

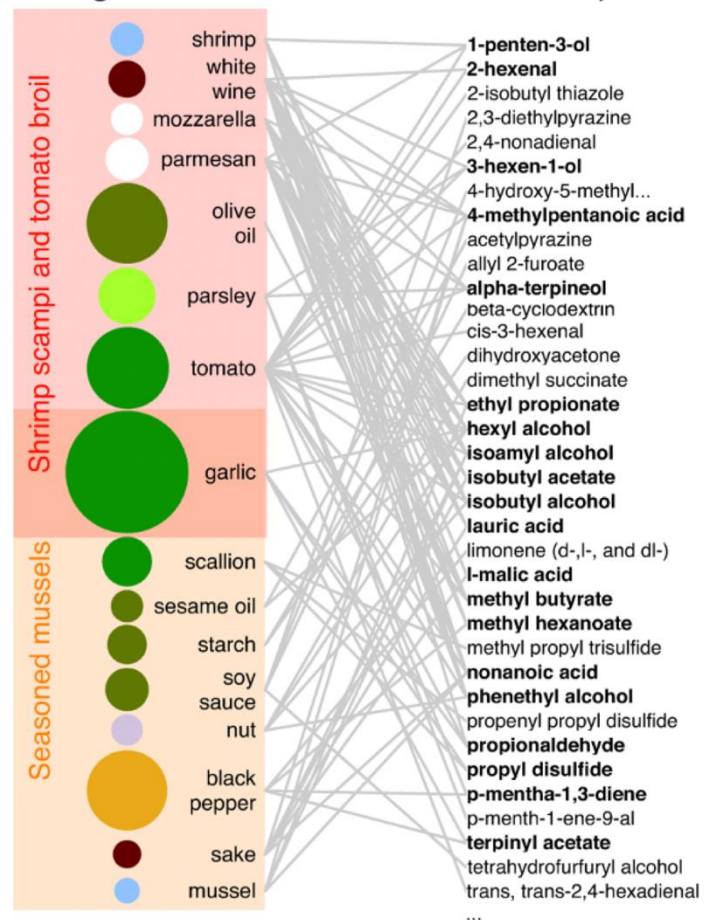
Day 4 - What Networks Could Be

UMN CSS Workshop 2025

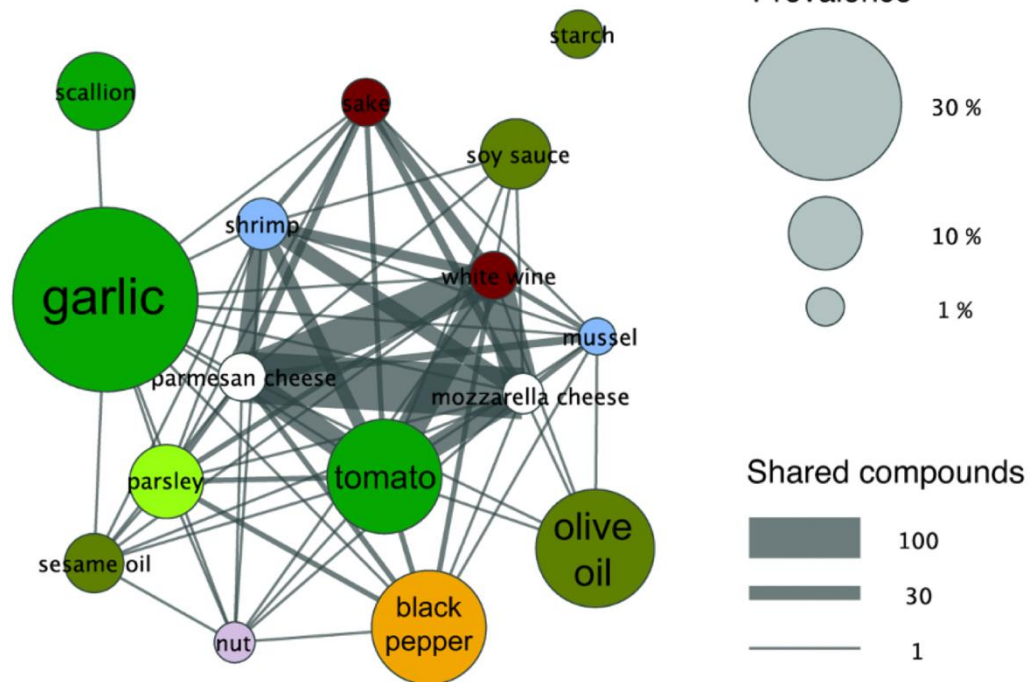
