

**Phil 420: *Metaphysics*
Spring 2008**

[Handout 14]

G. E. M. Anscombe: *Causality and Determination*

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[View 1]: Causation = necessitation.

___ Causality is some kind of necessary connection, or alternatively, that being caused is – non-trivially – instancing some exceptionless generalization saying that such an event always follows such antecedents.

*** The assumption of relevant difference**

___ **If an effect in one case and a similar effect does not occur in an apparently similar case, there must be a relevant further difference.**

___ **If C causes E but C' does not cause E' , then $C' \neq C$ and $E' \neq E$.**

[View 2]: Causation \neq necessitation.

___ There are situations in which, given the initial conditions and no interference, only one result will accord with the laws of nature; but there is no general reason, in advance of discovery, to suppose that any given course of things has been so determined.

___ There may be many cases in which difference of issue can rightly convince us of a relevant difference of circumstances; but it is not the case that it *must be so*.

§ A Historical Review

Aristotle: View 1

“When the agent and patient meet suitably to their powers, the one acts and the other is acted on OF NECESSITY.”

Spinoza: View 1

“Given a determinate cause, the effect follows OF NECESSITY, and without its cause, no effect follows.”

Hobbes: View 1

“A cause simply is the aggregate of all the accidents both of the agents ... and of the patients, put together.... It cannot be understood but that the effect is produced at the same instant, and if any of them is wanting, it cannot be understood but that the effect is not produced.”

Hume: View 1

___ He challenged the idea of a “logical connection” between cause and effect, but he himself assumed that NECESSARY CONNECTION was an essential part of the idea of the relation of cause and effect, and he sought for its nature. He thought this could not be found in the situations, objects, or events called ‘causes’ and ‘effects’, but was to be found in the human mind’s being determined, by experience of CONSTANT CONJUNCTION, to pass from the sensible impression of memory of one term of the relation to the convinced idea of the other.

JeeLoo’s note: In this sense Hume is an anti-realist with regard to causation.

Kant: View 1

“In conformity with such a rule there must be in that which precedes an event the condition of a rule according to which this event INVARIABLY and NECESSARILY follows.”

Mill: View 1

___ Since Mill it has been fairly common to explain causation one way or another in terms of ‘necessary’ and ‘sufficient’ conditions. ... ‘sufficient condition’ is so used that if the sufficient conditions for *X* are there, *X* occurs.

Russell: View 1

___ Russell too assumes that necessity or universality is what is in question, and it never occurs to him that there may be any other conception of causality.

Q: Why must we accept deterministic causation?

§ Anscombe’s View

If I have had one and only contact with someone suffering from a highly contagious disease and I ask the doctor whether I will get the disease. He will usually only be able to say ‘maybe you will, maybe not.’

1. Causality consists in the derivativeness of an effect from its cause. Effects derive from, arise out of, come of, their causes.
2. However, the necessity will be that of laws of nature; through it we shall be able to derive knowledge of the effect from knowledge of the cause, or vice versa, but that does not show us the cause as source of the effect.
3. Therefore, analysis in terms of necessity or universality does not tell us of this derivedness of the effect; rather it forgets about that.
4. Therefore, causation is not to be identified with necessitation.

Why?

___ If A comes from B, this does not imply that every A-like thing comes from some B-like thing or set-up or that every B-like thing or set-up has A-like thing coming from it; or that given B, A had to come from it, or that given A, there had to be B for it to come from. Any of these may be true, but if any is, that will be an additional fact, not comprised in A's coming from B.

Causation Singular	Causal explanation General
<i>c</i> causes <i>e</i>	All <i>Cs</i> cause <i>Es</i> Necessarily, if <i>C</i> then <i>E</i>

Neo-Humeans realize that if you take a case of cause and effect, and relevantly describe the cause A and the effect B, and then construct a universal proposition, 'Always, given an A, a B follows,' you usually won't get anything true. You have to get to describe the absence of circumstances in which an A would not cause a B. But the task of excluding all such circumstances can't be carried out.

*** Anscombe's Reasons against Causal Laws:**

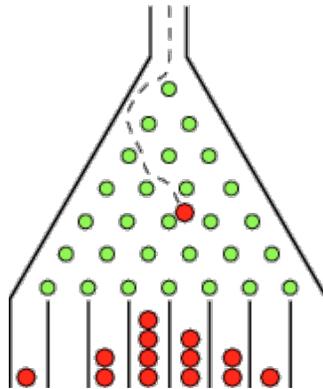
'Always, given an A, a B follows.'

1. The condition "always" is almost never true: what we describe are at best *under normal conditions*.
2. 'Normal conditions' in a causal law statement is a vague notion. We may not know in advance whether conditions are normal or not, or what to count as an abnormal condition.
3. In real life scenarios, we are not interested in the hopeless task of construing lists of all the sets of conditions under each of which people always get a certain disease.

