

1 The Early Modern epistemology

“Rationalists”

Rene Descartes (French / 1596-1650)

Baruch Spinoza (Dutch / 1632-1677)

Gottfried Leibniz (German / 1646-1716)

Others: Blaise Pascal, Blaise Malebranche

“Empiricists”

John Locke (English / 1632-1704)

George Berkeley (Irish / 1685-1753)

David Hume (Scottish / 1711-1776)

Others: Francis Bacon, Thomas Hobbes

We will start with Cartesian skepticism

- **Epistemology** is the branch of philosophy concerned with knowledge and justification.
 - In particular: what knowledge is, the source of knowledge, and the limits of human knowledge
 - Similarly for justification
- In the process of talking about Early Modern skepticism, we will talk about theories of ideas, theories of perception, and theories of justification and knowledge

2 Assessing arguments

Logic is the informal and informal study of patterns of reasoning. It is concerned primarily with **arguments**, which consist of one or more **premises** and a **conclusion**, where the premises are intended to provide support for the conclusion.

What makes for a good argument? For one thing, in a good argument either

- the conclusion follows from the premises, without exception OR
- the premises provide very good support for the conclusion.

Concerning the first: A *deductive* argument is one in which the premises purport to guarantee the truth of the conclusion.

- A *deductive* argument is *valid* if and only if it's impossible for all of the premises of the argument to be true while the conclusion is false. In other words, *iff* the conclusion follows necessarily from the premises.
- How do you test for this?
 - Recognize that it has a logically valid form. (See below.)
 - Try to imagine a scenario (which doesn't have to be actual) in which the premises are true but the conclusion is false. If you can, it's not valid and you have constructed a *counterexample*.

Argument 1:

P1. The Earth is a planet in our solar system.

P2. All planets in the solar system revolve around the sun.

C. The Earth revolves around the sun.

Argument 2:

P1. Caprica is a planet in our solar system.

P2. All planets in the solar system revolve around the sun.

C. Caprica revolves around the sun.

Some logically valid forms:

- All A's are B's. All B's are C's. Therefore, all A's are C's. (Categorical syllogism)
- Some A's are B's. All B's are C's. Therefore some A's are C's. (Categorical syllogism)
- If P, then Q. P. Therefore, Q. (Modus ponens)
- If P, then Q. Not Q. Therefore, not P. (Modus tollens)
- P or Q. Not Q. Therefore P. (Disjunctive syllogism)
- If P, then Q. If Q, then R. Therefore, if P, then R. (Hypothetical syllogism)

If an argument is valid, that's one sign that it's a good argument. But it should also have all true premises. A *sound* argument is one that's valid and has all true premises.

Concerning the second: Being sound is not the only way for an argument to be good. It could also be a good *inductive* argument.

- An inductive argument is one where the premises do not guarantee the truth of the conclusion, but make it probably true.
- A *strong* argument is an inductive argument where the truth of the premises does make the conclusion more likely to be true. (A *weak* inductive argument is not.)
- It's *cogent* if it's strong and all the premises are true.

Argument 3:

P1. 99.9% of all swans are white.

C. The next swan you see will be white.

Summary: So, we've covered two kinds of arguments: deductive and inductive.

- Deductive arguments can be:
 - Valid or invalid
 - Sound or unsound
- Inductive arguments can be:
 - Strong or weak
 - Cogent or uncogent

3 Exercises

For each of these arguments, put them into premise/conclusion form, and say: (1) if they're deductive or inductive, and (2) if they're valid/invalid OR cogent/uncogent.

Exercise 1: From *On Monarchy, Book I, Ch. X*, by Dante.

Wherever there are quarrels there has to be someone to decide them. Now between two rulers one of whom is in no way subject to the other, there may be quarrels. Therefore there has to be someone to decide between them... a third ruler of wider jurisdiction who bears rule over

both... And so we must come to a first and final judge whose decision will settle all quarrels. Therefore there must be one ruler for the world.

Exercise 2: From "Famine, Affluence, and Morality," by Peter Singer

Since we are not under an obligation to give aid unless aid is likely to be effective in reducing starvation or malnutrition, we are not under an obligation to give aid to countries that make no effort to reduce the rate of population growth that will lead to catastrophe.

Exercise 3: From *Anarchy, State, and Utopia*, by Robert Nozick

No one has a right to use a relatively unreliable procedure in order to decide whether to punish another. Using such a system, he is in no position to know that the other deserves punishment: hence he has no right to punish him.