

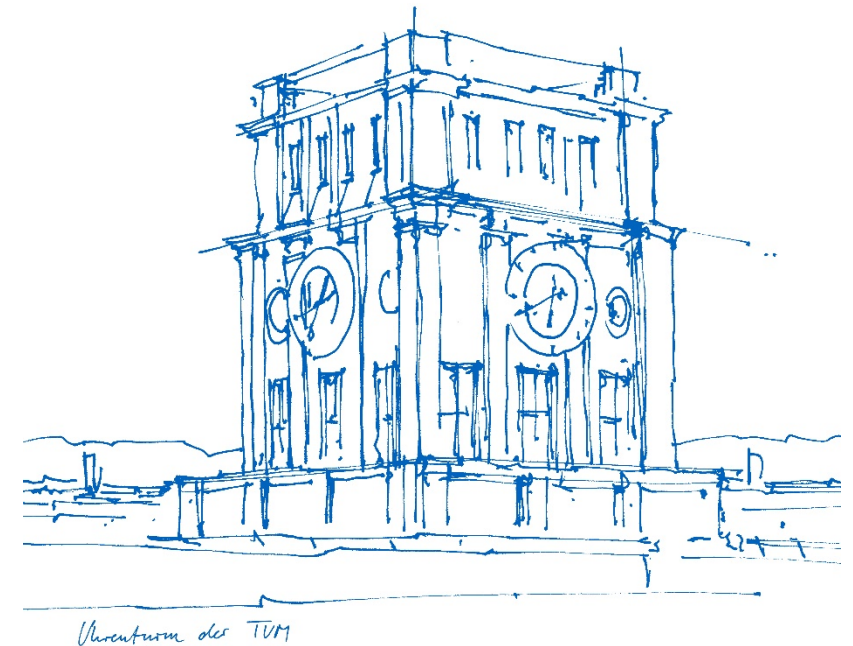
Social Forces

Jürgen Pfeffer

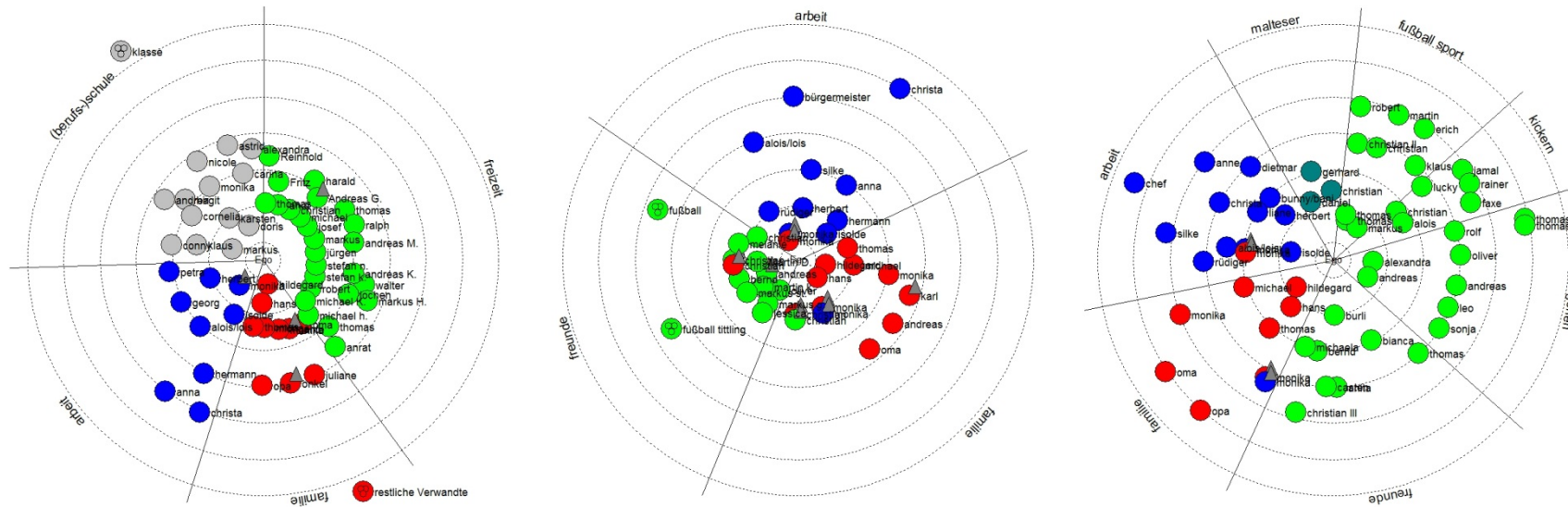
Technical University of Munich

Bavarian School of Public Policy

juergen.pfeffer@tum.de | [@JurgenPfeffer](https://www.instagram.com/JurgenPfeffer)

