

Chapter 3

Towards Modern Philosophy

3.1 Readings and Study questions

- Readings:
 - Montaigne, *The Apology for Raymond Sebond*, 'Man has no knowledge', EMP p. 29-31 (until "he has a conception of Pyrrhonism"), and 'The senses are inadequate', EMP p.34-37
 - Bacon, *The New Organon*, EMP 38-44 (XXXVI-LXIV)
 - Descartes, *Discourse on the Method*, EMP part I and II, p.56-58
 - Newton, *Mathematical Principles of Natural Philosophy*, 'Rules of Reasoning in Philosophy', p.72-74
- Study Questions:
 1. Explain Montaigne's statement that all the profit of men's pursuit of knowledge over the centuries reduces to have learned their ignorance?
 2. What are the main tenets of Pyrrhonism?
 3. List the various reasons why the senses are inadequate according to Montaigne
 4. List and define the four classes of Idols that Bacon distinguishes
 5. Explain why the beginning of Descartes' *Discourse* sounds ironic. Do you think the text can still be said to defend the idea of reason's being shared by all human beings?

6. What is the method of induction?

3.2 Background

3.2.1 Modern Times

What period of history will we cover?

- Period covered: mid-17th. century to French Revolution – Age of Enlightenment
- Preceding period: European Renaissance (14th-16th) and Protestant Reformation (16th)
- Following Period: Industrial Revolution (late 18th - early 19th)
- Modern philosophy is contrasted with ancient and medieval philosophy

What are the main events during this period?

- Downfall of absolute kingdoms and feudal systems – revolutions and rise of democratic regimes (England, US, France)
- Downfall of Christendom as a unified political entity – last religious wars (Thirty Years war : 1618-48) and rise of tolerance
- Rise of modern science and technological progress (Copernicus, Kepler, Harvey, Descartes, Leibniz, Pascal, Boyle, and Newton)
- Rise of individualism and capitalism

As one can imagine, all this does not come in a nice and easy way...

3.2.2 Medieval Philosophy

Authorized authorities

- Ancient Philosophers (Aristotle)
- The Bible

- The Catholic Church and its authorized interpretation of the Bible (concils)

What does roughly Philosophy consists in?

- Commentaries of Aristotle and the Bible
- Disputes in Universities among Scholars
- No genuine original work

What are the scholastics' concerns? Philosophy is concerned with the place of man in the God-made universe

- Nature and limits of man's understanding of God and the universe
- Conflict between man's freedom and God's sovereignty
- Purpose of the Creation
- Nature of the Creation: *Natural Philosophy*, i.e. physics, comes from Aristotle's works. Teleological and qualitative.

3.3 When Skepticism threatens

The rise of skepticism originates in:

- The Renaissance – humanism and universality of reason
- The Reformation – appeal to the individual conscience for interpreting the holy texts
- The Scientific revolution: Copernicus (heliocentrism), Tycho Brahe, Kepler (elliptical orbit), Galileo (telescope)

Skepticism about the possibility of knowledge: in what sense?

- Knowledge: warranted true belief – to be distinguished from:
 - False belief
 - Opinion – even true opinion: it is not enough to believe something true to truly *know* it.

A distinction between two kinds of skepticism (Montaigne, p.29):

The question of skepticism: Can we know anything?

- Academics: we cannot know anything – auto-contradictory
- Pyrrhonists: we cannot assert anything for certain – the pyrrhonist contradicts its opponents in order to show that they are not justified in asserting what they pretend to know, but does not propose any alternative. Suspension of judgment is supposed to allow to reach a state of *ataraxia* (lack of worry or serenity)
- SO: The consistent skeptic does not assert that he does not and cannot know anything, for to do so is yet another form of dogmatism. Instead, the consistent skeptic criticizes any dogmatic view, and suspend his judgment in all matters.

Why should one be skeptic?

- The history of thoughts (Montaigne): the endless controversies over the centuries in all matters indicate that none of the dogmatic philosophers got it right, except the Pyrrhonists.

Montaigne quotes Cicero (p.31):

So that, since equal reasons are found on both sides of the same subject, it may be the easier to suspend judgment on each side.

SO: Reason does not seem to be able to warrant true knowledge.

- The unsettling discoveries from science: the sun does not go around the earth, but the earth goes around the sun; planets have craters; the earth is round; antipodes exist (and people there don't fall...)

These discoveries seem to cast some doubt on all our means to reach knowledge:

- Consequence 1: Senses are not reliable.
 - Many other arguments against the truthfulness of any knowledge acquired through the senses: lack of some senses, no consensus over sensations, contradiction between senses and illusions, influence of illness, madness and sleep

- But what else do we have? Montaigne p.34: “The senses are the beginning and the end of all knowledge”. Ultimately, does not science itself rely on sense observation?

