

1st exercise (5th april) : whole networks

Data set: KNOKE bureaucracies

Ucinet data set: **KNOKE BUREAUCRACIES** (KNOKBUR)

- **UCINET DATASET** KNOKBUR
- **DESCRIPTION** Two 10x10 matrices
 - **KNOKM non-symmetric, binary.**
 - **KNOKI non-symmetric, binary**
- **BACKGROUND** In 1978, Knoke & Wood collected data from workers at 95 organizations concerned with social welfare issues in Indianapolis. Respondents indicated with which other organization s(private firms, governmentnal agencies, voluntary organisations) their own organization had any of 13 different types of relationships in the last 2 years

Ucinet data set: **KNOKE** **BUREAUCRACIES (KNOKBUR)**

- Knoke and Kuklinski (1982) selected a subset of 10 organizations and two relationships

- **information exchange in KNOKI.**

Q: To and from which organisations did the respondent's organization send or receive "information about community affairs"

Money exchange is recorded in KNOKM,

– Q: To and from which organisations did the respondent's organization give or receive "money or other material resources "

Knoke D. and Wood J. (1981). Knoke D. and Kuklinski J.
(1982)

Attributes of these organisations: here we concentrate on sector

TABLE 1
Indianapolis Organizations Used in Network Examples

Organization Name	Symbol	Sector*	Influence Reputation
City/County Council	COUN	GOV	5.80
Chamber of Commerce	COMM	VOL	5.80
Board of Education	EDUC	GOV	4.75
Local Industries	INDU	PVT	5.38
Mayor's Office	MAYO	GOV	5.86
Women's Rights Organization	WRO	VOL	2.50
Star-News	NEWS	PVT	6.40
United Way	UWAY	VOL	5.94
Welfare Department	WELF	GOV	4.60
Westend Organization	WEST	VOL	3.50

*GOV = government; VOL = voluntary; PVT = private profit making.

1st step prior to the analysis

- Better to do this even if not required in all computations you will do
- Unpack the data set KNOKBUR
 - Data >unpack
- You get 2 datasets
- KNOKI & KNOKM

2nd step prior to the analysis

- Visualize both networks KNOKI and KNOKM
- Insert the attribute sector in the visualisation (change colour for instance)

Characterise the whole network : density and average degree

	Density	Nr of ties	Average degree
KNOKI			
KNOKM			

Characterise the whole network : geodesic distances

network > cohesion > geodesic distances (old)

KNOKI

KNOKEM

Characterise the whole network : centralization

- KNOKI & KNOKM
- Use the Symmetrised version of the matrices (option : undirected)
- Network>centrality and power>degree

Characterise the whole network : reciprocity

- Ucinet>network>cohesion>reciprocity
- Reciprocity value to take into consideration = hybrid reciprocity
- KNOKI & KNOKEM

Characterizing whole networks : transitivity

- UCINET>network>cohesion>transitivity (old)
- KNOKI & KNOKEM

What needs to be sent to socnet.iseg. 17.18@gmail.com

- Outputs/text files – the UCINET produces TXT files which you can save and send; you may prefer other format, and anything is OK as far as it is readable
- Per each measure I would like you to write 2/3 sentences of interpretation, mainly focusing on the comparison of the two networks
 - In what are these matrices similar/distinct? What does it mean?