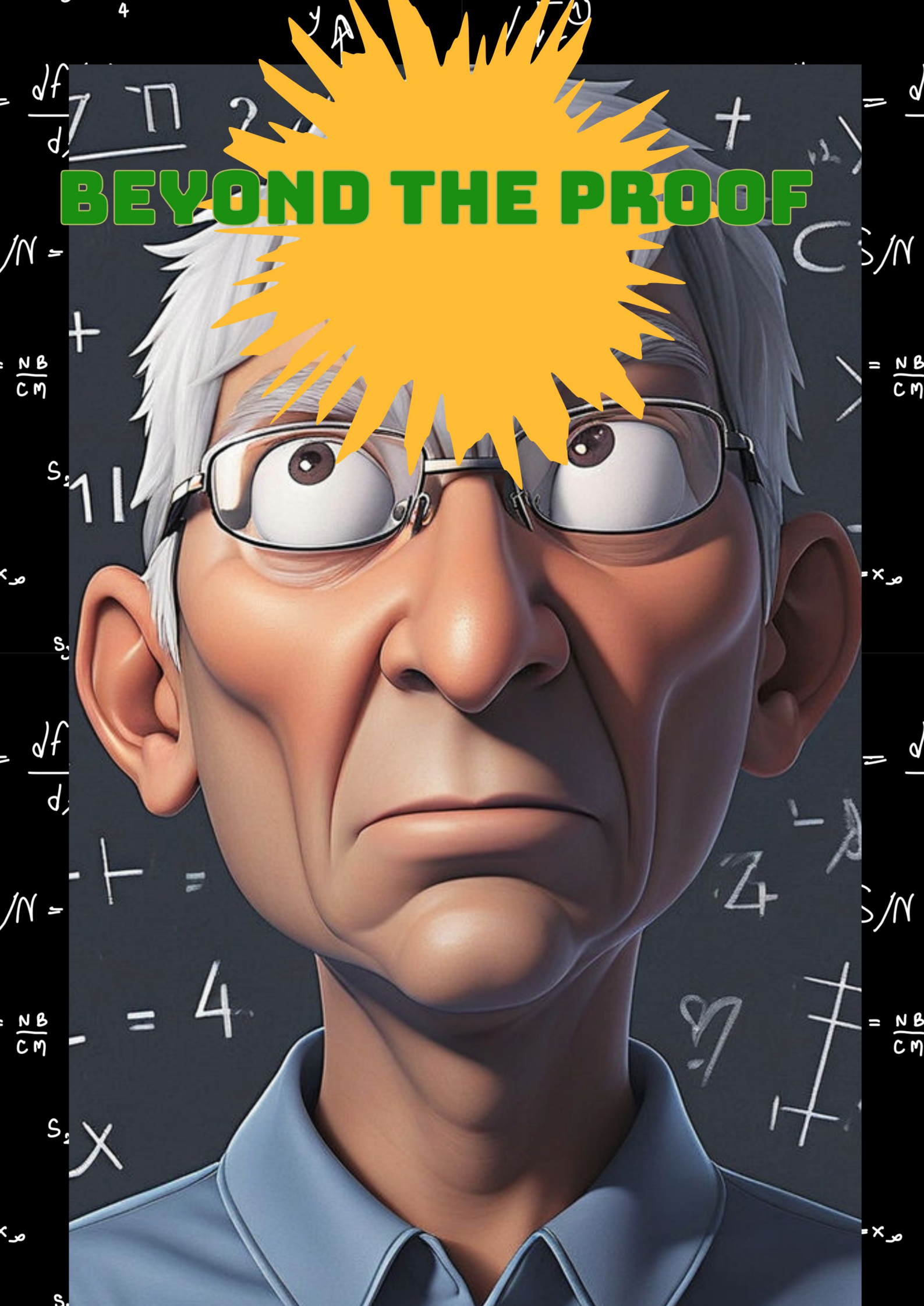
BEYOND THE PROOF

Would any teacher of mathematics dream of discussing these questions with his class before proceeding to the proof of his propositions? It is generally admitted that, if such questions are to be answered at all, it is not with the aid of geometrical reasonings that they will be answered.

