

Philosophy 1320: Theories of the Mind, Stern College - Yeshiva University, Spring 2007
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I. Aristotle: matter and form

In our last class, I mentioned that Aristotle's interest in natural science led him to look for natural causes of change where Plato appealed to the theory of forms.

Plato thought that the unchanging forms were most real.

Aristotle denied that a separate world of forms could help explain why sensible things have their properties.

We can call Aristotle's rejection of the world of forms monism: there is only one kind of thing, in this case substance.

(Calling Aristotle a monist is a bit misleading, since Aristotle thinks that there are many different kinds of substance, many ways of being. But, it will suit our purposes.)

Since Aristotle rejects Plato's forms, he has no need to posit that the soul is distinct from the body.

But, in rejecting the forms, he is faced with the problem of explaining the differences among matter.

Consider, the difference between a lump of clay, and a similar lump made into a statue.

The two lumps are made of the same kind of stuff, but have a different shape.

Plato would say that the lump that looks like a statue participates in the abstract form of the statue.

Aristotle calls the shape of the sensible statue itself its form.

Primary substances, things, have both matter and form.

Matter itself is mere potentiality; it is nothing in itself unless it has some form.

The form is what makes it what it is; see p 39.

Forms, for Aristotle, are thus just one aspect of a substance.

Every living thing, indeed every thing that we can name, has its matter, the stuff out of which it is made, and its form.

In the case of the statue, the form is related to its shape, though form is not merely shape.

Consider my eye, as Aristotle does on p 40.

It has matter, which it can share with a dead eye.

It has some properties in common with an eye of a statue, like its shape.

But, the real eye is able to see.

The function of seeing is what makes an eye a real eye.

So, the form of the eye is related to its function.

Similarly with my hand, which has particular functions.

All the parts of me: my heart, my lungs, my toes, have functions, and so both matter and form.

When we put all of these pieces together, we get a person.

We are all made out of the same kind of matter.

But, we have different properties.

The properties which make me what I am are my form.

II. Aristotle on the soul

Given that every substance has matter and form, the soul can not be identified with the matter, since the matter is only potentially a thing.

And dead bodies have the same matter as live ones.

The soul must be identified with the form of the person, that which makes us who we are, our function.

Technically, Aristotle calls the soul the first actuality of the natural, organic body.

(First actuality is contrasted with second actuality as knowledge of a fact is contrasted with an ability to use that fact; but no matter, here. The point is that matter is potentiality and form is actuality.)

The soul is thus not separable from the body, though it is different from just the matter of the body.

As with Plato, 'soul' in Aristotle's work does not precisely refer to that which we think of as a mind.

Since the form of something is what makes it what it is, the soul includes our biological aspects, like sensation and locomotion, as well as reason.

Aristotle's account of the soul as the form of the human body makes the soul of a person seem a lot like the soul of an animal or plant.

For, plants and animals also have a matter and a form.

Each of these, thus, has a soul.

Plants have nutritive souls.

Animals also have sensitive souls.

While Plato identified several parts of the human soul, Aristotle mentions six faculties, though these are not to be taken as parts: nutrition and reproduction, sensation, desire (which cuts across all three parts of Plato's soul), locomotion, imagination (which we share with some animals), and reason.

Only humans have rational souls.

Thus, Aristotle defines human beings according the functions of their souls: rational animal.

If you think of form as shape, Aristotle's account of the soul will seem doomed.

For artifacts like statues, shape nearly exhausts form.

But, form is inextricably linked to function.

The form of an object is what makes the object what it is.

We are what we are, i.e. persons, because of our ability to reason.

Thus, by definition, our form is linked to our ability to think.

And, our soul are thoughtful, as opposed to just some kind of shape.

III. Perception and thought

For Aristotle, the soul is an aspect of our material constitution.

It seems puzzling that matter can think.

For Plato, the soul was independent from the body.

The independence of the soul creates the mind/body problem: how can an immaterial soul communicate with a material body.

But Plato avoided worries about how bodies think, since they do not.

Aristotle uses an analogy with perception to help explain how matter can think.

Morton presents some of Aristotle's theory of vision to make the analogy clear.

Consider an apple: it is red and sweet.

These are real properties of the apple itself.

According to Aristotle, people can see when the eye is changed to be like the color of an external object.

I see the apple as red because my eye itself is able to change to red.
Morton says that the color is thus communicated to the soul, which is misleading.
The eye's changing to match the environment is perception itself.
There is no further communication to an independent soul.
Similarly, Aristotle writes that the soul can not be blended with the body, on p 42.
The soul is not another matter, with some connection to the body, like blending.
The soul just is the matter in its particular form.