Instructor: Alvin Zhou

A Ingredients

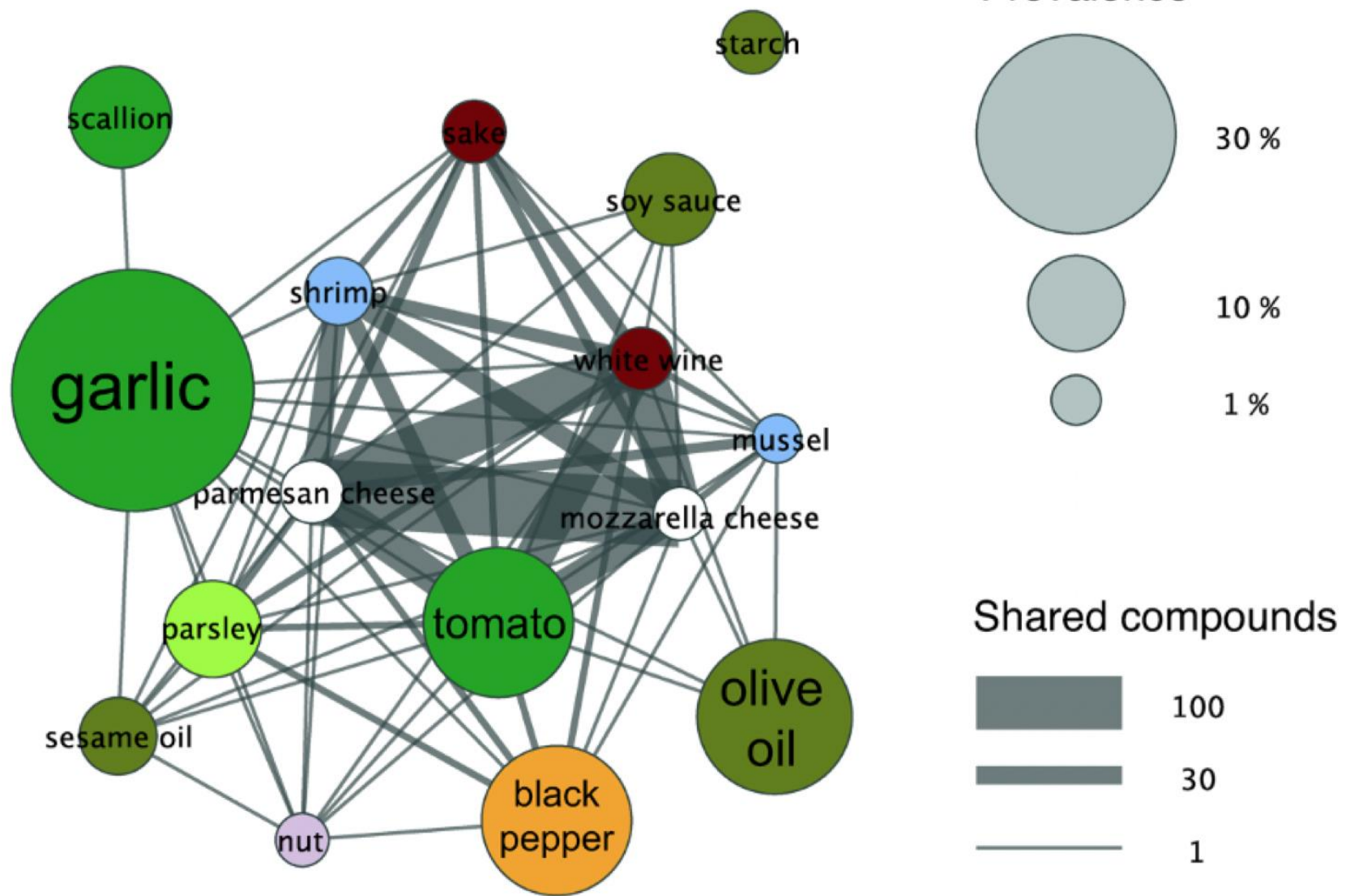
Flavor compounds