THE SCIENCE OF PSYCHOLOGY.—Now let us come back to a science which has to do directly with things. We have seen that the plain man has some knowledge of minds as well as of material things. Every one admits that the psychologist knows minds better. May we say that his knowledge of minds differs from that of the plain man about as the knowledge of plants possessed by the botanist differs from that of all intelligent persons who have cared to notice them? Or is it a knowledge of a quite different kind?

Those who are familiar with the development of the sciences within recent years have had occasion to remark the fact that psychology has been coming more and more to take its place as an independent science. Formerly it was regarded as part of the duty of the philosopher to treat of the mind and its knowledge; but the psychologist who pretends to be no more than a psychologist is a product of recent times. This tendency toward specialization is a natural thing, and is quite in line with what has taken place in other fields of investigation.

When any science becomes an independent discipline, it is recognized that it is a more or less limited field in which work of a certain kind is done in a certain way. Other fields and other kinds of work are to some extent ignored. But it is quite to be expected that there should be some dispute, especially at first, as to what does or does not properly fall within the limits of a given science. Where these limits shall be placed is, after all, a matter of convenience; and sometimes it is not well to be too strict in marking off one field from another.

It is well to watch the actual development of a science, and to note the direction instinctively taken by investigators in that particular field. If we compare the psychology of a generation or so ago with that of the present day, we cannot but be struck with the fact that there is an increasing tendency to treat psychology as a natural science.

By this is not meant, of course, that there is no difference between psychology and the sciences that concern themselves with the world of material things—psychology has to do primarily with minds and not with bodies. But it is meant that, as the other sciences improve upon the knowledge of the plain man without wholly recasting it, as they accept the world in which he finds himself and merely attempt to give us a better account of it, so the psychologist may accept the world of matter and of minds recognized by common thought, and may devote himself to the study of minds, without attempting to solve a class of problems discussed by the metaphysician.

For example, he may refuse to discuss the question whether the mind can really know that there is an external world with which it stands in relation, and from which it receives messages along the avenues of the senses. He may claim that it is no more his business to treat of this than it is the business of the mathematician to treat of the ultimate nature of space. The psychologist assumes without question the existence of an external real world, a world of matter and motion. He finds in this world certain organized bodies that present phenomena which he regards as indicative of the presence of minds. He accepts it as a fact that each mind knows its own states directly, and knows everything else by inference from those states, receiving messages from the outer world along one set of nerves and reacting along another set. He conceives of minds as wholly dependent upon messages thus conveyed to them from without.

He tells us how a mind, by the aid of such messages, gradually builds up for itself the notion of the external world and of the other minds which are connected with bodies to be found in that world. We may fairly say that all this is merely a development of and an improvement upon the plain man's knowledge of minds and of bodies. There is no normal man who does not know that his mind is more intimately related to his body than it is to other bodies. We all distinguish between our ideas of things and the external things they represent, and we believe that our knowledge of things comes to us through the avenues of the senses. Must we not open our eyes to see, and unstop our ears to hear?

We all know that we do not perceive other minds directly, but must infer their contents from what takes place in the bodies to which they are referred—from words and actions. Moreover, we know that a knowledge of the outer world and of other minds is built up gradually, and we never think of an infant as knowing what a man knows, much as we are inclined to overrate the minds of infants. The fact that the plain man and the psychologist do not greatly differ in their point of view must impress every one who is charged with the task of introducing students to the study of psychology and philosophy.

It is rather an easy thing to make them follow the reasonings of the psychologist, so long as he avoids metaphysical reflections. The assumptions which he makes seem to them not unreasonable; and, as for his methods of investigation, there is no one of them which they have not already employed themselves in a more or less blundering way. They have had recourse to introspection, they have noticed the phenomena of their own minds; they have made use of the objective method, they have observed the signs of mind exhibited by other persons and by the brutes; they have sometimes experimented—this is done by the schoolgirl who tries to find out how best to tease her roommate, and by the boy who covers and uncovers his ears in church to make the preacher sing a tune. It may not be easy to make men good psychologists, but it is certainly not difficult to make them understand what the psychologist is doing and to make them realize the value of his work.

