

PHIL 420: Metaphysics

Handout 12

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Shoemaker: Causality and Properties (1980)

§ Shoemaker's Main Contentions:

1. To argue that only causally relevant properties are "genuine" properties; properties are simply causal powers.
2. To define the principle of individuation (identity) for genuine properties (Cambridge properties).
3. To argue that all the causal potentialities possessed by a property at any time in the actual world are essential to it and so belong to it at all times and in all possible worlds.
4. To conclude that causal necessity is a species of logical necessity.

§ Causality and Events

It is events, rather than objects, that are the terms of the causal relationship.

Event = constituent objects + properties

< Any account of causality as a relation between events should involve reference to the properties of the constituent objects of the events.>

Event C causes Event E:

___ An event typically consists of a change in the properties or relationships of one or more objects.

⇒ **Event C, in virtue of the property F, causes event E, in virtue of the property G.**

e.g. a gun shot out a bullet that caused the death of Mr. K. If Mr. K was killed by the bullet through his heart, then it is in virtue of the bullet, not in virtue of the loud noise, that the gun shot caused Mr. K's death. If Mr. K died of a heart attack, then it could be the loud noise, rather than the bullet, that cause the death of Mr. K.

e.g. a soprano's singing shattered the glass. It is in virtue of the high pitch, not in virtue of the Italian lyrics, that the glass was shattered.

⇒ **Therefore, all events have many properties and we can always identify some properties to be the causally relevant ones.**

§ Real/Genuine Properties vs. Non-Genuine Properties

[cf. Putnam's distinction of 'property-1' and 'property-2']:

Property-1: for every predicate F true of a thing, there is a property of the thing which is designated by the corresponding expression of the form "being F."
e.g. the property of 'being three-inch taller than JeeLoo', the property of 'being the tallest person in the Metaphysics class,'.....

Property-2: genuine properties of the objects (Putnam calls them physical properties)
e.g. the property of 'being six feet tall,' the property of 'being 160 lbs.,'....

Shoemaker's criterion:

___ A property is genuine if and only its acquisition or loss by a thing constitutes a genuine change in that thing.

[Cambridge Criterion]: (Peter Geach)

___ The thing called 'x' has changed if we have 'F(x) at time t' true and 'F(x) at time t¹' false, for some interpretation of 'F,' 't,' and 't¹.'

Genuine changes are Cambridge changes.

Some changes are mere-Cambridge changes when they are not genuine changes of the subject, e.g. Socrates undergoes a change when he comes to be shorter than Theaetetus in virtue of the latter's growth.



[Cambridge properties]: genuine properties.

vs.

[Mere-Cambridge properties]: properties such as being "grue", historical properties like being over 20 years old and having been slept by George Washington, relational properties like being fifty miles south of a burning barn, and such properties as being such that Jimmy Carter is President of the United States.

* Shoemaker's theory does not apply to mere-Cambridge properties.

§ The Individuation of Properties

[The principle of Individuation for Properties]:

___ What makes a property the property it is (what determines its identity), is its potential for contributing to the causal powers of the things that have it.

___ If under all possible circumstances properties X and Y make the same contribution to the causal powers of the things that have them, X and Y are the same property.

e.g. 'being knife-shaped' and 'being made of steel' or 'being made of glass'

§ Conditional Powers

Claim: Properties are *clusters of conditional powers*.

'Conditional power'

- = An object has power P *conditionally upon* the possession of the properties in Q if
- (i) it has some property *r* such that having the properties in Q together with *r* is causally sufficient for having P, while
 - (ii) having the properties in Q is not by itself sufficient for having P.

§ Properties in Possible Worlds

[Shoemaker's Claims]:

1. identity of properties = identity of causal potentialities of these properties
2. All causal potentialities are *essential* to the property that has them (such that the property cannot lose them either across time or across possible worlds). ⇒ [total cluster theory]
3. The *totality* of a property's causal potentialities constitutes the individual essence of the property.
4. Therefore, causal necessity is a sort of logical necessity.

Properties are identical, whether in the same possible world or in different ones, just in case their coinstantiation with the same properties gives rise to the same powers.

Note:

___ Shoemaker argues for the total cluster theory, against the core cluster theory. The issue is whether some, or all causal laws are logically necessary such that they hold in all possible worlds.

[Shoemaker's Argument]:

1. If we hold that some law-like connections are contingent while some are necessary, there is no way (not empirically, and not through conventions) in which we could discover which of these are necessary.
2. If we could not discover which causal connections are necessary, then we could not identify the essential core clusters of properties.
3. If we could not identify the core cluster of properties, then the core cluster theory does not give us what we wanted.