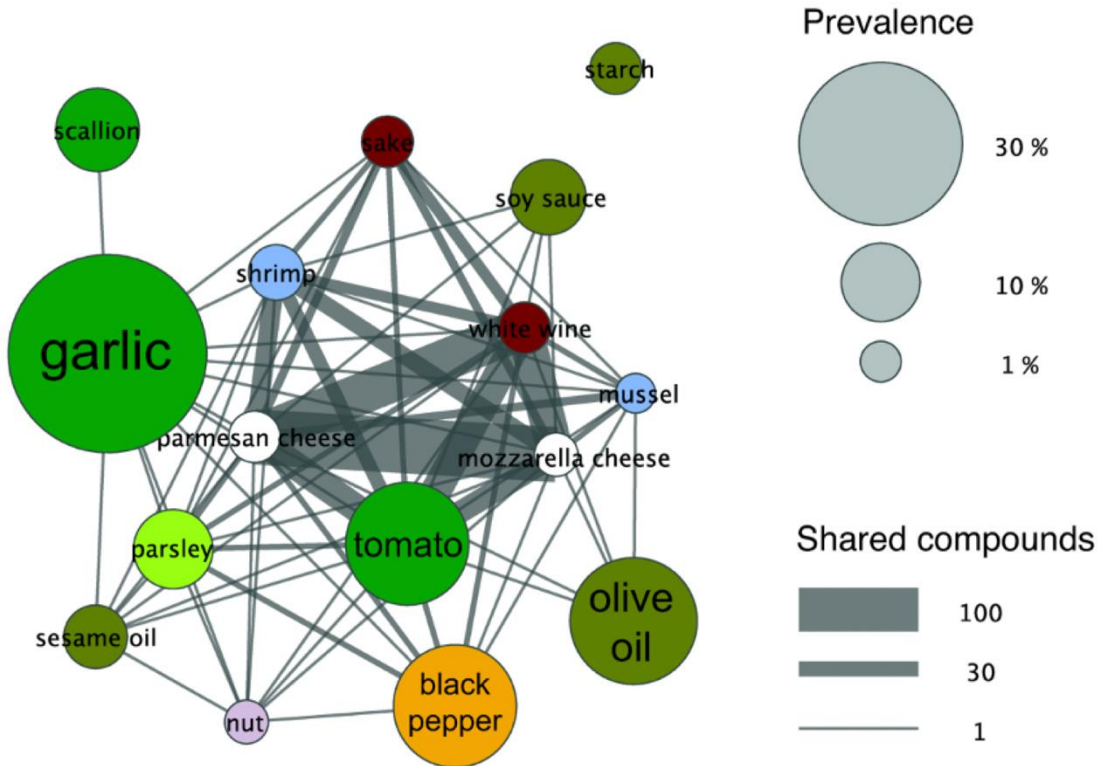
B Flavor network



B Flavor network

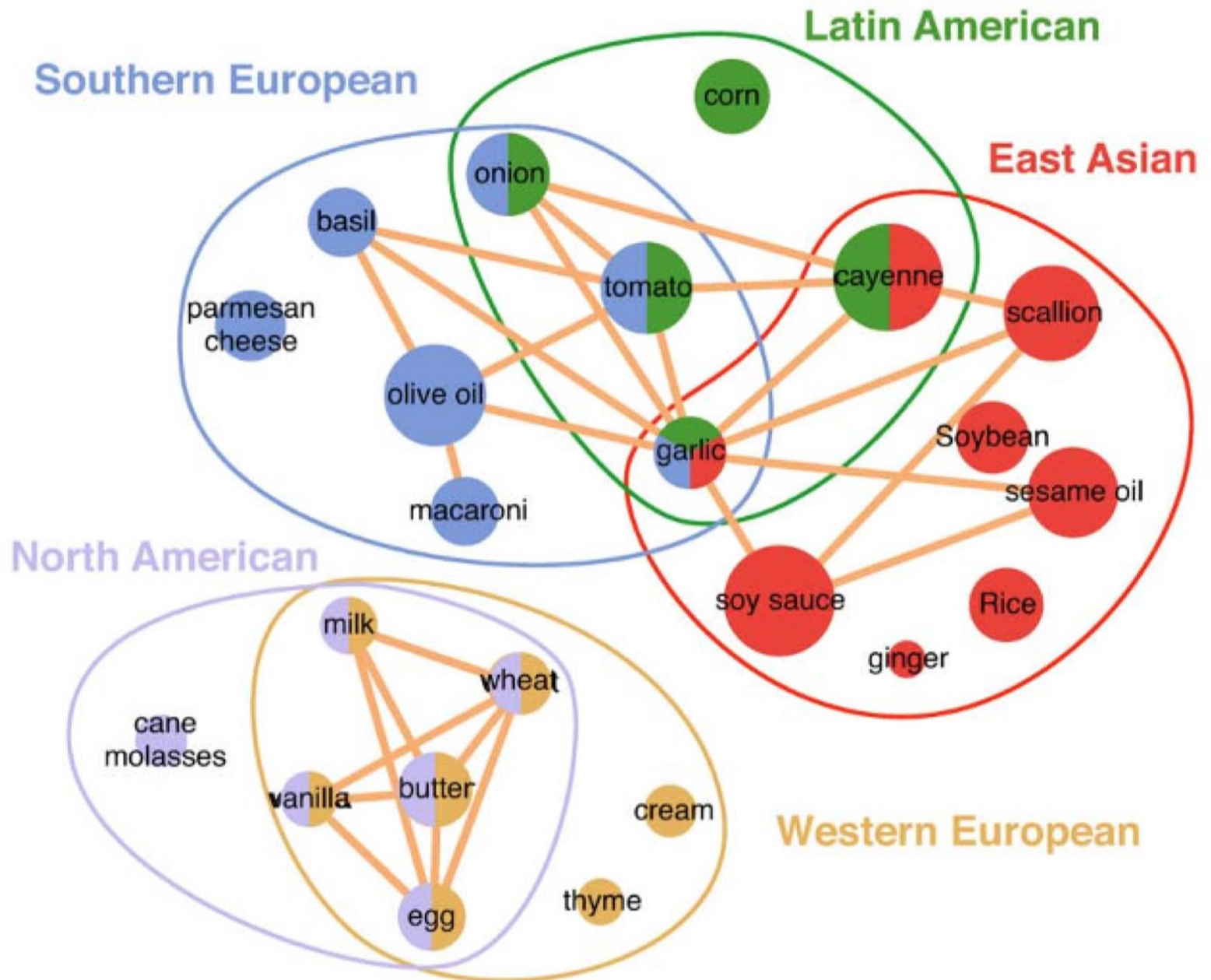


B Flavor network

