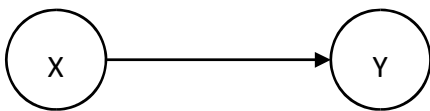


## Types of Causality

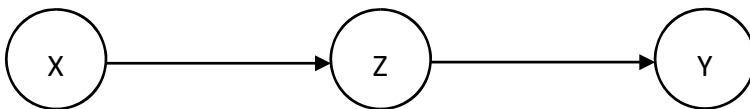
Dr. Philip N. Howard  
Oxford University

In the social sciences and humanities, computational or otherwise, six parsimonious forms of causal relationships are particularly important.

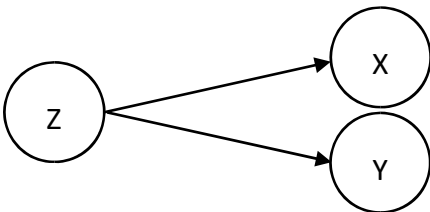
1. A direct causal relationship is one in which a variable, X, is a direct cause of another variable, Y. In other words, X is the immediate determinant of Y within a socially relevant context.



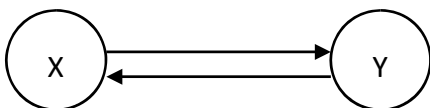
2. An indirect causal relationship is one in which X exerts a causal impact on Y, but only through its impact on a third variable, Z.



3. A spurious relationship is one in which X and Y are related, but only because of a common cause, Z. There is no formal causal link between X and Y.



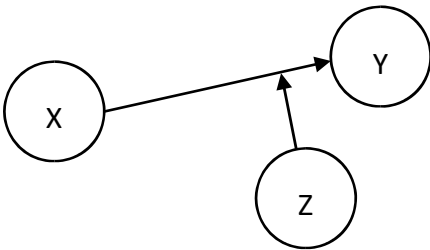
4. A bi-directional or reciprocal causal relationship is one in which X has a causal influence on Y, which in turn, has a causal impact on X.



- An unanalyzed relationship is one in which X and Y are related, but the source of the relationship is unspecified.



- A moderated causal relationship is one in which the relationship between X and Y is moderated by a third variable. In other words, the nature of the relationship between X and Y varies, depending on the value of Z.

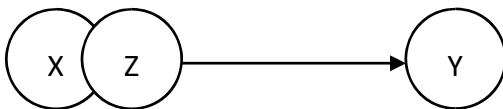


However, social phenomena are almost always explained best by two complex forms of causal relationships, and these are usually explicated through mixed methods.

- A non-linear causal relationship is one in which any change in X is not directly proportional to a change in Y. Depending on when or how much X varies, Y may vary more or less.



- A conjoined causal relationship is one in which X and Z together have an impact on Y.



For more, see Jaccard, J., & Turrissi, R. (2003). *Interaction Effects in Multiple Regression*. Thousand Oaks, CA: Sage and Ragin, C. (2000). *Fuzzy Logic in the Social Sciences*. Chicago, IL: University of Chicago Press. This work can be cited as Howard, P. (2016). *Types of Causality*. Retrieved from [philhoward.org](http://philhoward.org). This work is licensed under a Creative Commons Attribution - Non Commercial - Share Alike 4.0 International License.