

ODUCE PHILOSOPHICAL SOCIETY

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In this short lecture I will:

- **identify three claims each of which seems plausible;**
- **explain the Twin-Earth thought experiment which purports to show that the first of these claims is false;**
- **briefly run through the ramifications that the Twin-Earth argument has been thought to have;**
- **consider objections to this thought experiment.**

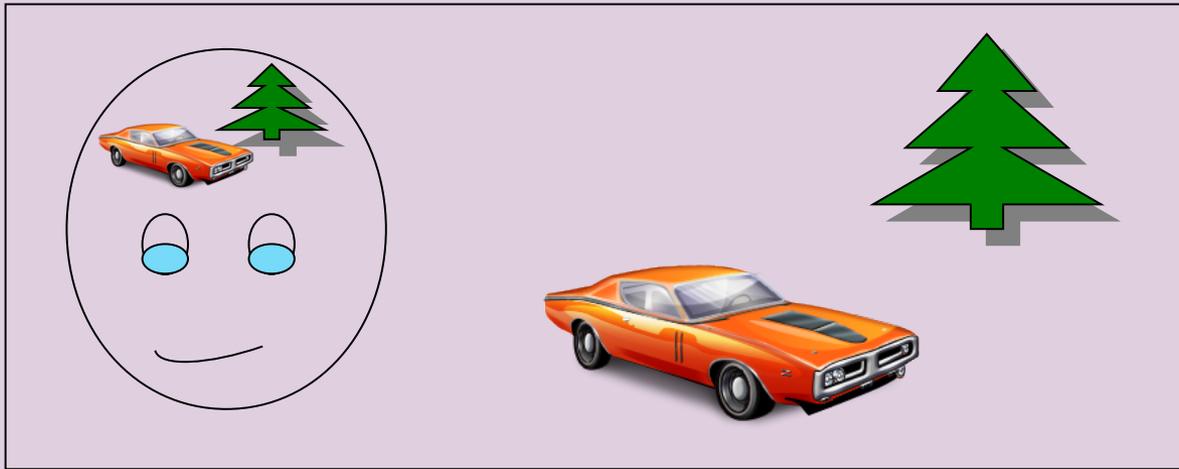
Claim One:

- **The contents of our beliefs are determined solely by properties intrinsic to us**

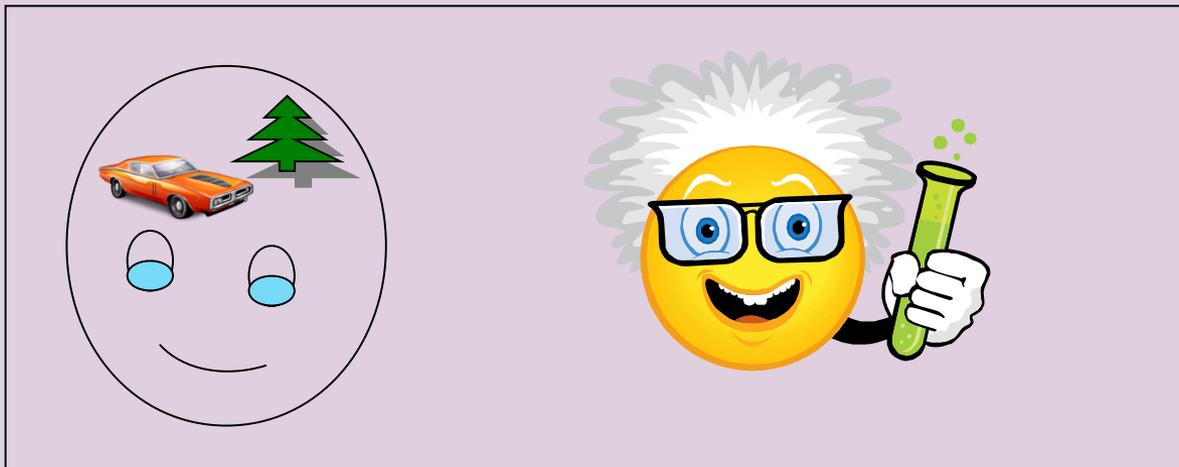
This is the claim of Internalists who believe that our beliefs would be the same *whatever* our environments were like

Internalists believe that the content of our beliefs is determined solely by our intrinsic properties

INTERNALISM



World One in which our thoughts about the external world are (mainly) true



World Two in which our thought about the external world are all false

Claim two:

- **The contents of our beliefs determine the meaning of the words we utter to express these beliefs**

This refers to *speaker-meaning* not *sentence-meaning*.

