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# Conducting an Organizational Network Analysis

Identify a strategically important group

Assess meaningful and actionable relationships

Constructing and administering the survey

Visual analysis of organizational networks

## ❖ Quantitative analysis of organizational networks

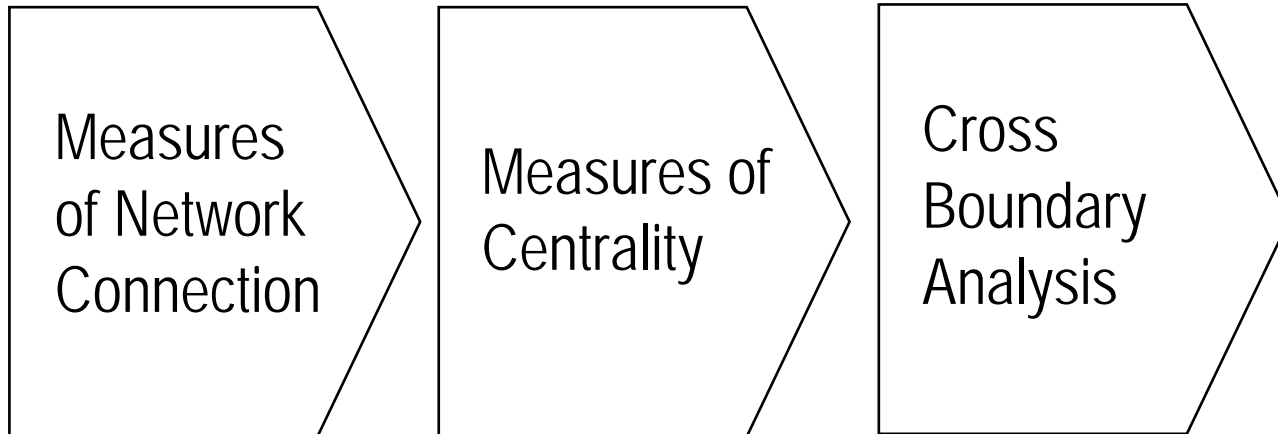
Create meaningful intervention plans

Assess progress and outcomes

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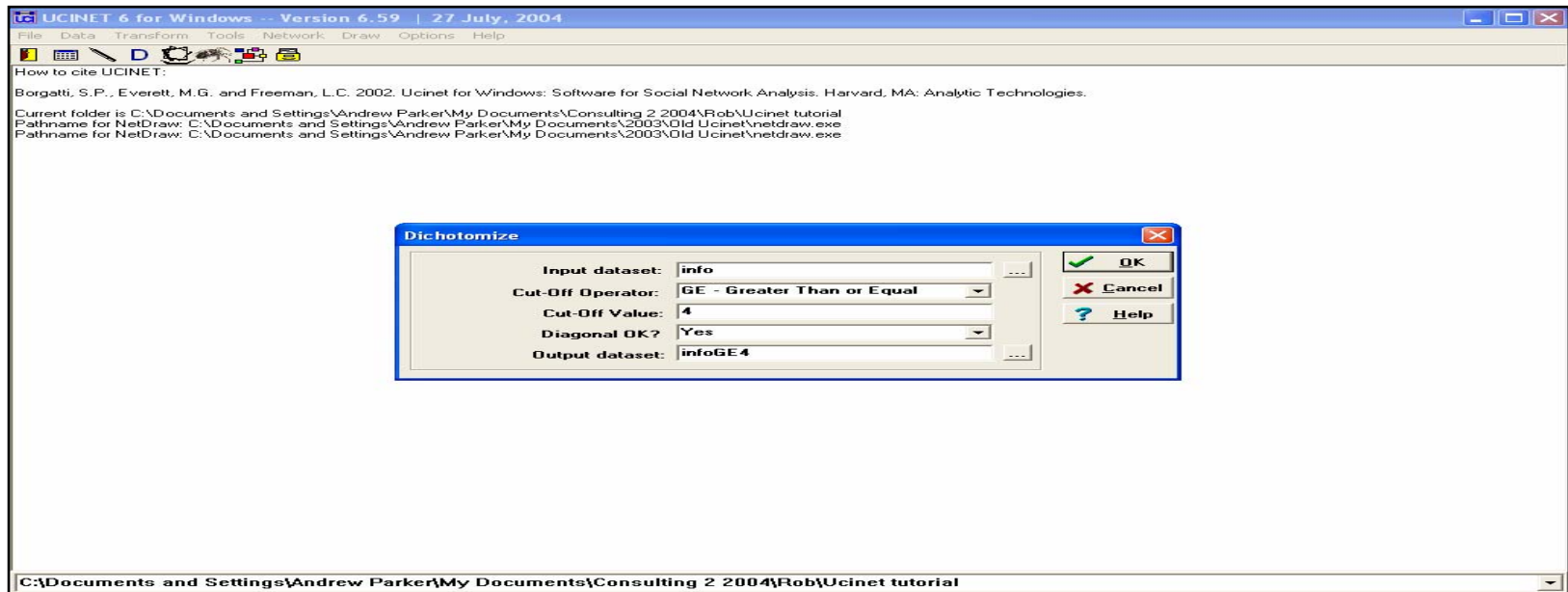
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# Quantitative Analysis of Organizational Networks



# Dichotomizing Valued Data

- The survey data that we collect is usually valued data. Although we can use valued data in UCINET we prefer to take different cuts of the data. For example, we may want to examine the data where people only responded “strongly agree” to a question. To do this we dichotomize the data i.e. convert it to zeros and ones where one means strongly agree and zero means any other response.



