

PHI 312: 17th & 18th Century Philosophy

1) This period is often referred to as (early) *modern*. ‘Modern’ means ‘characteristic of the present time’ and suggests not only continuities with the contemporary philosophy, but also a break with the past. The 17th century authors we’ll read were seen as representatives of “the *new philosophy*”.

2) The break was with the orthodox philosophy of late mediaeval Europe, *scholasticism*, a marriage of Christian doctrine and Aristotelianism. On the one hand, Aristotle’s account of the world was to be reconciled with doctrine; on the other, the details of doctrine were to be clarified in terms of Aristotelian metaphysics.

[According to Aristotle’s *hylomorphic* theory of nature: a) everything is a combination of matter (*hyle*) and form (*morphe*); b) it is the kind of thing (*substance*) that it is because of its form. Science is the search for “real” definitions that characterize the nature or essence of the kind in question. (E.g. man is a rational animal.) Then, all the attributes of that kind of thing (not the accidental properties of individuals of that kind) are supposed to follow from these definitions and evident basic principles by a process of deductive (syllogistic) reasoning. Furthermore, change is to be explained in terms of ends, the nature of a thing determining the end (*telos*) towards which it moves.

Scientific explanations, on this account, are qualitative (in terms of essences) rather than quantitative, and teleological (in terms of ends or purposes). It’s easy to see how such a pattern of explanation might descend into triviality. (E.g. Massive bodies fall because it is in their nature to do so.)]

3) However, the ‘new’ philosophy of the 17th century was also influenced by ideas from the ancient world. We mention three of them:

i) Mathematics is important for understanding the world: the cosmos has an eternal and unchanging underlying order, and the principles of this order are essentially mathematical.

[This kind of view goes back to the Pythagoreans, and traces of it can be found in Plato. For extra-philosophical reasons, Platonism enjoyed a vogue in Europe at the start of the Renaissance, and the idea that mathematics expressed the laws of the Universe inspired—and was confirmed by—some notable scientific discoveries. (Consider, for example, Kepler’s (1571-1630) 2nd law of planetary motion: the radius vector drawn from the sun to each planet has such a (varying) length and moves with such a (varying) velocity, that it sweeps out equal areas in equal intervals of time.)]

Also, mathematics—and, in particular, Euclid’s axiomatic development of the subject—provided a paradigm of (apparently) certain knowledge and a model for its organization.

ii) Atomism is the view that the world consists of an infinite number of indivisible bodies moving randomly in a void, and that quantitative differences (size, shape etc.) between these bodies and the speed and direction of their motion account for the different kinds of things and events in the world. It reemerged in the 17th century as *corpuscularianism*.

[It was thought that an explanatory account of phenomena in mechanical/corpuscular terms would be objective in a way that a qualitative explanation could not be—because color, taste, feel etc., unlike shape, size etc., were thought not to be genuine properties of objects, but to be subjective sensations produced in us by such genuine properties. In contrast to Aristotelian science, which set great store by appearances, the new science was often counterintuitive: things were not really the way they seemed to be.]

Here's a quotation from Galileo's *The Assayer* that makes this point:

Now whenever I conceive of any material or corporeal substance, I am necessarily constrained to conceive of that substance as bounded and as possessing this or that shape, as large or small in relationship to some other body, as in this or that place during this or that time, as in motion or at rest, as in contact or not in contact with some other body, as being one, many or few—and by no stretch of the imagination can I conceive of any corporeal body apart from these conditions. But I do not at all feel myself compelled to conceive of bodies as necessarily conjoined with such further conditions as being red or white, bitter or sweet, having sound or being mute, or possessing a pleasant or unpleasant fragrance. On the contrary, were they not escorted by our physical senses, perhaps neither reason nor understanding would ever by themselves arrive at such notions. I think therefore that these tastes, odors, colors, etc., so far as their objective existence is concerned, are nothing but mere names for something which resides exclusively in our sensitive body, so that if the perceiving creature were removed, all of these qualities would be annihilated and abolished from existence. But just because we have given special names to these qualities, different from the names we have given to the primary and real properties, we are tempted into believing that the former really and truly exist as well as the latter.

An example, I believe, will clearly explain my concept. Suppose I pass my hand, first over a marble statue, then over a living man. So far as the hand, considered in itself, is concerned, it will act in an identical way upon each of these objects; that is, the primary qualities of motion and contact will similarly affect the two objects, and we would use identical language to describe this in each case. But the living body, which I subject to this experiment, will feel itself affected in various ways, depending upon the part of the body I happen to touch; for example, should it be touched on the sole of the foot or the kneecap, or under the armpit, it will feel, in addition to simple contact, a further affection to which we have given a special name: we call it "tickling." This latter affection is altogether our own, and is not at all a property of the hand itself. And it seems to me that he would be gravely in error who would assert that the hand, in addition to movement and contact, intrinsically possesses another and different faculty which we might call the "tickling faculty," as though tickling were a resident property of the hand *per se*.

iii) Skepticism