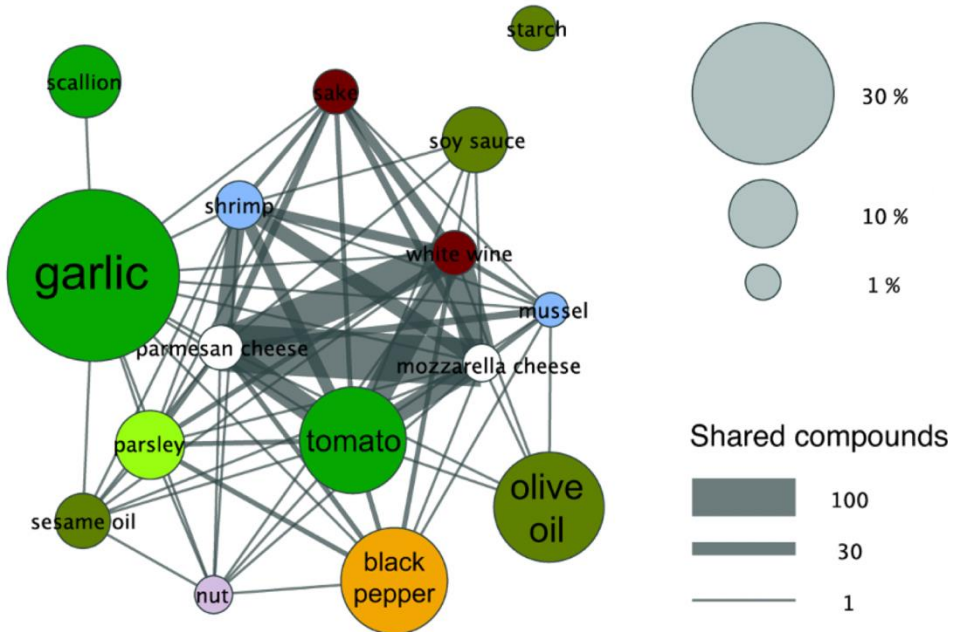


- Node: ingredient
- Tie: shared flavor compound
- What else could be the tie?