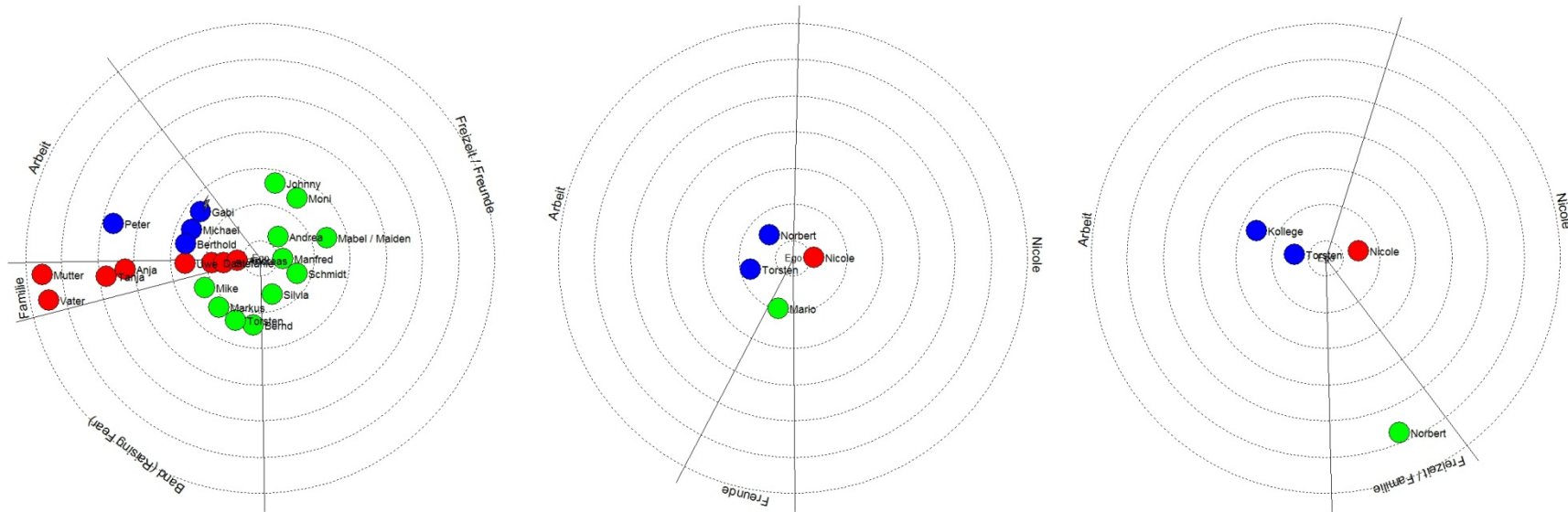


Networks Structures Tell Stories



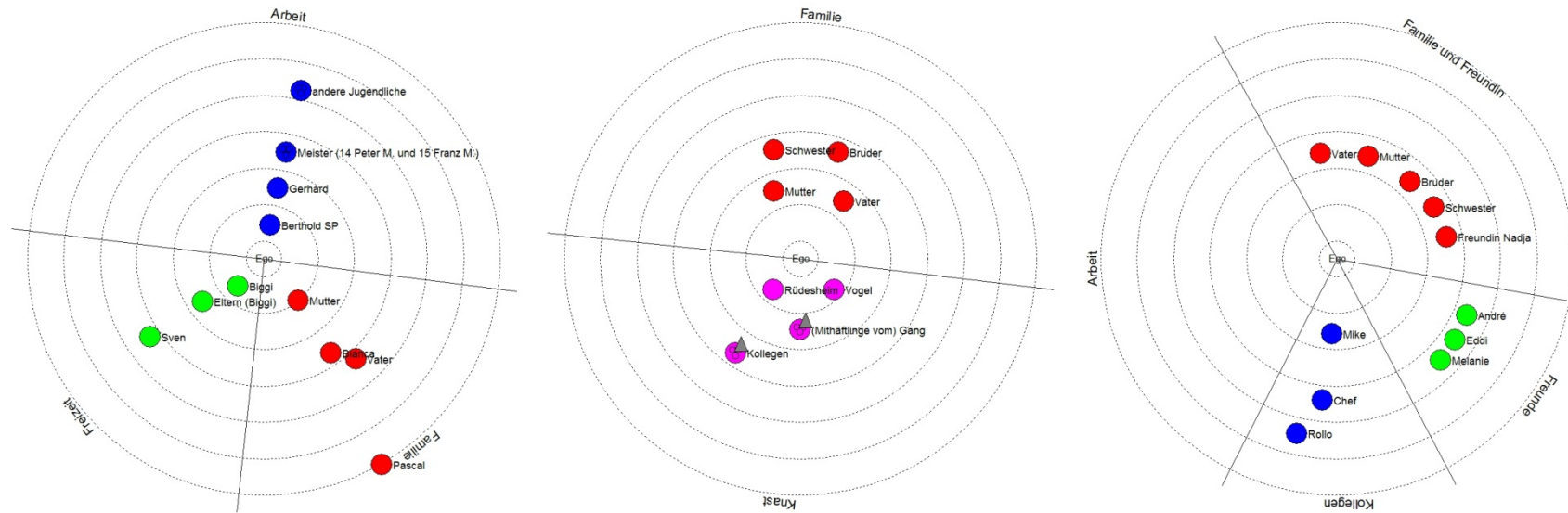
Project: Network resources of young adults during the transition into the labor market,
 Betina Hollstein, University of Hamburg, Funded by: German Research Foundation/HO 2120/4-1

