

Chapter 16

Predication, Ontology and Change

16.1 Reading and Homework

- Readings: *Categories*, Book I, chap.2 and 5 until 2b6, pp 657 and 658-659 in RAPG
- Aristotle, *Physics* I, RAPG pp.694-702
- Study Questions
 1. What is a subject? what is a predicate?
 2. Give examples of a predicate P which can “be said of” a subject S
 3. Give examples of a predicate P which can “be present in” in subject S
 4. How does Aristotle define “substances” in chap. 5 of Book I of the *Categories*? How does he define a substance in the *Physics* 190b?
 5. Explain, with Aristotle’s example in the *Physics*, the thesis that change occurs between contraries
 6. Explain Aristotle’s thesis that: “In every case there must be some subject that comes to be something” (190a15) with the example of the musical/unmusical man

7. To what does Aristotle identify the “primary subject” remaining the same under change around 192a30?

16.2 Subjects and Predicates

16.2.1 Reading the text

CHAPTER 2, beginning

- Distinction between composed and uncomposed sentences:

Examples: man runs / man

This is the distinction between subjects and predicate in propositions.

16.2.2 Predication and Ontology

Subjects and Predicate

- In distinguishing between elements of composition and the composed sentences, Aristotle introduces us, via sentences, to the subject / predicate distinction. For Aristotle, the basic kind of statement is a statement of the ‘subject is predicate’ form.
 - the subject: what the statement is about
 - the predicate: what is stated about the subject
- Examples:
 - This (Jalisco) is a cat
 - A cat is an animal
 - This (Jalisco’s color) is black
 - black is a color
- **In general: “this is such”** (I take the terminology from Prof. Terry Penner)
 - Subjects are ”this-es”
 - Predicates are ”such-es”

Predication and Ontology

- Remember how we came to postulate the existence of the universals with Plato. We started with a series of statements:
 - Lake Michigan is beautiful
 - Jalisco is beautiful
 - Montana is beautiful

Thus, we started with propositions of the type: 'S is P'. Propositions of this type are subject-predicate propositions. Now, subjects and predicates refer to stuff in the world: the lake, Montana, or Jalisco on the one hand; beautiful on the other hand.

In particular, we wanted to **give an account of that one property which is shared by several individuals, or particulars**. We wanted to understand its ontological status, that is to say, what and how "beautiful" is. One trouble for such an ontological status was that it seems that "beautiful" is something that is at several places at the same time.

- Thus, the ontological question is: **what kind of being has the stuff in the world, to which we refer to with subjects and predicates?**
- **Plato's answer** to the problem was to postulate the forms. He turned the **linguistic relation of predication into an ontological relation – participation**. The ways the real things are beautiful is in participating to the real thing which is Beauty. And this stands for most predicates.
- **Aristotle has a different story**.
 - Just as Plato, he starts with proposition of the 'subject is predicate' type.
 - Like Plato again, Aristotle admits that some account should be given of the predicate that are shared by many individuals, that is to say, an account of properties
 - However, **he denies that properties are ontologically separated things**.

- Instead, he is going to sustain that **the being of properties depends on the being of the fundamental bearers of properties**(Of course, more has to be said about what I mean by fundamental bearers of properties.). This is what has to be understood in the first chapters of the *Categories*.

- Aristotle is going to make this point in analyzing what kinds of subjects and what kinds of predicates there are. He is going **to show that Plato's view on predication is too simple**. Indeed:
 1. There are different kinds of subjects and predicates.
 2. These should be given different ontological statuses.

From our examples, we can already see that:

- some things can be both subjects and predicates
- some things seem to never be predicates (Jalisco, or Jalisco's black). This is going to be ontologically significant for Aristotle.

What Aristotle is taking from this is that

1. The things that are at the bottom of the chain of predication are the fundamental existents for Aristotle, which he will call substances. These substances are the fundamental bearers of properties, that is we mean the things that cannot be expressed by predicates.
 2. There are different ways of being predicated, and the "stuff" to which the various kinds of predicate refer have various ontological statuses.
- Before we go any further, and in order to keep everything clear, we have to keep in mind the difference between the two following distinctions:
 1. PREDICATE - SUBJECT
 2. PROPERTIES - PARTICULARS (among which SUBSTANCES)

The former is a LINGUISTIC distinction. The latter is an ONTOLOGICAL distinction.

