Social Networks and Social Theories

Kevin Reuning

Social Network Analysis

Asks questions such as:

- What leads to alliances between countries?
- Which political donor is most influential in a state?
- Who becomes friends with who in an assisted living home?
- Does having more friends help you survive trauma?
- Do schools with on-campus housing create denser webs of friendships?
- Does trade between countries reduce the chances of war between them?

Social Network Analysis

How are these questions related?

They involve relationships between 'actors' (countries, donors, residence...)

Social Network Analysis

How are these questions related?

► They involve relationships between 'actors' (countries, donors, residence...)

How are they different?

- The network can be a cause or an effect.
- We are interested in individuals, the relationship between individuals, or the whole structure

- Similarities between actors:
 - Are they part of a club? Do they live together? In the same class? Hold similar values?

- Similarities between actors:
 - Are they part of a club? Do they live together? In the same class? Hold similar values?
- Relations:
 - Friends? Mother-Daughter? Boss? Nemesis?
 - Does one actor like the other? Do they know each other?

- Similarities between actors:
 - Are they part of a club? Do they live together? In the same class? Hold similar values?
- Relations:
 - Friends? Mother-Daughter? Boss? Nemesis?
 - Does one actor like the other? Do they know each other?
- Interactions between actors:
 - Did one buy something from the other? Did they talk to each other? Did work with each other?

- Similarities between actors:
 - Are they part of a club? Do they live together? In the same class? Hold similar values?
- Relations:
 - Friends? Mother-Daughter? Boss? Nemesis?
 - Does one actor like the other? Do they know each other?
- Interactions between actors:
 - Did one buy something from the other? Did they talk to each other? Did work with each other?
- Flows:
 - Did Information pass from one actor to another actor? Did money pass from one to another?

Flows vs Interactions

Interactions are single events that are observable whereas flows are the transmission of something to another actor:

Two actors interact in a purchase, and goods flow from one to another.

Levels of Analysis

We can study networks at three levels of analysis:

- Actor level: The position of an individual within a network.
- Dyad level: The relationships that exist between all actors within a network and each other.
- Whole Network level: The overall structure of the network

DV and IV

Quick refresher:

- Dependent variable: The effect, what we want to explain.
- Independent variable: The cause, what we think explains something else.

Networks can be either the DV or the IV

Networks as a DV or an IV

- Actor level:
 - IV: An actor's position in a network explains...
 - DV: An actor is positioned in a network because of...
- Dyad level:
 - IV: Two actor's relationships explains...
 - DV: Two actors have a relationship because of...
- Network level:
 - ► IV: The structure of the network explains...
 - DV: The structure of the network is because of...

Returning to our questions

What is the level of analysis and is the network the DV or the IV?

- What leads to alliances between countries?
- Which political donor is most influential in a state?
- Who becomes friends with who in an assisted living home?
- Does having more friends help you survive trauma?
- Do schools with on-campus housing create denser webs of friendships?
- Does trade between countries reduce the chances of war between them?

