

Lecture I

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Outline

- 1 About this course
- 2 Philosophy of science before Kuhn
- 3 Kuhn's picture

The name of the game

- We will combine lectures with discussions based on the texts.
- The main text is Kuhn (1996) and Hacking (1984).
- Other texts will be available online.
- More texts could be added to the syllabus if we move fast.
- Requirements: midterm essay (40%), final essay (40%), participation (20%).

Kuhn's book

- This is a text both in history and philosophy of science.
- Rich in historical data.
- Its predecessor is Kuhn's major book on the transition from Ptolemaic to Copernican astronomy (geocentric to heliocentric).

The classical picture

- (Science=Physics)
- There is scientific progress: science goes from victory to victory.
- What counts as victory? Perhaps getting at truth, perhaps getting at a better explanation.
- History has little or no role in understanding science.
- We must distinguish between **the context of discovery** and **the context of justification**.
- Philosophy of science should study the context of justification.

The classical picture (cont.)

- Science is rational.
- The transition from one theory to another theory goes through experiments.

Kuhn's reaction

- The notion of progress, if there is one, must be refined.
- (This issue is critical in the interpretation of Kuhn's book.)
- There is no distinction between the context of discovery and the context of justification.
- History is key in understanding scientific change.
- Science is not always rational. Again, the notion of rationality must be refined.
- Scientific change is not determined by experiments, but experiments do still have a role.

Kuhn's picture

- 1 Normal science dominated by the paradigm X .
- 2 Anomalies.
- 3 Crisis.
- 4 Revolution: paradigm Y replaces X .
- 5 Normal science dominated by the paradigm Y .