

Causation and Medicine: Postulates and Pluralism?

The concept of causation is vital to the everyday practice of medicine. It assists doctors with both diagnosis and treatment, and consideration of causation is central to research into the epidemiology of disease and the planning of health services. It also has a role to play in the more extraordinary aspects of biomedical science, for example assisting in disease discovery.

In infectious disease research, several schemes for determining causal relationships have been developed - for instance Koch, 1882, Rivers, 1937 and Evans, 1976. In this paper, I intend to review these three schemes of causation used in medicine, before moving on to discuss the following three points:

1. Factors within each of these schemes resemble factors within philosophical theories of causation. For example, each of these schemes has a requirement for some form of constant conjunction, reflecting Humean notions of causation. There are also features that we might associate with counterfactual-conditional causation, mechanistic causation and indeterminate causation;
2. Taken as a whole, however, medical causation is rather unlike causation in philosophy. For instance, while they consist of factors similar to those within the philosophy of science, a given scheme will use these factors in a pluralistic manner. That is, in determining medical causation, evidence is used that, from the perspective of the philosophy of science, is based in a number of incommensurate theories of causation. This leads to internal inconsistency. They also suffer from ambiguous terminology and often fail to properly delineate causative from confounding factors; and
3. The very nature of the causation these schemes drive toward is controversial. Do physicians use these schemes to justify decisions made on the basis of intuition (or some other criteria of cause altogether), or do they reflect some aspect of causation as it is in medicine. If so, should philosophers of science be pluralistic about causation?

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