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<u>OUTLINE</u>
Metaphysics of Modality

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This course will span **four** lectures. In it, we will look at a number of different positions on the status and nature of *possible worlds*. In particular we will look at two different kinds of realist position before considering *fictionalism* and (time permitting) *expressivism*. We will also attempt to answer the question, *in virtue of what are modal claims about **us** true*? These lectures will proceed as follows.

1. **Introduction & Concrete Modal Realism**

2. **Concrete Modal Realism v. Abstract Modal Realism**

3. **Transworld Identity v. Counterparts**

4. **Fictionalism**

Lecture 1
Introduction & Concrete Modal Realism

1. **Introduction**

   What is modality? To get to grips with this, we should begin by considering *modal statements*. Modal statements are (in general) those that invoke **possibility** and **necessity**.

   "Was that a bird?"
   "I'm not sure, it **could have been** a plane…" | Epistemic |

   "You **can't** just steal from people like that!" | Moral |

   "Travelling faster than light is **impossible**." | Physical |

   "**Necessarily**, either *P* or ¬*P*." | Logical |

   "If you **had** left earlier, you **would have** been on time!"

   "The glass is **fragile**." | Metaphysical |

   "If an animal is a dog, then it **must** be a mammal."

   "I **could have been** an astronaut."

   There are a few reasons why we might care about modal claims:

   (i)   Many are ordinary claims. (So modality is relevant to things we ordinarily take to be true.)

   (ii)   They are relevant to several different philosophical concepts and debates:

          a. Counterfactuals
          b. Supervenience (e.g. in philosophy of mind or in metaethics)
          c. Accidental Generalisations v. Laws
          d. Accidental v. Essential Properties

   In each of these domains, it seems like we can make **true** claims about what is or isn't possible. Given this a question arises: **what makes modal claims true?**

2. **Modal Claims and Possible Worlds**
In philosophy, we often spell out modal claims in terms of **possible worlds**. We do this according to the following rules:

*It is **possible** that p* IFF *p is true at **some** possible world*

*It is **necessary** that p* IFF *p is true at **all** possible worlds*

But what *are* these possible worlds? As an intuitive gloss on them, we can say that they are **alternative ways things could have been**.

Employing possible worlds in this way has proved fruitful in that they offer a way of interpreting modal operators like 'possibly' and 'necessarily'. We can use them to provide a **semantics** for modal claims.
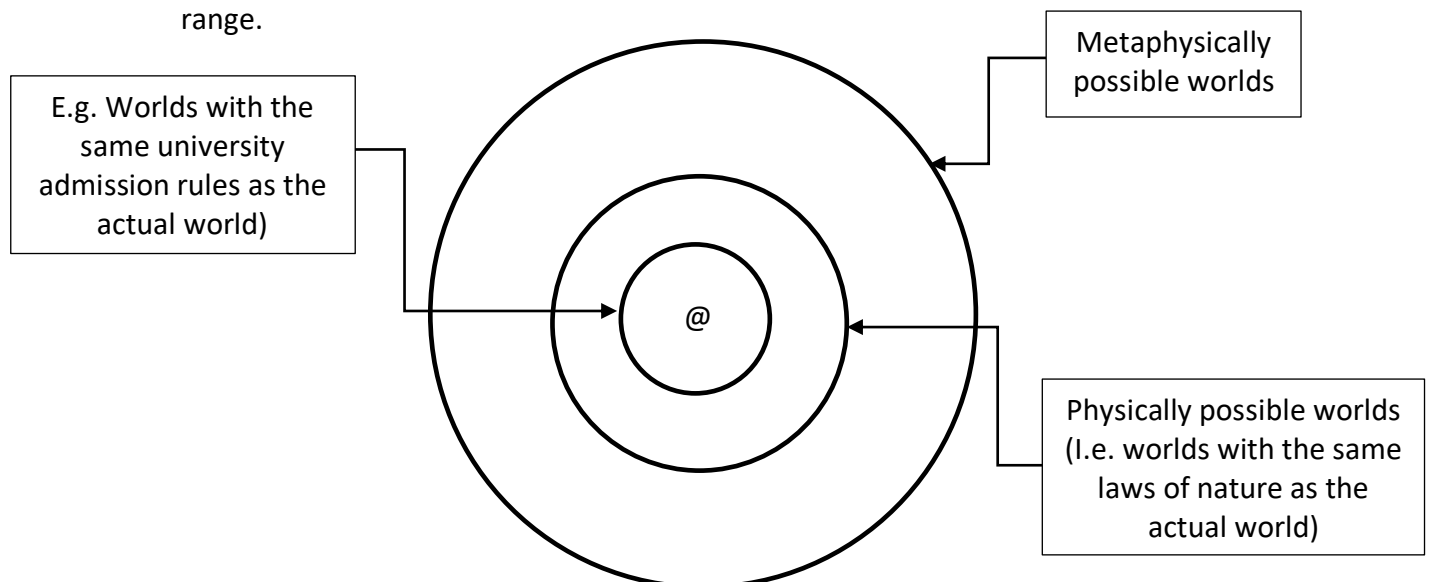
The metaphysical questions that then arise are:
- **What <u>are</u> possible worlds?**
- What is there **ontological status**?
- If they exist (if they are part of our ontology) what **kind of existent** are they?

