

Why I am a Materialist

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WHEN I SAY that I am a materialist I mean that I believe in the following statements:

1. Events occur which are not perceived by any mind.
2. There were unperceived events before there were any minds.

And I also believe, though this is not a necessary logical deduction from the former two, that:

3. When a man has died he is dead.

Further, I think that it is desirable that other people should believe these statements. I do not mean that I believe that the universe is a machine, or that I am a machine; nor yet that consciousness does not exist, or has a lesser reality (whatever that means) than matter.

When I say 'I believe' I do not mean the word in the sense in which a fervent Christian uses it concerning the Virgin Mary, Pontius Pilate, and others who figure in the creeds. I mean it in the ordinary sense, in which, for example, I believe that dinner will be waiting when I go home, though, of course, the cook may go on strike or the chimney may catch fire. That is to say, I act, and propose to act, on the basis that materialism is true. But I am prepared to consider evidence to the contrary. And I certainly don't get shocked or angry if someone criticizes or doubts the truth of materialism.

Now the word 'materialism' is used, particularly in controversy, to imply a belief that a good dinner is better than a good deed. In fact, a materialist is supposed to be a man who has, or does his best to have, large meals, a large mistress, a large bank balance, a large motor-car, and so on. It is not obvious why this should be so. Other peoples' meals are as material as mine, and a bank balance is not something tangible, like a cellar full of gold and jewels.

In practice I have found that professed materialists are generally less selfish than professed idealists. For idealism is a remarkably useful device to enable us to bear other peoples' ills, and particularly their poverty. It is easy to persuade ourselves that the poor

have various spiritual blessings. But it is not so easy, when one's own affairs are concerned, to avoid the attitude of the idealist of whom it was written:

There was a faith-healer of Deal
Who said: 'Although pain isn't real,
When I sit on a pin and it punctures my skin
I dislike what I fancy I feel.'

I do not of course deny that some idealists are excellent people, and some materialists coarse and selfish. But on the whole I think the contrary is true, for reasons which will appear later.

Fifteen years ago I was a materialist in practice, but not in theory. I treated myself as a material system. We all do this to some extent. When we want to go somewhere we get into a train or bus, confident that on the one hand we shall not be able to propel ourselves so rapidly through space by the mere exercise of our wills, nor on the other that the vehicle will find any more difficulty in moving us than if we were a sack of potatoes. However, though we all have considerable faith in the applicability to ourselves of the laws of physics, our faith does not apply to chemistry. We should be willing to trust our weight to a rope which has been tested to stand double our weight, but we should mostly hesitate to drink half the fatal dose of a poison. Rightly too in some cases, for poisons in sub-lethal doses may do a good deal of harm. But not by any means always. Some poisons, such as carbon monoxide, are completely harmless in half the lethal quantity. I applied the laws of chemistry to myself. For example, I said: 'If a dog is given hydrochloric acid to drink (diluted, of course, so as not to injure its stomach), it excretes part of the acid combined with ammonia as ammonium chloride. Now men work in a similar way to dogs, and both are systems of partially reversible chemical reactions. So if I eat ammonium chloride I shall become more acid.' This did in fact happen. I was quite correct in my reasoning, or at any rate it led to a correct result.

However, although I was a materialist in the laboratory, I was a rather vague sort of idealist outside, for the following reason. I had learned that matter had certain properties. It consisted of atoms which united in particular patterns. They moved in definite paths under given forces, and so on. My belief in these theories was not a matter of mere

docility either. I had tested them and risked my life on their substantial accuracy. Clearly, if matter had the properties attributed to it by physicists and chemists, something more was needed to account for living organisms. And it was far harder to account for mind. As a believer in evolution, I had to reject such theories as T. H. Huxley's epiphenomenalism, according to which mind is a secondary consequence of a small class of material events (namely, those which go on inside our heads), but does not influence them. Apart from my very strong belief that I can act, the evolution of something as complicated as my mind, yet absolutely functionless, seemed most unlikely. Not that functionless organs are never evolved. On the contrary, it is probable that most organs are evolved in a rudimentary form before they develop a function. And I have not enough faith in the theories of Paley and his like to believe that every organ--for example, a cock's comb, a pigeon's cere, or a cassowary's wattle--has a function. However, I cannot believe that a system so complicated, and within its limitations so efficient, as the human mind could have evolved if it were functionless.

