

## AND CAN IT BE REVERSED?

### CHAPTER 3.

But if in this secular world there are no fixed spiritual landmarks or signposts, the good news is that the only world-view that carries conviction is one based on a relationship with the Almighty, the Creator; and if Christianity is much the best religion which the world has known, (which was professor Eucken's view), that means that a Christian world-view is probably the best that you are going to get. But before evangelical Christians indulge in too much euphoria, it is prudent to remind ourselves for a moment why it is that scientific truth is necessarily unreliable. The late-Victorian physicists literally thought they had little more to discover; with Clerk Maxwell's equations for the propagation of electro-magnetic waves the last big problem had been solved, and all that remained was a little tidying up. Then came modern physics! First Max Plank's discovery that energy was not infinitely divisible, but consisted of packets or quanta; leading eventually to the wave mechanics and the quantum mechanics, and to Heisenberg's "Uncertainty Principle", namely that you cannot know a particle's position and momentum; the more accurately you know the one, the less accurately you know the other. Then Einstein's discovery that the common-sense concepts of space and time were not good enough to describe the movement of the heavenly bodies; you needed to combine them into a four-dimensional concept of space-time. Gravity did not exist; Newton was right, force at a distance was absurd. Even the concept of "Force" was eliminated; from henceforth the heavenly bodies moved along paths of least energy. Of course it is sensible to continue to use the concepts of force and gravity in everyday affairs; but one must try to remember they are but concepts. Similarly it is sensible to continue to talk of space and time, provided one remembers they too are but concepts, and inadequate ones at that. And Bertrand Russell ends his "Human Knowledge, its Scope and its Limits" in which he considers chiefly scientific knowledge, by saying that all knowledge is uncertain, inexact and partial. And to this doctrine no limitations have been found! And in his lengthy analysis of the legitimacy of "Induction", (and the whole of science depends on the legitimacy of induction), he concludes that induction is legitimate when common sense says it is legitimate, and illegitimate when common sense says it is illegitimate. To give a simple example; if someone, taking a census of a Welsh village in which 60 people lived, found that the first 50 were called "Williams", it would not be legitimate induction for him to conclude that all 60 were called "Williams", because one might be called "Evans". Induction is only valid, when common sense tells you that the great probability is that it is valid. All attempts to prove induction valid in the end are falsified, because they all come down to numerical induction, as illustrated above.

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And if science, which has swept the world with the success of its technology, cannot offer a world-view that provides a certainty that is emotionally satisfying, then no other philosophy has any hope of doing so either. So we are left with the religions, and the marriage of minds, which the German General Staff considered essential for the effective conduct of war. When a troop commander orders his gun position officer to carry out certain orders, the gun position officer does not try to interpret the electrical impulses that have travelled along the telephone wire; he understands the orders, and obeys them. Similarly in a Court of Law, there is a great deal of telepathy involved both in the examination and cross-examination of witnesses and in arguing before either a judge or a jury. In practice this is taken for granted; and in this subject science, so far, has nothing to say. Indeed telepathy is regarded as a rather spooky subject; whereas we all practice it every day of the week, in all our dealings with other people, as a matter of course. Our judgement may not be very good; but we all try as best we can. It is one of the glories of Creation that out of a seemingly mechanical Universe, human character and Man's freewill are born, and blossom and flower. Similarly, out of a world in which all knowledge appears to be uncertain, occasionally you find that two human minds can understand each other with complete certainty.

So it is that we are able to see that mathematical physicists and evolutionary biologists who discover that their respective subjects appear to obey causal laws, and do not need the intervention of freewill to explain their results, are not entitled to conclude that we are all automata, and have no freewill. To reach this conclusion, they have extrapolated wildly from the results of their experiments, and by induction inferred that the same mechanism applied to men and women. They have counted the first 10 of the Welsh village, and found they are all called "Williams", and concluded that the remaining 50 are all called "Williams" too. They have failed to understand the most elementary part of the scientific method, which is that few scientific propositions involve deduction only, because deduction can never result in any scientific "Law". Only induction can lead from experimental results to a generalized proposition, which is what we call a "Law". And in practice some inductions are legitimate, and some are not. We all know that David Hume proved conclusively that induction was logically indefensible; so that although the whole of science depends on it, the only excuse for it is that it often produces acceptable conclusions, and the construction of the whole of scientific theory would be impossible without it. For scientists to ignore the very basis of science, I would have thought, could be called ignorance.