Networks Structures Tell Stories



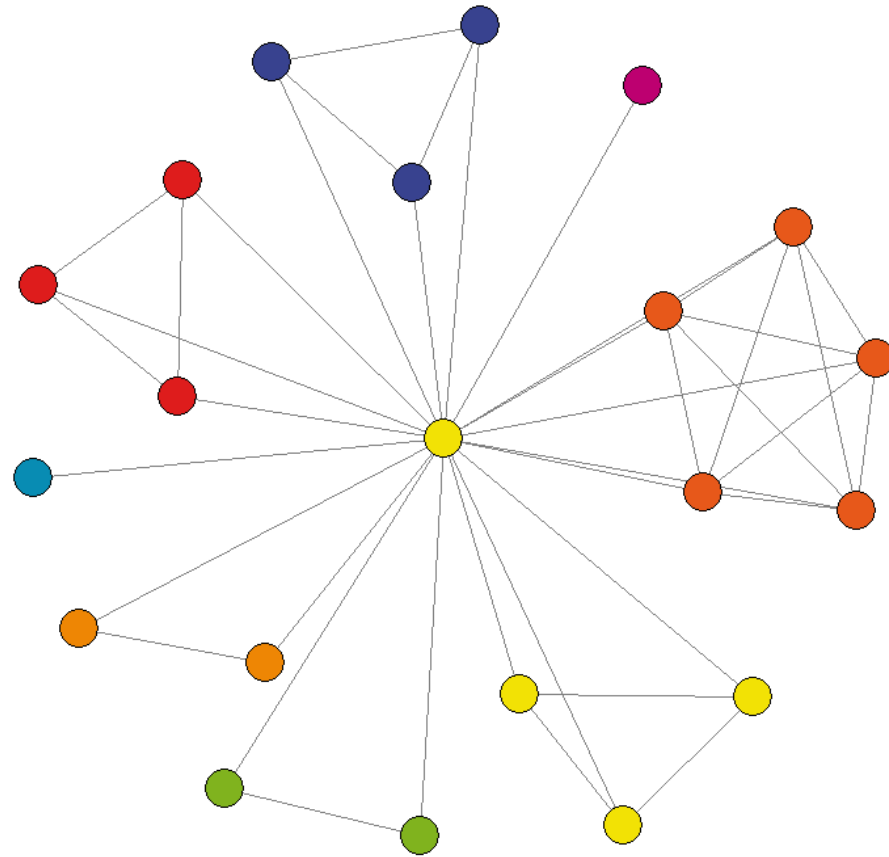
Project: Network resources of young adults during the transition into the labor market,
 Betina Hollstein, University of Hamburg, Funded by: German Research Foundation/HO 2120/4-1

