

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 "box" (it is necessary that) and \Diamond "diamond" (it is possible that)
- If ϕ is a well-formed formula, then so are $\Box\phi$ and $\Diamond\phi$

$$\Box A \leftrightarrow \neg \Diamond \neg A$$
$$\Diamond A \leftrightarrow \neg \Box \neg A$$

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 $\Diamond \exists x(Px \ \& \ Sx)$ *de dicto*
- (3) All robins must be birds $\Box \forall x(Rx \rightarrow Bx)$ *de dicto*
- (4) Mark could have had a daughter $\Diamond Dm$ *de re*
- (5) Any robin must be bird $\forall x(Rx \rightarrow \Box Bx)$ *de re*

- The Barcan Formula (1946):

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

- (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 ‘ \Box ’ and ‘ \Diamond ’ 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:

$$\begin{aligned} \Diamond p \text{ is true iff there is some world } w \text{ such that } p \text{ is true at } w \\ \Box p \text{ is true iff for any world } w, p \text{ is true at } w \end{aligned}$$

- ✓ 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

- Barcan (Marcus), R., (1946) ‘A functional calculus of first order based on strict implication’ *Journal of Symbolic Logic* 11, 1-16
 Forbes, Graeme, (1985) *The Metaphysics of Modality* (OUP) Ch. 1
 Lewis, David, (1986) *On the Plurality of Worlds* (Oxford: Blackwell)
 Loux, Michael, (1979) *The Possible and the Actual* (Cornell University Press) Introduction
 Lowe, E.J., (2002) *A Survey of Metaphysics* (OUP) Ch. 7
 Plantinga, Alvin (1974) *The Nature of Necessity* (OUP) Ch. 1
 Williamson, Timothy, (2010) ‘Barcan Formulas in Second-Order Modal Logic’ in M. Frauchiger and W.K. Essler, eds., *Themes from Barcan Marcus* (De Gruyter, 2015)

Further reading on topics not covered

- Melia, Joseph, (2003) *Modality* (London: Acumen) Ch. 3 [Error theory], Ch. 4 [Modalism]
 Blackburn, Simon, (1987/1993) ‘Morals and Modals’ in *Essays in Quasi-Realism* (OUP) [Conceptual approach]
 Thomasson, Amie, (2007) ‘Modal Normativism and the Methods of Metaphysics’ *Philosophical Topics* 35, 135-160 [Conceptual approach]

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