



# **Kuhn's Scientific Revolutions**

Philosophy of Economics

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# Contents

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1. **Kuhn's Scientific Revolutions**
2. Implications and Comparisons
3. Looking Back & Forward

# Central Claims

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1. The main unit of analysis is the **paradigm**
2. Science operates in two modes: **normal science** and periods of **revolution**
3. Scientists operating under conditions of normal science do not aim to refute or corroborate: they “**solve puzzles**” within the paradigm
4. The switch between scientific paradigms can be **sudden and drastic**
5. There are **genuine losses** in explanatory power in switching from one paradigm to another
6. The history of science is **often messy**; existing accounts tell too much of a sterilised story

# Kuhn on the Development of Science



## pre-convergence stage

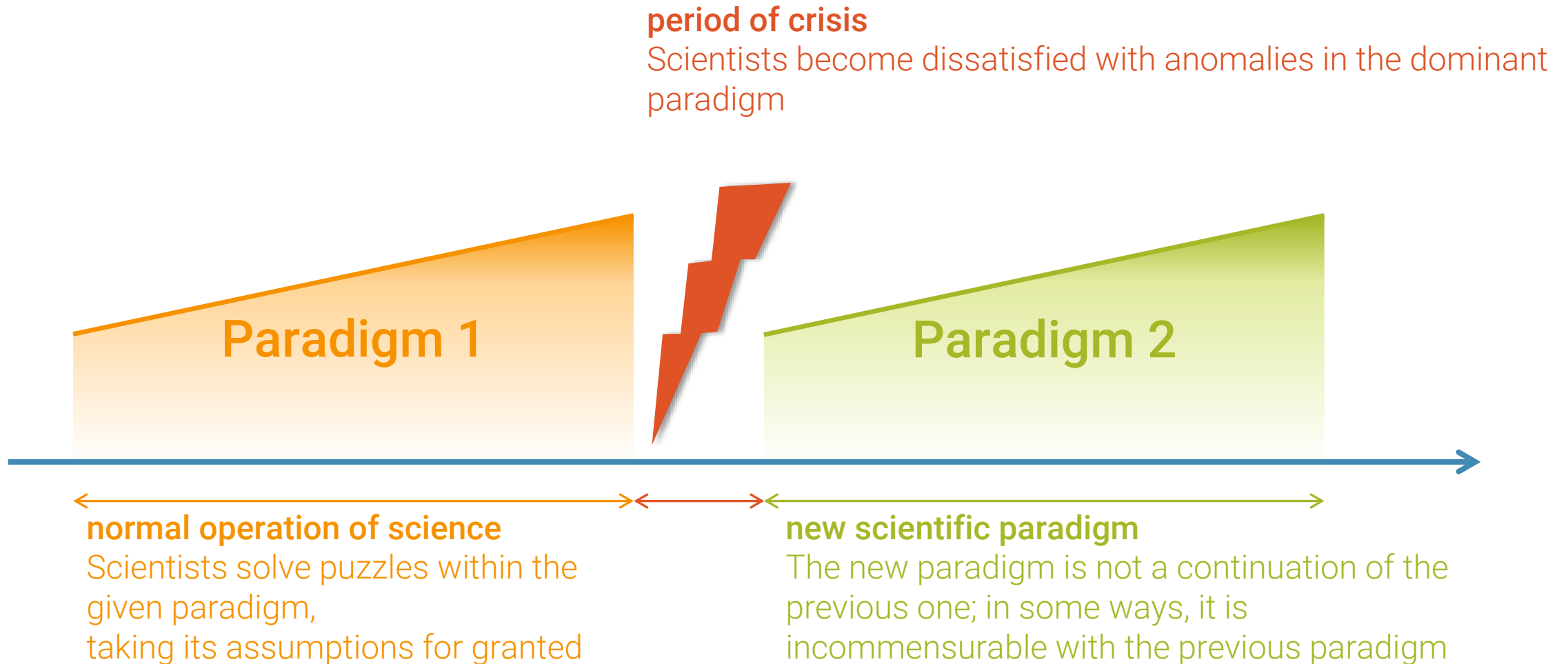
Different schools with conflicting approaches exist



## mature science

Scientists agree on a central paradigm which defines normal practices of inquiry; the paradigm values "convergence"