Nor did I see how, on a materialist basis, knowledge or thought was possible. The light which reaches my eyes causes nervous impulses in about half-a-million fibres running to my brain, and there gives rise to sensation. But how can the sensation be anything like a reality composed of atoms! And, even if it is so, what guarantee have I that my thoughts are logical! They depend on physical and chemical processes going on in my brain, and doubtless obey physical and chemical laws, if materialism is true. So I was compelled, rather reluctantly, to fall back on some kind of idealistic explanation, according to which mind (or something like mind) was prior to matter, and what we call matter was really of the nature of mind, or at least of sensation. I was, however, too painfully conscious of the weakness in every idealistic philosophy to embrace any of them, and I was quite aware that in practice I often acted as a materialist.

The books which solved my difficulties were Frederick Engels's *Feuerbach and Anti-Duhring*, and later on V. I. Lenin's *Materialism and Empirio-Criticism*. But the actual progress of scientific research in the last fifteen years also helped me enormously. None of the books which I have mentioned is easy if one has been brought up in the academic tradition which goes back to Plato and Aristotle. This is partly because they apply scientific method not only to philosophy but to philosophers. They are not merely

concerned with showing that their authors are right and their opponents wrong, but with explaining why, under particular social conditions, such and such theories are likely to gain wide acceptance. Hence, unless one accepts their political and economic theory, one is not likely to agree with their views concerning nature and knowledge, though it is only with the latter that I am concerned in these pages.

Engels and Lenin were firm materialists--that is to say, they believed that matter existed before mind, and that our minds reflect nature, and reflect it truly up to a point. But they absolutely rejected the current scientific theories of their day as complete or even satisfactory accounts of nature. 'The sole property of matter', wrote Lenin, 'with whose recognition materialism is vitally connected, is the property of being objective reality, of existing outside of our cognition ... The recognition of immutable elements, the immutable substance of things, is not materialism, but metaphysical, anti-dialectical materialism...It is of course totally absurd that materialism should ... adhere to a mechanistic world picture of matter and not an electro-magnetic or some immeasurably more complicated one.' Writing of the physics of his own day, he said: 'Dialectical materialism insists on the temporary, relative, approximate character of all these milestones on the road of knowledge of nature.'

Nature is in a state of perpetual flux--in fact, it consists of processes, not things. Even an electron is inexhaustible--that is to say, we can never give a complete description of it. We professors are always trying to give such a complete description, so that we can deduce all natural happenings from a few general principles. These attempts are successful up to a point, but we always find that nature is richer than we had thought. And the newly discovered properties of things appear to us as contradictions. Thus at the present moment both light and matter are found to have two sets of properties --one set resembling those of particles, and another set resembling those of waves. According to Engels and Lenin, things really embody a union of opposites, whose struggle makes them unstable and results in their development into something else. When we find 'internal contradictions' in our conceptions about things our minds are mirroring nature.

But these internal contradictions do not mean that nature is irrational. They mean that it is unstable. Our brains are finite. Nature is probably infinite, certainly too large for us to

take in. So our account of any material phenomenon is a simplification. We naturally think of things as neatly rounded off, and therefore tend to exaggerate their stability. However, the more we study nature, the more we find that what is apparently stable turns out to be the battlefield of opposing tendencies. The continents are the field of a struggle between erosion, which tends to flatten them, and folding and vulcanizing, which build mountains. For this reason they have a history. Animals and plants are never completely adapted to their environment, as Paley thought, and as they presumably would have been had they been made by an all-wise and all-powerful creator. On the contrary, they evolve just because they are imperfect. The same principle holds for human societies.

One of the materialist's greatest difficulties used to be perception. If the world consists of self-contained objects isolated from one another in space, how can any sort of image of it be formed in our brains! There is no hollow space in our heads where a puppet representation of the external world could be set up. Sound is the only feature of the external world about whose representation in our brain we know much. If we place an electrode on the auditory part of a cat's cerebral cortex and another somewhere else on its body, then in favourable circumstances if we amplify the current between them and pass it through a loudspeaker we actually hear sounds which the cat is hearing, or would hear if it were fully conscious. The same experiment is quite possible with a conscious human brain, though I don't think it has yet been done.

