

Psychological structures of friendships

Venla Berg, Population Research Institute, Väestöliitto

The Academy of Finland Seminar: The emotional, social and cultural
aspects of collective action
Tallinn 27–28 November 2014





Linked Lives

- Human development is socially embedded
- Glenn Elder
 - The life course paradigm: Social change and individual development In P.Moen & G.H. Elder, Jr. *Examining Lives in Context: Perspectives on the Ecology of Human Development* (1995), 101-139. Washington: APA.
 - The Life Course and Human Development. *Handbook of Child Psychology Vol 1* (1998), 939-91. New York: Wiley.



Our project: Linked Lives

- Linked Lives over the Life Course: A Dyadic Approach to Individual Development
- The purpose is to augment the study of individual human minds by considering how individuals develop over time in relationships with others
- Anna Rotkirch, PI, Väestöliitto
- Markus Jokela, co-PI, University of Helsinki
- Anneli Miettinen, Lassi Lainiala, and Venla Berg, Väestöliitto
- International collaborators
 - Robin Dunbar, University of Oxford
 - Tamás Dávid-Barrett, University of Oxford
 - Michaela Kreyenfeld, Max Planck Institute
 - David Lawson, University College London

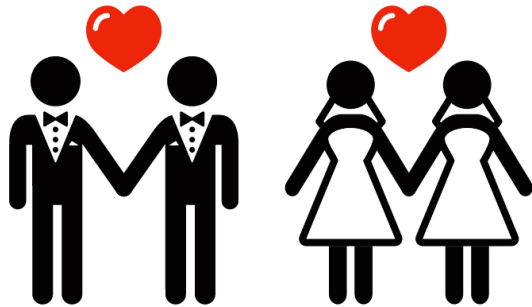


Our project continued...

- Two register based datasets from Finland: FINNFAMILY & FINNUNION (compiled by Statistics Finland)
- Several existing survey and panel datasets from other Western countries
 - HILDA (Australia)
 - PairFam (Germany)
 - NSFH (the US)
 - BHPS (the UK)
 - GenTrans (Finland)