He, like the workers in the other natural sciences, takes for granted the world of the plain man, the world of material things in space and time and of minds related to those material things. But when it is a question of introducing the student to the reflections of the philosophers the case is very different. We seem to be enticing him into a new and a strange world, and he is apt to be filled with suspicion and distrust. The most familiar things take on an unfamiliar aspect, and questions are raised which it strikes the unreflective man as highly absurd even to propose. Of this world of reflective thought I shall say just a word in what follows.

REFLECTIVE THOUGHT.—If we ask our neighbor to meet us somewhere at a given hour, he has no difficulty in understanding what we have requested him to do. If he wishes to do so, he can be on the spot at the proper moment. He may never have asked himself in his whole life what he means by space and by time. He may be quite ignorant that thoughtful men have disputed concerning the nature of these for centuries past. And a man may go through the world avoiding disaster year after year by distinguishing with some success between what is real and what is not real, and yet he may be quite unable to tell us what, in general, it means for a thing to be real.

Some things are real and some are not; as a rule he seems to be able to discover the difference; of his method of procedure he has never tried to give an account to himself. That he has a mind he cannot doubt, and he has some idea of the difference between it and certain other minds; but even the most ardent champion of the plain man must admit that he has the most hazy of notions touching the nature of his mind. He seems to be more doubtful concerning the nature of the mind and its knowledge than he is concerning the nature of external things. Certainly he appears to be more willing to admit his ignorance in this realm. And yet the man can hold his own in the world of real things. He can distinguish between this thing and that, this place and that, this time and that.

He can think out a plan and carry it into execution; he can guess at the contents of other minds and allow this knowledge to find its place in his plan. All of which proves that our knowledge is not necessarily useless because it is rather dim and vague. It is one thing to use a mental state; it is another to have a clear comprehension of just what it is and of what elements it may be made up. The plain man does much of his thinking as we all tie our shoes and button our buttons. It would be difficult for us to describe these operations, but we may perform them very easily nevertheless. When we say that we know how to tie our shoes, we only mean that we can tie them.

Now, enough has been said in the preceding sections to make clear that the vagueness which characterizes many notions which constantly recur in common thought is not wholly dispelled by the study of the several sciences. The man of science, like the plain man, may be able to use very well for certain purposes concepts which he is not able to analyze satisfactorily. For example, he speaks of space and time, cause and effect, substance and qualities, matter and mind, reality and unreality. He certainly is in a position to add to our knowledge of the things covered by these terms. But we should never overlook the fact that the new knowledge which he gives us is a knowledge of the same kind as that which we had before.

He measures for us spaces and times; he does not tell us what space and time are. He points out the causes of a multitude of occurrences; he does not tell us what we mean whenever we use the word "cause." He informs us what we should accept as real and what we should repudiate as unreal; he does not try to show us what it is to be real and what it is to be unreal. In other words, the man of science extends our knowledge and makes it more accurate; he does not analyze certain fundamental conceptions, which we all use, but of which we can usually give a very poor account. On the other hand, it is the task of reflective thought, not in the first instance, to extend the limits of our knowledge of the world of matter and of minds, but rather to make us more clearly conscious of what that knowledge really is.

Philosophical reflection takes up and tries to analyze complex thoughts that men use daily without caring to analyze them, indeed, without even realizing that they may be subjected to analysis. It is to be expected that it should impress many of those who are introduced to it for the first time as rather a fantastic creation of problems that do not present themselves naturally to the healthy mind. There is no thoughtful man who does not reflect sometimes and about some things; but there are few who feel impelled to go over the whole edifice of their knowledge and examine it with a critical eye from its turrets to its foundations.