Speakers utter sentences with *type-meaning* (sentence-meaning) to express their beliefs by means of *speaker-meaning*

Claim three:

- **The meaning of our words, together with the context in which they are uttered, determines the truth-value of our utterances**

This states that we determine the truth-value of an utterance by appeal to the speaker-meaning of the utterance (its truth-conditions) plus the context in which it is uttered

Putnam's Twin-Earth thought experiment, if it works, shows that we must reject one or other of these three claims

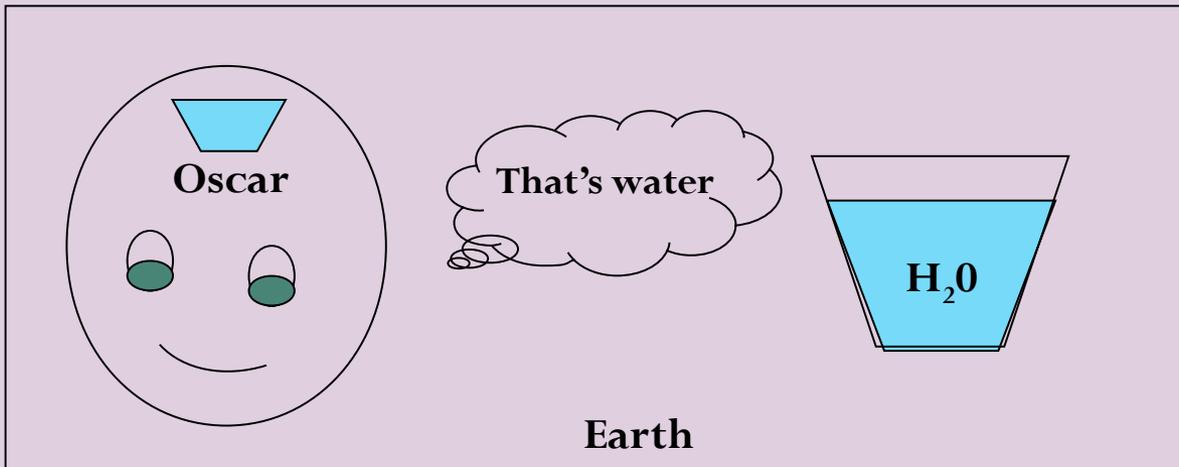
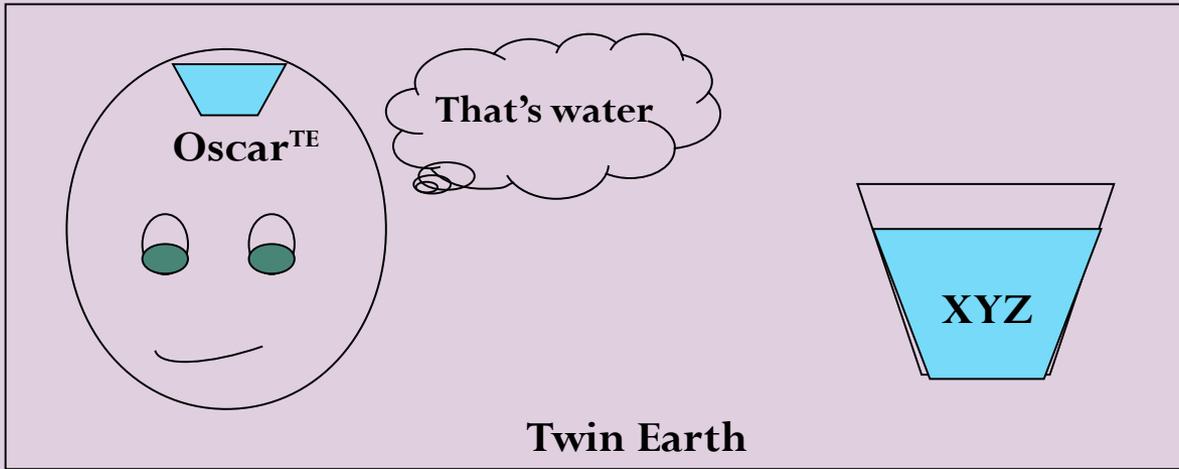
Imagine:

- **A person, Oscar, who lives on Earth**
- **Another planet identical to Earth on which lives a doppelganger of Oscar. We'll call this other planet Twin Earth, and Oscar's doppelganger Oscar^{TE}**
- **The year is 1750 before the discovery of the chemical composition of water**

Further suppose that:

- **Earth and Twin Earth are molecule for molecule identical except for the fact that the liquid flowing in rivers and from the tap has the chemical composition XYZ rather than H₂O**
- **Oscar and Oscar^{TE} are identical with respect to their intrinsic properties – ie. with respect to their physiological properties, phenomenological properties and behavioural dispositions**

NOTE: it is obvious, given that water is H₂O and water^{TE} is XYZ, and that both Oscars are 90% water, that neither of these two claims can be correct , but bear with me....