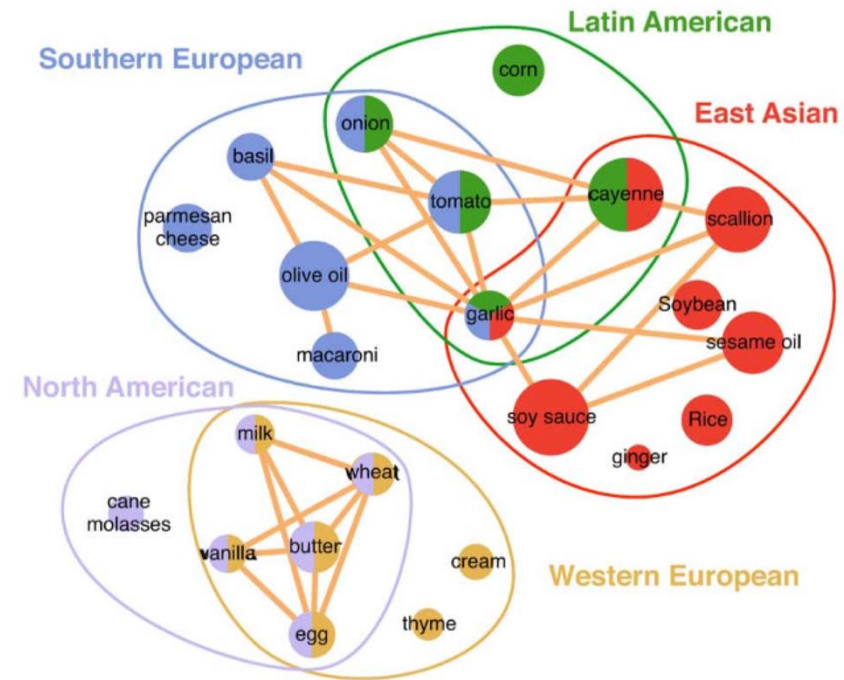
C



B Flavor network



C Co-occurrence in recipes



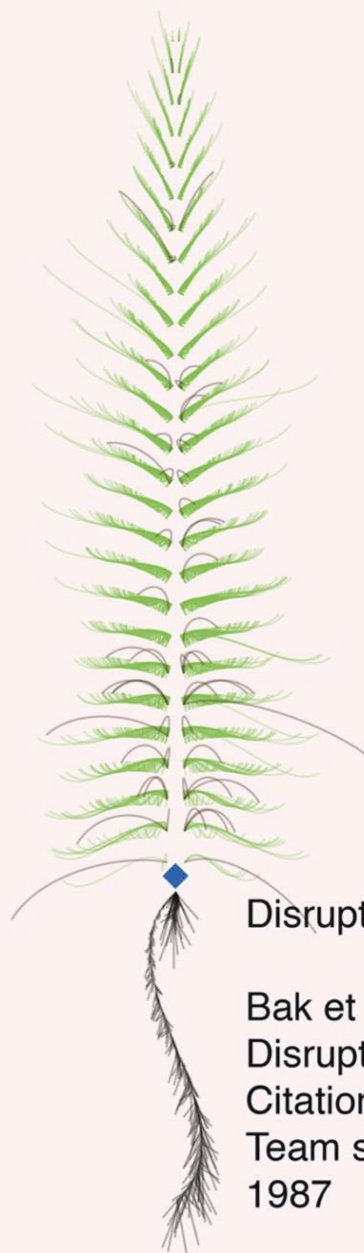
What other kinds of networks could be constructed from the data?

