Metaphysics of Modality Lecture 1: Introducing modality
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Plan:
Lecture 1: Introducing modality
Lecture 2: David Lewis’s Concrete Modal Realism
Lecture 3: Two versions of Abstract Realism/Actualism
Lecture 4: Modal Fictionalism

1. Introducing Modality

• Modality: the phenomenon of possibility and necessity: of could and must.
• Modal thought and modal language is prevalent in everyday life, telling us about what could be the case or must be the case, but for different reasons.

1. Mark could have been an ancient historian (metaphysical)
2. All robins must be birds (metaphysical)

2. Philosophical contexts

a) Counterfactuals
b) Dispositions
c) Supervenience
d) Logic

3. Language for modal logic

• There are 2 standard modal expressions: □ “box” (it is necessary that) and ◊ “diamond” (it is possible that)
• If φ is a well-formed formula, then so are □φ and ◊φ

\[
\begin{align*}
\square A & \leftrightarrow \neg \Box \neg A \\
\Diamond A & \leftrightarrow \neg \Box \neg A
\end{align*}
\]

4. De Dicto and De Re modality

(1) The number of planets in our solar system is necessarily greater than 5
• Modal claims can give rise to two different readings: a modal status applied to the proposition (de dicto) or a modal status applied to an entity (de re)

A formula with modal operators is de re iff it contains a modal operator R which has within its scope either (1) an individual constant, or (2) a free variable, or (3) a variable bound by a quantifier not within R’s scope. All other formulae with modal operators are de dicto (Forbes, 1985: 48).

(2) There could have been pink swans \( \Box \exists x (P x & S x) \) de dicto
(3) All robins must be birds \( \Box \forall x (R x \rightarrow B x) \) de dicto
(4) Mark could have had a daughter \( \Box D m \) de re
(5) Any robin must be bird \( \forall x (R x \rightarrow \Box B x) \) de re
• The Barcan Formula (1946):

$$\Box \exists xFx \rightarrow \exists x \Diamond Fx$$

(6) Necessarily, the thing Sophie is thinking about is prime (de dicto) False
(7) The thing Sophie is thinking about is necessarily prime (de re) True

5. Possible Worlds

• What logical principles do ‘□’ and ‘◇’ obey? × Not truth tables!
• Take the modal operators to be quantifiers over possible worlds
• Define possibility and necessity in terms of truth at these possible worlds:

$$\Box p \text{ is true iff there is some world } w \text{ such that } p \text{ is true at } w$$

$$\square p \text{ is true iff for any world } w, p \text{ is true at } w$$

• ✓ Advantages: reflects our intuitions that there are different ways things could’ve gone, it applies to discourse about counterfactuals, supervenience, properties, relations, concepts, and propositions.¹

6. The debate

• Whether translating modal claims into possible world language can help us understand the content of such claims, depends on what we think possible world talk itself means
• Positions in the debate: Modalism, Concrete Modal Realism (Lewis), Abstract Modal Realism/Actualism (Plantinga, Adams, Stalnaker, Carnap), Conceptual approach (Baldwin, Thomasson, Blackburn), Error Theory (Quine), Fictionalism (Rosen, Yablo, Divers)
• ✓ × Criteria of assessment: Fidelity to modal opinion, Ontology, Ideology, Explanatory power, Epistemology

Reading list

Forbes, Graeme, (1985) The Metaphysics of Modality (OUP) Ch. 1
Plantinga, Alvin (1974) The Nature of Necessity (OUP) Ch. 1

Further reading on topics not covered

Melia, Joseph, (2003) Modality (London: Acumen) Ch. 3 [Error theory], Ch. 4 [Modalism]

¹ See Lewis (1986) Chapter 1, Sections 1.2-1.5 for more details.