Networks Structures Tell Stories

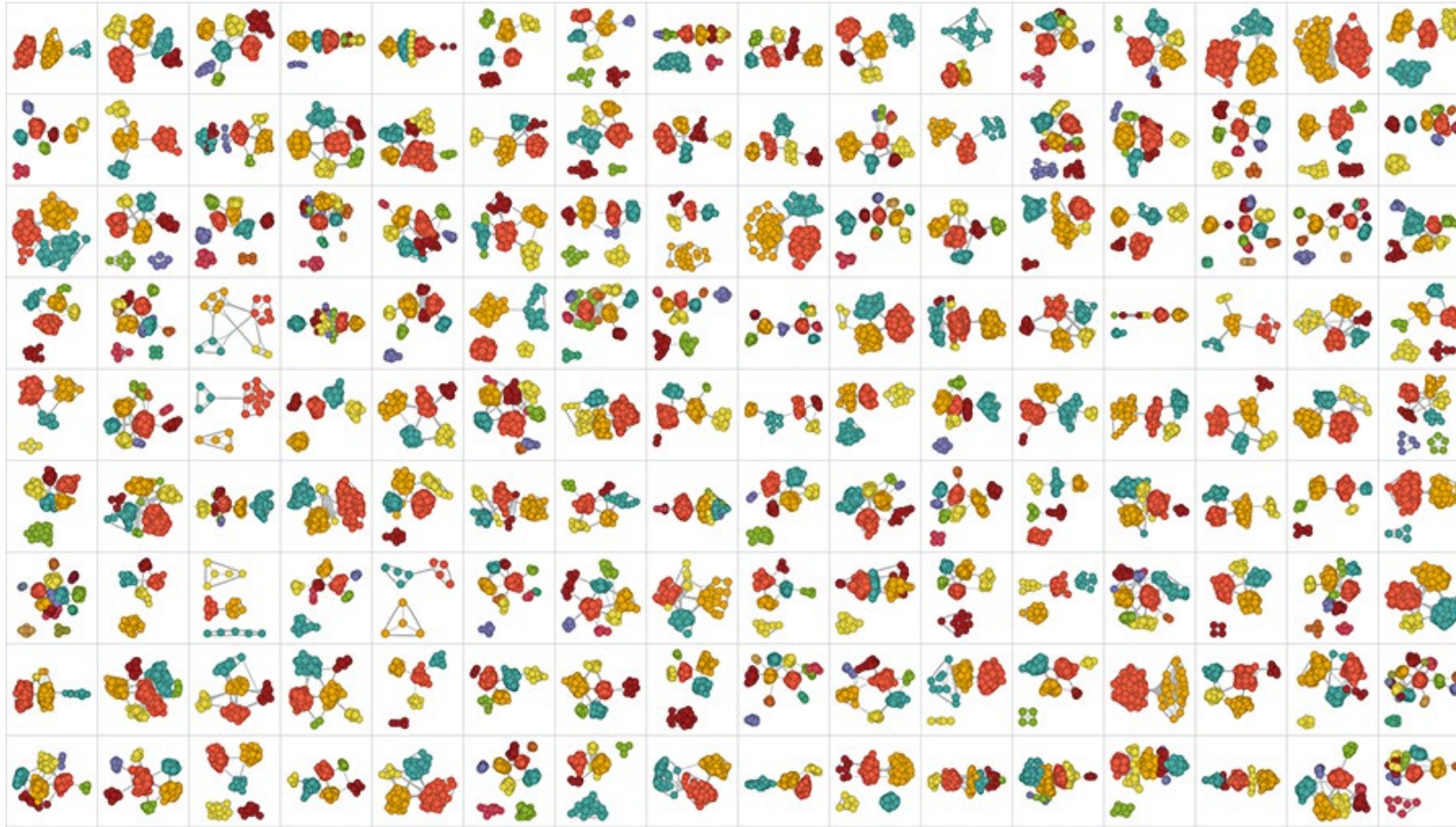


Project: Network resources of young adults during the transition into the labor market,
 Betina Hollstein, University of Hamburg, Funded by: German Research Foundation/HO 2120/4-1