Aristotle's point is to use linguistic to get to ontology, that is, to use our language to get an idea of what exists in the external world and how it exists, but you should keep in mind that both are still very different

16.2.3 Ways of beings subjects and predicates

Reading the text

CHAPTER 2, continued

Among the things *that are*

Fourfold classification of things expressed by subjects and predicates:

1. of but not in: man is said of the individual man
2. in but not of: grammar in the soul, this particular white in a body
3. both of and in: knowledge in the soul, knowledge of grammar
4. neither of or in: individual man and individual horse

Two notes for help:

1. Definition of what it is to be "in a subject":

I call 'in a subject' what is in something, not as a part,
and cannot exist separately from what it is in. (1a25)

Note that this is already a rejection of the existence of all predicates as ontologically separated universals. According to Aristotle, colors do not and cannot exist separately of the body there are in – and the same holds for grammar and knowledge. There exists nothing like 'whiteness' if nothing is white, there exists nothing like 'knowledge' if nobody knows anything.

2. Aristotle makes the point clear that individuals, or particulars, have a special status: *there are never said of anything else*, but some can be in something.

Ways of Predicates

- Aristotle's fourfold classification is a refinement of the simple idea of
 - the classes of predicates and universals being coextensive;
 - the classes of subjects and particulars being coextensive.

Aristotle tells us that the relation is more complicated

- Behind the fourfold classification, there are two distinction:
 - two ways of being a predicate
 - two ways of being a subject

Again, we are going from linguistic to ontology.

Let us start with predicates.

- **The main point that Aristotle wants to make is that there are ways of being a predicate without being essential to the subject:**
- Compare for example the following statements:
 - 'the individual man is a man' (Aristotle), or 'Jalisco is a cat'
 - 'the body is white' (Aristotle), or, for us, 'Jalisco is black'
- Aristotle points out that these two statements correspond to two different kinds of predication. Some predicates are essential (Jalisco is essentially a cat), others are accidental (Jalisco could have been gray).
- Aristotle makes a distinction between predicates in order to underline the distinction at the ontological level:
 - what is "said of" a subject corresponds to an essential property
 - what is "said to be (present) in" a subject corresponds to an accidental property

Ways of Subjects

Here again, the point is to show that the class of referents of subjects of predication do not have the same ontological status.

- We are told that:

1. Particulars are never said of anything: individuals, or particulars, cannot not be said to be essential predicates.
2. Particulars may be said to be present in something: some individual can be said to be accidental properties of other subjects. Such individuals are ontologically dependent on other things.

How to make sense of this? This is again to say that they are two ways of being a particular. **Not all particulars have the same ontological status.**

- More has to be said about this, which seems to be one of the main points that we have to take home from the fourfold distinction. Let us take an **example**:
 - Jalisco's black is a particular color. It cannot be said of anything else.
 - However, it is in Jalisco: it depends on her being a subject. Jalisco's black does not exist if Jalisco does not exist.
- The point is thus that **there are some particulars which are ontologically dependent.**

SYNTHESIS: Two fundamental relations

From Prof. Marc Cohen course's notes (with the authorization of the author):

Aristotle distinguishes two fundamental relations: being SAID OF a subject and being PRESENT IN a subject. These correspond, respectively, to the notions (that Aristotle later develops) of essential and accidental predication, and they cut across all ten categories.

1. SAID OF a subject

- This is a relation of **fundamental ontological classification**. It is the relation between a kind and a thing that falls under it.
- It is a transitive relation (i.e., if x is SAID OF y and y is SAID OF z, it follows that x is SAID OF z).
[...]
- What is SAID OF a subject is essential to that subject.

Examples:

1. Man is SAID OF Socrates.
 2. Animal is SAID OF man.
 3. (Hence) animal is SAID OF Socrates.
 4. White is SAID OF this (particular) color.
 5. Color is SAID OF white.
2. PRESENT IN a subject
- This is a relation of **fundamental ontological dependence**. What is PRESENT IN a subject, Aristotle says, belongs to it not as a part, and cannot exist separately from what it is in (1a24). [...]
 - What is PRESENT IN a subject is accidental (non-essential) to that subject.

Examples:

1. This grammatical knowledge is PRESENT IN a soul.
2. This white is PRESENT IN a body.
3. Color is PRESENT IN body.

End of Prof. Marc Cohen course's notes

Subjects and substances

- PRIMARY SUBSTANCES

CHAPTER 5

Aristotle lists and discusses the characteristics of substances: **Primary substances are only those things that are neither present in nor said of anything.**

The link between linguistic and ontology is then the following: Being a primary subjects makes you a primary substance.

Primary substances are distinguished from non-substances and secondary substances.

- NON-SUBSTANCES: Ontological dependency of all non-substances on substances:

All other things are either said of primary substances as subjects or in them as subjects. [...] Therefore, if there were no primary substances, there could not be anything else. (2a35)

This is a very strong statement: blackness, knowledge etc... would not exist if there were no primary substances in the world to bear them.

- SECONDARY SUBSTANCES: Hierarchy of the secondary substances: the closest to the bottom, the more substance. For example, human is more substance than animal, which in turn is more substance than living beings, while all of them, human, animal and living being are secondary substances.