[Conclusion]:

___ There are no situations that are logically but not causally possible.

[Postscript]

Richard Boyd's counterexample:

Imagine a world in which the basic physical elements include substances A, B, C, and D.
 Let X = a compound of A and B;
 Let Y = a compound of C and D.

We can suppose that it follows from the laws of nature governing the elements that these two compounds, although composed of different elements, behave exactly alike under all possible circumstances – so that the property of being made of X and the property of being made of Y share all of their causal potentialities.

Under Shoemaker's theory, 'being made of X' and 'being made of Y' are the same property.

However, X and Y are different substances; hence, the property of being composed of X should be different from the property of being composed of Y.

Shoemaker:

___ I think that this example does show that my account needs to be revised.

Revised version:

For properties F and G to be identical, it is necessary both (i) that F and G have the same causal potentialities *and* (ii) that whatever set of circumstances is sufficient to cause the instantiation of F is sufficient to cause the instantiation of G , and vice versa.

→ Properties are individuated by their possible causes as well as by their possible effects.

backward-looking causal features

forward-looking causal features

***Q:* What kind of causal features would be backward-looking? Are dispositions backward-looking features? 'Salt is soluble' makes it dissolve in water.**

***Q:* Do we really need to consider backward-looking causal features when we evaluate the causal power of properties?**

Sidney Shoemaker: Causal and Metaphysical Necessity (1998)

§ Main Theses:

1. **Causal necessity is just a special case of metaphysical necessity, and is necessity in the strongest sense of the term.**
2. **But causal necessity is not knowable *a priori*; it is an empirical discovery.**
3. **We could conceive worlds in which our causal laws do not hold, but this does not contradict the fact that causal laws are necessary truths (metaphysically necessary: it can't be otherwise).**
4. **The causal theory of properties can provide a parallel explanation of why the imaginability or seeming imaginability of worlds in which the causal laws are different is no threat to the claim that the causal laws that hold have the status of being metaphysically necessary.**
5. **Causal features of properties are essential to the property; they collectively constitute the *essence* of the property. Properties having the same causal features are identical properties.**
6. **A new theory: Causal features of properties are the same across all possible worlds since they constitute the essence of each property. Causal laws are relations between properties. Hence, causal laws hold in all possible worlds – they are metaphysically necessary.**

§ Varieties of 'Necessity':

[logical necessity]:

- ___ the necessity of analytic truths
- ___ something to which we have an *a priori* access
- ___ I favor the usage that restricts the term "logical truth" to what logicians would count as such.

[metaphysical necessity]:

- ___ Such truths were characterized as being true in all possible worlds.
- ___ Examples (i) statements of identity, such as "Hesperus is Phosphorus" and "Water is H₂O"
- ___ Examples (ii) statements about the essences of natural kinds, such as "Gold is an element" and "Tigers are mammals."
- ___ The metaphysically necessary truths are necessary in the strongest possible sense, and yet their epistemological status is that of being *a posteriori*. Such truths are knowable, if at all, only empirically.

[conceptual necessity]:

___ analytic truths like ‘Bachelors are unmarried.’”

§ **Note: Kripke on Necessity vs. A priority**

___ It’s certainly a philosophical thesis, and not a matter of obvious definitional equivalence, either that everything a priori is necessary or that everything necessary is a priori. But at any rate they are dealing with two different domains, two different areas, the epistemological and the metaphysical.

* **Necessity: a metaphysical notion, meaning something that might never have been false.**

* **“A priori”: an epistemological notion, meaning something that *can* be known independently of any experience; or something that a person may believe to be true on the basis of *a priori* evidence.**

Metaphysical		Epistemological	
Necessary truth:	Contingent truth:	<i>A priori:</i>	<i>A postiori:</i>
___ true in all possible worlds, can’t be otherwise.	___ true in our world only, but not in all possible worlds.	___ knowable through understanding of the intellect, independent of empirical verification.	___ knowable only through experience.

§ **Shoemaker on Causal Necessity**

1. **Properties are individuated by their causal features – by what contribution they make to the causal powers of the things that have them, and also by how their instantiation can be caused.**
2. **Collectively, causal features of this sort constitute the essence of a property.**
3. **Laws are, or assert, relations between properties (a la Armstrong).**
4. **Therefore, insofar as causal laws can be construed as describing the causal features of properties, they are necessary truths (even if their truth must be known empirically).**

Shoemaker:

___ I think it is fair to say that it is definitely a minority view. The established view, ..., is that causal laws are contingent, not just in the sense that their epistemic status is that of

being *a posteori*, but in the sense that there are genuinely possible situations in which they do not hold.