Deviant Network

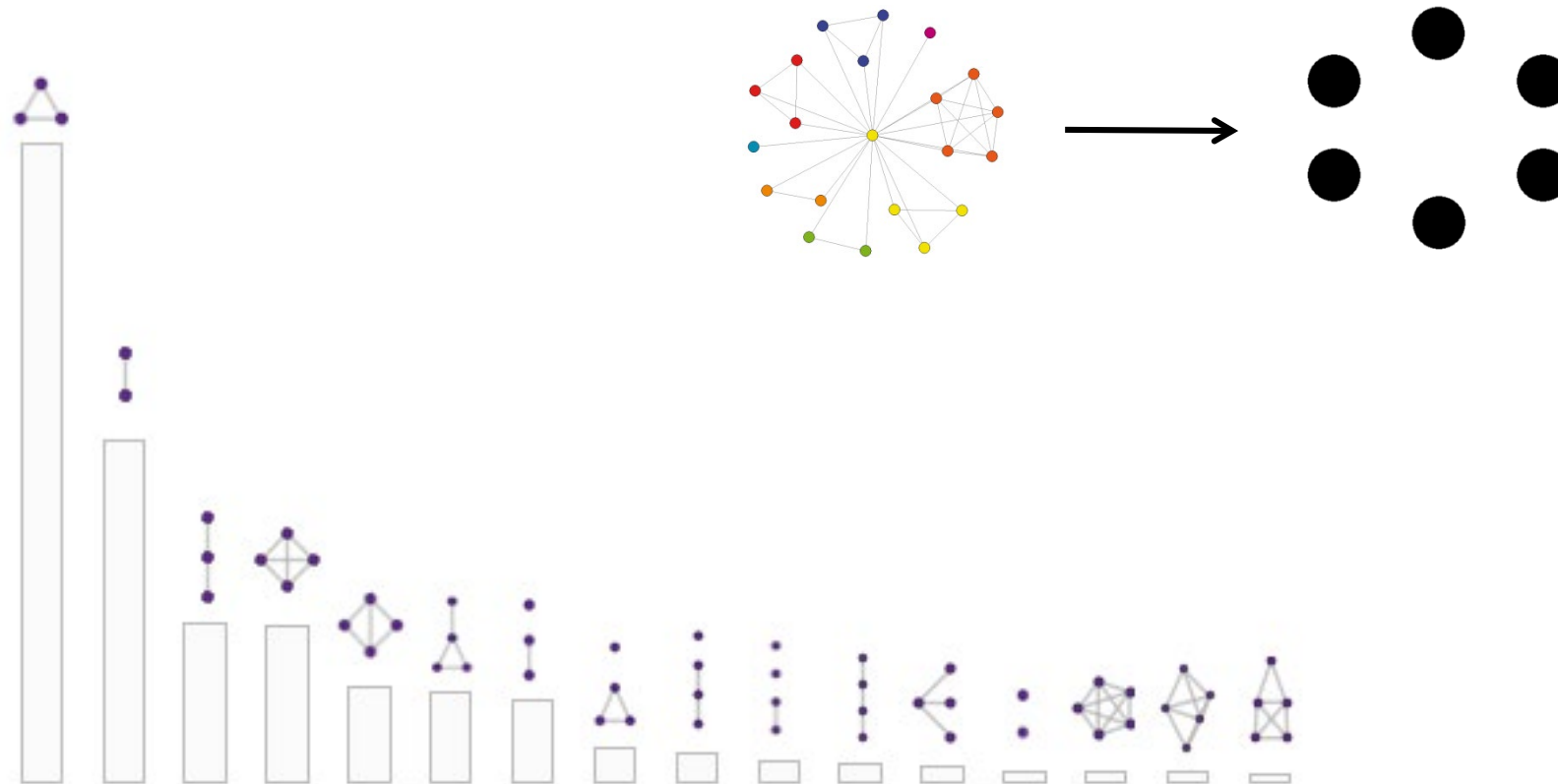


How do Networks Look Like?



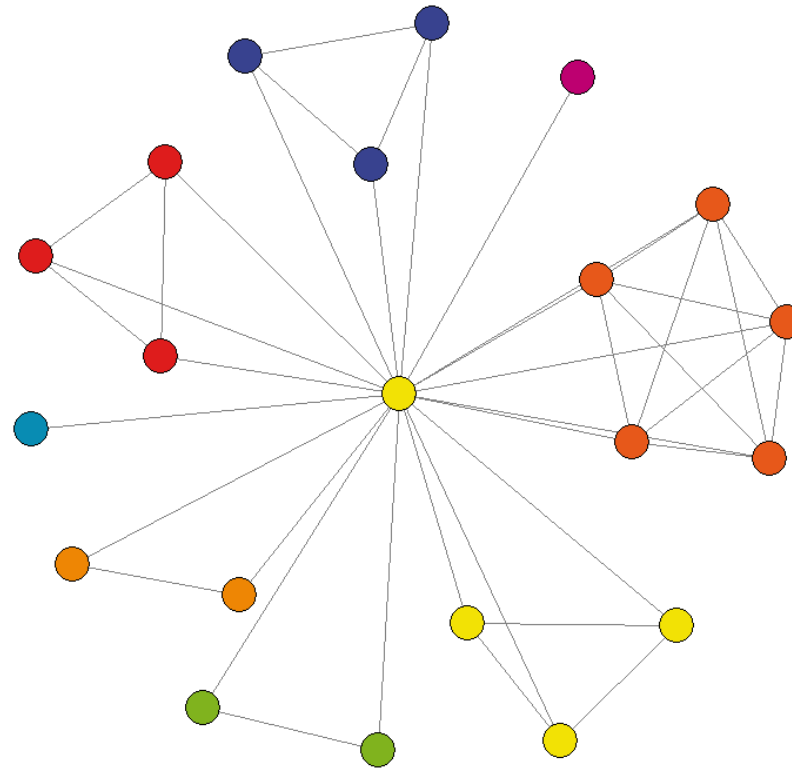
<http://blog.stephenwolfram.com/2013/04/data-science-of-the-facebook-world/>