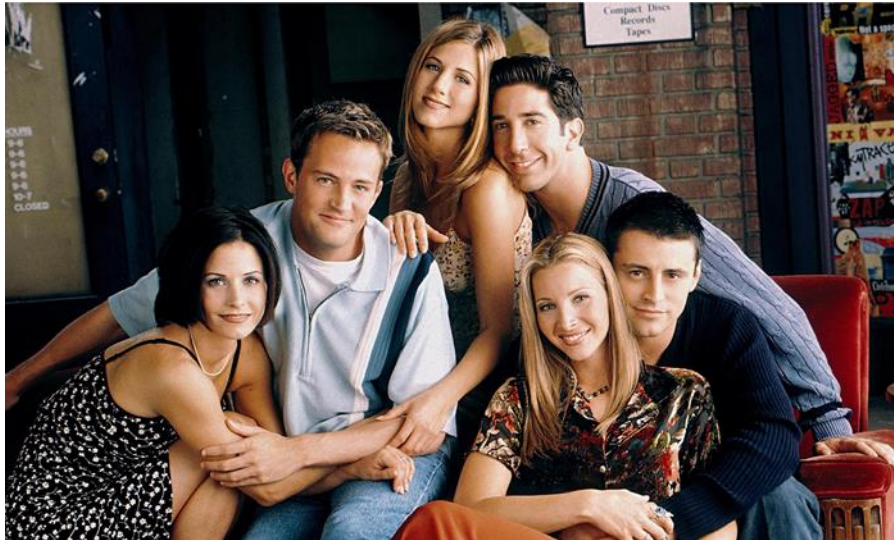


Friendships in humans



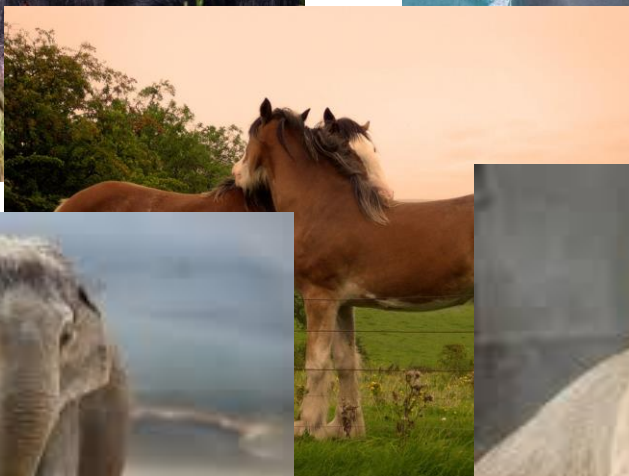


Friendships in humans





Friendships in other animals



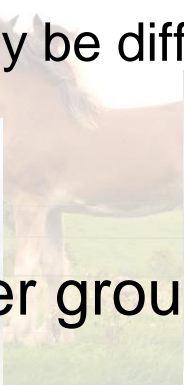
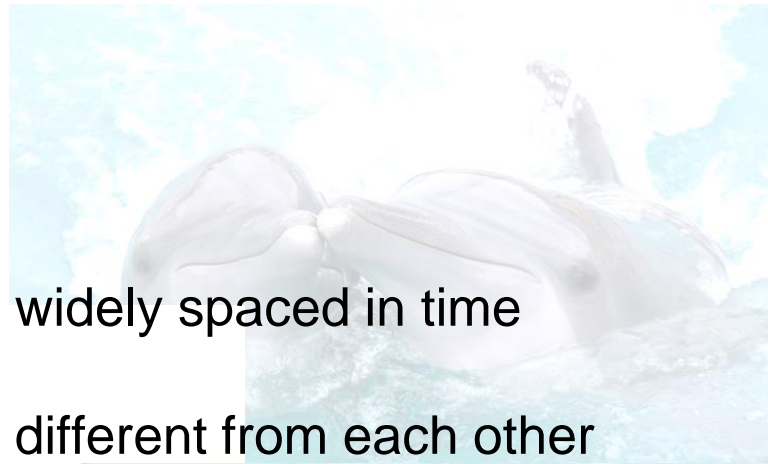
Seyfarth & Cheney, 2012



Friendships in non-human animals

- Long-lasting
- Reciprocal
 - Reciprocous actions may be widely spaced in time
 - Reciprocous actions may be different from each other

- Affect behaviour
- Are recognized by other group members
- Implicit



Seyfarth & Cheney, 2012



Benefits of friendships

- In humans
 - Better physical and mental health (Seeman 2000)
 - Decreased mortality (Holt-Lunstad et al. 2010)
- In non-human animals
 - Increased mating success in males (Connor et al. 2009)
 - Higher birth rates (Cameron et al. 2009)
 - Increased survival of offspring (Silk et al. 2003, 2009)
 - Increased longevity (Silk et al. 2010)



Friendships are adaptive



Who forms friendships?

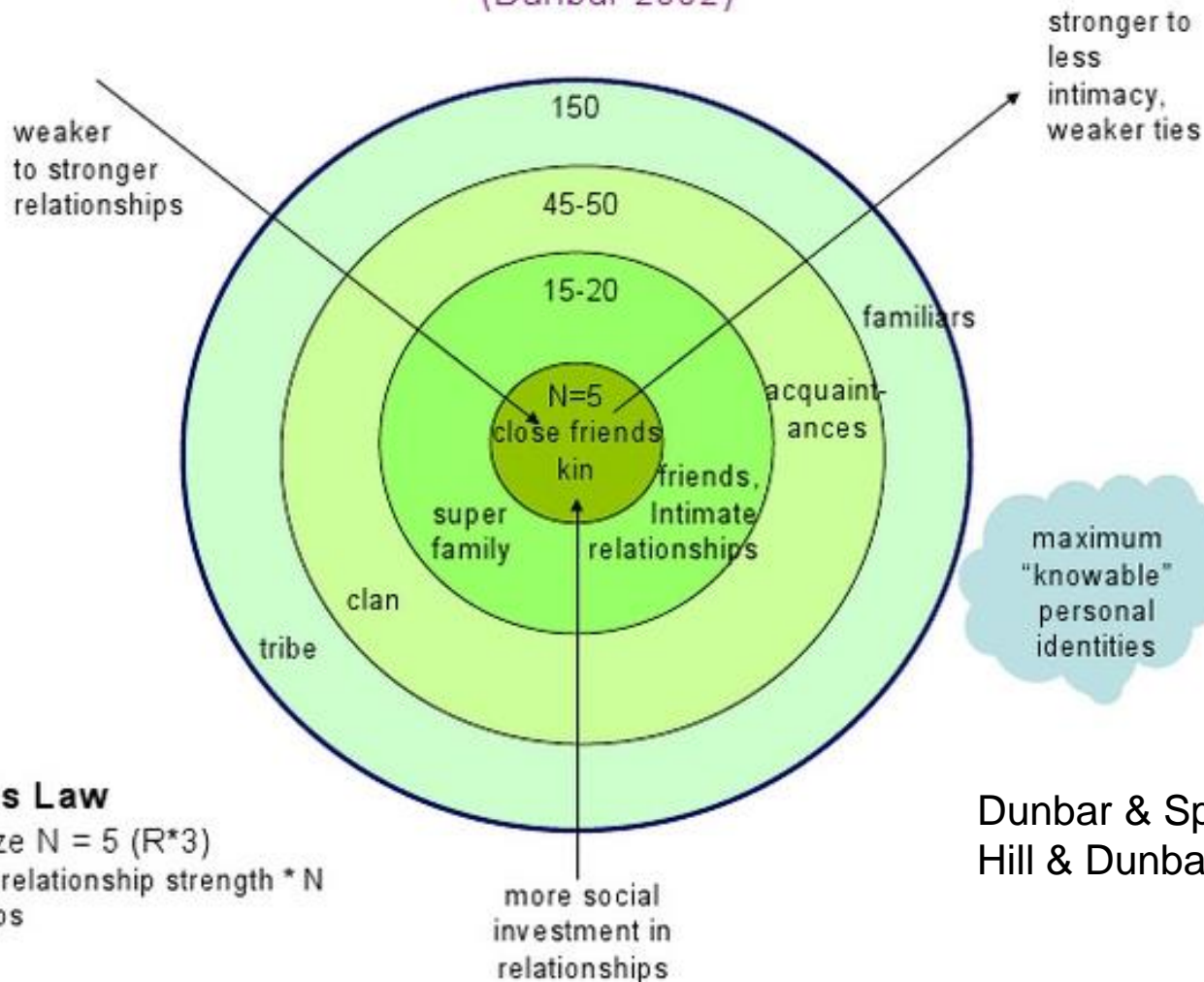
- Close kin
 - In non-human animals: particularly maternal kin