- Consequence 2: The Church is not a perfect authority in all domains
The best authority of the times, the Bible, must be understood in a non-literal way – but how do we know then what is legitimate to believe in religious matters? How do we choose between competitive criterion of knowledge (personal interpretation vs. Church authority)
- Consequence 3: Science can be mistaken
If highly respected scientists (Ptolemy) could be mistaken, why would we believe that the theories of the most recent scientist are true?
- SO: In short then, the best reason we have to be skeptic is that we do not have any means that we know for certain leads to true knowledge: the senses, reason, science, the Church all seem fallible. However, we are aware of many ways in which we get to belief false opinions.

Bacon distinguishes between four classes of “Idols” (false conceptions):

- The Idols of the Tribe: human nature
- The Idols of the Cave: individual’s environment
- The Idols of the Marketplace: other people – what does Bacon mean when he says that “words plainly force and overrule the understanding” (p.42)?
- The Idols of the Theater: philosophy and science – why does Bacon give this name to these Idols?

Skepticism touches various domains:

- All areas of knowledge: is there anyway for us to reach any warranted truth?
- Religion: can we and should we rationally prove the existence of God?

- Politics: doubts on religious belief imply doubts on the legitimacy of the sovereign power of absolute kings.

Most of the philosophers we will cover aim at meeting the skeptical challenge in these various domains.

3.4 Reason and Scientific Method

3.4.1 Enlightenment and the age of reason

One idea that the philosophers of the Enlightenment share: that all humans share reason. Rationality is universal. Reason is what makes all human beings equal.

In what sense can this be true?

Descartes: “Good sense is of all things in the world the most equally distributed”

- The irony of the beginning

What do you think of the “argument” in favor of the thesis according to which all human beings share reason?

- A way to understand:

- “Bona Mens”: faculty we all have to distinguish between truth and falsity

- The vanity of the belief that everybody has to be clever ultimately speaks in favor of the thesis that we all have the power to judge. We all share the power to decide for ourselves upon whether or not a given proposition P is true.

Notion of *natural light*

- That we all have a *faculty to judge*, to accept or to reject a given proposition, does not mean that we all have true knowledge of course! It all depends on *how we use our faculty to judge*.

In what sense this is new?

- Importance of the authority in the Middle Ages:
 - Aristotle for science and philosophy – *scholastics*

- the Church for religion
- Kings for Politics and strong hierarchy in the society
- The Age of Reason is a moment of history during which the *independence of reason* is asserted, thus challenging the traditional pillars of the society.

Rational method as a warrant to true knowledge. Descartes:

- Logic and Mathematics are the model: the only domains where we have reached some certainty
- Renounce all previous beliefs, accepted without rational justification
- Reconstruct on true foundation our entire body of knowledge
- Analysis and Synthesis: model of problem solving from the mathematics

Not all of the philosophers we will read follow this radical scheme. That said, all of them:

- Reject the authorities of the Church and of the Schools;
- Aim at designing a method to true knowledge;
- Takes the “new philosophy”, which is nothing but the embryo of modern science, as a model.

What is the new science?

3.4.2 Science as a model

Almost all the philosophers of the period are also great scientists

- Descartes: invention of analytical geometry (guess who invented the the Cartesian system and Cartesian coordinates)
- Pascal: Fluid Mechanics
- Leibniz: co-inventor of the infinitesimal calculus

- SO: We have to keep in mind that ultimately, philosophy and science are not separated, and that all the systems of philosophy have modern science in their horizon

The new science: quantity vs. quality

- The scholastic ways of explanation: Natural kind, defined by essential qualitative differences, and explanation in terms of intrinsic qualities (virtu dormitiva of opium)
- The new model for science: laws of nature expressed in mathematical language,
- the world is reduced to material bodies and their properties, expressed in quantitative terms
- the qualities that appear to humans are irrelevant to science

The hypothetical method

- Bacon advocated a new method in science:
 - gather the data
 - infer the law by *induction*
- Many recognize that this method is unpracticable:
 - no science is made this way
 - no science can be made this way
 Necessity of hypotheses to inform the observation
- The rationalists/empiricists debate has much to do with this issue of how much we should count on reason/experience in proper scientific reasoning. More to come later on that topic.
- For the moment, notice that, from Bacon to Newton, one of the rules is:
 - Okham razor
 - a very important consequence: *universal* law of gravitation – what does it mean that it is universal and why is it important? because it is saying, against the Aristotelian scholastics, that the universe is entirely

made of the same stuff, that the laws on Earth are the same as the laws in the Heavens, finally that the Heavens (and the planets within) are not divine. Reminder on Aristotle and the quintessence.