More Causation

27 November, 2006

Where we are

Russell

Lewis

Note

Reading

Lecture

Talking

Writing

Topics

Suggested paper topics on website

Russell

“On the notion of a cause”

Russell

Let’s look carefully at an argument Russell makes.

A dilemma about cause and effect

Russell

1. A cause is contiguous with its effect.
2. A cause is not contiguous with its effect.

Russell

1. A cause is contiguous with its effect. There is no stretch or moment of time after a cause ends and its effect begins.

2. A cause is not contiguous with its effect. There is a stretch or moment of time after a cause ends and its effect begins.

Part 1

1. A cause is contiguous with its effect.
There is no stretch or moment of time after a cause ends and its effect begins.

A great difficulty

“But a great difficulty is caused by the temporal contiguity of cause and effect.." (174)

A dilemma

Suppose a cause is contiguous with its effect.

The cause endures a finite amount of time.

Either the cause involves change within itself or it does not.

Change –> that's not the (true) cause

No Change –> not acceptable

Internal change

If the cause involves change within itself then

parts of the cause are causally related to each other, and

“only the later parts can be relevant to the effect, since the earlier parts are not continguous to the effect, and therefore cannot influence the effect.” (175)

Internal change

“Thus we shall be led to diminish the duration of the cause without limit, and however much we may diminish it, there will still remain an earlier part which might be altered without altering the effect, so that the true cause, as defined, will not have been reached..." (175)

A dilemma

Suppose a cause is contiguous with its effect.

The cause endures a finite amount of time.

Either the cause involves change within itself or it does not.

Change –> that's not the (true) cause

No Change –> not acceptable

No Internal change

If the cause does not involve change within itself then

“it seems strange, too strange to be accepted ... that the cause, after existing placidly for some time, should suddenly explode into the effect, when it might just as well have done so at any earlier time, or have gone on unchanged without producing its effect." (175)

Conclusion

“This dilemma, therefore, is fatal to the view that cause and effect can be contiguous in time; if there are causes and effects, they must be separated by a finite time interval t..." (175)

Two possibilities

1. A cause is contiguous with its effect.
There is no stretch or moment of time after a cause ends and its effect begins.

2. A cause is not contiguous with its effect.
There is a stretch or moment of time after a cause ends and its effect begins.

Part 2

“Philosophers, no doubt, think of cause and effect as contiguous in time, but this, for reasons already given, is impossible. Hence, since there are no infinitesimal time-intervals, there must be some finite lapse of time t between cause and effect. This, however, at once raises insuperable difficulties." (177)

The difficulties

“However short we make the interval t, something may happen during this interval which prevents the expected result." (177)

The difficulties

“I put my penny in the slot, but before I can draw out my ticket there is an earthquake which upsets the machine and my calculations." (177)

The difficulties

"But this means that the supposed cause is not adequate to insure the effect." (177)

Two possibilities

1. A cause is contiguous with its effect.
Leads to dilemma.

2. A cause is not contiguous with its effect.
The cause does not ensure the effect.

Law of causality

“every phenomenon is determined by its conditions, or, in other words, that the same causes produce the same effects." (Bergson) (176)

Two possibilities

1. A cause is contiguous with its effect.
Leads to dilemma.

2. A cause is not contiguous with its effect.
The cause does not ensure the effect.
So the law of causality is not true.

Can’t we add more to the cause?

“The principle "same cause, same effect” ... is ... utterly otiose. As soon as the antecedents have been given sufficiently fully to enable the consequent to be calculated with some exactitude, the antecedents have become so complicated that it is very unlikely they will ever recur.” (178)

Conclusion

“every phenomenon is determined by its conditions, or, in other words, that the same causes produce the same effects." (Bergson) (176)

Reject the law of causality

“The principle ‘same cause, same effect’, which philosophers imagine to be vital to science, is therefore utterly otiose.” (178)

Russell

“In the following paper I wish, first, to maintain that the word ‘cause’ is so inextricably bound up with misleading associations as to make its complete extrusion from the philosophical vocabulary desirable..." (171)

Russell

“The law of causality, I believe, like much that passes muster among philosophers, is a relic of a bygone age, surviving, like the monarchy, only because it is erroneously supposed to do no harm." (171)

What is Russell’s conclusion?

There are no causes.

The law of causality is useless for science.

The law of causality is false.

Philosophy should not use the word ‘cause’.

The notion of cause is not coherent.

A second argument

“All philosophers, of every school, imagine that causation is one of the fundamental axioms or postulates of science, yet, oddly enough, in advanced sciences such as gravitational astronomy, that word ‘cause’ never occurs." (171)

A second argument

"All philosophers, of every school, imagine that causation is one of the fundamental axioms or postulates of science, yet, oddly enough, in advanced sciences such as gravitational astronomy, that word 'cause' never occurs. Dr James Ward ... makes this a ground of complaint against physics: the business of those who wish to ascertain the ultimate truth of the world, he apparently thinks, should be the discovery of causes, yet physics never even seeks them." (171)

Science vs Philosophy

“To me it seems that philosophy ought not to assume such legislative functions, and that the reason why physics has ceased to look for causes is that, in fact, there are no such things.” (171)

Priority

Which comes first Philosophy or Science?

Methodology

What method will help us understand causation?

Science

History of Philosophy

Armchair reasoning from examples