

they will do it whether we forbid them or not. But we take our own starting-point in the common consciousness and common sense of mankind.

Now, what do we mean when we employ this word *knowledge*. By knowledge we mean *certain perception*. This is Dr. Johnson's definition, "certain perception; indubitable apprehension," he defines it; and he quotes the words of Locke, the English philosopher, who says, "Knowledge, which is the highest degree of the speculative faculties, consists in the perception of the truth of affirmative or negative propositions." To the same effect Sir W. Hamilton* observes, "Knowledge is the mere possession of truths."

It will help us to grasp these definitions if we compare them with the descriptions of those two operations of the mind which are most akin to knowledge, namely, *belief* and *opinion*. By *belief* we mean that which we hold without any doubt on the credible testimony of others, not as the result of our own examination. By *opinion* we mean the judgment which we form on any subject, with respect to which we cannot attain to absolute certainty. It may amount to practical certainty; but if it is rightly called opinion, it can go no further. By *knowledge* we mean certain perception, not merely a judgment that the thing may probably be so or so, not merely a certainty, because we cannot doubt the testimony on which we have received the information, but a clear and certain perception of some existence, fact or relation, which we obtain through the medium of our sense, if the object is a material one, and by our intelligence if it is a principle or an abstract relation. "Knowledge," says Tennyson, "is of things we see." (*In Mem.*)

Knowledge is of various kinds. There is, first of all, the knowledge of simple facts, the most elementary kind of knowledge. Then there is the knowledge of the relation of these facts, the principles which underlie, connect and explain them. There can be no doubt as to which of these kinds of knowledge is the greater. Yet the more humble is not to be despised, for it is indispensable. It is true, on the one hand, that a mere accumulation of facts is of little value—is very nearly worthless. It is as useless as heaps of brick and mortar would be to a man who wanted a house and had no knowledge of the art of building. Yet the bricks and mortar must be there, or there can be no house, and so we must collect the facts which go to the building up of the structure of knowledge, although the facts will be barren and dead when there is no knowledge of principles to bind them together and make them an organized whole. A wise counsellor who wishes to lead another in the path of true knowledge will never omit to set these principles clearly before him.*

This is very much what we mean when we speak of scientific knowledge as the aim of all our studies. Time was when the word science provoked a sentiment of aversion, of opposition, almost of resentment. This time has now well nigh passed away. Science has invaded every province of knowledge and thought. And with right; for what do we mean by scientific knowledge? We mean knowledge which is accurate, systematic, methodical. We mean knowledge which results from the careful collection, comparison and co-ordination of facts. We mean what Bacon calls "a knowledge by causes," itself dead or barren, but

* "Lect. on Metaph.," vol. i. p. 8.

"True knowledge," says Bacon, "is knowledge by causes." Nov. Org. Aph. ii. 2; Works, iv. 119.