# Necessity, Analyticity, A priori

Benjamin Marschall

Lecture II

## Definitions

<u>Necessity</u> is a *modal* notion: it has to do with how things might have been.

A true statement is **necessary** *if and only if* it could not have been false.
Otherwise it is **contingent.**

<u>Analyticity</u> is a *semantic* notion: it has to do with meanings.

A true statement is **analytic** *if and only if* its is true in virtue of the meanings of the words contained in it.
Otherwise it is **synthetic**.

<u>A Priority</u> is an *epistemic* notion: it has to do with knowledge and justification.

A true statement is **a priori** *if and only if* it can be known independently of experience.
Otherwise it is **a posteriori**.

## Recap

- How to explicate analyticity is contentious.
- Kant, Frege, and Ayer all give distinct accounts that differ in scope.
- It is widely accepted that all analytic statements are a priori.
- But it is controversial whether all a priori statements are analytic.
- Empiricists reject the synthetic a priori.

How about necessity?

Until 1970, pretty much everyone agreed that a statement is **necessary** *if and only if* it is **a priori**.

Then Saul Kripke gave three lectures titled "Naming and Necessity" at Princeton.

## What Is Necessity?

Putative example of a necessary truth:

$$5 + 7 = 12$$

A natural thought: It is a matter of convention that the sign "+" stands for addition, and that "−" stands for subtraction. Things could be the other way round. And in such a case "$5 + 7 = 12$" would be false. (Same for "unmarried" in "All bachelors are unmarried").

This is correct. But does it show that 2 + 2 = 4 is *not* necessary? No. By calling a statement necessarily true we mean that, *given the meaning it actually has*, it could not have been false. In this sense 2 + 2 = 4 is arguably necessary.

In contrast, "There are no motorways in Norfolk" is true but could have been false *even if* we keep its meaning fixed.

**Identity Statements**

    (1) 8 = 8                                     (3) Rishi Sunak = Rishi Sunak

    (2) The number of planets = 8             (4) Rishi Sunak = the prime minister

(2) and (4) are true but could have been false: There might have been more or fewer planets in the solar system than there actually are, and someone else might have won the last general election.

(2) and (4) are also known based on experience. Knowing that (1) and (3) are true, one the other hand, only seems to require that we understand what "8" and "Rishi Sunak" mean.

|  | A priori | A Posteriori |
|---|---|---|
| **Necessary** | (1), (3) |  |
| **Contingent** |  | (2), (4) |

The thesis that statements are necessary if and only they are a priori thus looks plausible so far.

One can also try to argue for it:

- If a statement is a posteriori, then there must be experiences that support it. *The earth is round,* for instance, is supported by observations about how ships disappear on the horizon. But the world could have given rise to different experiences, for instance if it had been flat. Thus a posteriority seems to entails contingency.

- If a statement is a priori, then no experience can support (or refute) it. It must be true (or false) regardless of how the world is. Thus a priority seems to entail necessity.

But, these compelling considerations notwithstanding, it is now widely believed that there are both a posteriori necessities and a priori contingencies.
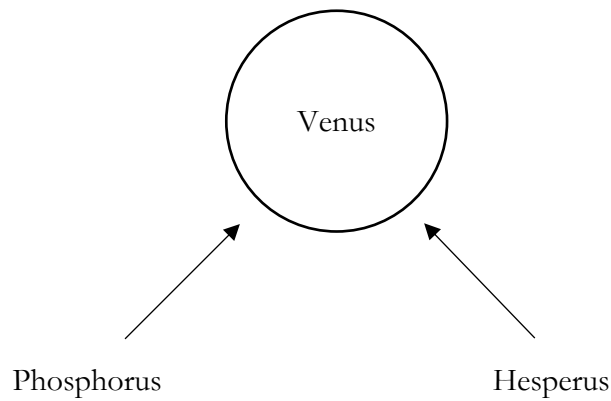
**Kripke's Challenge**

Suppose we name a planet we see in the morning Phosphorus, and one that we see in the evening Hesperus. Then the following statements are true, a priori, and necessary:

    (5) Phosphorus = Phosphorus
    (6) Hesperus = Hesperus

Eventually we discover that we saw the *same* planet in the morning and in the evening – namely Venus:

Then it is true that

(7) Hesperus = Phosphorus

Is (7) a priori? Arguably not, because (7) was established based on the *empirical* fact of astronomy that the same planet was seen both morning and evening.

Is (7) necessary? Kripke says *yes*.

**Rigid Designation**

Let's call something a *rigid designator* if in every possible world it designates the same object, a *nonrigid* or *accidental designator* if that is not the case. (Kripke, *Naming and Necessity,* 48)

Kripke's thesis:

- Proper names are *rigid designators*.
- Definite descriptions, such as *the prime minister* or *the planet seen in the morning*, aren't.

(7) contains two proper names flanking the identity sign. Since they refer to the same object – Venus – in our *actual* world, they also refer to the same object – Venus – in every *other* possible world. And in every possible world Venus is identical to itself. Thus (7) is necessary. (To simplify matters we set aside worlds in which Venus doesn't exist.)

Contrast:

(8) the planet seen in the morning = the planet seen in the evening

For each possible world, the descriptions flanking the identity sign in (8) refer to whatever is the planet seen in the morning/evening in *that* world. In our actual world both refer to Venus, therefore (8) is true. But in other worlds different planets might be the referents.

|  | A priori | A Posteriori |
| --- | --- | --- |
| **Necessary** | (1), (3) | **(7)** |
| **Contingent** | ? | (2), (4), (8) |

According to Kripke there are also a priori contingent truths, but we will postpone their discussion to next week. (You can think about the status of *I am here now*).

**Two Objections** [Very brief, for more study pages 101-105 of *Naming and Necessity*].

*Objection I*: This is crazy! Clearly it could have happened that two different planets were seen and named in the morning and evening. Wouldn't that be a case where Hesperus is *not* Phosphorus?

*Reply*: No. While this scenario is indeed possible, it wouldn't be a case where Hesperus is *not* Phosphorus *given* the meanings these names actually have. Compare the case of the alleged falsity of "5 + 7 = 12".

*Objection II*: Ok, but isn't there a clear sense in which, before the astronomic discovery establishing (7) was made, things could have turned out *either way* – Hesperus might be Phosphorus, but might also be a different planet?

Reply: Yes indeed, but that is a different notion of possibility. It is *epistemic* and only concerns our knowledge. It is compatible with holding that, if (7) is in fact true, it is necessarily true.

**Coda**

> Albritton called the problems of necessity and a prioricity in natural kinds to my attention, by raising the question whether we could discover that lemons were not fruits. (Kripke, *Naming and Necessity*, 23n2)

Read *NN* (especially lecture 3) and Putnam's "The Meaning of Meaning" for more on the modal status of, among others:

- Water = $H_2O$.
- Heat is molecular motion.
- Pain is the firing of C-fibers.
- Pencils are organisms.
- This wooden table could not have been made of ice.
- The Queen could have had different parents from the ones she actually had.