b



Developing

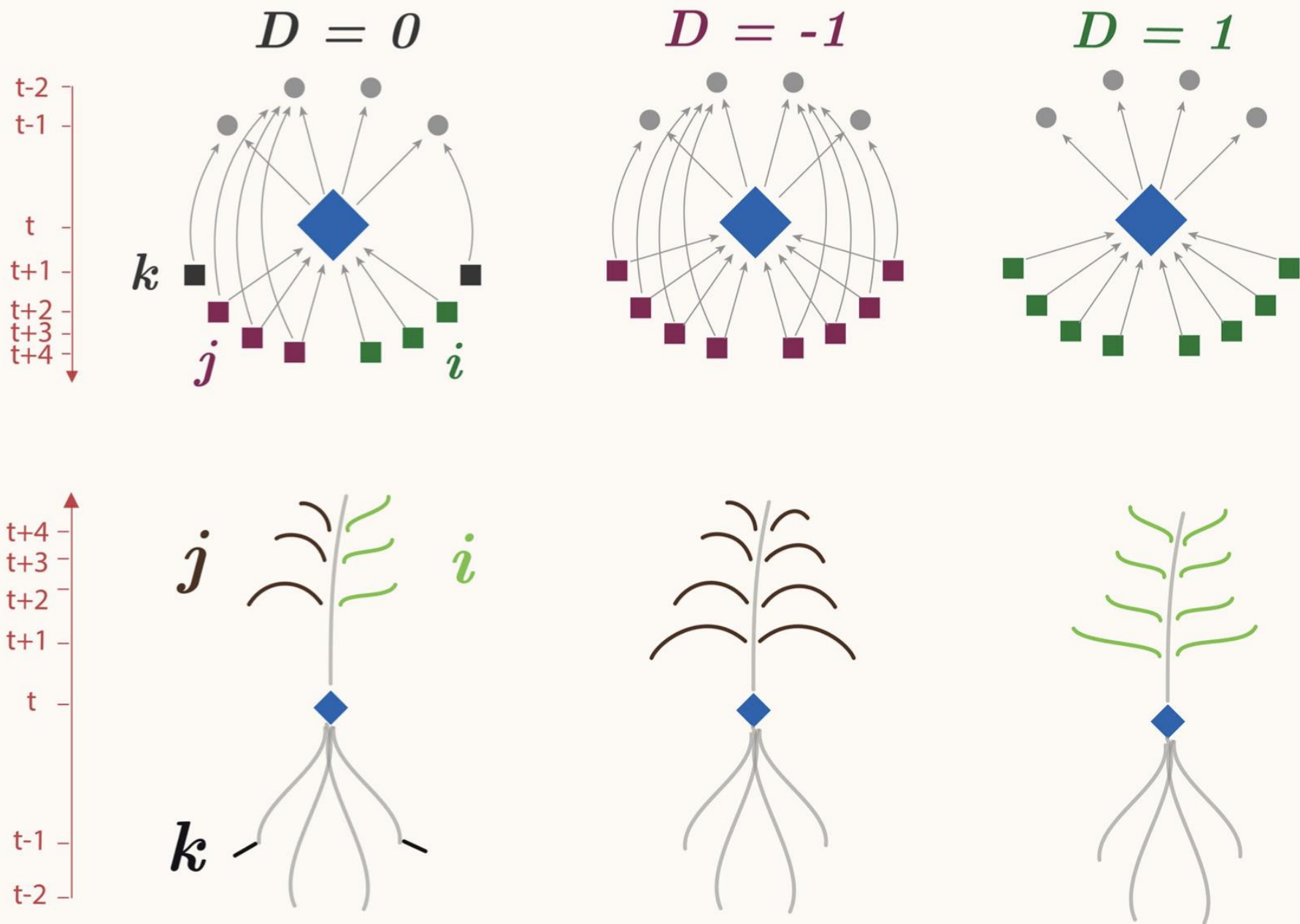
Davis et al.
Disruption -0.58
Citation 3269
Team size 7
1995

