British Empiricism

Characteristic of Descartes's philosophy was the pivotal role played by God, who guarantees the reliability of our faculty of reason and who would be a deceiver if our strong inclination to believe in the existence of external things were wrong. A further role for God (not covered in the **Meditations**) was in the emerging science of the 17th century. High-level scientific principles were said to be based on God's attributes. For example, the claim that in the universe the quantity of motion is conserved is based on the immutability (unchanging character) of God.

A problem with this top-down approach to scientific theorizing is that it can run into conflict with experience. In the case of the conservation law, it was soon recognized that it is empirically false. What is conserved is not quantity of motion, but quantity of directed motion. This fact sank Descartes's clever attempt to inject mind into the physical world by having it merely deflect motions in the brain: this would violate the correct conservation law.

In contrast to the top-down approach, a bottom-up or inductive approach was championed by English philosophers. The approach consists of three steps:

1. Observation of a number of cases.
2. Discovery of a common pattern among the cases.
3. Inductive inference to the conclusion that the pattern holds for all things of the relevant type.

Typically associated with this approach, the basis for modern science, is empiricism, the doctrine that all our knowledge of factual matters is based upon sense experience. The leading philosophical British empiricist in the period following Descartes was John Locke (1632-1704).

The method just broadly sketched was also adopted by Sir Isaac Newton. He is perhaps most famous for promulgating universal gravitation, that all bodies of any mass attract each other with a force which is a function of the mass and the square of the distance. Newton is said to have been inspired by noticing the fall of an apple when the moon was in his line of sight. These two seemingly different cases exhibit the same pattern, namely, a falling toward the earth. This, the story goes, Newton generalized to all behavior of massive bodies, in the heavens and on earth.

We now think of Newton's generalization as one of the great achievements in the history of science, but in his day, Newton was reviled for having perpetuated a fraud. (Leibniz, a Continental Rationalist, was one of his most bitter critics.) His critics asked the same sort of question Socrates asked of Euthyphro. If bodies really attract one another, what is it that makes them do so? Failure to answer the question betrays ignorance about what attraction is. If you answer that it is a force, the critics respond that this is no more than to say that bodies attract one another, i.e., to say nothing more. One of the most significant philosophical breakthroughs made by Newton was to convince people that attraction exists, whether he could explain it or not. In fact he

could not give the sort of explanation the critics called for (in terms of impact), lamented the fact, and asserted that attraction is proved to exist anyway.

John Locke set about to show in a general way how our knowledge is based on experience. However, he did not get as far as one would like, and he ended up being a limited skeptic. Locke passed over the rationalistic claims of Descartes. He believed that we do not have the kind of rational insight Descartes had claimed, because what is in our mind is only what has come into it as sense impressions. So the role of reason is restricted to manipulation of sensory data, and this does not take us very far.

Generally, Locke was concerned about the ability of the senses to penetrate into the nature of things. He thought them to be very crude, so that even with the aid of instruments, they could provide only limited information about the nature of objects. Having adopted the philosophy of atomism from his fellow Briton Thomas Hobbes (which claims that material objects are swarms of tiny atoms), he thought that the fundamental particles and processes are out of our reach. Further, he held that we know nothing of what our senses are not currently perceiving or have perceived before. Babie are born into the world with a "tabla rasa," a blank slate that is filled up with experience.

One would think that this largely negative result would be a low point for empiricism, but it was to be dealt a still heavier blow by David Hume (1711-1776). Hume finished the job of undermining the reliability of both senses and reason. So great was the damage, that Hume found himself in despair. He likened himself to a monster, unfit for human companionship. Then he decided not to take it so hard, and to go ahead and do philosophy in a loose and casual manner.

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Since the main thrust of this unit is the political philosophy of Hobbes and Locke, we will not go further into the causes of Hume's despairing scepticism. However, you should know that just as philosophy has had a profound influence on the hard sciences, the ideas of Locke and Hume have had a profound influence on contemporary social science. Locke's idea that man is born a tabla rasa is the basis of what has come to be called "the standard model of social science." Hume's extreme skepticism is a major underpinning of cultural relativism.

Scientific research in the second half of the last century (you know the 1900's) has shown the tabla rasa idea to be incorrect in many ways and severely undermined the idea of total cultural relativism. However, since most social scientists are unlikely to let facts get in the way of cherished dogma (especially dogma with profound political implications), the social science professors you are likely to meet in college are unlikely to believe the approach suggested by evolutionary psychology.

Ironically, although perhaps inevitably, evolutionary psychology like the philosophy of Immanuel Kant is, at heart, an attempt to reconcile the ideas of Descartes and the Empiricists by suggesting that the brain is not a tabla rasa, but a series of evolved mechanisms for interpreting sense data. "I evolved, therefore I am?"