The Hylomorphism of Aristotle and Aquinas
• Aristotle was born in the Greek colony of Stagirus in 384 B.C., so he was over 80 years younger than Socrates and over 40 years younger than Plato.

• He wrote on logic, metaphysics, mathematics, physics, biology, ethics, politics, medicine, and the fine arts.

• He is Plato’s most famous student.

• Aristotle is certainly one of the greatest and most influential philosophers in history, along with Plato, his teacher.

• Born in 1225 A.D. in what is now Italy, St. Thomas Aquinas was a Dominican friar and priest who is one of the most influential philosophers in the Catholic tradition.

• He was known for bringing together Christian doctrine and Aristotelian philosophy, at a time when Christianity had previously relied more on Plato than Aristotle.

• He also made extensive use of the thought of other philosophers including Plato and St. Augustine, as well as Jewish and Arab philosophers such as Moses Maimonides and Ibn Sina (aka. Avicenna).
What is Hylomorphism?

- Hylomorphism is a philosophical view that says everything in nature is made up of two parts: “matter” and “form”.

- The word “hylomorphism” comes from the Greek words ὕλη (hyle) and μορφή (morphe). These words are often translated into English as “matter” and “form”.

- Hylomorphism was first proposed by Aristotle. That means it comes on the scene later than both dualism (which can be traced at least to Plato) and physicalism (which originates with Leucippus and Democritus: pre-Socratic philosophers).

- Plato’s dualism is responding to the various kinds of physicalism that came before him. Hylomorphism is responding to both physicalism and dualism. It tries to improve on both.
What is Hylomorphism?

• Hylomorphism is even more of a johnny-come-lately in the western world because most of Aristotle’s writings were lost sometime after his death in 322 B.C. and not discovered again by western thinkers for over 1400 years.

• This is why Thomas Aquinas is one of the most important interpreters of Aristotle’s hylomorphism: he lived during the time shortly after many of Aristotle’s writings were rediscovered.

• Hylomorphism (in different versions) was almost universally accepted in western philosophy for over four hundred years, from shortly before the time of Aquinas up until Descartes in the 1600’s. It was Descartes, the “Father of Modern Philosophy” whose writings began the shift away from hylomorphism.

• Within a century of Descartes’ time, hylomorphism had nearly disappeared from the historical mainstream of philosophy. Today it is making a bit of a comeback, partially due to the obvious problems with physicalism and dualism.
## What is Hylomorphism?

Hylomorphism is a subtle view that is more difficult to explain in a “sound bite” than physicalism or dualism. So before we get into the details of what hylomorphism is, let’s start by looking at how it agrees and disagrees with the other views we have discussed.

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<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Do I have a soul?</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Is a corpse a human body?</td>
<td>Yes</td>
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<td>No</td>
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<td>Yes</td>
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<td>Is my body a “physical” object?</td>
<td>Yes</td>
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<td>Yes</td>
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<td>Do non-human animals have souls?</td>
<td>No</td>
<td>No</td>
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<td>Are mental states “physical”?</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<td>Are bodies conscious?</td>
<td>No</td>
<td>Yes</td>
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<td>Does my soul survive death?</td>
<td>Yes</td>
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Defining ‘Substance’

Question: What is a thing?

A pile of rocks is a pile of things.

But is the pile a “thing” too? Is the pile a thing in addition to the rocks themselves?

We know that a squirrel is a kind of “pile” of things as well. It is a precisely arranged pile of cells, and of atoms.

But is the squirrel a “thing” too? Is it a thing in addition to the smaller things that make it up?
Defining ‘Substance’

According to Aristotle and Aquinas, there is an important difference between a squirrel and a pile of rocks.

The squirrel has a special kind of unity that a pile of rocks doesn’t have.

Aquinas and Aristotle mark this difference by saying that the squirrel is a “substance” and the pile of rocks is not. The squirrel is something over and above the particles that make it up.

A substance is a thing that is unified in a strong sense. It is “one thing” in a way that non-substances are not.
Defining ‘Substance’

Living things like squirrels, trees and human beings are the most obvious examples of substances. They exist through time and their parts behave in a coordinated way.

You might think that a single rock has a kind of unity that a pile of rocks doesn’t have. Is it a substance? Does it behave in a way that is unified, like a squirrel does?

