Causation and Causatives

Brian Weatherson

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Causatives

1. Causatives
2. Short circuits
3. Pre-emption
4. Loose ends

- Talk about causation as such is rare
- We do often use causatives, like ‘open’, ‘warm’ and ‘kill’
- Opening the door is not equivalent to causing the door to open
- The offensive host example

Systematic + Productive

1. Causatives
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- Use of causatives is systematic and productive
- Both in children and adults
- Examples
  - Giggled
  - Microwaved
  - YouTubed

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Compositional

- Usual account of systematicity and productivity is compostionality
- That's what I conclude here
- There is some relation, call it M, and we understand X'd in terms of X and M
- M is sometimes called 'direct causation'
- But I'll just call it M

M

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- No evidence that we understand M in terms of CAUSE plus some property
- Possible argument: learning data
  - But I don't have enough evidence for that
- Lewis' argument against it being ordinary directness: Rube Goldberg machines
- Not intentional: can unintentionally open door, and intentionally cause door to open
- If M is cause plus something, should be able to independently use something

Causation

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- Other direction of conceptual dependence
- CAUSE should be analysed using M
- Since M entails CAUSE, should be disjunctive
- If counterfactual dependence entails CAUSE, it should be another disjunction
- So here's my hypothesis

c causes *e* iff

(a) *c*M*e*; or

(b) *e* counterfactually depends on *c*

Mere Causation

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- Say *c* merely causes *e* iff *c* causes *e* and ~*c*M*e*
- My view is that mere causation is equivalent to counterfactual dependence
- That will be a focus of counterexamples
- Assuming M is a relation between events

Methodology

1. Causatives
2. Short circuits
3. Pre-emption
4. Loose ends

- There is a lot of relevant empirical data, e.g. from learning theory
- This paper does not discuss that data
- Instead it is just analytic metaphysics
- Short-circuits suggest M matters
- Pre-emption suggests that mere causes always have counterfactual dependence

Short-Circuits

1. Causatives
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- Causation theorists often ignore M
- Short-circuit cases show this is wrong
- Short-circuit cases have the following structure

