

Agency and Manipulability Causation: What's the Difference in Practice?

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Brendan Clarke

Department of Science and Technology Studies

UCL

Agency

“... an event A is a cause of a distinct event B just in case bringing about the occurrence of A would be an effective means by which a free agent could bring about the occurrence of B.”

[Menzies and Prince, 1993: 187]

Manipulability

“...the change in B, if any, that is produced by the manipulation of A should be produced only via a causal route that goes through A.”

[Woodward, 2008: §§5]

The Koch-Henle Postulates

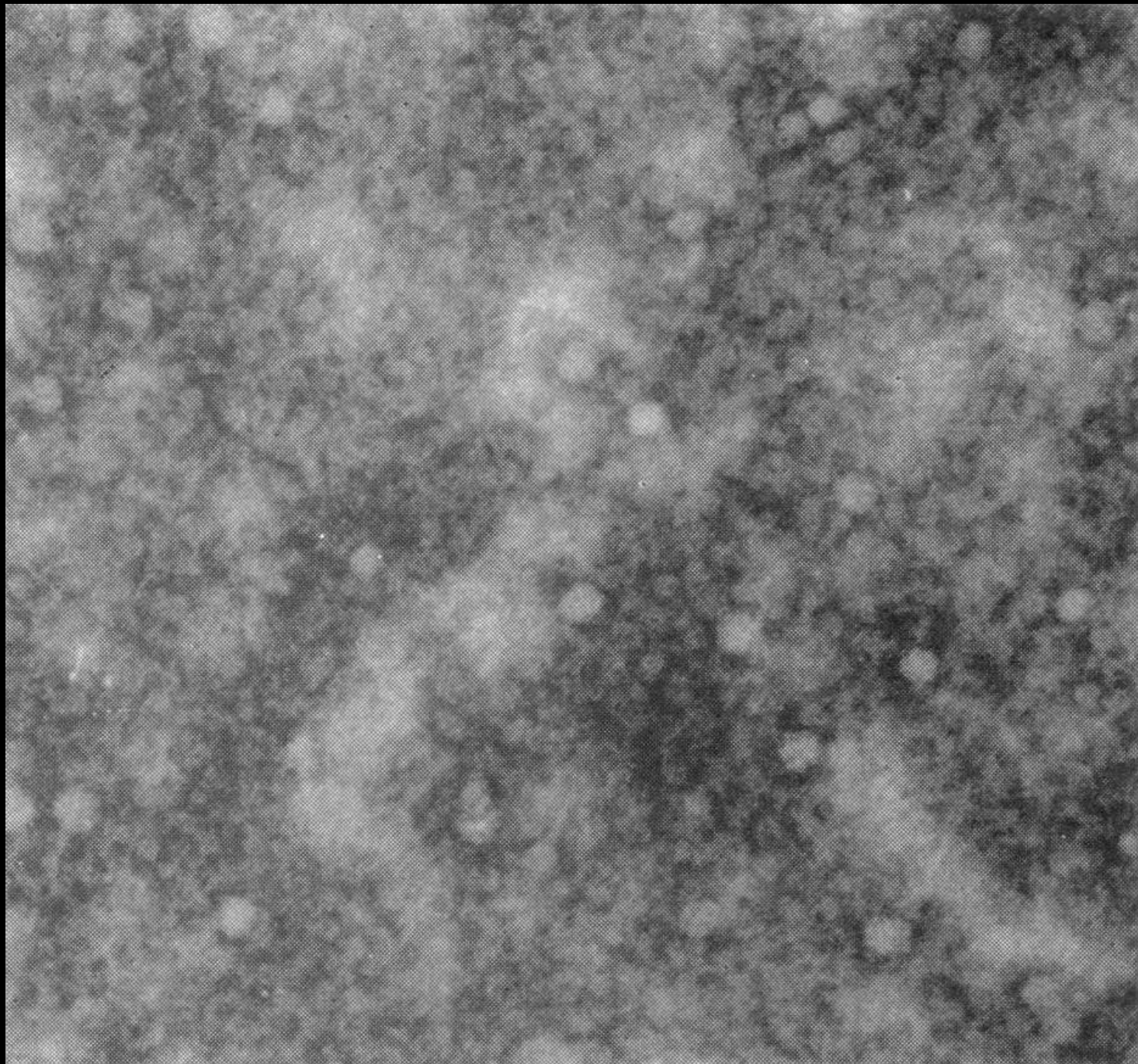
- (1) The organism must be shown to be constantly present in characteristic form and arrangement in the diseased tissue.
- (2) The organism which, from its behaviour appears to be responsible for the disease, must be isolated and grown in pure culture.
- (3) The pure culture must be shown to induce the disease experimentally.

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Hepatitis B Virus (HBV) and Hepatocellular Carcinoma (HCC)

- 1963 – Discovery of Australia antigen
- 1968 – causal role of Australia antigen in hepatitis B discovered
- 1970 – correlation between chronic HBV infection and HCC noted
- Mid-1970s – complications of causation



Summary of evidence linking HBV with HCC

- Epidemiological correlation
- Molecular mechanism for oncogenesis
- Woodchuck hepatitis virus
- Vaccination against hepatitis B

Agency without Agents?

*“...when we are presented with another situation involving a pair of events which resembles the given situation with respect to its intrinsic features, we infer that the pair of events are causally related even though they may not be manipulable...Clearly, **the agency account, so weakened, allows us to make causal claims about unmanipulable events...**We can make such causal claims because we believe that there is another situation that models the circumstances surrounding the earthquake in the essential respects and does support a means-end relation between an appropriate pair of events. **The paradigm example of such a situation would be that created by seismologists in their artificial simulations of the movement of continental plates**”*

[Price and Menzies, 1993: 197]

Bibliography

- Menzies, P. and Price, H. 1993. Causation as a Secondary Quality. *The British Journal for the Philosophy of Science*. **44**(2): 187—203.
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