Facebook Networks

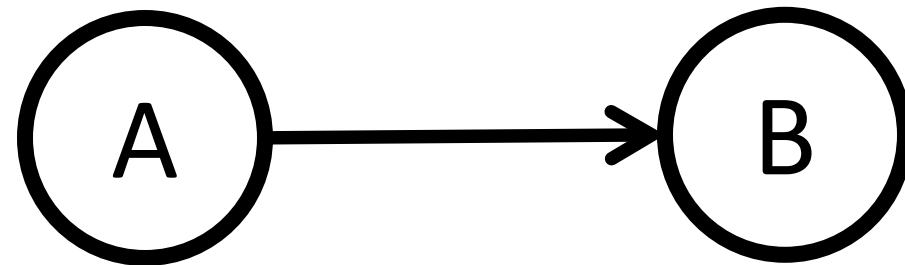


<http://blog.stephenwolfram.com/2013/04/data-science-of-the-facebook-world/>

What “Forms” Social Networks?



Why do people communicate?



Homophily

“Birds of a feather flock together”

People link together because of similarities:

- Common socio-demographic attributes
- Common behaviors, goals, and stories

“Homophily limits people’s social worlds in a way that has powerful implications for the information they receive, the attitudes they form, and the interactions they experience.”

M. McPherson, L. Smith-Lovin, J. M. Cook, Birds of a Feather:

Homophily in Social Networks. Annual Review of Sociology 27:415-444,2001.

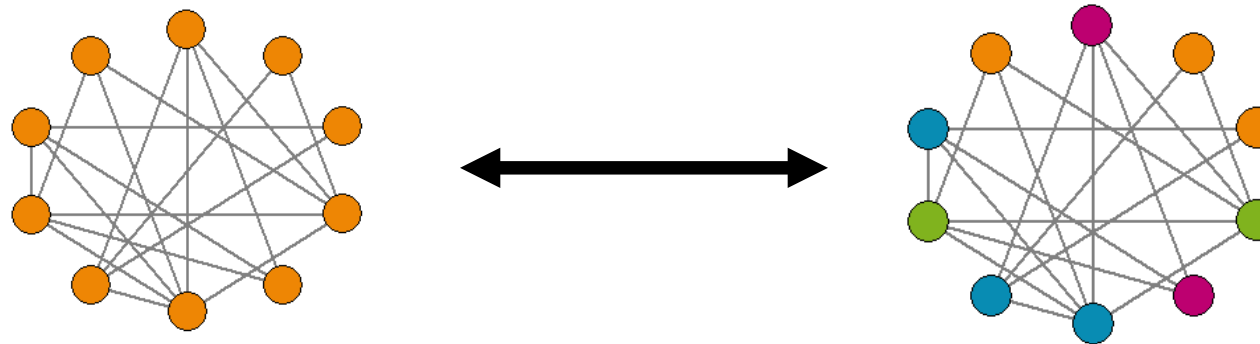


Group Homophily

Groups are homogeneous

“Homophily in race and ethnicity creates the strongest divides in our personal environments, with age, religion, education, occupation, and gender following in roughly that order.”

M. McPherson, L. Smith-Lovin, J. M. Cook, Birds of a Feather:
Homophily in Social Networks. Annual Review of Sociology 27:415-444,2001.



