

# Causation and Modality

## Week 6: Contextualism

**So far:** We've looked at how causation and modality are related to each other (and to laws and dispositions).

**Today:** We'll look at different ways in which causal and modal language might be sensitive to *context*.

### What is Contextualism?

A linguistic expression is *context-sensitive* iff its content depends on the context of use.

- Context-sensitivity vs. ambiguity
- Context-sensitivity vs. vagueness

Two sources of context-sensitivity:

- Context-sensitive constituents (e.g. 'I was born in Leeds.')
- Hidden syntactic structure (e.g. 'John is tall [*for a X*']')

### Two Types of Modal Contextualism

#### Kratzer on modal auxiliaries

Modal auxiliaries can apparently be used to mean different things in different contexts:

E.g. 'Jane can't play football.'

- *Jane's not allowed to play football.*
- *It's not in Jane's interests to play football.*
- *Jane's a bad footballer.*
- *The pitch is waterlogged.*
- *Any others?*

One proposal: 'can' is ambiguous.

- But you'd need *a lot* of disambiguations...!

Kratzer's proposal: modal auxiliaries express functions with *two* arguments, a proposition *p* and a set of propositions, **B** (the 'modal base').

Roughly: CAN ( $p$ ,  $\mathbf{B}$ ) is true iff  $p$  is true in some possible world where all of the propositions in  $\mathbf{B}$  are true.

While the modal base is not normally explicitly specified in modal utterances, it is usually determined by the conversational context.

[Footnote: Kratzer later adds a third argument place, the ordering source, to deal with gradability and the difference between weak and strong necessity – see her ‘The Notional Category of Modality’]

### Lewisian Counterpart Theory

What are the truth conditions of ‘George Osborne could have had eleven fingers’?

- There is a PW in which George Osborne has eleven fingers (the Overlap View)
- There is a PW in which a *part* of George Osborne has eleven fingers (Modal Worm Theory)
- There is a PW in which a *counterpart* of George Osborne has eleven fingers (Lewis’s view)

A counterpart of an object is something which is *similar* to that object...

...but there are many different ways in which two things can resemble one another...

...so there are many different counterpart relations, one for each dimension of similarity.

Which counterpart relation a particular modal utterance is evaluated with respect to is determined by the conversational context; and *one* of the relevant features of the context is how the object is picked out.

E.g. consider the following argument:

1. The lump of clay could have survived being squashed.
2. The statue could not have survived being squashed.
3. Therefore, the statue is not identical to the lump of clay.

Lewis thinks this argument is invalid, because...

...P.1 predicates the property of having a *lump*-counterpart that survives squashing...

...P.2 withholds the property of having a *statue*-counterpart that survives squashing...

...and these are different properties!

[Footnote: this view is not the view that an object can have more than one counterpart (of the same kind) per world (although Lewis also held the latter view).]

## Two Types of Causal Contextualism?

**Question:** What do we get if we combine what we know about the context-sensitivity of modal talk with what we know about the connections between causation and modality?

## Causes and Conditions

Whether an event is judged to have been ‘part of the cause’ or merely ‘part of the background’ seems to depend on the context (e.g. short-circuit vs. presence of oxygen).

Standard reaction to this: *both* are causes, but depending on the context there may be pragmatic reasons to talk about one but not the other.

But there are good reasons to think that this is a *semantic* phenomenon, not a pragmatic one...

### **The Strategy:** Mackie + Kratzer

Recall Mackie’s account of causation:  $X_1, \dots, X_n$  caused  $Y$  iff  $X_1, \dots, X_n$  were minimally jointly sufficient for  $Y$ .

A natural gloss on ‘sufficiency’: *Given* that  $X_1, \dots, X_n$  all occurred,  $Y$  *had to* occur.

If the ‘had to’ has the strength of metaphysical necessity, there are an awful lot of causes...

...but perhaps causal claims are context-sensitive in just the way that Kratzer thinks modal claims are...

...causes are things which necessitate their effects only *in view of* certain facts.

Roughly: CAUSES ( $[X_1, \dots, X_n]$ ,  $Y$ ,  $\mathbf{B}$ ) is true only if  $Y$  occurs in every possible world where  $X_1, \dots, X_n$  all occur and all the propositions in  $\mathbf{B}$  are true (where  $\mathbf{B}$  is typically determined by context).

An example from the law: In *Jones v. Boyce*, the defendant’s negligence was judged to have caused the claimant’s loss only if the negligence placed the claimant “in such a situation that he *must* adopt a perilous alternative”, thereby creating “a *necessity* for what he did”.

An example from science: Genes are judged to be the causes of certain phenotypes, even though many other environmental factors are necessary for their development, insofar as those other factors *have* to be present for the organism to survive.

## Event Descriptions

Adding adverbial modifiers to the event descriptions in a causal claim can affect how likely we are to endorse it.

E.g.: it wasn’t Simona’s saying ‘Hello’ *loudly* that caused Alex to greet her in return; rather, it was Simona’s saying ‘Hello’ that caused Alex to greet her in return.

### **The Strategy:** Lewis on causation + Lewis on modality

Recall the simple counterfactual account of causation:  $X$  is a cause of  $Y$  iff  $Y$  wouldn’t have occurred if  $X$  hadn’t occurred...

...i.e. (according to counterpart theory) iff no *counterpart* of *Y* occurs in all the closest possible worlds where no *counterpart* of *X* occurs...

...but if there are multiple counterpart relations, then perhaps causal claims are context-sensitive in just the way that Lewis thinks modal claims are.

E.g. the two causal claims above are compatible, even if 'Simona's saying 'Hello'' and 'Simona's saying 'Hello' loudly' pick out the same event, because they elicit different counterpart relations.