

# Session 9. Pluralism I: Incommensurability

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Thus far we've looked at (1.) negative epistemology, (2.) theoretical virtues, and (3.) inference to the best explanation.

The question of *pluralism*—that there might be more than one theory that is "legitimate" (in some sense) has been constantly in the background.

Over the next four weeks, we'll look at different variants of pluralism.

Aims for today:

- (1.) Examine the notion of *incommensurability*.
- (2.) Assess whether there might be a link between incommensurability and *kinds of ignorance*.
- (3.) Set up some ideas and themes for future weeks.

## 1 Kuhn and incommensurability

Kuhn's account of scientific development and incommensurability is likely familiar.

However there's a **lot** of interpretive work here, so it will be useful to set things up.

An account **scientific development** as involving **anomalies** within a **paradigm**, leading to **crisis** and **revolution** with the emergence of a **new paradigm**.

A lot of work on Kuhn analyses whether this account of scientific development is **reasonable/correct**.

This won't matter so much for us, what is important is the idea of a **paradigm** (a framework in which normal science is conducted) and **incommensurability**.

**Incommensurability.** (General idea) There is a degree of *incomparability* between one paradigm and another.

**Note:** At least as Kuhn understands it, incommensurability is **diachronic** and **not easily reversible** (one starts with a paradigm, realises it fails to solve certain problems, and then characterises what one did before as a **mistake**).

Incommensurability can be:

**Methodological:** Different puzzle solutions from different eras are evaluated by reference to different paradigms (and different problems may be relevant).

**Observational:** Different paradigms suggest different interpretation of observations.

**Semantic:** Meanings of concepts of first set are different from second set.

**Semantic (early):** Meaning holism results in a change in the meaning of one term changing the meaning of many others.

**Semantic (later):** Translation between the concepts of different paradigms is impossible.

## 2 Hoyningen-Huene, incommensurability, and ignorance

Hoyningen-Huene opts for a version of the later version semantic incommensurability on which we have different *lexicons* with different *taxonomies* obeying the "no overlap" principle.

e.g. Geocentric vs. heliocentric systems.

**Note:** Incommensurability can be **graded** under this notion (according to how severe the revisions are).

Recall our kinds of ignorance (these are Hoyningen-Huene's versions):

**Conscious ignorance** I am aware of my ignorance.

**Opaque ignorance** I am not aware of my ignorance.

**Superficially opaque ignorance:** Both question and truthful answer can be easily understood. (e.g. the odometer on my car)

**Deeply opaque ignorance:** There are some concepts that prevent me from being aware of my ignorance (e.g. Aristotle and electromagnetic radiation—he was still able to ask the question about the nature of light).

**Radically opaque ignorance:** I cannot even understand the question (e.g. Aristotle and the molecular composition of water).

<p><b>Main Claim:</b> Incommensurability implies deeply opaque ignorance.</p>
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**Example 1.** The Precession of the Perihelion of Mercury.

We have incommensurability between Newtonian and Einsteinian physics (e.g. mass terms), and deeply opaque ignorance (could not have easily understood solution).

**Example 2.** Virus research.

We have incommensurability between the classificatory systems (e.g. into living and non-living, vs. living/non-living/virus), and deeply opaque ignorance (idea was that everything should have been either living or non-living).

**Example 3.** Prion research.

Again, incommensurability between the classificatory systems (e.g. containing DNA/RNA and containing DNA/RNA or containing prions), and deeply opaque ignorance (idea that a protein could have been an infectious agent was baffling).

**More general claim:** Whenever you've got incommensurability, you've got deeply opaque ignorance (you'll be deeply ignorant about the lexical terms you haven't understood yet).

**Closing question:** Are we permanently in a state of deeply opaque ignorance?

### 3 Questions

**Question.** How **troubling** should we find this possible regress?

**Question.** How do we understand **ignorance** in this context?

**Question.** What about going the other way (i.e. that deeply opaque ignorance implies strong incommensurability)? Is there a symmetry?

**Question.** What if the boundary between the different kinds of incommensurability/ignorance is vague?

**Question.** How gradual can the change be?

**Question.** How fine-grained are the changes? Do we get **intra**-community incommensurability?

**Question.** Can we also have synchronic incommensurability (of course non-Kuhnian)?

**Question.** Can we switch between frameworks? (And does this lead to a pluralism?)

**Question.** How "theoretical" is the adoption of a lexicon, or is it more "quasi-intuitive"?

**Question.** In a case of deeply opaque ignorance and strong incommensurability, can I suspend judgement?

**Question.** Can we have **grounds** for suspecting opaque ignorance/incommensurability?

### 4 Housekeeping

Please fill in the student evaluation form!

Presentation?