Step 1. Transform > Dichotomize

Step 3. Choose cut-off op. and value (e.g. GE and 4)

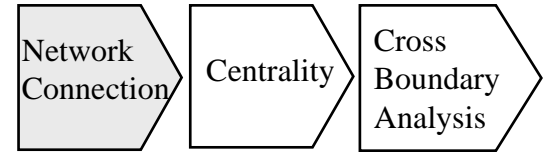
Step 2. Choose input dataset (info.##h)

Step 4. Specify output data set (infoGE4.##h)

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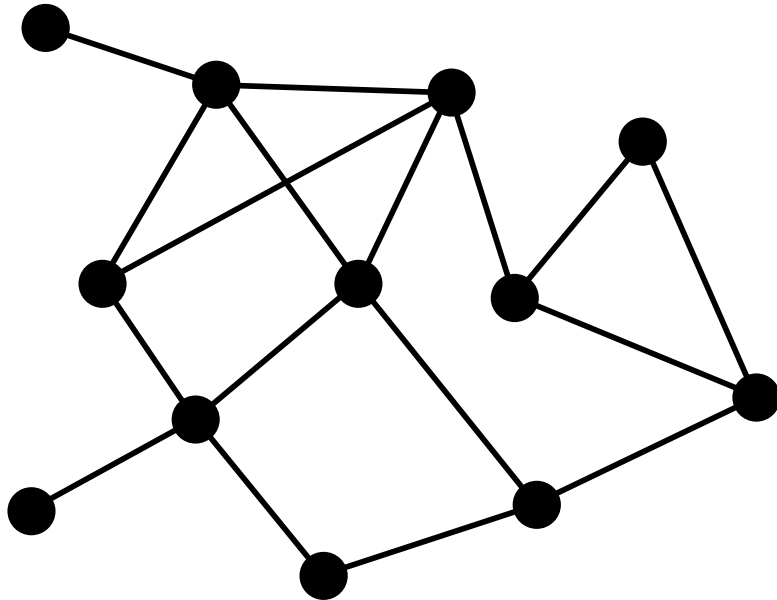
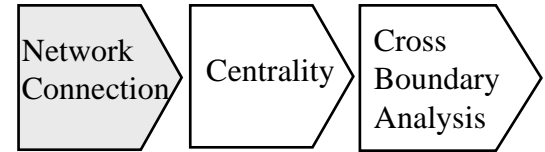
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# Measures of Network Connection

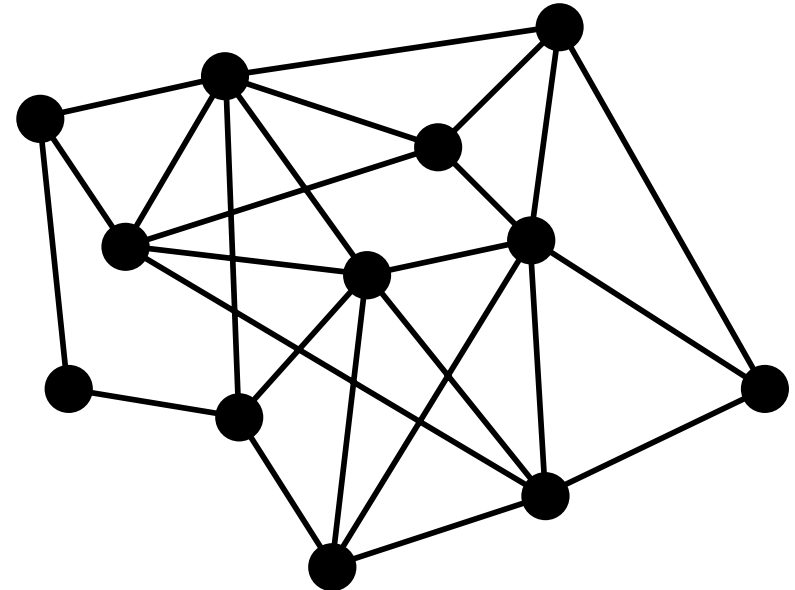


- Density
  - Shows overall level of connection within a network.
  - We can also look at ties within and between groups.
- Distance
  - Shows average distance for people to get to all other people.
  - Shorter distances mean faster, more certain, more accurate transmission / sharing.

# Density



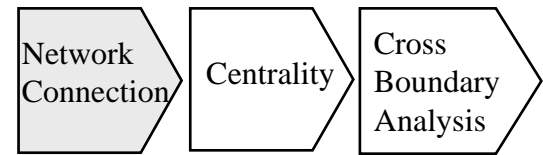
Low Density (25%)  
Avg. Dist. = 2.27



High Density (39%)  
Avg. Dist. = 1.76

- Number of ties, expressed as percentage of the number of pairs
- Dense networks have more face-to-face relationships

# Quantitative Analysis: Density



```
Output Log #2
File Edit
Log File Number 2

BLOCK DENSITIES OR AVERAGES
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Input dataset: C:\Documents and Settings\anparker3\My Documents\2005b\ucinet test\infoGE4

Relation: Page 1
Density (matrix average) = 0.0812
Standard deviation = 0.2731

Use MATRIX>TRANSFORM>DICHOTOMIZE procedure to get binary
Density table(s) saved as dataset Density
Standard deviations saved as dataset DensitySD
Actor-by-actor pre-image matrix saved as dataset Density

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Running time: 00:00:01
Output generated: 15 Sep 05 14:22:04
Copyright (c) 1999-2005 Analytic Technologies
```

- Step 1. Network > Cohesion > Density
- Step 2. Input dataset “infoge4.##h”

The remainder of this document is restricted to Network Roundtable members.

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