

LAB 3 – Testing Hypothesis with SNA

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Review --Types of Testable Hypothesis

TYPES OF SIMPLE HYPOTHESES

| | Independent Variable | Dependent Variable | Example Study |
|-------------|------------------------------|------------------------------|---|
| Dyad Level | Network tie | Network tie | doing business w/ ea other → friendship |
| | Network tie | Attribute similarity | Friends → similar political attitudes |
| | Attribute similarity | Network tie | Smoking → friendship |
| Node Level | Node level network property | Node level network property | Degree → betweenness |
| | Node level network property | Actor attribute | Centrality → performance |
| | Actor attribute | Node level network property | Good looks → centrality |
| Group Level | Group level network property | Group level network property | Density → Avg path length |
| | Group level network property | Other group attribute | Density → team performance |
| | Other group attribute | Group level network property | Prop women → density of trust ties |

Use of Control Variables in Your Model

- For Node or Group level analysis:
 - Vector control variable
- For Dyadic level of analysis:
 - Dyadic relationship/Matrix
 - Similarity Matrix
 - Vector as Matrix (to control for i or j characteristics)

Dyad Level Hypothesis Testing -- Exercise with Ucinet

- Using the MBA data provided in email or posted on class web site, we are going to test the following:
- H1: Friendship Tie will lead to Interaction Tie
- H2: Friendship Tie will lead to Similar Job Attitude
- H3: Similarity in Extraversion will lead to Interaction Tie
- H1 and H3 will be tested in same model since same DV (holding control for Team Membership – similarity Matrix), while H2 will be tested separately (holding control for similar Major – similarity Matrix)

Question Regarding Your Class Project!

- Are you confident which level of analysis your hypothesis you wish to test for fall in?
- Do you know the data step procedures you will need to run through in order to test those hypothesis?
- Do you understand how to add control variables/matrices relevant to test your model?
- Any concerns? Questions? → LAB #4 – you can schedule a tutorial session for 30-45 minutes (depending on demand/supply!) with one of us grad student to help you with some data question related to your class project! See email to sign up soon!



Thank You!

