1.G: the ***Philosophyldeas*** overview of

SCIENTIFIC PHILOSOPHY

The earliest philosophers were also the earliest scientists, and their aim was enquiry into existence by any means available. Gradually, though, there was a division of labour, and specialists in mathematics, cosmology and technology became less philosophical. The physical sciences made considerable progress in good theorising, but produced few secure results, since good tools and research techniques were lacking. This all changed once nature was treated mathematically, instruments for examining distant or tiny objects were developed, and the idea of the repeatable controlled-conditions experiment was developed. Science took off, and began to offer us precise mathematical laws, which might describe or explain the entire universe. As we know, once the method was seen to work, almost every area of human investigation came under its influence.

At first science and philosophy ran in parallel, watching one another with interest, but the science began to influence the philosophy. It was suggested that if strict laws controlled all of nature, this made events in the universal totally predictable, and free will redundant. Soon a doctrine called Positivism emerged, which suggested that from now on the sciences were in charge. Since empirical research provides a reliability which no philosopher can match, the philosophers must always defer to the science. We then find new political theories being described as 'scientific', theories of biology influencing our views of morality, and philosophers trying to embrace the methods of mathematics.

A few philosophers raised some resistance to the onslaught, by suggesting that the observations on which the sciences rested tended to be rather subjective and selective, influenced by the background culture, language and theories. The history of science was rather messy, with evidence of observations being fixed to achieve neat results. The Philosophy of Science emerged, in which philosophers analysed and criticised the systems and methods of the scientists. One culmination of this was the radical claim that there is no 'truth' at all in science, and it should just be seen as the product of a passing culture.

Unsurprisingly, the radical claim won little long-term support, and it was now the turn of science to fight back. In modern times sciences have extended their reach, into the physical workings of the brain, our processes of understanding, our actual moral behaviour and practical reasoning, and our evolutionary history. 'Matter' and 'substance', key concepts in early philosophy, seem to be the preserve of the physicist. The time was ripe for Scientific Philosophy, which makes itself subservient to the findings of the researchers. At the centre of this approach is the extraordinary findings of quantum theory, which have thrown into doubt the possibility of stable truth, strict laws, determinate objects, objectivity, and even logic. So perhaps we should build our metaphysics on these reliable new findings, rather than on the ancient categories of thought? There is some caution about doing that, because the scientists themselves seem unsure about what exactly they have revealed.

It is the newer branches of science, especially those which examine humanity itself, which invite the possibility of philosophy becoming entirely scientific. We might build our morality on the startling observations of survival strategies among animals. Instead of anguishing over the definition of 'knowledge', maybe we should research how we actually assemble and use what we know. Instead of introspecting from armchairs about 'thought', and putting forward hopeful arguments about separate 'minds', maybe we should just attend more closely to what our brains actually do. At this point some thinkers simply abandon philosophy and immerse themselves in science.

Those who admire science but still believe philosophy has a role are faced with a trilemma. Should philosophers merely submit to the science, or should they develop the sciences into some 'higher-level' understanding, or can they actually contribute something to the more theoretical end of the scientific enterprise? 'Submission' would make philosophy a descriptive activity, in which some solutions to traditional problems were indicated in the scientific literature. 'Development' would turn philosophers into specialists in scientific generalisation, cross-referencing the different areas of research, to expound a persuasive general picture rooted in disciplined observation. 'Contribution' would appear if philosophers developed new concepts and tools, or gave helpful critical analysis of those currently used in science.

The opponents of these three styles of Scientific Philosophy continue to fight for the full independence of the subject. They label the excessively pro-science attitude (in which only causal explanations are allowed) as 'Scientism', and claim that there is a rival approach to understanding. Only a very foolish philosopher rejects the well-established facts which are offered by science, but the objection is to the claim that such facts are of central philosophical importance. If, for example, we find that our actual moral behaviour is mirrored in studies of animals, or can be modelled in game theory, this may tell us nothing about morality, if that concerns how we *ought* to behave, rather than what we actually do. If neuroscientists provide us with a perfect and detailed map of the brain events underlying every thought we ever have, this may entirely miss the point of what matters about thought. Maybe the flights of reasoning and creativity which some people can manage far transcend anything which science has the faintest chance of explaining. Surely we want to know how we *should* reason, rather than how we actually do it?

Even if the more scientific philosophers reject such aims as fruitless and vain, there is no denying that important questions can be asked about science, which can only be asked from the outside. Is the scientific attitude dangerous, or destructive of human happiness, or hostile to crucial traditional wisdom? How far should the scientific attitude extend – into education, into child-rearing, into human relationships, into the design of our human world? Even within the problems of science, there seems to be a point where scientists have nothing further to say, and yet interesting issues remain. On the subjects of time and eternity, change, the infinite, the ways in which nature is categorised, human nature, the self, the value of consciousness, emotions, causation, and the ultimate foundations and ends of things, it is hard to imagine a time when the writings of philosophers do not offer interesting analyses and illuminations of what is at stake.