Geographic Propinquity

“Those close by, form a tie”

People connect with each other because of physical closeness:

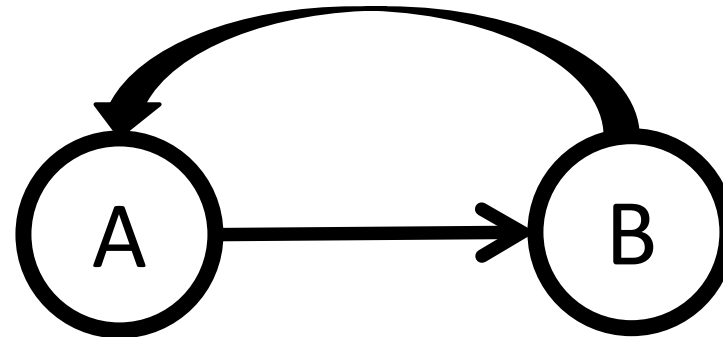
- Neighbors
- Students/Dorm
- Coworkers



Reciprocity

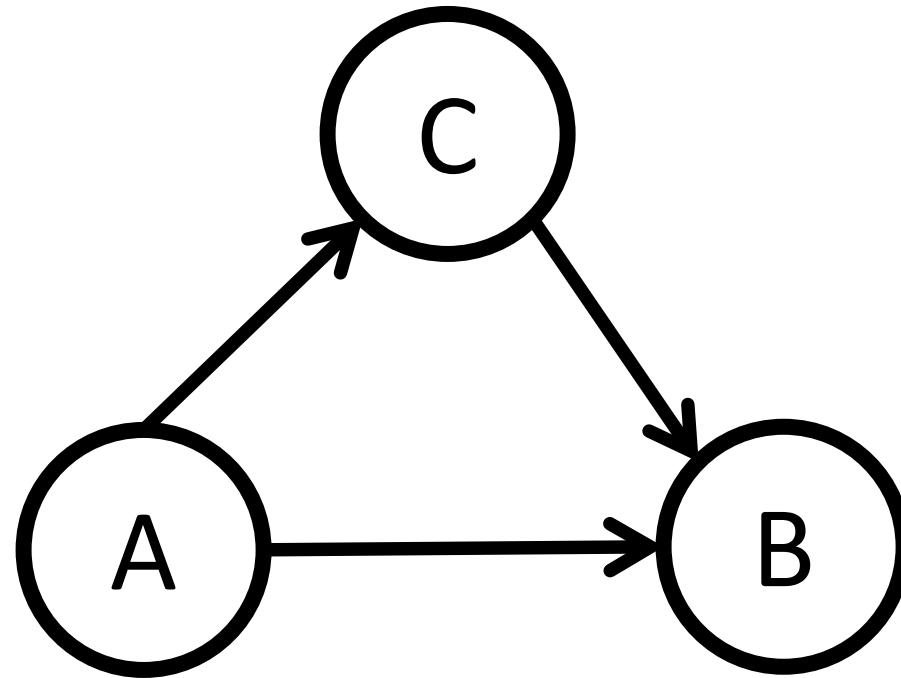
People interact with people who interact with them

Repeated reciprocity leads to stronger connections



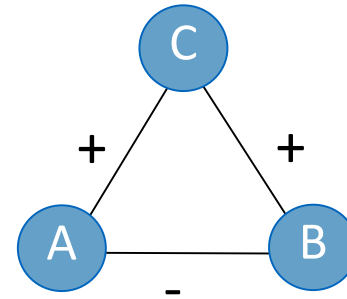
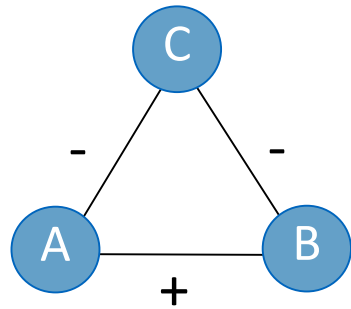
Transitivity

F. Heider, Attitudes and Cognitive Organizations,
Journal of Psychology, vol. 21: 107-112, 1946.



Balance Theory

Transitivity forms networks



F. Heider, Attitudes and Cognitive Organizations,
Journal of Psychology, vol. 21: 107-112, 1946.

How are people connected?