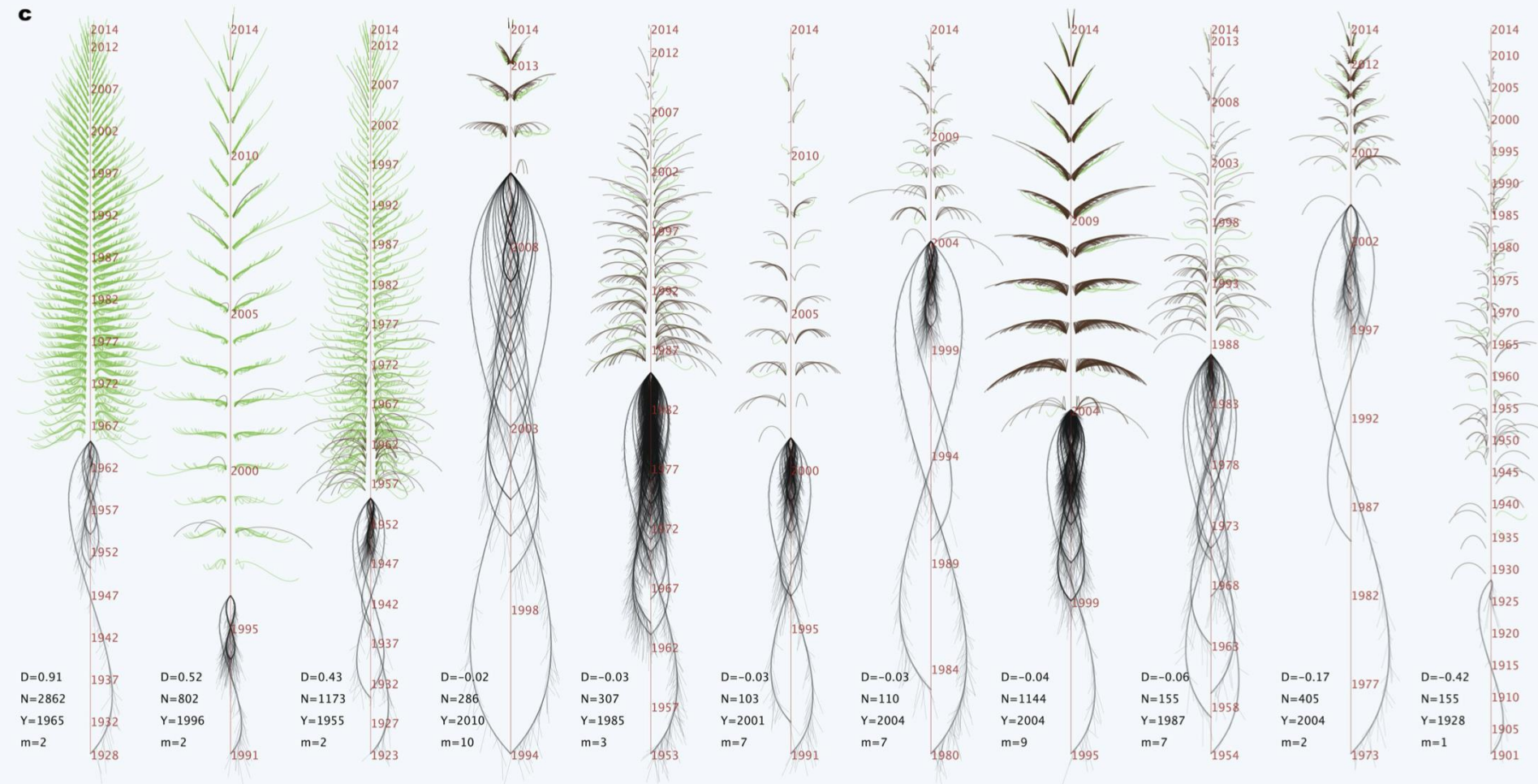


Disrupting

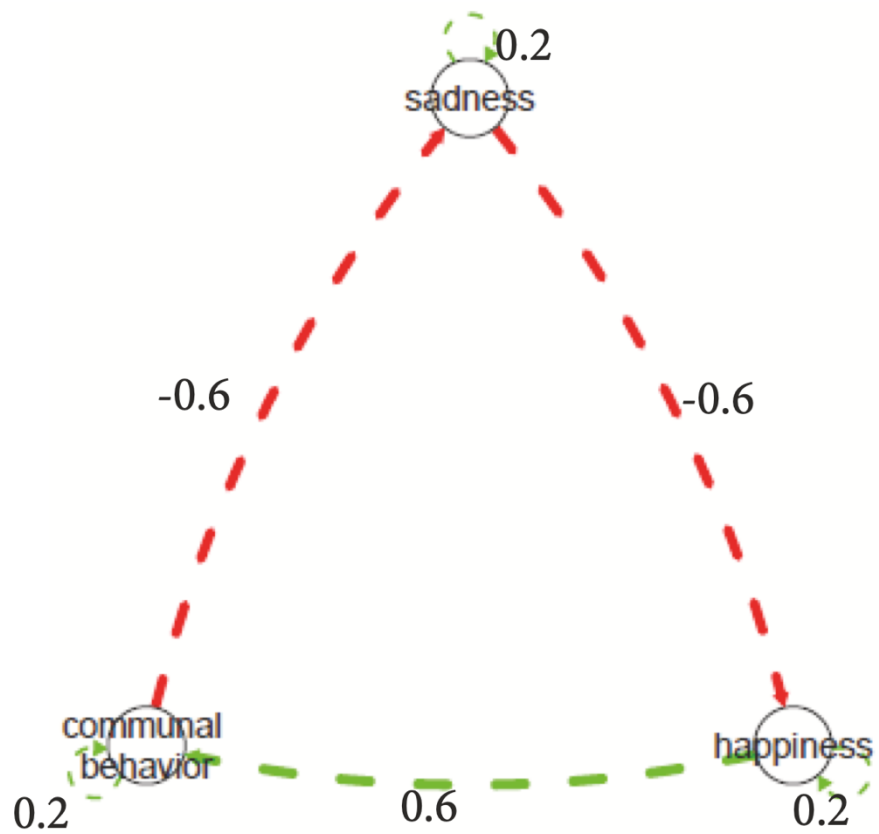
Bak et al.
Disruption 0.86
Citation 3433
Team size 3
1987