This means that the ear and the auditory nerve serve to set up electrical disturbances in air which we perceive as sound. In this case, then, there is an actual imaging of the external reality. But how can anything of this kind take place with a solid object seen or felt! The physical discoveries of the last decade have shown that ordinary material objects, from electrons upwards, can be regarded as periodic disturbances. Certainly the rhythm is very much faster than that of sound, and could not possibly be copied in the brain. But some kind of rhythmical changes in the brain, though very much slower than those which they mirror, would be copies of at least one aspect of matter.

The physicists tell us that the frequency of the vibrations associated with a particle are proportional to its mass, and the physiologists, in studying the impulses in a nerve fibre from an end organ responsible for our touch or pressure sense, find that the frequency of

the impulses increases with the stimulus, though not in exact proportion. We do not yet know in any detail what happens in the brain when we feel pressure, but it is likely that a similar law holds good.

We are only on the very fringe of the necessary investigations, but it is becoming daily more plausible that our minds are physical realities acted on by the rest of the world and reacting on it. Our minds are processes which occur in our brains. Until recently it was quite impossible to see how the processes going on in thousands of millions of cells could possibly form a unity such as we find in our consciousness. We are now, however, discovering both in atoms and molecules properties of a system as a whole which cannot be located at any particular place in it. There is nothing in any way mystical about these properties. They can be very precisely measured and calculated. They are expressions of the fact that the various constituents of nature are much less isolated than was at one time thought.

The difficulties about truth are complicated by the fact that we use the word for at least three very different relations. We may mean that a perception or idea in a mind is true if it corresponds to an external reality. If the relation between the two is one of likeness it can never be complete, but it may be true enough for a particular purpose. We may mean that a physical copy or image is like its original. Or we may mean that a statement is true. This statement may be in words or other symbols, and logic is largely concerned with the truth of statements. Their truth or otherwise depends on the meaning of the symbols. This is a social matter. A statement is true only as long as someone understands it. After that it is meaningless. 'Iron is heavier than water' will be true only as long as someone understands English, even if he is only an antiquarian. After that it will be gibberish like 'Pung twet maborooohoo', which for all I know meant something to the men who built Stonehenge, but is neither true nor untrue today.

Of course the philosophers say that a symbolic statement stands for a mental reality called a judgment, which is independent of language. I think this is extremely doubtful. On the contrary, it seems much more likely that language began with words or phrases whose English equivalents would be 'Come here', 'Wolf!', 'Heave-ho', 'Darling', and so on, which are not statements, and neither true nor false. And one can certainly think

without making statements or judgments, as when one remembers the plan of a town and picks out the quickest route, or imagines what an acquaintance will do in given circumstances.

The great advantage of the theory that judgments are anything but sentences repeated in our heads is that it gives philosophers a chance to theorize about thought without investigating the physiology of the brain. This enables them to tell us a lot about truth, but very little about how we get to know it or how we act on it. If we take the view that a statement is true in so far as it calls up mental images which correspond to reality, and useful in so far as it incites actions appropriate to the real situation, we have got away from metaphysics, and are up against problems concerning the action of the brain, the history of language, and how we learn language as children, which cannot be solved by pure thought, but only by studying the real world.

For such reasons as these I find materialism intellectually satisfactory. I also think it is useful because it leads to actions of which I approve. Mankind is up against a very difficult situation. We have dealt with a great mass of problems in the past by scientific thinking--that is to say, materialistic thinking. We try to solve our political problems by appeal to eternal values. But if we start thinking materialistically about these 'eternal values' we find that they are social phenomena which have come into being in the last few thousand years, because men gave up hunting and took to husbandry, agriculture, and handicraft. So society became a great deal more complicated, and 'eternal values' are part of the apparatus by which it has been kept going. In particular they are very useful to those who are in comfortable situations at present, and would like the present state of things, with a few minor modifications, to be eternal.

Materialistic thinking in the past has been revolutionary in its effects. It has built up natural science and undermined religion. The same process is going on today. We have to realize that our current ideas about society are mostly very like our ancestors' ideas about the universe four hundred years ago--irrational traditions which stifle progress in the interests of a small minority. These ideas are being transformed by materialistic thinking about history as our ancestors' ideas were transformed by materialistic thinking about nature. The consequence will no doubt be revolutionary, as it was in the past. This would

perhaps be deplorable if our society were working well. But it is working very badly. So we are probably going to have an uncomfortable time in the immediate future, whatever happens. And as I want a rational society to come out of our present troubles I am not only a materialist myself, but I do what I can to make other people materialists.