January 29, Dr. Wallace attaches less importance to the rearing of a few men of exceptional qualities than to the weeding out of the worst and raising the average; but surely, without giving undue and exclusive credit for advance to the pioneers and prophets, we may take it that men like Darwin and Wallace himself, to mention only one type, will, under natural selection, render the later more conscious steps of man's evolution easier.

Dr. Wallace, in the letter referred to, speaks of the "fittest" not surviving under existing civilisation, meaning that many of the specialised types, which form important elements in our polymorphic communities, are not fittest to survive, and continue to reproduce their kind in more primitive or more ideal communities. But this, of course, accords well with the principle of the "survival" of those types "fittest" to the actual environment. (Survival, of course, does not postulate direct reproduction any more than it postulates long life; the "worker" bees "survive.") Further, Dr. Wallace's hopeful attitude shows that he really trusts "natural selection" to steer the best races of man to a point whence their further, more self-conscious, progress (still, as always, under natural selection) will be more and more in accord with Nature's will, and so less wasteful and pain-fraught.

Man is a self-conscious part of Nature, with the power to "look before and after"; and doubtless the races of man, which will rise highest under natural selection, will not let their faculty of taking counsel from natural and human history rest idle; but, just as Dr. Wallace himself showed years ago that "sexual selection," in the sense of choice of mates, had no power at all *against* "natural selection" (such selection being, I would say, of a faculty or instinct developed by natural selection, and from time to time modified by natural selection to suit changes in the environment), so this conscious "human selection" is but a faculty of man that is being developed (indirectly, perhaps) by natural selection, and can have no power at all to thwart "natural selection," though its wise use may save our race much of the pain that results from fruitlessly "kicking against the pricks."

G. W. BUTLER.

February 3.

Genius and the Struggle for Existence.

MR. BULMAN, in *NATURE* of January 22, urges that what is good for the individual or race will survive unaided. But surely this is contrary to well-known facts. Man, with the increase of specialisation, which (whether it be an unmixed good or no) we find associated with his advance to a greater mastery over the rest of Nature, has become, so to speak, a polymorphic species, like the ants, bees or termites; and while in all species we find more or less mutual aid, in polymorphic species it is especially obvious that it is not the isolated individual types, but the total combination that natural selection regards, since the isolated types may be quite incapable of reproducing their kind and performing their special duties unaided.

In all such cases, the "survival" of the individual types,