(*st*) *consist of all invertebrate animals having red blood* (*ir*) *and not naked* ($1 - n$), *and an indefinite remainder* ($\frac{?}{0}$) *of invertebrate animals* (*i*) *not having red blood* ($i - r$) *and not naked* ($1 - n$) *and of vertebrate animals* ($1 - i$) *which are not naked* ($1 - n$).

We have entered so fully into the explanation of Professor Boole's system in its bearing on what he terms Primary (virtually equivalent to Categorical) Propositions, that we cannot follow him into the field of Secondary (virtually equivalent to Conditional, that is, Disjunctive and Hypothetical) Propositions. Nor is it necessary that we should do so; for our object is not to give a synopsis of the "Investigation," but simply to make the nature of the work understood; and, for that purpose, what has been said is sufficient. The application of the Calculus to Secondary Propositions is exceedingly similar, in respect not only of the general method followed, but even of the particular formulæ obtained, to its application to Primary. All that is peculiar in the treatment of Secondary Propositions arises from the introduction of the idea of Time. For instance, the proposition, "If $X$ is $Y$, $A$ is $B$," is held to be not substantially different in meaning from this: "the time in which $X$ is $Y$, is time in which $A$ is $B$." Such being the fundamental view taken, symbols like $x$ and $y$ are used to represent the portions of time in which certain propositions (e.g., $X$ is $Y$, $A$ is $B$) are true. Then, the symbol 1 denoting the universe of Time, or Eternity, the expressions, $1 - x$, $1 - y$, will denote those portions of time respectively in which the propositions, $X$ is $Y$, $A$ is $B$, are not true; and so on.

The extension of his method, by Professor Boole, to the theory of Probabilities, is a splendid effort of genius on the part of the author, and furnishes a most convincing illustration of the capabilities of the method. The part of the "Investigation" which is devoted to this subject, is much too abstruse to admit of being here more particularly considered; but, to show what the method can accomplish —though the bow of Ulysses perhaps needs the arm of Ulysses to bend it—we may simply state one of the problems of which Professor Boole gives the solution. "If an event can only happen as a consequence of one or more of certain causes, $A_1$, $A_2$, ..... , $A_n$, and if generally $C_i$ represents the probability of the cause $A_i$, and $p_i$ the probability that, if the cause $A_i$ exist, the event $E$ will occur, then the series of $C_i$ and $p_i$ being given, required the probability of the event $E$."