# Kuhn on the Development of Science



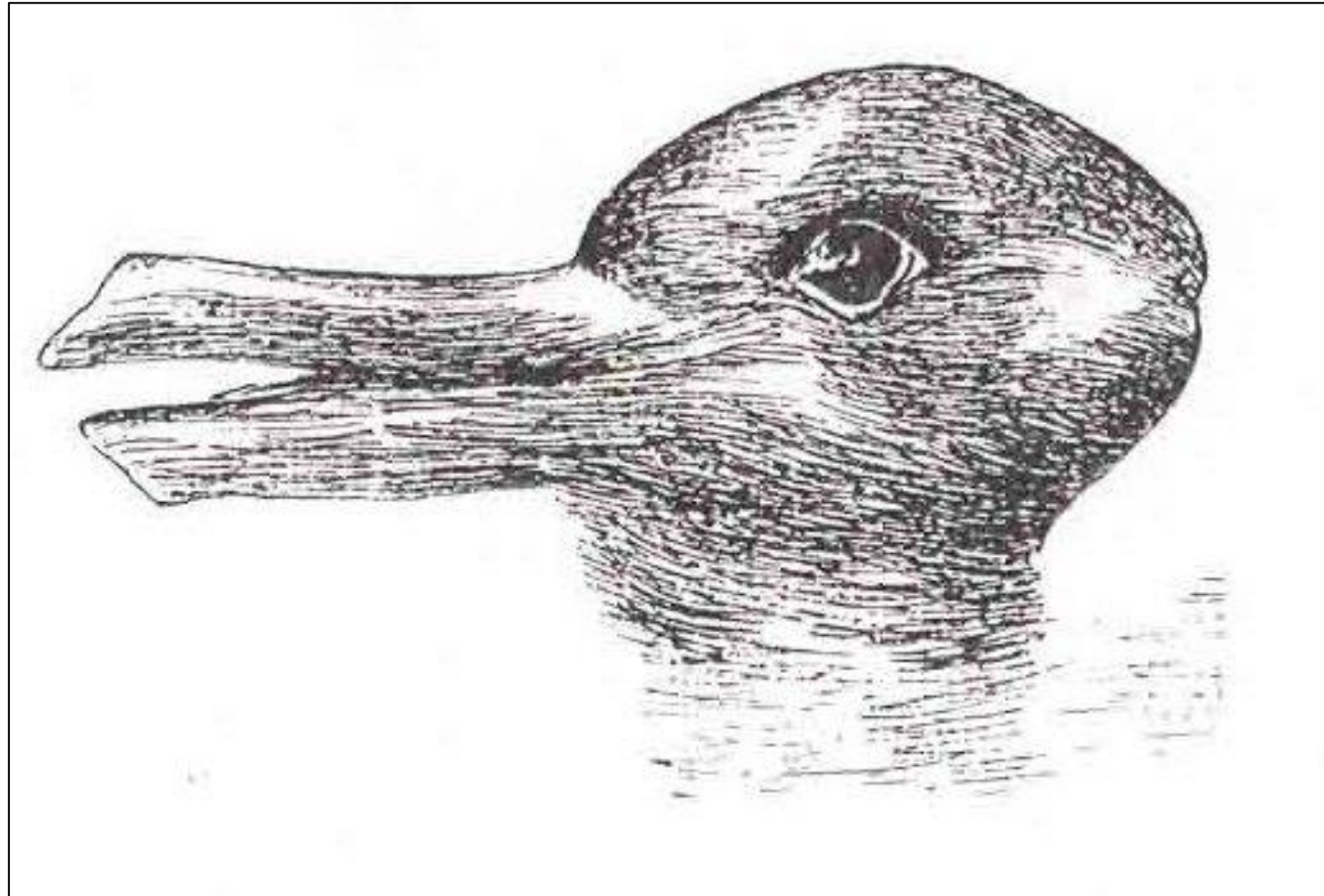
# Incommensurability

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- Different scientific paradigms are **incommensurable**
  - “Like the choice between political institutions, that between competing paradigms proves to be a choice between incompatible modes of community life” (1970, 94)
- There is no(?) external standard by which we can measure the switch from one paradigm from one to another
- Observation is not neutral: it is guided by theory; there is no neutral weighing-up of evidence between theories

# Theory-Dependence of Observation

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Source:  
[https://commons.wikimedia.org/wiki/File:Duck-Rabbit\\_illusion.jpg](https://commons.wikimedia.org/wiki/File:Duck-Rabbit_illusion.jpg)

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# Questions

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- What is the difference between Kuhn's model and Popper/Lakatos?
- Is the Kuhnian model a plausible way to understand the development of macroeconomics?

# Radicalising Kuhn

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Feyerabend, **Against Method**  
“Everything goes”

McCloskey, **The Rhetoric of Economics**

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# Looking Back

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## Popper

Main ideas: falsification and severe testing

## Putnam

Problem of auxiliary hypotheses

## Lakatos

Main ideas: scientific research programmes, hard cores

*What characterises science?  
How does science/economics operate/progress?*

## Friedman

Main ideas: instrumentalism and unrealistic assumptions

## Musgrave

Types of unrealistic assumptions

## Kuhn

Main ideas: paradigms, scientific revolutions, incommensurability