Q: Are we more interested in particular causation in the given case, or a generalized strict (exceptionless) causal statement?

§ Prediction and Determination

Example: a ball ejected may fall into different tubes (or something like this 😊)



From exact figures for positions, velocities, directions, spins, and masses you might be able to calculate the result as accurately as you chose. But the minutest inexactitude will multiply up factor by factor, so that in a short time your information is gone.

What are the difficulties?

- ___ margins of inaccuracy of measurement
- ___ multiplicity of impacts
- ___ not getting *complete* information

Anscombe: I conclude that we have no ground for calling the path of the ball determined.

The objector's objection:

___ Isn't each state of its path determined, even though *we* cannot determine it? Your argument has partly relied on loss of information through multiplicity of impacts. But from one impact to the next the path is surely determined, and so the whole path is so after all.

Reply:

It sounds plausible to say: each stage is determined and so the whole is. But what does 'determined' mean? The word is a curious one; in this sort of context it is often used as if it meant 'caused'.

When we call a result determined we are implicitly relating it to an antecedent range of possibilities and saying that all but one of these is disallowed. What disallows them is not the result itself but something antecedent to the result. The antecedences may be logical or temporal or in the order of knowledge. Of the many – antecedent – possibilities, *now* only one is – antecedently – possible.

It might be said that anything was determined once it had happened. There is now no possibility open: it *has* taken place! It was in this sense that Aristotle said that

past and present were necessary. But this does not concern us: what interests us is *pre-determination*.

The statement ‘each stage of the ball’s path is determined’ must mean ‘Upon any impact, there is only one path possibly for the ball up to the next impact.’ But what ground could one have for believing this, if one does not believe in some system of which it is a consequence?

A physicist says: I believe in causality!

But must such a physicist be a “determinist”? Must he believe that the whole universe is a system such that, if its total states at t and t' are thus and so, the laws of nature are such as then to allow only one possibility for its total state at any other time? No. He may not think that the idea of a total state of the universe at a time is one he can do anything with. He may even have no views on the uniqueness of possible results for whatever may be going on in any arbitrary volume of space.

What a physicist says about causality is this:

1. Our theory should be such that only this result was possible as *the result of the experiment*.
2. He has a theory that essentially assigns only probability to a result, essentially allowing a range of possible results, never narrowed down to one until the event itself.
3. His demand for uniqueness of result is restricted to situations in which he has got certain processes going in isolation from inconstant external influences, or where they do not matter.

It is one thing to hold that in a clear-cut situation, the result should be determined. It is quite another to say that in the hurly-burly of many crossing contingencies whatever happens next must be determined; or to say that the generation of forces is always determined in advance of the generating procedure; or to say that there is always a law of composition, of such a kind that the combined effect of a set of forces is determined in every situation.

Reflection (JeeLoo): If we *had* God’s eye, we *might be* able to see how each stage of a causal relation is determined. But should we be basing our causal statements on this hypothetical God’s eye?

§ Back to Causation: There are necessitating causes and non-necessitating cause.

We may discover types of necessitating and non-necessitating cause.

The concept of necessity, as it is connected with causation, can be explained as follows:

**A cause C is a necessitating cause of an effect E when
if C occurs it is certain to cause E unless something prevents it.**

Or:

**A cause C is a necessitating cause of an effect E when
It is not possible (on the occasion) that C should occur and should not cause
an E , nor should there be anything that prevents an E from occurring.**

A non-necessitating cause:

**A cause C is a non-necessitating cause of an effect E when
It is possible (on the occasion) that C should occur and not cause an E , even if
there is no intervention of anything to frustrate it.**

§ Conclusion:

It has taken the invention of indeterministic physics to shake the rather common dogmatic conviction that determinism is a presupposition, or perhaps a conclusion, of scientific knowledge.

Meanwhile in non-experimental philosophy it is clear enough what are the dogmatic slumbers of the day. It is over and over again assumed that any singular causal proposition implies a universal statement running ‘Always when this, then that...’; often assumed that true singular causal statements are derived from such “inductively believed” universalities.

- 1. If I am right, then not being determined does not imply not being caused.**
- 2. Indeterminism is the thesis that *not all* physical effects are necessitated by their causes.**
- 3. But I do not mean that any motions lie outside the scope of physical laws, or that one cannot say, in any given context, that certain motions would be violations of physical law.**

Final Reflection (JeeLoo):

___ Anscombe says, “I find deterministic assumptions more common now among people at large, and among philosophers, than when I was an undergraduate.” Do you think that determinism and indeterminism are the different “world-versions” that Goodman depicts?