Thinking works analogously to perceiving.
In perceiving, the sense organ changes to match the outside world.
Similarly, in thinking, we are changed to match the forms of other objects in the world.
Morton uses the example of our knowing that a horse is rushing past.
Our knowledge is more than just awareness of the sense perceptions involved.
Similarly, knowledge of essences, or of the distinction between form and matter, is clearly not just sense perception.
Since we have such knowledge, we must have a capacity to receive it.
That capacity is what we call the passive intellect.
In contrast, the active intellect is our capacity to make ourselves think.
The receiving of forms does not exhaust the mind's capacity.
We also have an ability to act on the world, which arises from the active intellect.

Given Aristotle's monism, it is surprising to note that Aristotle, in Book III of *de Anima*, intimated that one part of the soul, the active intellect, may be immortal.
Still, the immortality does not appear to be an individual immortality.
It is more like an aspect of the eternal, the divinity of reason, that is part of us.
This doctrine is not in our reading; I mention it only as an aside.

IV. The reality of the soul

So, does Aristotle think that there is a soul?
The question is ambiguous.
If we take that term to refer to a non-material soul which is independent of the body, the answer is no.
But, Aristotle certainly thought that there is a soul.
The soul of a person is the form of the person.
And the form of an object exists, just as surely as its matter exists.

To see the reality of form, consider the ship of Theseus.
If we replace each plank in the ship, the matter of the ship has disappeared.
But, the ship remains.
The form has remained constant, even if the matter has shifted completely.
Both matter and form are real modes of substance, really exist.
Similarly, both the body and the soul exist, even if not independently.

V. Introduction to Descartes

The scientific revolution of the sixteenth and seventeenth centuries ended the reign of Aristotle's view of the world, and the soul, and marked a return to a Platonic view.

We will start by looking at the second meditation, and a bit of the third, in Descartes' *Meditations on First Philosophy*.

Then, we will return to the three short selections from Galileo and Descartes concerning the nature of the material world according to the new science.

After that, we will proceed with the sixth meditation.

I start with a brief introduction on the scientific revolution, and its effect on the Aristotelian world view.

Aristotle's view of the material world, of our perceptions and our minds, dominated medieval thought.

Aristotle's understanding of the material world is fairly commonsensical.

There are ordinary objects, like trees, with ordinary properties, like being brown or tall.

We somehow commune with these objects so that we can understand them.

The new science rejected the commonsense science of the medieval world view.

Consider four medieval dogmas.

- D1) The heavens are constant, and the Earth is at the center of the universe.
- D2) Causes are (partially) explained teleologically, by purposes. E.g. Objects tend to fall to the Earth because of their natural tendency toward the center.
- D3) The heavens contain starry perfect spheres (stars and planets) which revolve in perfect circles around the Earth.
- D4) There are two kinds of motion. Terrestrial motion is linear; celestial motion is circular.

The first two of these dogmas come directly from Aristotle (384-322 BC).

The third and fourth come from Ptolemy (2nd century AD), who saw the sky as a thing, like a roof on the Earth.

The new science undermined all four of these dogmas.

In the 15th century, a new star is discovered, against D1.

Copernicus (1473-1543) hypothesized that earth was not stable, and that it underwent retrograde motion, against D1.

Brahe (1536-1601) discovered that planets move in ellipses, against D1 and D3.

Kepler (1571-1630) urged heliocentrism, against D1.

Galileo (1564-1642) suffered under the Inquisition in 1633 for supporting Kepler's heliocentrism.

He also argued that there was one type of motion for all bodies, not one on earth and one in sky, against D4.

This motion, due to gravity, is a unifying hypothesis, which explains all motion mechanically, against D2.

Newton's first law of motion, inertia, says that bodies have no natural telos, also against D2.

His discovery of Jupiter's moons meant that there was more than one center of motion, against D1.

And his discovery of bumps on moon is evidence against D3.

All of the evidence shows that there were good scientific reasons to reject Aristotelian science.

The view that replaced it asserted that all of the interactions among material bodies can be explained mechanistically, by the interactions of matter in motion.

The only real properties are those that mathematics can describe.

And mathematics can not describe color, sound, taste, and smell, among other sensory properties.

So, Aristotle must have been wrong about the reality of those properties.

Real properties are size, mass, distance and speed, for example.

The rejection of Aristotelian science extends to Aristotle's view of the soul.

According to Aristotle, our mental states just reflect changes in the body as it communes with external objects.

That is, there is no separation between mind and matter.

If matter really does not have ordinary sensory properties, then mental states can not be mere apprehensions of the real sensory properties.

So, what can mental states be?