In a sense, we may say that philosophical thought is not natural, for he who is examining the assumptions upon which all our ordinary thought about the world rests is no longer in the world of the plain man. He is treating things as men do not commonly treat them, and it is perhaps natural that it should appear to some that, in the solvent which he uses, the real world in which we all rejoice should seem to dissolve and disappear. I have said that it is not the task of reflective thought, in the first instance, to extend the limits of our knowledge of the world of matter and of minds. This is true.

But this does not mean that, as a result of a careful reflective analysis, some errors which may creep into the thought both of the plain man and of the scientist may not be exploded; nor does it mean that some new extensions of our knowledge may not be suggested. In the chapters to follow I shall take up and examine some of the problems of reflective thought. And I shall consider first those problems that present themselves to those who try to subject to a careful scrutiny our knowledge of the external world. It is well to begin with this, for, even in our common experience, it seems to be revealed that the knowledge of material things is a something less vague and indefinite than the knowledge of minds.

IS THERE AN EXTERNAL WORLD?

HOW THE PLAIN MAN THINKS HE KNOWS THE WORLD.—As schoolboys we enjoyed Cicero's joke at the expense of the "minute philosophers." They denied the immortality of the soul; he affirmed it; and he congratulated himself upon the fact that, if they were right, they would not survive to discover it and to triumph over him. At the close of the seventeenth century the philosopher John Locke was guilty of a joke of somewhat the same kind. "I think," said he, "nobody can, in earnest, be so skeptical as to be uncertain of the existence of those things which he sees and feels. At least, he that can doubt so far (whatever he may have with his own thoughts) will never have any controversy with me; since he can never be sure I say anything contrary to his own opinion." Now, in this chapter and in certain chapters to follow, I am going to take up and turn over.

So that we may get a good look at them, some of the problems that have presented themselves to those who have reflected upon the world and the mind as they seem given in our experience. I shall begin by asking whether it is not possible to doubt that there is an external world at all. The question cannot best be answered by a jest. It may, of course, be absurd to maintain that there is no external world; but surely he, too, is in an absurd position who maintains dogmatically that there is one, and is yet quite unable to find any flaw in the reasonings of the man who seems to be able to show that this belief has no solid foundation.

And we must not forget that the men who have thought it worth while to raise just such questions as this, during the last twenty centuries, have been among the most brilliant intellects of the race. We must not assume too hastily that they have occupied themselves with mere trivialities. Since, therefore, so many thoughtful men have found it worth while to ask themselves seriously whether there is an external world, or, at least, how we can know that there is an external world, it is not unreasonable to expect that, by looking for it, we may find in our common experience or in science some difficulty sufficient to suggest the doubt which at first strikes the average man as preposterous. In what can such a doubt take its rise? Let us see. I think it is scarcely too much to say that the plain man believes that he does not directly perceive an external world, and that he, at the same time, believes that he does directly perceive.

It is quite possible to believe contradictory things, when one's thought of them is somewhat vague, and when one does not consciously bring them together. have thought it worth while to raise just such questions as this, during the last twenty centuries, have been among the most brilliant intellects of the race. We must not assume too hastily that they have occupied themselves with mere trivialities. Since, therefore, so many thoughtful men have found it worth while to ask themselves seriously whether there is an external world, or, at least, how we can know that there is an external world, it is not unreasonable to expect that, by looking for it.

We may find in our common experience or in science some difficulty sufficient to suggest the doubt which at first strikes the average man as preposterous. In what can such a doubt take its rise? Let us see. I think it is scarcely too much to say that the plain man believes that he does not directly perceive an external world, and that he, at the same time, believes that he does directly perceive one. It is quite possible to believe contradictory things, when thought of them is somewhat vague, and when one does not consciously bring them together.

I do not mean to say that the plain man is conscious of drawing this conclusion. I only maintain that it seems a natural conclusion to draw from the facts which he recognizes, and that sometimes he seems to draw the conclusion halfconsciously. On the other hand, we must all admit that when the plain man is not thinking about the distinction between ideas and things, but is looking at some material object before him, is touching it with his fingers and turning it about to get a good look at it, it never occurs to him that he is not directly conscious of the thing itself. He seems to himself to perceive the thing immediately; to perceive it as it is and where it is; to perceive it as a really extended thing, out there in space before his body. He does not think of himself as occupied with mere images, representations of the object. He may be willing to admit that his mind is in his head, but he cannot think that what he sees is in his head.