Short-Circuits

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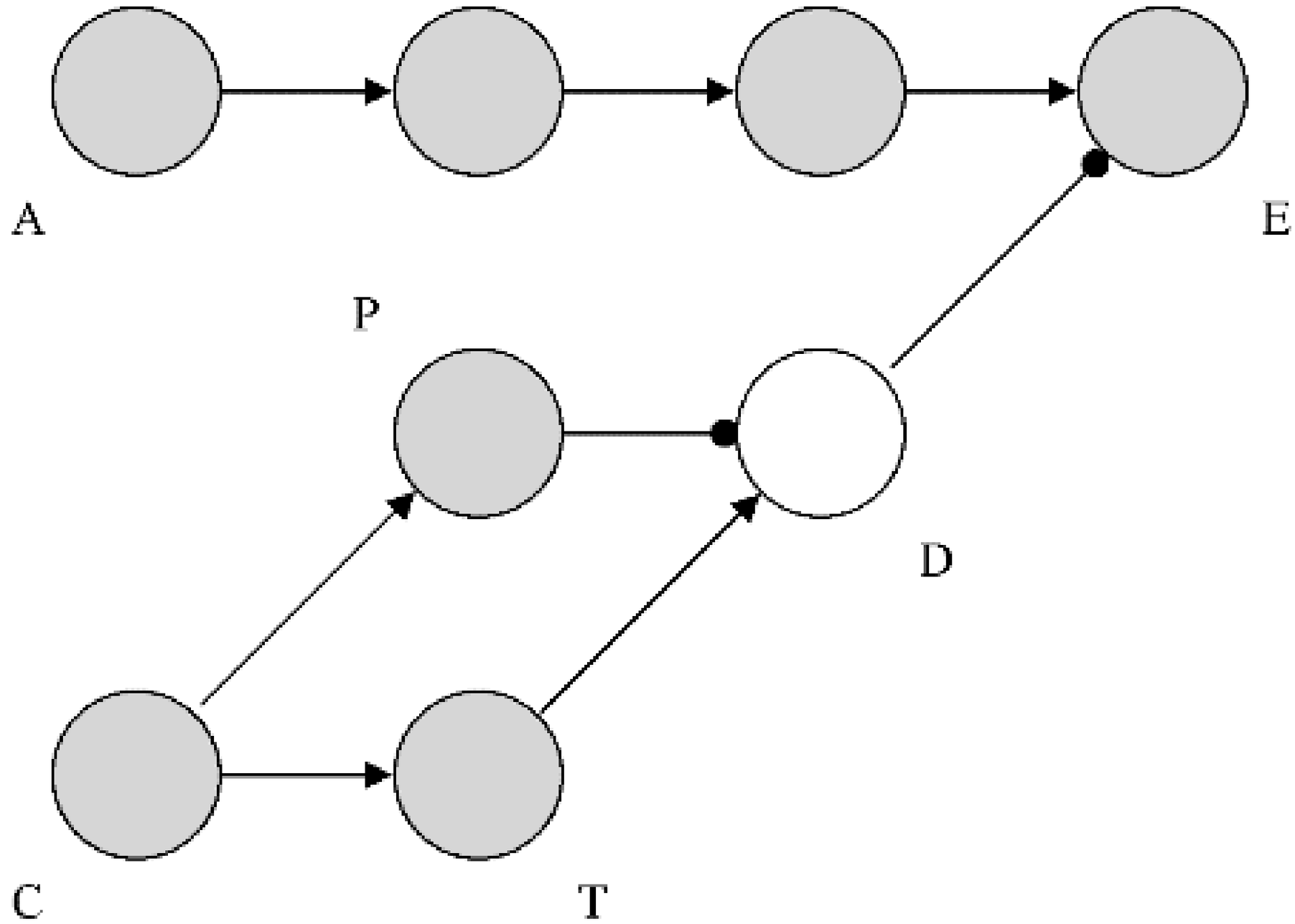

Varieties

1. Causatives
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- Apart from arrows from A to E, there are five other arrows in the diagram
- How many of these represent M relations, and how many represent mere causation?
- Whether C causes E depends on this

CMT

1. Causatives
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Attempted Assassination

Enemy hires Assassin1 to kill Victim. (This is C.) Assassin1 starts planning the kill. (This is T.) Happily, Agent has a wire inside Enemy's building, and hears of the plan. Assassin1's accepting the contract to kill Victim is obviously a criminal offence, so this leads Agent to arrest Assassin1, thus preventing Assassin1 carrying out his mission. (This is P.) As always, D is Victim's death (which doesn't happen) and E is Victim's Survival (which does).

CMP

1. Causatives
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Bomb Detector

Victim is now a little nervous. He is particularly worried about bombs on his car. So he hires Mechanic to install a bomb detector on his car, one that blows up the car when a bomb is detected, as long as it detects no one is actually in the car. Let C be the installation of the detector. Assassin2 sees Mechanic installing the detector. Assassin2 doesn't want to kill Victim; he wants to kill Bill Clinton...

CMP

1. Causatives
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Unfortunately, Assassin2 believes that only Bill Clinton would be having this kind of bomb detector installed, so this is the car to attack. Fortunately, Assassin2 always assassinates with car bombs, bombs that he (mistakenly) believes can't be detected. So Assassin2 puts a bomb on Victim's car. (This is T.) The bomb detector regularly scans the car for bombs. As T is happening, one of the regularly scheduled scans starts. (This is P.) The scan detects the bomb, and blows up the car. Victim is safely inside his house, so D does not occur.

