(Ready and Power 2021)

Ready, Elspeth, and Eleanor A. Power. 2021. “Measuring Reciprocity: Double Sampling, Concordance, and Network Construction.” *Network Science* 9 (4): 387–402. https://doi.org/10.1017/nws.2021.18.

“Understanding the importance of reciprocity in “real life,” and how it might vary across cultures and contexts, presents fundamental methodological challenges, both statistical and in terms of data collection.” P 387

A diagram of a diagram

Description automatically generated

One way to estimate the “inaccuracies” in people’s nominations is to look at the agreement (concordance) between people nominally reporting on the same relationship. [In the LOVE network, I observe non-concordance in my mentor – their mentor networks] “When there is complete sampling of a network, undirected ties or partnerships of various forms (e.g., friends, drug co-use partners, and sexual partners) should be reported by both members.” p 389

“these studies can speak only to reciprocity of nomination, not reciprocity of exchange.”

“A common practice with asymmetric relationships (i.e., ones that are inherently directed) is to “double-sample” (Nolin, 2008) by asking respondents not only who they turn to for various types of support but also who turns to them. Assuming complete sampling, this means that the same directed relationship should be reported on twice, once by the giver and once by the receiver.” [This is the LOVE survey]

“Reciprocity occurs where ties appear in both directions”

“Double sampling is generally seen as a technique for dealing with the potential for bias and inaccuracy in people’s reporting, with the assumption being that multiple insights into the same relationship will jointly be more accurate than a single report.”   
  
“Aggregation techniques may also depend on whether networks are weighted or unweighted and how many sources of information are being integrated. Aggregation procedures will have important consequences for network density and possibly for other important network measures. Here, we consider the impact of simple aggregation techniques on the measurement of reciprocity.”

“We calculate concordance between all dyads, first for all ties reported across either the incoming or the outgoing network layers”