

Lecture IX

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Causality as chain

- Many people, theorists and non-theorists, think of causes as inserted into chains.
- What was the cause of my flu? The virus I caught. Where did it come from? From that man over there. So, my proximity to that man over there was a cause of my flu.
- Causes are links in a chain, where neighboring links are similar in structure.
- Some immediate problems: what was the first cause? (This is a very distinguished question in the history of philosophy.)
- Hanson: the idea of causes as links in a chain goes against scientific practice.

Science and causes

- The causal talk is not present in the actual scientific practice.
- Suggestion: causal talk is appropriate in the discussion of accidents.
- That is: event A would not normally result in event B save in exceptional circumstances.
- Hanson does not explain the connection between accidents and causes. He only stresses the absence of causes in scientific practice.

Causes and explanation

- To search for causes is to search for an **explanation**.
- The bare chain in itself explains nothing.
- That is, it shows no connection between its different links.
- We can have an explanation of the event when we see it as part of a more global context.
- We need theoretical assumptions in order to even begin the explanation.

Scars and wounds

- 'The scar on my arm was caused by a wound I received playing table-tennis.'
- When is this claim justified?
- We begin by asking when someone is wounded.
- Not when he is operated on by a surgeon.
- Not when he is a tree.
- Nor can the wound be identified with deep incision.
- There must be background information available before we identify incision as a wound.

Causality and theory

- We cannot say that X causes Y just by seeing them in some temporal or spatial order.
- To make the assertion of causality we also need to know to which **kinds** of things X and Y belong.
- And then, we also need to know that events of Y -kind follow events of X -kind.
- A language maximally close to observation, an observation report, cannot express causal connections.
- It is only in this case that the causal chain analogy could work.
- So, the causal 'chain' represents events arranged in space and time, but does not give us causal links.

Causes and effects

- Effect-words stand closer to observation language.
- They are less charged with theory than cause-words.
- Causes are intimately related to contexts of utterance.
- Example: 'Fire!'
- Causes are connected to effects, but only because theories connect them.

Hanson's diagnosis

- The appeal of causal chains is due to the rise of mechanics.
- The domination of mathematics and of deductive method.
- The dream of mechanical calculation.