PROFESSOR BOOLE'S MATHEMATICAL THEORY

immediate comparison of X and Y, then no concepts enter into the argument except X and Y, and the argument is reduced to conversion. But if the conclusion be drawn mediately, it must be by the comparison of X and Y with some third thing: not with a plurality of other things, but with some single thing. Here we have the mind drawing its inference in a syllogism. What the various admissible forms of conversion and syllogism may be, or whether these forms have been correctly specified by particular eminent logicians, are minor questions. The essential thing in a philosophical respect is, that the mind, in the inferences which it draws, does and can work in no other moulds than those described. All this seems to us so plain that we confess ourselves utterly puzzled to comprehend how men of profound and original genius have been beguiled into an assertion of the contrary.

Professor Boole himself, in summing up his assault on the Aristotelian Logic, comes very near admitting what we contend for. "As Syllogism," he says, " is a species of elimination, the question before us manifestly resolves itself into the two following ones: 1st. Whether all elimination is reducible to Syllogism; 2nd. Whether deductive reasoning can, with propriety, be regarded as consisting only of elimination. I believe, upon careful examination, the true answer to the former question to be, that it is always theoretically possible so to resolve and combine propositions that elimination may subsequently be effected by the syllogistic canons, but that the process of reduction would in many instances be constrained and unnatural, and would involve operations which are not syllogistic. To the second question I reply, that reasoning cannot, except by an arbitrary restriction of its meaning, be confined to the process of elimination." With regard to this second question, we merely note in passing, that we have proved in the preceding paragraph that inference, where not immediate or of the nature of conversion, can be nothing else than elimination. It is, however, with the first question, whether elimination is reducible to syllogism, that we have now more particularly to do; and we accept with satisfaction the admission, guarded and (to some extent) neutralised as it is, that every line of argument may be thrown into a form in which the eliminations that take place are effected by the syllogistic canons. It is quite irrelevant to notice, as Professor Boole does, that the process of reduction would, in many instances, be constrained and unnatural; for we are not here i charge, tl are not sy in the "r Author h he groun the produ luced to fall back Inte impo on or s In stat gainst 1 that, from ety of pi wstem i events, i trust, ful of infere But Pro ducible mme neo to deter as well a should be which, in of the pr

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