

At [arXiv.org](https://arxiv.org), a relevant paper by [Cosma Shalizi](#) and [Andrew C. Thomas](#) "Homophily and Contagion Are Generically Confounded in Observational Social Network Studies"(available [here](#)).

Abstract: We consider processes on social networks that can potentially involve three phenomena: homophily, or the formation of social ties due to matching individual traits; social contagion, also known as social influence; and the causal effect of an individual's covariates on their behavior or other measurable responses. We show that, generically, all of these are confounded with each other. Distinguishing them from one another requires strong assumptions on the parametrization of the social process or on the adequacy of the covariates used (or both). In particular we demonstrate, with simple examples, that asymmetries in regression coefficients cannot identify causal effects, and that very simple models of imitation (a form of social contagion) can produce substantial correlations between an individual's enduring traits and their choices, even when there is no intrinsic affinity between them. We also suggest some possible constructive responses to these results.