What about a ship? Or, more generally, what about “artifacts” (objects made by human beings for some purpose)?
The Unity of Substance

So far, we’ve said that substances have **unity**.

But what do we mean by “unity”? Let’s try to make it more precise.

To do that, we need to introduce a new idea, called **the four causes**.

Aristotle thought that there were four different kinds of causes in nature:

1) **The material cause**: The “stuff” that something is made of. We’ll talk about this more when we talk about matter.
   
   Example: The clay of a clay ball.

2) **The formal cause**: The way in which matter is. We’ll talk about this more when we talk about form.
   
   Example: The round shape of a clay ball.

3) **The efficient cause**: A cause that moves something else, usually by “pushing” or “pulling” on it. This is the most familiar kind of cause.
   
   Example: My fist that smashes the clay ball flat.
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4) **The final cause**: The goal towards which something strives.
   
   Examples: The house in the mind of a house-builder; the finish line towards which the runner is running.

It is this fourth kind of cause that can help us explain what we mean by “the unity of substance.”
4) **The final cause:** The goal towards which something strives.

**Examples:** The house in the mind of a house-builder; the finish line towards which the runner is running.

The parts of a squirrel all work together for a goal or purpose. This goal is the squirrel’s final cause: living and flourishing.

The parts of a rock don’t seem to work together at all. They just sit there. And the rock doesn’t seem to have a goal towards which it is striving.

A ship *does* have a goal to work for: Its goal is to transport people by water. But notice that, unlike the squirrel, its goal doesn’t come from *nature*, but from human beings. We built its goal into it.
The Unity of Substance

The unity of substance (or *substantial unity*) is the kind of unity that something has when it has a purpose (final cause) that it strives for. So which of these three things has this sort of unity? In other words, which ones are substances?

A squirrel is a substance because its whole being (including all its parts) strives to help it live and flourish.

A rock is probably not a substance because it does not have any obvious goal to strive for, and its parts do not work together for any purpose.

We might call a ship an “artificial substance” (or “artifact”) because although it *does* have a goal to strive for (to transport people well) this goal does not come from the ship’s *internal* nature, but from an *external* source: human beings.
What is a change?

Aristotle’s hylomorphism begins by trying to explain change.

Here’s an observation: It seems that anytime something changes, it changes *from* something, *into* something.

And when it does that, there is always some part of it that is different after the change from before. But there is also something that stays the same.

A change always involves “something” that is different after the change. And it also involves “something” that remains the same through the change.
What is a change?

Note that there is a difference between *change* and mere *substitution*:

Unless there is something that is common to both the “before” and the “after”, it seems like we have a case of mere substitution: one thing vanished and another appeared. And that isn’t change.
What is a change?

Long hair
Me

Haircut...

Short hair
Me

Long hair
Me

A Fried Egg

WANNA SEE SOMETHING WEIRD?

WATCH. YOU PUT BREAD IN THIS SLOT AND PUSH DOWN THIS LEVER...

THEN IN A FEW MINUTES, Toast POPS UP!

WON. WHERE DOES THE BREAD Go?

BEATS ME. ISN'T THAT WEIRD?
What is a change?

Aristotle used “matter” to designate the feature that stays the same through a change. And he used “form” to designate the feature that is different before and after the change.

Consider a ball of clay:

Now smash it flat.

Before the change, the matter is the clay and the form is the round shape of the clay. After the change, the matter is still the clay but the form is the flat shape.
What is a change?

Before the change, the matter is the clay and the form is the round shape of the clay. After the change, the matter is still the clay but the form is the flat shape.

Note that this is a CHANGE, not a SUBSTITUTION. The ball did not disappear and a pancake appear in its place! Rather, the clay is still the same lump before and after. But with different shapes.

Remember Descartes’s puzzle about the wax? It is the same wax, but it changes its features (shape, smell, color etc.).
What is a change?

Notice: matter and the form *need* each other. The roundness of the clay cannot exist without something that *is* round (namely, the clay). But of course, although the clay can exist without the roundness, it cannot exist without *some shape or other*.

There is just no such thing as clay without shape!

So any piece of clay has both matter and shape. Furthermore, the shape can change without the matter changing, so the shape and the matter must be *real and distinct features* of the clay.
What is a change?