Secondary substances vs. primary substances:

1. They have in common that : **No substance is *present in something else***, that is, substances are not ontologically dependent: they exist independently.
 2. Secondary substances differ from primary substances in that they can be said of something else.
- THUS: The fundamental beings for Aristotle are particular substances. This is an alternative ontology to Plato's ontology for whom the Forms are the fundamental independent entities, while particular are only insofar as they participate to their "originals", the forms.

If primary substances, did not exist, nothing else would either.

16.2.4 Conclusion: Aristotle's Ontology

We end up with the following FOURFOLD DIVISION:

1. Universal substances ("secondary substance")
2. Particular non-substances

3. Universal non-substances
4. Particular substances (“primary substances”)

In a table:

	NOT PRESENT IN (substance)	PRESENT IN (property)
SAID OF (universal)	man, horse, animal Universal Substances	white, knowledge - Universal Non- Substances
NOT SAID OF (particular)	this man, this horse Individual Substances	this knowledge of grammar, this white Individual Non- Substances

Now, how is this going to help us understand how things change ??

16.3 An account of change

16.3.1 About the *Physics*

The *Physics* is a **study of nature** (ta phusika) and natural objects. What is specific about natural objects?

Natural things are some or all of them subject to change (Physics I.2, 185a12-13).

So the study of nature is basically a study of the things that are subject to change.

What is at stakes in the *Physics* is the **possibility of knowledge in the natural realm**. A “natural science” consists in giving an coherent account of natural phenomena.

- Aristotle lays out clear and coherent notions of **change, nature, cause, space, time** etc., so that philosophical doubt is no longer possible about the very possibility of natural sciences.

- **He rejects the notion of void and of infinite** physical magnitude as incoherent but also unnecessary.

- Finally, in book VIII, he argues that the world's constant change ultimately depends on some "**unmoved mover**", eternal just as the world is, and external to the physical system.

At the end of the day, the idea of natural science should be legitimate, and we can turn to studying natural phenomena with the mind in peace.

The following is an almost exact replication of Prof. Cohen's course notes

16.3.2 Puzzles about Change

We know this was a topic that puzzled Aristotles predecessors.

- All agreed on the general idea that **change occurs between contraries**. Aristotle reminds us of this in book 5.
 - pale from not pale
 - musical from non-musical
 - shaped statue or built house from non-shaped statue or unorganized pile of bricks
- Because of this very characteristic, change seemed a **problematic notion**:
 - **Parmenides** radically denied the existence of change altogether.
 - **Heraclitus** claimed that nothing existing escapes from continuous change
 - **Plato** said that real things (Forms) do not change, and restricted change to the realm of appearances – the physical world.
- In I.8, Aristotle gives an example of an argument against coming-to-be that sounds typically Parmenidean (191a28-29):

What is cannot come to be (since it already is), while nothing can come to be from what is not.

- Parmenides' type of argument is basically the following:
 1. there are only two ways in which something can come to be: either from what is, or from what is not. This is using the Principle of Excluded Middle.

2. But neither is possible.
3. Therefore, nothing can come to be.

The idea of this argument seems to be this: in a case of coming to be, the resulting object is clearly a being, something that **is**. From what initial object does it come to be? Parmenides offers us only two choices: either what is or what is not. But if the initial object is what is, and the resultant object is also what is, we do not really have a case of coming to be – there is no change. And if the initial object is what is not, we have another kind of impossibility, for nothing can come to be from what is not (*ex nihilo nihil fit*).

In Plato, we ended up with two kinds of “beings” (of which only one kind really **is**):

- The forms *are* and never come to be
- The sensibles continuously come to be, and “are” not really (images)

Aristotle wants to give an analysis of coming-to-be, i.e., change, that will enable him to avoid this dilemma: How something that is can come to be? His account is designed to explain both how change in general is possible, and how coming into existence is possible. We will first look at Aristotle's account, and then see how it manages to evade the Parmenidean dilemma.

16.3.3 Aristotle's Account

Three principles instead of two: the subject of change

- Aristotle's account is contained in Physics I.7. He insists that there must be **three** basic ingredients in every case of change.

Contrast with Plato: only two: a pair of opposites.

In addition to a pair of opposites, there must be an underlying subject of change.

The basic case of change involves a pair of opposed or contrary properties and a subject that loses one of them and gains the other.

- But Aristotle does not even insist that there be an opposed pair of properties (191a6-7):

In another way, however, there need not be two [contraries]; for just one of the contraries is enough, by its absence or presence, to produce the thing.

- So the ingredients Aristotle insists on are:
 1. an underlying subject
 2. a form (i.e., a positive property)
 3. a lack (or privation) of that form.

Examples

Aristotle's examples illustrate these ingredients:

- (a) A man who was unmusical becomes musical.
- (b) Some bronze (which was shapeless) becomes a statue.

