

the proposition that self-preservation is the strongest and most general law of our nature, and the proposition that no man will starve if able and in circumstances to work for his own maintenance—that the one proposition can be deduced by inference from the other, as the conclusion from the premises of an argument. And still more there is such a dependence between the proposition, that the planet moves in an elliptical orbit round the sun, having its focus in the centre of that luminary, and a thousand other propositions—so that without a separate observation for each of the latter, they can be reasoned from the former; just as an infinity of truths and properties can, without observation, be satisfactorily demonstrated of many a curve from the simple definition of it. We do not affirm, that, in any case, we can establish a dogma, or make a discovery independently of all observation—any more than in a syllogism we are independent of observation for the truth of the premises—both the major and the minor propositions being generally verified in this way; while the connexion between these and the conclusion, is all, in the syllogism, wherewith the art of logic has properly to do. In none of the sciences, is the logic of itself available for the purposes of discovery; and it can only contribute to this object, when furnished with sound data, the accuracy of which is determined by observation alone. This holds particularly true of the mixed mathematics, where the conclusions are sound, only in as far as the first premises are sound—which premises, in like manner, are not reasoned truths, but observed truths. Even in the pure