3. **Some Important Distinctions**
Before we can carry on to the main question of this course, there are a few distinctions to cover. It will be useful to have these to hand in the rest of our investigations.

Restricted Modalities
Consider the claims we looked at at the start of the lecture. There were *different kinds of modality*. With the possible-worlds machinery at our disposal, we can now make sense of some of these kinds of modality in terms of the **set of worlds** over which they range.

E.g. Worlds with the same university admission rules as the actual world)

Metaphysically possible worlds

Physically possible worlds (I.e. worlds with the same laws of nature as the actual world)

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Epistemic Modality

Consider the statement from the start again. In the mini-dialogue, the second person says of the thing in the sky that 'it could have been a plane.' But notice that the force of the world '**could**' here is different. They were not making a claim about the nature of the object; instead they were making a claim about **their evidence and beliefs**. That is, this proposition,

"It could have been a plane"

is more accurately understood as expressing,

"**For all I know**, the object was a plane."
OR
"**My evidence** is **consistent** with its being a plane."

This kind of modality **can't** be distinguished from metaphysical modality in the way that we just understood restricted modalities. You might think that we could make sense of this modality in terms of the worlds that can and cannot be ruled out on the basis of our evidence. But, consider the following two propositions:

A. Either it is necessary that Goldbach's Conjecture is true, or it is necessary that it is false. (METAPHYSICAL)
B. It is possible that Goldbach's Conjecture is true and it is possible that it is false. (EPISTEMIC)

If the Conjecture is true, then it is true at all possible worlds. And if it is false, then it is false at all possible worlds. This is what Proposition A states.

Given this, we cannot cash Proposition B out in terms of what is true at worlds.
Argument:
1. Either all of the worlds are ¬GC-worlds or they are GC-worlds.
2. Suppose they are all ¬GC-worlds.
   3. So, there is no world at which GC.
   4. So, there is no GC-world my evidence cannot rule out.
   5. So, Proposition B is false.
6. Suppose they are all GC-worlds
   7. So, there is no world at which ¬GC.
   8. So, there is no ¬GC-world my evidence cannot rule out.
   9. So, Proposition B is false.
10. Therefore, Proposition B is false.

De Re and De Dicto Modal Claims

When we make modal claims, we can ascribe modal properties to **propositions** or to **things**. Compare:

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Necessarily, all humans are mortal.

$\Box\forall x(Hx \rightarrow Mx)$

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$\boxed{\textit{De dicto modality}}$

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All humans are **necessarily** mortal.

$\forall x(Hx \rightarrow \Box Mx)$

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$\boxed{\textit{De re modality}}$

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These notions can be defined as follows:

> A formula of the form $\Box\Phi/\Diamond\Phi$ exhibits modality **de dicto** iff there is neither a free variable nor a name within the scope of the modal operator.

> A formula of the form $\Box\Phi/\Diamond\Phi$ exhibits modality **de re** iff there is either a free variable or a name within the scope of the modal operator.

So, 'necessarily, all humans are mortal' tells us that, for all possible worlds *w*, all the humans at *w* are mortal at *w*. If you like, imagine going to each world and checking first for humans; then, if you find any humans, check whether those humans are mortal.

Contrastingly, 'all humans are necessarily mortal' tells us that, all the humans *here* (at the world of evaluation, which in this case is the actual world) have the property of being mortal at *all* possible worlds. If you like, imagine identifying each human here, and then going to each world *w* and checking whether each of the humans you found here is mortal at *w*.

This distinction helps us to disambiguate a claim like:

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'Necessarily, the number of planets is even.'

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We can now see that this could be saying:

1. At all possible worlds, the number of planets is even. (**de dicto**)
2. The number of planets is such that, at all possible worlds that number is even. (**de re**)

Once disambiguated, we can see that 1 is clearly false (after all, *our* world was once one where there was an odd number of planets!). But 2 is clearly true (since, 8 is even at all possible worlds).

4. **Intro to Concrete Modal Realism**

We can now get a start on one view of what these worlds we've been talking about **are**. What their ontological kind and status are.

In a nutshell, according to **David Lewis**, possible worlds are **just like our world**.

What is our world like? It is made up of **concrete** stuff that is spatiotemporally related to other stuff in the world. In more technical terms,

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***W* is a possible world** iff…
W is a maximal mereological sum of spatiotemporally related objects.

For things to be **spatiotemporally related** is for them to be related in time and space.

For something to be a **mereological sum** is for it to be made up of parts.

Putting these together then, *W* is a **maximal mereological sum of spatiotemporally related objects** iff…

1. *W* is a mereological sum
2. For any *x* and for any *y*, if *x* is a part of *W* and *y* is part of *W*, then *x* is spatiotemporally related to *y*
3. For any *x* and for any *y*, if *x* is a part of W and *x* is spatiotemporally related to *y*, then *y* is a part of *W*

In other words, all the things that make up a world *W* are spatiotemporally related, and there is nothing spatiotemporally related to *W* that isn't itself a part of *W*.

On this view **actuality is indexical**. What's special about our world is just that we happen to be in it. The actual is as special (relative to other worlds) as *here* is (relative to other places).

On this view it also turns out that **objects are world-bound**. That is, no object is part of more than one world. So, for instance, something like 'I could have been an astronaut' isn't true because *I* am an astronaut at some other world. I can only exist here at the actual world.