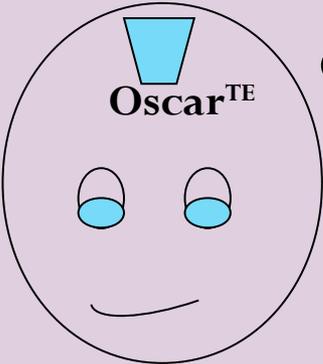
Putnam first notes that if we accept the three claims then:

- **by claim 1, Oscar and Oscar^{TE}, are intrinsically identical, and therefore such that the contents of their beliefs are the same;**
- **by claim 2, the identical content of Oscar's and Oscar^{TE}'s beliefs means that Oscar and Oscar^{TE}'s utterances should have the same speaker-meaning;**
- **by claim 3, when Oscar and Oscar^{TE} are in the same context, their utterances should have the same truth-value.**

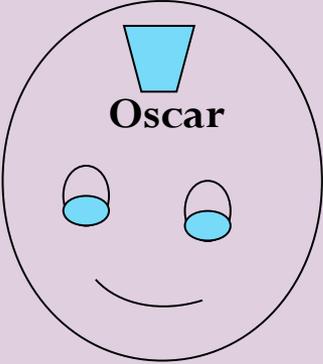
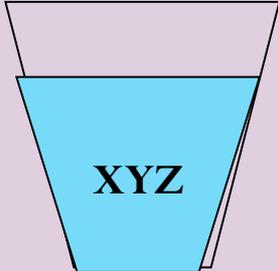
But, Putnam argues, we should now imagine that Oscar is transported in his sleep to Twin Earth

So Oscar and Oscar^{TE} then find themselves in the same room looking at the same glass of XYZ

Twin Earth



That's water



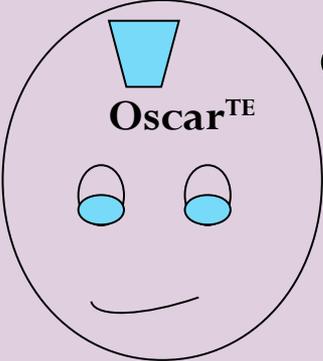
That's water

Four questions:

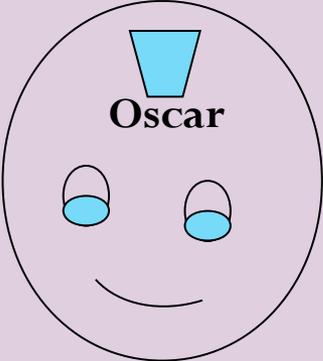
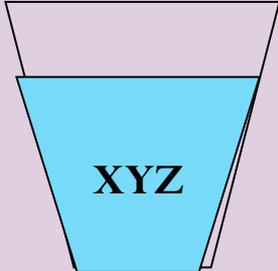
1. do Oscar and Oscar^{TE} have beliefs with the same content?
1. do the utterances of Oscar and Oscar^{TE} have the same meaning?
1. do Oscar and Oscar^{TE} have beliefs with the same truth value?
1. So the utterances of Oscar and Oscar^{TE} have the same truth-value?

Putnam answers 'no' to all four questions.

Twin Earth



That's water



That's water

Do the twins have the same belief?

Do their utterances have the same meaning?

Do their beliefs and utterances have the same truth value?

Putnam starts by answering ‘no’ to questions 3 and 4 insisting that the twins’ beliefs/utterances do not have the same truth value

His argument for this is that whilst the twins are both looking at the *same* glass of water^{TE} (so the *context* in which the truth-value of their utterances and beliefs is determined is the same):

- **Oscar’s belief [that is water], and his utterance ‘that is water’ will both be *false***
- **Oscar^{TE}’s belief [that is water^{TE}] and his utterance ‘that is water^{TE}’ will be *true***

If we accept that the twins' beliefs and utterances differ in truth-value, then we must accept one of the following claims:

- **The twins do *not* have beliefs with the same content despite the fact that they're intrinsically identical (so claim 1 is false)**
- **The twins *do* have beliefs with the same content (because they are intrinsically identical), but the speaker-meaning of their utterances is not determined by the content of their beliefs (claim 2 is false)**
- **The twins *do* have the same belief, *and* the speaker-meaning of their utterances *is* determined by the content of their beliefs, but the truth-value of their utterances is not determined, in a context, by the speaker-meaning of their words (claim 3 is false).**

Putnam argues that to accept b) or c) is to leave ourselves with no story about:

- *what determines the speaker-meaning of our words - after all what could determine what we mean by our words except what we intend them to mean?*
- *what determines the truth-value of our utterances - after all what could determine the truth-value of our utterances in a context except the meaning of our words?*

We must therefore, says Putnam, accept a) and reject Cartesian Internalism.