Evaluation

1. Causatives
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- C does not cause E in Attempted Assassination
- You don't cause someone's continued survival by launching a doomed attempt to kill them
- But C does cause E in Bomb Detector
- The mechanic *saved* Victim's life
- Saving someone's life requires that you cause their continued survival

Why M Matters

1. Causatives
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- Attempted Assassination: C merely causes P
- Bomb Detector: C merely causes T
- This is the crucial difference between cases
  - In a recent blog post ("Are Short-Circuits Causes") I go over alternative explanations at some length, and argue that they fail
- So M matters to causation
- So an analysis of causation must either include M, or include factors that are sensitive to whether M applies

Pre-Emption

1. Causatives
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- Obvious source of (potential) counterexamples: Pre-emption cases
- If I'm wrong, there are cases where *c* causes *e*, but *e* is not counterfactually dependent on *c* and ~*c*M*e*
- Standard pre-emption examples do not provide counterexamples
- It seems there are no pre-empted mere causes

Elevator Example

1. Causatives
2. Short circuits
3. Pre-emption
4. Loose ends

Host is hosting a dinner party at which Guest is a guest. Host lives on the eighth floor of a building with a single elevator. The party is going well until Host mentions the war. This upsets Guest who storms out and calls the elevator, by pressing the down button on the elevator console. Unfortunately, the elevator has just left and won't return until it has gone to the ground floor. While Guest is waiting, and before the elevator has reached the ground, another person on this floor, Neighbour, comes to the elevator...

Elevator Example

1. Causatives
2. Short circuits
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(...*cont*)

She would have called the elevator, which had not yet reached the ground, but saw that Guest had already called it. If Neighbour had called the elevator, it would have arrived at the time it actually arrived, since the elevator would not have started back up until it reached the ground in any case. Some time after that the elevator arrives and Guest and Neighbour ride it to the ground floor.

Elevator Example

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- I think (as do most informants I've asked) that Host's mentioning the war did not cause the elevator to arise
- Informants were almost exactly split on whether it was *a* cause of the elevator's arrival, but few thought it caused the elevator to arrive
- I think this is a typical example of the following structure, with C-D being a mere causal link, and the rest being M links

Elevator Example

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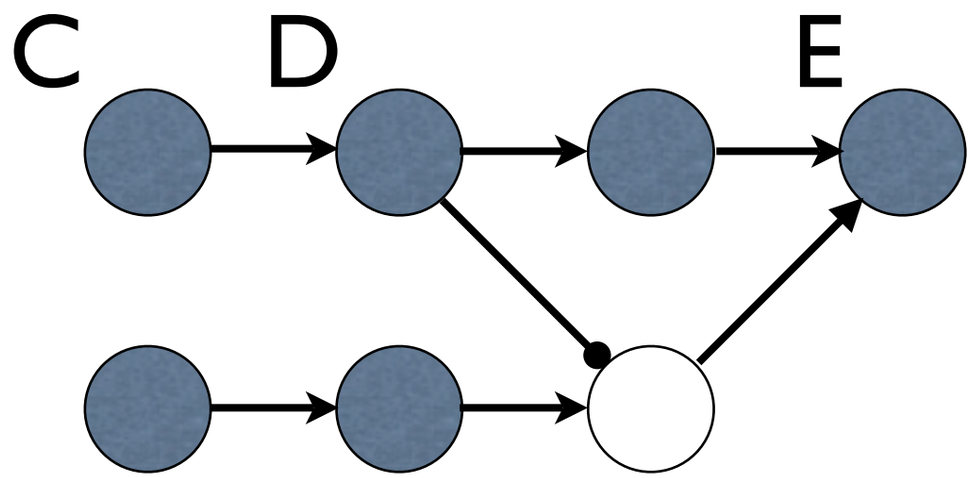

- If C-D is an M link, then C causes E
- If C-D is a mere cause, C does not cause E
- This holds (I hope!) generally across examples

Aside on Influence

1. Causatives
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- Elevator cases are very bad for Lewis's causation as influence theory
- Calling the elevator, when someone else is about to call it, does not influence when it arrives
- But it does cause it to arrive
- So we can't give an account of M in terms of influence
- I *think* it hasn't been noticed that there are such realistic counterexamples to Lewis

Loose Ends

1. Causatives
2. Short circuits
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4. Loose ends

1. Causation without events?
2. Importance of causation
3. Is this a reductive analysis?
4. Debate ending?
5. Relation to two-concepts account
6. What is counterfactual dependence?
7. Analyse "*c* is a cause of *e*"

All events?

