

Bertrand Russell

"Analogy"

The postulates hitherto considered have been such as are required for knowledge of the physical world. Broadly speaking, they have led us to admit a certain degree of knowledge as to the space-time structure of the physical world, while leaving us completely agnostic as regards its qualitative character. But where other human beings are concerned, we feel that we know more than this; we are convinced that other people have thoughts and feelings that are qualitatively fairly similar to our own. We are not content to think that we know only the space-time structure of our friends' minds, or their capacity for initiating causal chains that end in sensations of our own. A philosopher might pretend to think that he knew only this, but let him get cross with his wife and you will see that he does not regard her as a mere spatio-temporal edifice of which he knows the logical properties but not a glimmer of the intrinsic character. We are therefore justified in inferring that his skepticism is professional rather than sincere.

The problem with which we are concerned is the following. We observe in ourselves such occurrences as remembering, reasoning, feeling pleasure, and feeling pain. We think that sticks and stones do not have these experiences, but that other people do. Most of us have no doubt that the higher animals feel pleasure and pain, though I was once assured by a fisherman that "Fish have no sense nor feeling." I failed to find out how he had acquired this knowledge. Most people would disagree with him, but would be doubtful about oysters and starfish. However this may be, common sense admits an increasing doubtfulness as we descend in the animal kingdom, but as regards human beings it admits no doubt.

It is clear that belief in the minds of others requires some postulate that is not required in physics, since physics can be content with a knowledge of structure. My present purpose is to suggest what this further postulate may be.

It is clear that we must appeal to something that may be vaguely called "analogy." The behavior of other people is in many ways analogous to our own, and we suppose that it must have analogous causes. What people say is what we should say if we had certain thoughts, and so we infer that they probably have these thoughts. They give us information which we can sometimes subsequently verify. They behave in ways in which we behave when we are pleased (or displeased) in circumstances in which we should be pleased (or displeased). We may talk over with a friend some incident which we have both experienced, and find that his reminiscences dovetail with our own; this is particularly convincing when he remembers something that we have forgotten but that he recalls to our thoughts. Or again: you set your boy a problem in arithmetic, and with luck he gets the right answer; this persuades you that he is capable of arithmetical reasoning. There are, in short, very many ways in which my responses to stimuli differ from those of "dead" matter, and in all these ways other people resemble me. As it is clear to me that the causal laws governing my behavior have to do with "thoughts," it is natural to infer that the same is true of the analogous behavior of my friends.

The inference with which we are at present concerned is not merely that which takes us beyond solipsism, by maintaining that sensations have causes about which *something* can be known. This kind of inference, which suffices for physics, has

already been considered. We are concerned now with a much more specific kind of inference, the kind that is involved in our knowledge of the thoughts and feelings of others—assuming that we have such knowledge. It is of course obvious that such knowledge is more or less doubtful. There is not only the general argument that we may be dreaming; there is also the possibility of ingenious automata. There are calculating machines that do sums much better than our schoolboy sons; there are gramophone records that remember impeccably what So-and-so said on such-and-such an occasion; there are people in the cinema who, though copies of real people, are not themselves alive. There is no theoretical limit to what ingenuity could achieve in the way of producing the illusion of life where in fact life is absent.

But, you will say, in all such cases it was the thoughts of human beings that produced the ingenious mechanism. Yes, but how do you know this? And how do you know that the gramophone does *not* "think"?

There is, in the first place, a difference in the causal laws of observable behavior. If I say to a student, "Write me a paper on Descartes' reasons for believing in the existence of matter," I shall, if he is industrious, cause a certain response. A gramophone record might be so constructed as to respond to this stimulus, perhaps better than the student, but if so it would be incapable of telling me anything about any other philosopher, even if I threatened to refuse to give it a degree. One of the most notable peculiarities of human behavior is change of response to a given stimulus. An ingenious person could construct an automation which would always laugh at his jokes, however often it heard them; but a human being, after laughing a few times, will yawn, and end by saying, "How I laughed the first time I heard that joke."

But the difference in observable behavior between living and dead matter do not suffice to prove that there are "thoughts" connected with living bodies other than my own. It is probably possible theoretically to account for the behavior of living bodies by purely physical causal laws, and it is probably impossible to refute materialism by external observation alone. If we are to believe that there are thoughts and feelings other than our own, that must be in virtue of some inference in which our own thoughts and feelings are relevant, and such an inference must go beyond what is needed in physics.

I am, of course, not discussing the history of how we come to believe in other minds. We find ourselves believing in them when we first begin to reflect; the thought that Mother may be angry or pleased is one which rises in early infancy. What I

am discussing is the possibility of a postulate which shall establish a rational connection between this belief and data, e.g., between the belief "Mother is angry" and the hearing of a loud voice.

The abstract schema seems to be as follows. We know, from observation of ourselves, a causal law of the form "A causes B," where A is a "thought" and B a physical occurrence. We sometimes observe a B when we cannot observe any A; we then infer an unobserved A. For example: I know that when I say, "I'm thirsty," I say so, usually, because I am thirsty, and therefore, when I hear the sentence "I'm thirsty" at a time when I am not thirsty, I assume that someone else is thirsty. I assume this the more readily if I see before me a hot, drooping body which goes on to say, "I have walked twenty desert miles in this heat with never a drop to drink." It is evident that my confidence in the "inference" is increased by increased complexity in the datum and also by increased certainty of the causal law derived from subjective observation, provided the causal law is such as to account for the complexities of the datum.

It is clear that in so far as plurality of causes is to be suspected, the kind of inference we have been considering is not valid. We are supposed to know "A causes B," and also to know that B has occurred; if this is to justify us in inferring A, we must know that *only* A causes B. Or, if we are content to infer that A is probable, it will suffice if we can know that in most cases it is A that causes B. If you hear thunder without having seen lightning, you confidently infer that there was lightning, because you are convinced that the sort of noise you heard is seldom caused by anything except lightning. As this example shows, our principle is not only employed to establish the existence of other minds but is habitually assumed, though in a less concrete form, in physics. I say "a less concrete form" because unseen lightning is only abstractly similar to seen lightning, whereas we suppose the similarity of other minds to our own to be by no means purely abstract.

Complexity in the observed behavior of another person, when this can all be accounted for by a simple cause such as thirst, increases the probability of the inference by diminishing the probability of some other cause. I think that in ideally favorable circumstances the argument would be formally as follows:

From subjective observation I know that A, which is a thought or feeling, causes B, which is a bodily act, e.g., a statement. I know also that, whenever B is an act of my own body, A is its cause. I now observe an act of the kind B in a body not my own, and I am having no thought or feeling of the kind A. But I still believe, on the basis of

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self-observation, that only A can cause B; I therefore infer that there was an A which caused B, though it was not an A that I could observe. On this ground I infer that other people's bodies are associated with minds, which resemble mine in proportion as their bodily behavior resembles my own.

In practice, the exactness and certainty of the above statement must be softened. We cannot be sure that, in our subjective experience, A is the only cause of B. And even if A is the only cause of B in our experience, how can we know that this holds outside our experience? It is not necessary that we should know this with any certainty; it is

enough if it is highly probable. It is the assumption of probability in such cases that is our postulate. The postulate may therefore be stated as follows:

If, whenever we can observe whether A and B are present or absent, we find that every case of B has an A as a causal antecedent, then it is probable that most B's have A's as causal antecedents, even in cases where observation does not enable us to know whether A is present or not.

This postulate, if accepted, justifies the inference to other minds, as well as many other inferences that are made unreflectingly by common sense.