In case (a), the subject is *man*, the form is *musical* and the privation is *unmusical*. In case (b), the subject is *bronze*, the form is *statue* and the privation is *shapeless*.

The subject – the man, or the bronze – persists through the change.

Of the other terms involved, the earlier ones (unmusicality, shapelessness) cease to exist, while the later ones (musicality, the statue) come into existence.

These were cases of **coming into being** (generation), since lacks or privations were replaced by forms. **Ceasing to be** (destruction) occurs when a form is replaced by a privation – when matter is deprived of form. This would happen, for example, when a statue is melted down into a shapeless pool of bronze. The bronze persists, but the statue has ceased to exist.

16.3.4 Response to Parmenides

Aristotle gives his response to Parmenides in chapter 8.

- He begins (191a28-29) by **summarizing the Parmenidean argument** against coming to be that we mentioned above:

What is cannot come to be (since it already is), while nothing can come to be from what is not.

- **Aristotle's response is to reject the Parmenidean dilemma** that something comes to be from what is or from what is not (191a30). He does so, characteristically, **by drawing a distinction** where his opponents did not. At 191b4 he says:

[...]we speak in two ways when we say that something is or comes to be something from what is [...]

Is the initial object a being or a not-being, Parmenides asks? Aristotle's answer is: **in a way it is a being, and in a way it is a not-being**. And in a way, it is not a being, and in a way it is not a not-being.

- In effect, the trouble with the Parmenidean argument is that it treats the initial and resultant objects as if they were **simples: not being and being**. But, as Aristotle has shown, both are **compounds**.

The initial object, for example, might be an unmusical man. And this is both in one way a being and in another way a not being:

- the initial object is something that is, for it is a man,
- and something that is not, for it is not musical.

- As for Parmenides' claim that nothing can come to be from what is not, Aristotle agrees that, on one reading, this is perfectly correct (191b14):

We agree with them in saying that nothing comes to be without qualification from what is not [...]

Note on the text: We should probably take without qualification here to modify what is not rather than comes to be – comes to be from what is unqualifiedly not or comes to be from what is simply a not-being.

In other words,

- the musician does not come into existence out of thin air, out of sheer nothingness.
- But this leaves room, Aristotle says, for the musician to come to be from what in a way is not (191b15).

[...] but we say that things come to be in a way - for instance, coincidentally - from what is not. For something comes to be

from the privation, which in itself is not and does not belong to the thing [when it has come to be].

Note on the text: Similarly, we should take in a way to modify what is not rather than comes to be.

In other words,

- since the musician comes to be from the compound unmusical man, what he comes to be from is in one way a not-being, since he comes to be from a privation – the unmusical.

- But in a way, what he comes to be from is a being, as well, for the initial object is something that exists, a man.

Parmenides, thus, offers us a false dilemma: that the initial object is either being or not being. But since the initial object is a compound, in a way it is both.

16.3.5 Accidental vs. Substantial Change

Aristotle notes (190b11) an important feature of change:

that which comes to be is always composite

For example, what comes to be is the musical man. But what about Aristotle's other case? What is the statue a compound of? Aristotle's answer: matter and form.

We thus see two different kinds of change in Aristotle's account:

1. **Accidental** change (e.g., alteration of a substance): **the subject is a substance**. E.g., the man becomes a musician, Socrates becomes pale.

2. **Substantial** change (generation and destruction of a substance): **the subject is matter**, the form is the form of a substance. E.g., the bronze becomes a statue, a seed becomes a tiger, an acorn becomes an oak tree.

Accidental change can be accommodated within the world of the Categories, a world in which primary substances (individual horses, trees, and cats etc.) are the basic individuals. But what of substantial change? This seems to threaten the ontology of the Categories. For substantial change requires a subject, matter, that seems more basic than the individual plants and animals of the Categories.

But this creates a problem: if the primary substances of the Categories turn out to be compounds of form and matter, how can they be the basic ingredients of the world?

Example: a builder is not a basic individual, for Aristotle. A builder is a compound of a subject and a property: a substance (a human being) and a characteristic (s)he happens to have – the knowledge of building. How, then, can a tiger retain its status as a basic individual? After all, it, too, is a compound of a subject and a property: matter and a form that supervenes, a form that the matter happens to have.

This problem is not addressed in the *Physics*, but it is one that Aristotle returns to in the *Metaphysics*. His answer, as we shall see, is not altogether clear.

End of Prof. Cohen course notes.

16.4 Conclusion

- Ontology: the basic distinction is between *this-es* and *such-es* – particulars and properties
 - There are two kinds of this-es and two of such-es:
 - this-es are either substances or not (universal particulars are not substances but still particulars)
 - such-es are either accidental or essential
- Change:
 - Three principles instead of two: such-es (which change) and a this (which remains the same through change)
 - This means that things that change are *always composite*
- A threat: what is the fundamental this was mere matter – instead of a particular substance?