1. Causatives
2. Short circuits
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- I have given a theory of causation on which it is always a relation between events
- Some think that causal relations (especially M) can hold between agents, facts, properties, states of affairs or anything else
- I think Lewis's events account avoids puzzles about causal exclusion that plague rival theories, but I can't defend that fully here
- I also think absences can be events, so I'm not moved by Lewis's argument that causation is not a relation

Does Causation Matter?

1. Causatives
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- Causation is a disjunctive concept
- Most disjunctive concepts are unimportant
- So is causation unimportant?
- Mostly yes
- The two disjuncts are really important
- Perhaps there is something important that relates them, e.g. in responsibility theory
- Similar question from a different field: What unites the virtues?

Reductive Analysis?

1. Causatives
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- I claim the disjunctive theory of causation is a reductive analysis
- That requires showing that CAUSE is not a constituent of M
- I'm postponing that until a full study of the learning data
- It also requires showing that CAUSE is not a constituent of the counterfactual conditional
- I think that independently
- Some arguments against might confuse M with CAUSE

Debate Ending?

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- The aim of (my favourite part of) the causation literature was to find a reductive analysis of CAUSE
- We now have such an analysis
- Can we go home now?
- Well, no; we still need to analyse M, or at least often a theory of it
- Some of the best of the current causation literature might be better suited to analyse M

Two Concepts?

1. Causatives
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- Ned Hall argued that we have been confused by the fact that there are two causal concepts, DEPENDENCE and PRODUCTION
- The disjunctive analysis is similar, but different in two respects
- First, I don't think there's any kind of ambiguity in our causal language
- Causal talk fails standard ambiguity tests
- From *a* caused an F, and *b* caused an F, we can always infer that *a* and *b* both caused an F

Two Concepts

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- Second, M is not the same as PRODUCTION
- A causal connection can be an instance of M without being productive in Hall's sense
- You can close a door by double prevention, e.g. by kicking away a doorstop
- As Hall has recently noted, in cases of double prevention with a pre-empted backup, neither of his concepts apply, but we can have causation
- That's because an M can be a double preventer

Dependence

1. Causatives
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- What is counterfactual dependence?
- I follow Lewis in "Causation as Influence"
- *e* depends on *c* iff there is a body of true counterfactuals of the following form
  - If *c* had happened in way w_{i1}, then *e* would have happened in way w_{i2};
  - Where the w_{i2} differ substantially
- Less formally, *e* would have been different had *c* been different (in one of a large number of specified ways)

Dependence

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- This is a long way from the Classic CounterFactual (CCF): If *c* had not happened, then *e* would not have happened
- Lewis notes that the truth of the CCF is not necessary for the body of conditionals to exist
- I'd add it isn't sufficient
- Let *c* be an event where one of my long ago ancestors was saved from early death
- Let *e* be this talk
- The CCF is true, but *c* doesn't influence *e*, and hence doesn't cause *c*

“a cause of”

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- Largely because of the elevator example, I think we have to distinguish the following
  - *c* caused *e*
  - *c* was a cause of *e*
- The first is strictly stronger than the second
- Another example: the rescue of my imperiled ancestor was a cause of this talk, without causing this talk
- So what is the *a cause of* relation?

"a cause of"

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- I don't have a full answer
- My best guess is that it is the transitive closure of the causal relation
- This does produce counterintuitive results in short-circuit (and switching) cases
- So I'm rather unsure that this is right

Disjunctive Analysis!

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- Summary
- M matters!
- This is shown by the short-circuit cases
- Causation is a disjunctive concept
- The disjuncts are M and counterfactual dependence
- Causing probably is different from being a cause of, and I'm not attempting here to analyse the latter concept