Now the shape of a piece of clay is only one kind of form that it may have.

The color of the clay is another kind of form.

It’s texture is another form, etc.

Anything that describes the clay as it is will be a form in the clay.

The clay is...

- smooth, rough
- hard, soft
- wet, dry
- round, flat
- red, yellow

These are called “accidental forms.” Accidental forms are forms that make the substance to be a particular way.

A change that involves only accidental forms is called an “accidental change.”
What is a change?

But Aristotle also noticed that accidental change isn’t the only kind of change in nature. Consider a tree that burns into ashes.

It doesn’t seem like the pile of ashes is just a different kind of tree (with very different accidental forms). Rather, it seems that the tree was destroyed entirely.

Yet, the tree didn’t just disappear and the pile of ashes appear in its place! This does not seem like a case of substitution. It seems like a case of genuine change.
What is a change?

Aristotle calls this *substantial* change. In substantial change it is not only accidental forms that are different after the change. *Substantial forms* are different as well.

Here is a simple definition of accidental and substantial form:

An **accidental form** makes a substance to be in a particular way.

A **substantial form** makes a substance to exist as the kind of thing that it is.
An accidental form makes a substance to be in a particular way.  
A substantial form makes a substance to exist as the kind of thing that it is.

So in the case of the tree burning into ashes, the tree loses its substantial form entirely. And so the tree ceases to exist.

But the tree doesn’t just vanish into thin air! The matter of the tree — the “stuff” that it is made of — is still there. But it takes on a new substantial form: the substantial form of ash.
Now we can (finally) define a “soul” according to Aristotle and Aquinas:

**A soul is the substantial form of a living substance.**

So anything that is alive has a soul, even trees and bacteria.

And nothing *could be* alive without a soul. The soul is the “principle” (= “source”) of life in the organism. It is what makes a living thing to be alive, as the kind of living thing that it is.
A soul is the substantial form of a living substance.

But now, consider what happens when someone chops down our lovely tree:

When the tree is chopped down (or shortly thereafter) it dies.

And what remains is a dead tree.

Now a dead tree, since it is not alive, has no soul.

And since a tree-soul is what makes a tree to be a tree, strictly speaking, a dead tree is not a tree.
A soul is the substantial form of a living substance.

And since a tree-soul is what makes a tree to **be** a tree, strictly speaking, a dead tree is **not** a tree.

We can see that the “dead tree” is no longer a tree because it decomposes and, over time, comes to look less and less like a tree.

When does it stop being a tree? The answer is: as soon as it dies. Its soul is gone. And the soul of the tree is what gave it its “tree-ness”.

So a “dead tree” is, strictly speaking, not a tree.
So a “dead tree” is, strictly speaking, not a tree.

The adjective “dead” is what is called an alienans adjective: it “alienates” the noun it modifies from the kind of thing it refers to. Other examples of alienans adjectives include “decoy” in “decoy duck” and “false” in “false teeth”.

A decoy duck is not a kind of duck, but a duck look-alike. And false teeth are not a kind of teeth, but a substitute for teeth.

Similarly, a “dead tree” is not a kind of tree, but an ex-tree.
Enough about trees. Now let’s talk about squirrels.

According to hylomorphism, Sammy the squirrel is composed of matter and form; he is composed of some **physical stuff** and a **soul** that makes the stuff to be a squirrel.

We can say then, that Sammy has a body and a soul, but it is also true that Sammy’s *living* body is identical to Sammy. But Sammy’s living body *includes* a soul. The soul is what makes a living body to be a body.

Sammy *is identical to* Sammy’s body. But Sammy’s body could not *be* a body without a soul.

That means, that when Sammy dies, the little soul-less squirrel-corpse that remains is **not** Sammy. It is also not a squirrel-body. You might say it is an “ex-squirrel-body” or simply an “ex-squirrel”.
Now we say that Sammy’s corpse is an “ex-squirrel” but really, it probably isn’t a unified substance at all. “Ex-squirrel” is just our name for a whole bunch of substances (carbon compounds, water, lipids etc.) that are all arranged in a kind of complex “pile.”

This explains why Sammy’s corpse decomposes with time. It is not a unified thing - it has nothing holding it together. So it gradually falls apart. Unlike Sammy, the corpse has no substantial form to organize it. It is not a substance.
So Sammy is his body. But is Sammy a physical object, according to hylomorphism?

