

There is not any obvious way of proving or disproving an ingenious hypothesis of this sort, but it is in line with the central idea of Darwinism. If a process of germinal selection can be admitted as aiding and abetting the processes of selection at higher levels (intra-selection and individual selection), a new strength is given to the general selectionist position.

(b) Mr. Bateson's great work, entitled *Materials for the Study of Variation*, is an endeavour to get out of the speculative mire in which, to the physicist's contempt, the biologist still flounders. It is an attempt to get beyond the vagueness of the assumption that "variability exists" to a sure knowledge of what variations do actually occur. Life is so abundant and so protean that we draw cheques upon nature almost *ad libitum*, and in our impetuosity scarce wait to see whether they are honoured.

By an examination of specimens in many collections and museums, by detailed investigations in regard to particular cases of importance, and by careful sifting of recorded instances of variation, Mr. Bateson has given us a sound foundation upon which to build. It must be noted, however, that he has as yet confined himself almost entirely to one kind of variation, which he terms *meristic*, *i.e.* variations in the number, symmetry, and arrangement of parts. He leaves to a future volume almost all discussion of *substantive* variations, that is to say, changes in quality and substance, which to most biologists are probably of greater interest. Many of the variations with which he deals, such as branched legs in insects, are not of the sort which we suppose to have furnished the raw material of evolutionary progress. In fact, they are too "monstrous".

As is well known, the ordinary, though not universal, conception of the process of organic evolution is that from an ancestral form by minute and, at first, almost insensible differences a new form arises. The minute variations may be indefinite and indeterminate, as most Darwinians follow their master in believing; or they may be definite and determinate, along particular lines, as is suggested from many sides, by Lloyd Morgan with