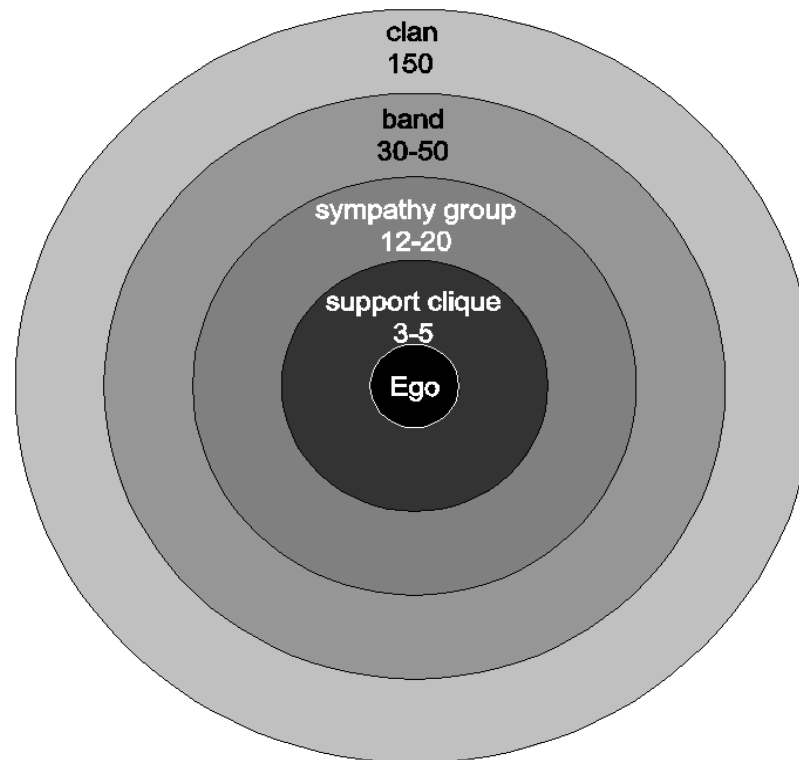
Dunbar's Number

There is a “cognitive constraint” on network size in humans, based on the size of our neocortex.

Time based constraints focus on budgeting finite time on alters

Hierarchical Organization

W. X. Zhou, D. Sornette, R. A. Hill, R. I. M. Dunbar, Discrete hierarchical organization of social group sizes, *Proc. Biol. Sci.* 272 (1561), pp. 439–444, 2005.



Support Clique

General Social Survey: People discuss “important matters” (Burt, 1984)

The network are:

- Small
- Kin-centered
- Relatively dense
- Homogeneous

Groups with larger core networks:

- Young
- Highly educated
- Metropolitan residents

P. V. Marsden, v, American Sociological Review, Vol. 52 (1), pp. 122-131, 1987.

Weak/Strong Ties

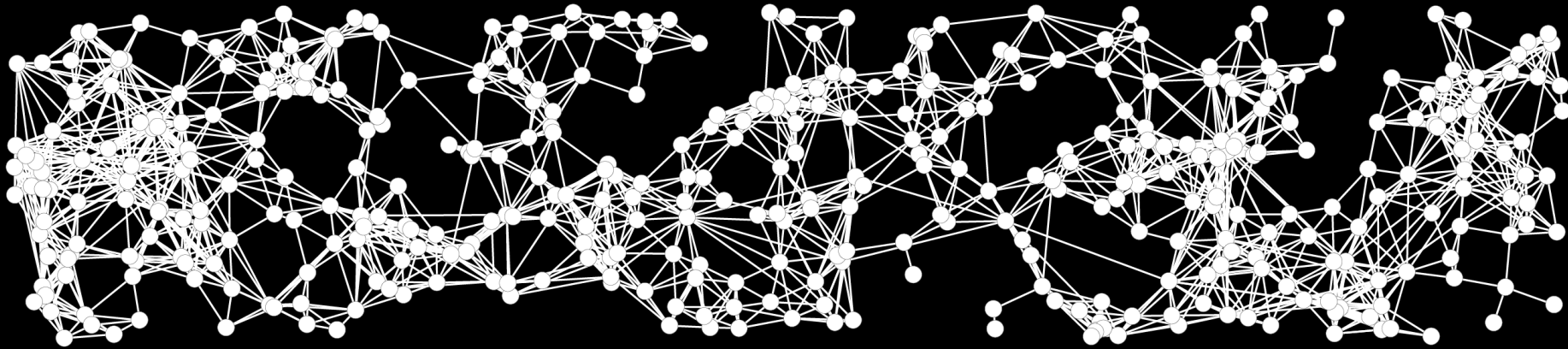
The strength of a tie is a (probably linear) combination of...

- The amount of time
- The emotional intensity
- The intimacy (mutual confiding)
- The reciprocal services

M. S. Granovetter, The Strength of Weak Ties, American Journal of Sociology, Vol. 78-6, pp. 1360-1380, 1973.

*“Our mission is to go forward, and it has only just begun.
There's still much to do, still so much to learn. Engage!”*

Jean-Luc Picard, Star Trek TNG, Season 1 Episode 26



Juergen.Pfeffer@tum.de @JurgenPfeffer
Mirco.Schoenfeld@tum.de