We have been operating under the following definition of “physical object”:

A **physical object** is something that can be studied and explained by the physical sciences (biology, chemistry and physics).

Hylomorphism definitely holds that Sammy and things like him can be (and are) studied and explained by the physical sciences.

However, it may be that those sciences cannot explain *all* of the behavior of Sammy completely.

The reason is that, according to hylomorphism, living things are *different* from non-living things. They have special substantial forms. Sammy’s substantial form *organizes* his matter and keeps all his bodily systems working: it keeps him alive.

So can Sammy be *fully* understood and explained by a purely mechanistic understanding physical sciences? Probably not fully. Why not?
So can Sammy be *fully* understood and explained by a purely mechanistic understanding physical sciences? Probably not fully. Why not?

Well, for one thing, Sammy is conscious. And it is not clear that we can expect the physical sciences as we now understand them ever to be able to explain consciousness. Recall the arguments of Jackson and Nagel against physicalism.

The hylomorphist can propose a solution to the problem of consciousness. Sammy’s *substantial form* (his soul) is the cause of consciousness in Sammy. The “stuff” he is made of cannot make him conscious by itself. It is his substantial form that organizes the stuff and makes it into a conscious animal.
Here is another philosophical problem that hylomorphism can solve: The problem of identity through time.

Here is a question:
How do we know if a substance is the same individual substance through time?

Here’s one possible answer:

If x and y exist at different times, 
\( x = y \) if and only if x and y have all the same parts.

This seems like the easiest answer for a physicalist.

But this answer would mean that living things, since they are constantly gaining and losing parts, would only exist for a few seconds at a time!

This is known as the problem of the diachronic identity, and it is a big problem for physicalism.
Hylomorphism can provide a solution to the problem of diachronic identity.

Since Sammy is identical to his body, can hylomorphism explain how Sammy can still be Sammy when he gains or loses parts?

Well, the parts of Sammy are whatever stuff is organized and unified by his substantial form (his soul), at any given time.

So Sammy can take in new matter, so that it becomes part of him.

And he can expel matter so that it ceases to be part of him.

And as different parts of him come and go, he remains the same Sammy, since he has the same substantial form, that is, the same soul.
Let’s sum up what we’ve said so far. According to hylomorphism:

- Sammy the Squirrel has a substantial form - his soul.
- That soul is what makes Sammy one substance.
- His soul also makes Sammy to be a squirrel.
- Sammy’s soul is the source (principle) of his squirrel life. It organizes him and makes his different bodily parts work together.
- His soul is also what makes Sammy’s parts his parts and allows him to gain and lose matter thru time, while remaining Sammy.
- Sammy is identical to his body, and it is his soul that makes his (living) body to be a body.
- When Sammy dies, what remains is not Sammy’s body. Nothing can be a squirrel-body unless it has a squirrel-soul.

But this raises a question: If Sammy’s body ceases to exist when he dies, where does his soul go?
One day, Sammy dies...  But where does Sammy’s soul go?

Well, Sammy’s soul doesn’t really go anywhere in particular. It is just gone.

Remember, his soul is a FORM. And forms need matter to exist...

Think about it, where does the round shape of the clay ball go when the ball is squashed? Where does the green color of a tree go when it burns into ash?

Green colors and round shapes cannot exist without something that is green or round.

In the same way, squirrel substantial forms cannot exist without something that IS a squirrel.
But...

WHAT ABOUT HUMAN BEINGS?

We know that, according to hylomorphism, Suzie’s corpse is not Suzie. In fact, it isn’t even Suzie’s body.

Remember our friend Suzie?

But where does Suzie’s soul go after she dies?

Does it just cease to exist, like Sammy the Squirrel’s soul does?
But where does Suzie’s soul go after she dies?

Does it just cease to exist, like Sammy the Squirrel’s soul does?

The easy answer would be “yes, Suzie’s soul is just gone when she dies, just like Sammy the Squirrel’s soul is.”

But this is not Aristotle’s answer. And it is not Thomas Aquinas’s answer either.

Next time we will take a closer look at the human soul and see how Aristotle (perhaps) and Thomas Aquinas (definitely) think that the human substantial form is capable of surviving death.