§ Note: Kripke on “Rigid Designators”

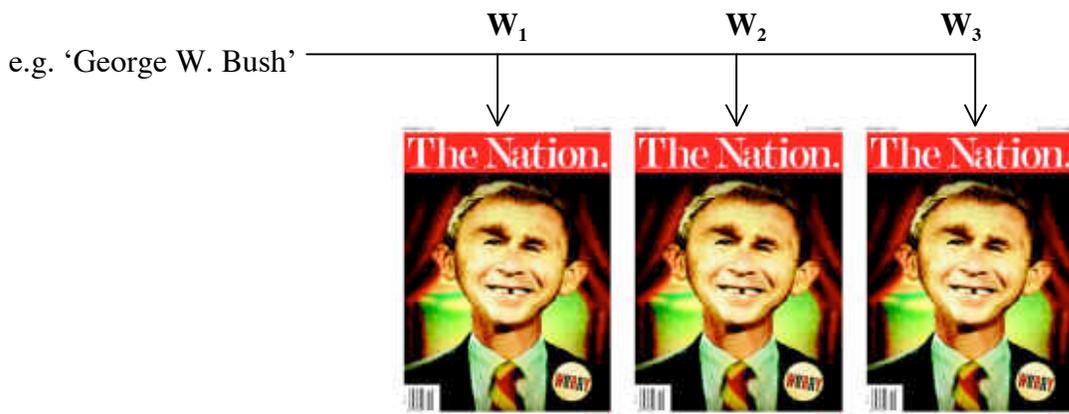
[Rigid Designator vs. Accidental Designator vs. Strong Designator]

[Rigid designator]

___ Let’s call something a ‘rigid designator’ if in every possible world it designates the same object, a ‘nonrigid’ or ‘accidental designator’ if that is not the case.

___ Of course we don’t require that the objects exist in all possible worlds. A rigid designator of a necessary existent can be called *strongly rigid*. **Q: Is ‘God’ a strongly rigid designator? What, if anything, is?**

Kripke’s claim: Proper names are rigid designators. Definite descriptions are non-rigid designators.



§ Forward-looking vs. Backward-looking Causal Features

[Forward-looking causal features]:

___ The features that contribute in certain ways to what their possessors cause, or what powers their possessors have.

[Backward-looking causal features]:

___ The features being such that their instantiation can be caused in such and such ways.

Shoemaker's New Causal Theory:

___ (1) **The causal features of a property, both forward-looking and backward-looking, are essential to it.**

___ (2) **Properties having the same causal features are identical.**

___ (3) **Properties that have causal features non-derivatively have them essentially, and are individuated in terms of them.**

___ (4) **Properties that enter into causal laws have their causal features essentially, and are individuated in terms of them.**

___ (5) **Essential properties are properties that things have in all possible worlds.**

Q: Why can we imagine that the causal features of properties are different, and, what goes with this, the laws of nature are different?

* Shoemaker's answer:

___ It is merely a form of **epistemic possibility**, not **metaphysical possibility**.

___ And I think that epistemic possibility, relative either to our actual state of knowledge or to some hypothesized state of knowledge, is all we need to account for cases in which we say that something is or was possible, where this is compatible with the thing in question being nomologically impossible.

___ So regarded, it gives no support to the idea that imaginability gives us access to metaphysical possibility that outruns nomological possibility.

Conceptual possibility (conceivability/imaginability)

___ We come to believe situations to be conceptually possible by reflecting on their descriptions and seeing no contradiction or incoherence.

Epistemic possibility (conceivability/imaginability)

___ We come to believe situations to be epistemically possible if they don't contradict our actual state of knowledge or some hypothesized state of knowledge.

Metaphysic possibility (conceivability/imaginability)

___ We come to believe situations to be metaphysically possible if they don't violate laws; i.e. if they are nomologically possible.

§ Reflections: How is Shoemaker's theory different from the causal theories we have read so far?

1. It seems to be analyzing the causal features of *properties*, rather than of *events*.
2. It does not single out just one causal feature of the property, but a cluster of them.
3. The cluster of causal features include both what the property can cause (forward-looking), and how it is caused (backward-looking).
4. It does not engage in counterfactual analysis. If a property has some causal features (both forward-looking and backward-looking), it has those features essentially.
5. Since it is not built on counterfactual dependence, it is not threatened by preemption, trumping, or other forms of redundant causation.
6. It does not stop at empirical regularity, even though it does assert that our discovery of causal laws is an empirical process.
7. ?