Who forms friendships?

The University of Manchester

MANCHESTER
1824

Motivation: Social Brain Theory (Dunbar 2002)



Dunbar's Law

Group Size $N = 5 (R \times 3)$
where R = relationship strength * N relationships

Dunbar & Spoor, 1995
Hill & Dunbar, 2003



Who forms friendships?

- Homophily
 - In humans: Race/ethnicity, age, religion, education, occupation, gender (McPherson et al. 2001)
 - In non-human animals: Age, social rank (Seyfarth et al. 2009)
 - Also behaviour, attitudes, and values (McPherson et al. 2001)
 - Personality (Massen & Koski, 2014; Selfhout et al. 2010)
- Genetic homophily (Christakis & Fowler 2014; Fowler et al. 2011)



Friends by personality and SES

- How are personality and socio-economic position of a respondent associated with the characteristics of his/her friends?



Ongoing work on friends

- FFS: Fraternity Friendship Study
 - A sub-project in collaboration with the University of Oxford and University of Leiden, partly with separate funding
 - Longitudinal study on group formation in young adults (i.e., university freshmen in an undisclosed European university)
 - Which qualities of individuals are clustered in groups?
 - How is group cohesion associated with the group's ability to function efficiently?



References

- Cameron, Setsaas, Linklater. 2009. Social bonds between unrelated females increase reproductive success in feral horses. *Proc. Natl. Acad. Sci. USA*, 13850–53.
- Christakis & Fowler. (2014). Friendship and natural selection. *Proceedings of the National Academy of Sciences*, 10796-10801.
- Connor. 2007. Complex alliance relationships in bottlenose dolphins and a consideration of selective environments for extreme brain size evolution in mammals. *Philos. Trans. R. Soc. Lond. B Biol. Sci.*, 362, 587–602.
- Dunbar & Spoons (1995). Social networks, support cliques, and kinship. *Human Nature – An Interdisciplinary Biosocial Perspective*, 6(3), 273-290.
- Fowler, Settle, & Christakis. (2011). Correlated genotypes in friendship networks. *Proceedings of the National Academy of Sciences*, 1993-1997.
- Hill & Dunbar. (2003). Social network size in humans. *Human Nature – An Interdisciplinary Biosocial Perspective*, 14(1), 53-72.
- Holt-Lunstad, Smith, & Layton. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Med* 7(7): e1000316.
- Massen, & Koski. (2014). Chimps of a feather sit together: Chimpanzee friendships are based on homophily in personality. *Evolution and Human Behavior*, 35(1), 1-8.
- McPherson, Smith-Lovin, & Cook 2001: Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 415-444.
- Seeman 2000. Health promoting effects of friends and family on health outcomes in older adults. *American Journal of Health Promotion*, 6(14), 362-370.
- Selfhout, Burk, Branje, Denissen, Van Aken, & Meeus. (2010). Emerging late adolescent friendship networks and Big Five personality traits: A social network approach. *Journal of personality*, 78(2), 509-538.
- Seyfarth & Cheney, 2012: The evolutionary origins of friendship, *Annu. Rev. Psychol.*, 63, 153–77.
- Silk JB, Alberts S, Altmann J. 2003. Social bonds of female baboons enhance infant survival. *Science* 302:1331–34
- Silk JB, Beehner JC, Bergman T, Crockford C, Engh AL, et al. 2009. The benefits of social capital: Close bonds among female baboons enhance offspring survival. *Proc.R.Soc.Lond.B*, 3099–104.
- Silk JB, Beehner JC, Bergman T, Crockford C, Engh AL, et al. 2010b. Strong and consistent social bonds enhance the longevity of female baboons. *Curr. Biol.*, 1359–61.

Thank you!

Venla Berg

Tel. +358 9 2280 5138

E-mail: [venla.berg at vaestoliitto.fi](mailto:venla.berg@vaestoliitto.fi)

