

What if explanation didn't need counterfactuals?

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In *Making things happen* (2003) Jim Woodward develops an account of causal explanation that essentially relies on counterfactuals. According to him, to provide a causal explanation is to show appropriate patterns of counterfactual dependencies. This explanatory strategy, he contends, invariably applies to the natural as well as the social sciences. In this paper, I shall confine the appreciation of Woodward's approach to the social science domain and focus on the role of counterfactuality in causal models.

Briefly put, Woodward examines the explanatory role of empirical generalisations. Empirical generalisations express a change-relating, or variation-relating, relation between variables and serve two roles: (i) they say that the explanandum was to be expected, and (ii) they answer *what-if-things-had-been-different* questions. It is in this second role that counterfactuals come in. In particular, we should aim at establishing whether empirical generalisations are invariant enough under interventions or environmental changes, that is to say, whether a specific change-relating relation would continue to hold, were we to set different values for the variables of interest.

Without denying the importance of counterfactuals in causal reasoning, I shall discuss two possible criticisms. First, it is controversial whether a counterfactual definition of invariance is appropriate in social science. The reason is that this kind of invariance-based accounts presuppose an experimentalist approach that is not always adequate in the social science domain. Second, there are cases in which explanation does not require to set in motion the whole machinery of counterfactuals—sometimes background knowledge will do the job as well.

As an alternative, I will sketch the features of a causal framework that aims at providing a causal explanation of social phenomena by uncovering their underlying structure or mechanism. This concept of causal or structural model will be an umbrella for various particular types of causal models, such as structural equation models, covariance structure models or multilevel models. In particular, I shall discuss two main aspects. First, within this framework, a non counterfactual definition of invariance can be given. In a nutshell, relations among variables have to show a certain invariance across stratifications of the population of reference or, if interventions are performed, invariance has to be tested on observed data rather than on different hypothetical and non observed values of the variables. Second, the hypothetico-deductive methodology of this causal framework provides (i) a more flexible *va-et-vient* between established theories and establishing theories, and (ii) statistical, epistemic, and metaphysical control on explanation.