

proclaimed, and he still continues to reason without paying any heed to these principles. But so there were men who wrote and spoke correctly before the first treatise on Grammar was given to the world, yet who would now deny the utility, nay the necessity of such a treatise? Practice has always existed before theory; it is upon the observations of practice that theory is built up; yet when erected how many there are that dwell within the edifice who could never of themselves have brought together the materials for its construction. We often hear it said that it is common sense which is necessary to enable men to think correctly, not Logic; but what is common sense? It is nothing more than that natural logic which exists more or less perfectly in the mind of every man. And as the naturally bright intelligence grows still more and more luminous under the polishing influence of education, so does the naturally acute judgment find its views enlarged and its powers strengthened by the explanations and assistance of those who have placed at its disposal the results of their own long studies and investigations. All men have the same nature; they have the same intellect; the process of reasoning in all is the same. It invariably consists in the progress from the known to the unknown, or from that which is better to that which is less known. The process of reasoning being invariable, the rules which govern this process must be invariable. Logic is not *an* art of reasoning, it is *the* art of reasoning. We have already compared it to Grammar, and we may very well say that it is the Grammar of Reasoning. The famous English philosopher, Locke, said that the syllogism was an invention of Aristotle, but that men had been able to reason before Aristotle, that Aristotle himself reasoned in quite a sensible manner, as did many after him, and that on this account the only merit possessed by the syllogism was that of being a philosophical curiosity, one of those toys with which great men occasionally amuse themselves. It is almost incredible that a man having any claims to the title of philosopher should make such absurd statements. Because on every page of philosophy we do not find such forms as: "Peter is either well or sick; but he is well, therefore he is not sick," from this it is concluded that the syllogism is not

made use of except when the intention is to amuse or deceive, that at best it is a peculiar method of reasoning which will scarcely admit of application. Now we know very well that the syllogism is *not* a method of reasoning, but that it is a method of analyzing that mental process, which as has already been said *must* take place in all correct reasoning. We know that there is no correct reasoning that may not be reduced to the syllogism, but to say that every argument must be stated in syllogistic form would be similar to saying that a chemist must use no compound that he has not previously analyzed, or that the grammatical speaker must parse every word as he goes. The chemist, of course, keeps his tests always by him to be employed on any substance suspected of being adulterated. A fallacious reasoning has been very well compared to an adulterated compound, "it consists of an ingenious mixture of truth and falsehood, so entangled, so intimately blended, that the falsehood is (in the chemical phrase) *held in solution*; one drop of sound logic is that test which immediately disunites them, makes the foreign substance visible and precipitates it to the bottom."

The principle which lies at the base of all Logic is, as you know, *dictum de omni, dictum de nullo*. Unable to challenge the truth of this principle, the enemies of Logic sneer at it, as being ridiculously obvious and childishly simple. Yet there is not a philosophical error which, if reduced to the form of the syllogism, will not be seen to violate this obvious and simple principle. Take, for instance, one of the arguments which the atheist Hume advances in his "Essay on Miracles." He says: "We have more reason to expect that a witness should lie than that a miracle should occur; now, as the only reason for belief in the miracles of Christianity is the testimony of witnesses, it is quite probable that these miracles are not true." Arranged in a more regular form, the argument may be stated thus: "Testimony is a kind of evidence more likely to be false than a miracle to be true; but the evidence on which the Christian miracles are believed is testimony; therefore the evidence on which the Christian miracles are believed is more likely to be false than a miracle to be true."

Now, let us try this solution by means of our drop of pure Logic. The *dictum de*