Is not the object there? does he not see and feel it? Why doubt such evidence as this? He who tells him that the external world does not exist seems to be denying what is immediately given in his experience. The man who looks at things in this way assumes, of course, that the external object is known directly, and is not a something merely inferred to exist from the presence of a representative image. May one embrace this belief and abandon the other one? If we elect to do this, we appear to be in difficulties at once. All the considerations which made us distinguish so carefully between our ideas of things and the things themselves crowd in upon us.

Can it be that we know things independently of the avenues of the senses? Would a man with different senses know things just as we do? How can any man suffer from an hallucination, if things are not inferred from images, but are known independently? The difficulties encountered appear sufficiently serious even if we keep to that knowledge of things which seems to be given in common experience. But even the plain man has heard of atoms and molecules; and if he accepts the extension of knowledge offered him by the man of science, he must admit that, whatever this apparently immediately perceived external thing may be, it cannot be the external thing that science assures him is out there in space beyond his body, and which must be a very different sort of thing from the thing he seems to perceive.

The thing he perceives must, then, be appearance; and where can that appearance be if not in his own mind? The man who has made no study of philosophy at all does not usually think these things out; but surely there are interrogation marks written up all over his experience, and he misses them only because he does not see clearly. By judiciously asking questions one may often lead him either to affirm or to deny that he has an immediate knowledge of the external world, pretty much as one pleases. If he affirms it, his position does not seem to be a wholly satisfactory one, as we have seen; and if he denies it, he makes the existence of the external world wholly a matter of inference from the presence of ideas in the mind, and he must stand ready to justify this inference.

To many men it has seemed that the inference is not an easy one to justify. One may say: We could have no ideas of things, no sensations, if real things did not exist and make an impression upon our senses. But to this it may be answered: How is that statement to be proved? Is it to be proved by observing that, when things are present and affect the senses, there come into being ideas which represent the things? Evidently such a proof as this is out of the question, for, if it is true that we know external things only by inference and never immediately, then we can never prove by observation that ideas and things are thus connected.

And if it is not to be proved by observation, how shall it be proved? Shall we just assume it dogmatically and pass on to something else? Surely there is enough in the experience of the plain man to justify him in raising the question whether he can certainly know that there is an external world.

THE PSYCHOLOGIST AND THE EXTERNAL WORLD.—We have seen just above that the doubt regarding the existence of the world seems to have its root in the familiar distinction between ideas and things, appearances and the realities which they are supposed to represent. The psychologist has much to say about ideas; and if sharpening and making clear this distinction has anything to do with stirring up doubts, it is natural to suppose that they should become more insistent when one has exchanged the ignorance of everyday life for the knowledge of the psychologist.

Now, when the psychologist asks how a given mind comes to have a knowledge of any external thing, he finds his answer in the messages which have been brought to the mind by means of the bodily senses. He describes the senseorgans and the nervous connections between these and the brain, and tells us that when certain nervous impulses have traveled, let us say, from the eye or the ear to the brain, one has sensations of sight or sound.

He describes for us in detail how, out of such sensations and the memories of such sensations, we frame mental images of external things. Between the mental image and the thing that it represents he distinguishes sharply, and he informs us that the mind knows no more about the external thing than is contained in such images. That a thing is present can be known only by the fact that a message from the thing is sent along the nerves, and what the thing is must be determined from the character of the message.

Given the image in the absence of the thing, —that is to say, an hallucination,—the mind will naturally suppose that the thing is present. This false supposition cannot be corrected by a direct inspection of the thing, for such a direct inspection of things is out of the question. The only way in which the mind concerned can discover that the thing is absent is by referring to its other experiences. This image is compared with other images and is discovered to be in some way abnormal.