

An Introduction to Social Network Analysis - Part III

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Co-funded by the
Erasmus+ Programme
of the European Union



Research Design



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Research design

- ▶ Two basic designs
 - ▶ Whole-network
 - ▶ We study the set of ties among all pairs of nodes in a given set. We can think of the relation being varied as a dyadic variable that has a value for every pair of nodes (0/1)
 - ▶ Personal-network
 - Set of focal nodes (egos) and their ties to others (alters)
- ▶ Nominalist vs. realist approach (natural groups)
- ▶ Random sampling, snowball, census.

Research Design considerations

- ▶ Respondent burden
- ▶ Cognitive capacity
- ▶ Recall error



Data collection

- ▶ Closed-ended questionnaires
 - ▶ Boundaries are known and all actors listed
 - ▶ Becomes cumbersome as network grows in size
 - ▶ Fewer concerns about respondent recall and accuracy
 - ▶ Each actor has approximately an equal chance of being selected
- ▶ Open-ended
 - ▶ Much more subject to recall error
 - ▶ Can use a fixed-choice method limiting the number of each actors elicited
 - ▶ Each actor in the network does not have the same chance of being recalled
 - ▶ Better for face-to-face interviews

Collecting data strategies in field surveys (after Christopoulos, 2014)

- ▶ Free recall
 - ▶ Appropriate when the network boundaries not certain
 - ▶ Too many possible alters
- ▶ Rosters
 - ▶ Boundary certain
 - ▶ Small network size
- ▶ Combination of recall and roster
- ▶ Problematize agency of nodes
 - ▶ Type of agency
 - ▶ Strength of agency
 - ▶ Permanence of agency
- ▶ Problematize nature of tie
 - ▶ Strength & direction (+ or -)

Issues with data collection

- ▶ Ethical
- ▶ Cultural
- ▶ Time
- ▶ Cost
- ▶ Reciprocity and the effects of this
- ▶ Imputing missing data (directed/undirected networks)
- ▶ Ethical issues
- ▶ Naming names

Techniques of dealing with common problems in data collection

- ▶ Specifically define the relation of interest (what is friendship)?
- ▶ Pilot surveys (cannot stress enough the importance of these)
- ▶ Define a clear time frame on which the relation has been active
- ▶ Expect long-standing relationships to be more accurately recalled
- ▶ Triangulation
- ▶ Interviews

Software

- ▶ Open source, for example Gephi
- ▶ UCINET



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