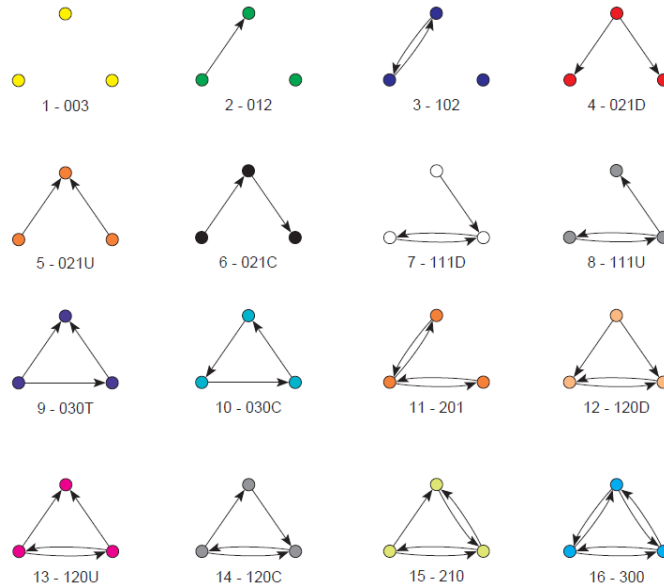


SOCn5010 Analýza sociálních sítí

Přednáška 12: Statistické nástroje



Type of hypotheses

- **Node-level (monadic)** – cases are nodes – higher centrality in professional network – higher wage
- **Dyadic level – cases are pairs** - the stronger the tie of professional cooperation, the stronger the tie of mutual trust
- **Group/network level** – the higher the density of the network, the faster the spread of innovation

Statistics

- Description of a network
- Hypotheses about theoretical parameter
- Hypotheses about **two paired means/densities** (test for differences in the probability of a tie of one type and the probability of a tie of another type)
- **Correlation** between two networks with the same actors (if there is a tie of one type among two actors, is there a likelihood of a tie of another type)

Node-level regression

- Symmetric associations (correlation) Vs. Assymmetric relations (regression)
- Regressing position on attributes
- Attributes explaining the position of node
- Attributes measured at interval level
- E.g. Predicting centrality in a friendship network using age and income variables

Dyadic regression

- Predicting a relation from another one
- Dependent network, independent network + node attributes, regressing each element in dependent network on its corresponding elements in the independent network + attribute-similarity network
- E.g. Predicting friendship relation by co-occurrence network (attendance of same uni courses) + gender

References

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