Michelle D’Ippolito

PSYC798W\_Homework #1

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Sister Ping Dataset

**Description:** The dataset describes the multiplex relationships in the Sister Ping human smuggling network that existed over 13 time periods covering 1982-2006. I am interested in studying the structure and organization of black markets and black market networks using statistical and network analysis methods.

**Variables of Interest (column header, type of variable, and plain text description):**

* *Gender (string/text):* Does the ID represent a male, female, or group of individuals?
* *ID (string):* an individual or group of individuals in the network (there are multiple rows for individuals depending on how many relationships they have with other individuals).
* *Function (string):* the role or function of an individual/group of individuals in the network.
* *Relationship (string):* the individual or group of individuals that ID has a relationship with in the network.
* *T0 (1982-1987)* through *T12 (2004-2006) (categorical):* A total of 13 columns that represent the time periods during which the human smuggling ring operated. The values of the columns represent the type of relationship that existed between the ID and Relationship individuals/group of individuals. Key: 0=no relationship, 1=business, 2=criminal, 3=family, 4=financial, 5=political, 6=law enforcement, 7=rival, 8=violence/murder, 9=other, 10=informant, 11=geographical, 12=material, 13=friendship. Note that not all types of relationships are present in this dataset as this was part of a broader project involving multiple networks.
  + *T0 (1982-1987) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T1 (1988-1991) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T2 (Jan-June 1992) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T3 (July-Dec 1992) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T4 (Jan-Feb 1993) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T5 (March-April 1993) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T6 (May-June 1993) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T7 (July-Aug 1993) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T8 (Sep-Dec 1993) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T9 (1994-1995) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T10 (1996-1999) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T11 (2000-2003) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
  + *T12 (2004-2006) (categorical):* Whether and what type of relationship existed between two individuals/an individual and a group during the time period.
* *Business (categorical)*: whether two individuals/individual and group had a business relationship.
* *Criminal (categorical)*: whether two individuals/individual and group had a criminal relationship.
* *Family (categorical)*: whether two individuals/individual and group had a familial relationship.
* *Financial (categorical)*: whether two individuals/individual and group had a financial relationship.
* *Law Enforcement (categorical)*: whether two individuals/individual and group had a relationship with law enforcement (e.g., was one or both of the individuals part of a law enforcement agency or was one arrested by law enforcement).
* *Rival (categorical)*: whether two individuals/individual and group were business and/or personal rivals.
* *Violence/Murder (categorical)*: whether one individual committed an act of violence against or murdered another individual/group of individuals.
* *Other (categorical)*: whether two individuals/individual and group had another type of relationship not defined here.
* *Informant (categorical)*: whether one individual informed on the activities of another individual/group of individuals.
* *Friendship (categorical)*: whether two individuals/individual and group were friends.

**Questions of Interest:**

1. How does the distribution of relationships of individuals change over the course of the network (i.e. across all 12 time periods)?
2. What role does gender play in the distribution of relationships over time in the network?
3. How does an individual’s function in the network change over time? Is this related to the change in their relationships over time?