Putnam ends with the immortal words ‘cut the pie anyway you like, meanings ain’t in the head’.

Ramifications of Putnam's Twin-Earth thought experiment:

- **contents and meanings are individuated at least in part by their relational properties;**
- **Cartesian scepticism is based on a false theory of content/meaning;**
- **first person authority on mental states and meanings is compromised;**
- **mental states cannot be type-identified with neural states (type-identity theory is false);**
- **mental states cannot be identified with the 'narrow' causal roles of neural states (functionalism is false);**
- **we must explain how non-narrowly individuated contents can be causally implicated in the production of actions.**

Some Objections to Putnam's Twin-Earth thought experiment:

1. Meaning, Rigid Designation and Natural Kind Terms

2. Rejection of the Thought Experiment

2a) On Scientific Grounds

2b) On Philosophical Grounds

1. Meaning, Rigid Designation and Natural Kind Terms

Putnam clearly assumes, in his thought experiment that both ‘water’ and ‘water^{TE}’ refer rigidly to the *real* essence of a liquid ostensibly defined in a context (Earth and Twin-Earth respectively) by its *nominal* essence.

We can question this assumption.

We would do so if we insisted that both ‘water’ and ‘water^{TE}’, have the same disjunctive meaning (H₂O *or* XYZ).

If we did this we would be saying that both ‘water’ and ‘water^{TE}’ rigidly designate a *nominal* rather than a *real* essence (and of course the *same* nominal essence).

On this theory of the meaning of ‘water’ and ‘water^{TE}’ the twins’ beliefs and utterances would have the same truth-value even when they are both on Twin-Earth.

The thought experiment would fizzle out.

Response:

When science discovered that H_2O is the chemical composition of water we might have decided either that the meaning of ‘water’ goes with the *nominal* essence of water *or* that the meaning of ‘water’ goes with the *real* essence of water.

I think that we decided the latter: most of us would *deny* that a liquid with a chemical composition other than H_2O is water.

This *might* have been different.

IF we had discovered, of some liquid in Cheshire that shares the nominal essence of water, that it has the chemical composition XYZ, I think we might have decided that there are two types of water and that the meaning of ‘water’ is (H_2O *or* XYZ). The word ‘water’ would then have rigidly designated a *nominal* essence.

I do not think this possibility is actualised.

You might, of course, disagree.

Were we to discover, on Kepler-452b, a liquid that shares the nominal essence of water, but that has the chemical composition XYZ, we might decide to *change* the meaning of ‘water’ to (H₂O or XYZ).

We might decide that the meaning of ‘water’ would no longer rigidly designate a *real* essence, but that it would from now on rigidly designate a *nominal* essence.

But I believe this would be a *change* of meaning, not the *discovery* that all along ‘water’ meant (H₂O or XYZ).

Again you might disagree

2. Rejection of the Thought Experiment

2a) On Scientific Grounds

We could reject the Twin-Earth thought experiment on the grounds that nothing that lacks the chemical composition H_2O could have all the macroscopic properties of water (H_2O).

To this there are (at least) two responses:

Response one:

It is not *nomologically* possible for anything that lacks the chemical composition H₂O to have all the macroscopic properties of water.

But it is *logically* possible.

Could even logic admit a world in which two liquids that are macroscopically and behaviourally identical nevertheless have a *different* chemical composition?

Hm. Discerning logical possibility is not always easy.

David Lewis argues that there are ‘no gaps in logical space’ i.e. absolutely *every way* the actual world *could be* is a way that some possible world *is*.

But this is not very helpful – is the situation described a way the world *could be*? Or not? (and does it matter?)

Response two (no it doesn't matter!):

We can change the thought experiment to involve topaz and citrine instead of H₂O and XYZ

Maximilian de Gaynesford argues that topaz and citrine have the same nominal essence (i.e. they are macroscopically identical) yet they differ in their chemical composition (topaz is Al₂SiO₄ (OH, F)₂, and citrine is SiO₂).

This enables us to run the thought experiment without even leaving Earth.

2. Rejection of the Thought Experiment

2b) On Philosophical Grounds

Some philosophers think we shouldn't rely on thought experiments for anything.

Daniel Dennett thinks that such experiments are 'intuition-pumps' so we get out only what we put in.

Other philosophers think that we should never rely on intuition because intuitions are culturally specific

That's my romp through the Twin-Earth thought experiment!

Sorry there weren't many pictures!