It is tempting to think that we have already reached the limits in science of what the mind can understand. It is common knowledge that when light from a single source passes

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through two parallel slits, before falling on a flat screen, one does not see uniform illumination in the middle of the screen, fading off at the edges. One sees interference fringes, the Fresnel fringes as we call them, of light and dark lines. This shows that light has some of the properties of waves. But we also know that light behaves as if it were composed of quanta of energy – discrete particles which cannot be divided. The distribution of radiation given off by a hot body only makes sense if this is so. And the quantum mechanics tries to explain how the behaviour of electrons in the structure of atoms depends on this. But how can a single quantum of light pass through two slits, and form the interference fringes on the other side? The wave mechanics may say there is a wave of 50% probability that a quantum will pass through one slit rather than the other; and it makes sense to say there is 100% probability of it passing through one **or** the other. But it is nonsense to say there is a wave of probability that a single quantum will pass through **both** slits. Common sense breaks down at this point; and all we can say is that light displays some of the properties of waves, and some of the properties of particles. Maybe further research will reveal a simpler vision of elementary matter; or maybe the mystery will deepen and become even more incomprehensible. I suppose it is best to keep an open mind. But one thing eminent writers of popular science, like Sir James Jeans and Professor Eddington, have always stressed, is that science may tell you **how** the world started; it will never tell you **why** the world started. It will never tell you the purpose of life, or explain the beauty of music. Yet these are exactly the questions that the public seem to think the latest research will reveal. I fear they will find that science has feet of clay.

And of course scientists, like other people, are often limited people. Few can write decent English, or explain in simple language what they are doing. Few have that rapport with non-scientists, which shows they can easily rise above their subject. Take Heisenberg himself. He was head of the Nazi atomic energy establishment during the War. He was protected from harassment on Himmler's direct orders; so presumably he was a Jew. But he either failed to see the need to flee Germany while there was time, or failed to have the moral fibre to stand up to Hitler. After the War, he claimed he had de-railed German atomic research; but the truth of that assertion is likely to remain shrouded in mystery until the day of judgement. He failed, as we religious people would say, to see the writing on the wall, let alone understand it. The same could be said of Science as a whole. As technology progressively intrudes into every facet of our lives, it systematically prevents contact between man and man, which is the fabric that keeps communities alive. But do you ever hear a scientist utter a word of caution? Or do you ever hear a scientist propose a sensible Rule for limiting research, where its moral questions worry many ordinary people? The scientific view

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of things is, in truth, an incredibly narrow view. Fascinating, exciting, but narrow. And the fact that so many scientists say the world is simply mechanical, simply means they lack the breadth of outlook to encompass other mental disciplines, irrespective of whether they think those disciplines true, or false. They seem to forget that nobody in his senses acts as though the world were mechanical, which I would have thought should introduce a certain caution into their certainty. When the whole of scientific method and the logic of induction have to be limited by common-sense, which science itself condemns as inadequate, you are left with a philosophical system, which is emotionally bankrupt. Evangelical Christians should take note, and appreciate that they are just as capable of making similar bad decisions in their own line of business. And the simple truth is that we need to be protected from the new scholasticism of science, just as much as we needed to be freed from the old scholasticism of medieval theology. The one is no better than the other.

What we want, if we are to create or preserve a decent just society, is a vision of Nature and the Universe that enables us to recognise as distortions or perversions the bigoted intolerant attitudes, which tend to gain control of all religions, which now pervade the narrow scholasticism of science as well, and which brutally manifest themselves when crime begins to get the upper hand. Toleration is a two-way conversation; you cannot tolerate those who will not tolerate you, except for reasons of temporary political expediency. Each world needs to have its due, and no more than its due; both the world on this side of death, and the world beyond death. So what we want is a vision of the Universe, which tolerates religious freedom so far as possible, which accords to science the respect due to it, and which recognises the brutal truth that War or conflict is inevitable if you come across someone more interested in fighting than talking? And in view of our history and our culture, a Christian view of Nature and the Universe is the best that you are going to get, in this country at any rate. Not ideal; but better than the alternatives.

However let us begin by considering the present position, and ask whether we should try to assess whether the degeneration of standards of decency in our community has not already gone so far, that any prospect of reversing it has probably been passed? Have we in Britain, with our long and valiant history of seeking freedom and government by consent, already been overwhelmed by the barbarians within our society? Just as the Romans long ago were overwhelmed by the barbarians from without? Or is it better to follow the example of the younger Scipio? He was one of the few thousand Romans to escape from the slaughter at Cannae, when he heard some Roman officers saying that ‘they must seek armistice terms from Hannibal’. He promptly had them arrested, and taken into custody! And subsequently

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he defeated Hannibal at Zama. There was a bitterly amusing sequel. Both men were exiled by their respective countries; and in later life met, I think in Asia Minor, and had a convivial evening together discussing the past. Appeasement; or have we learned?