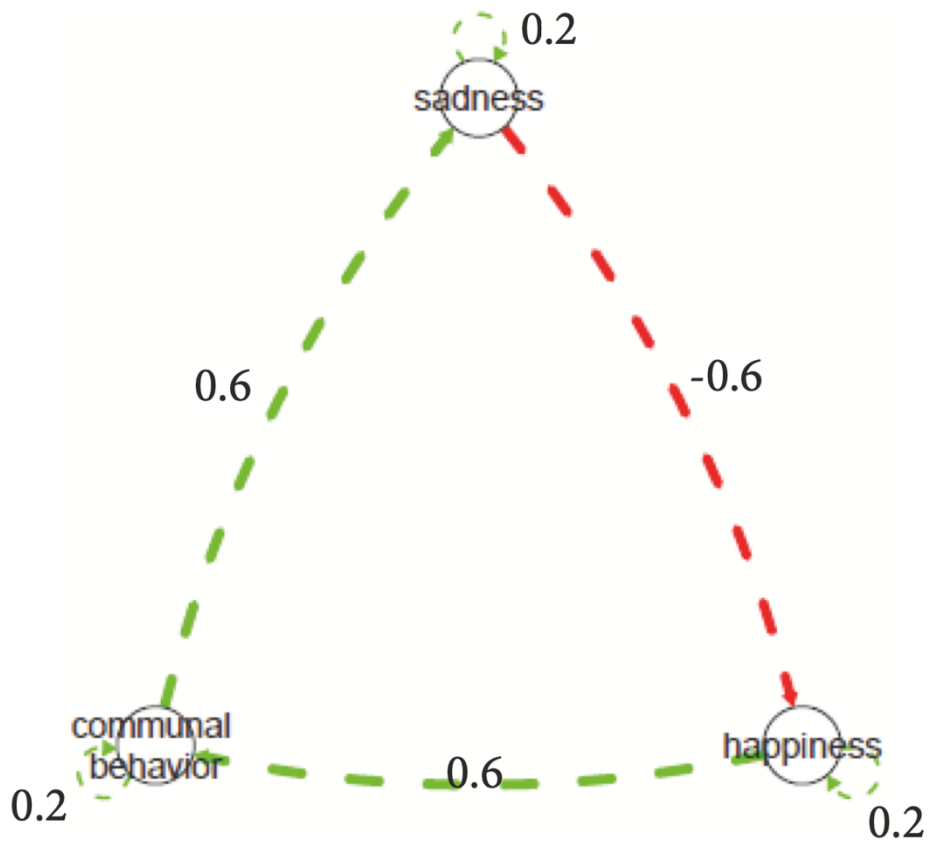
a



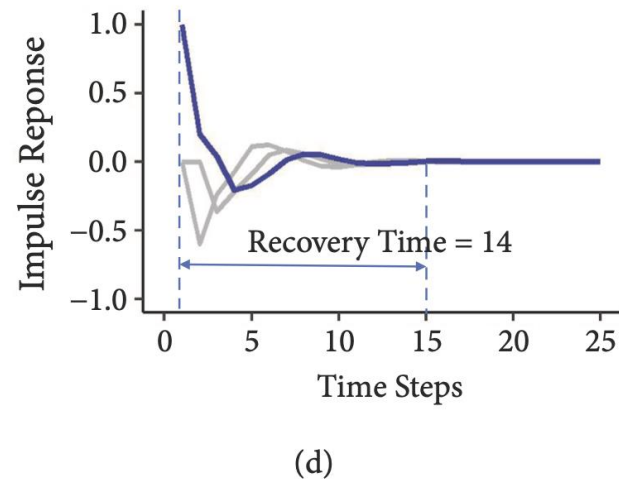
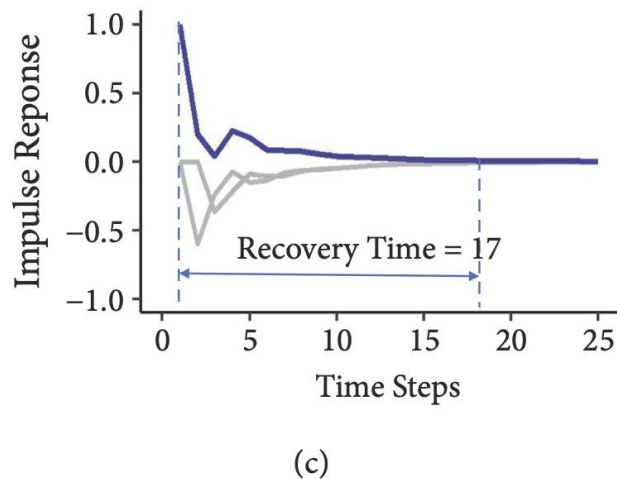
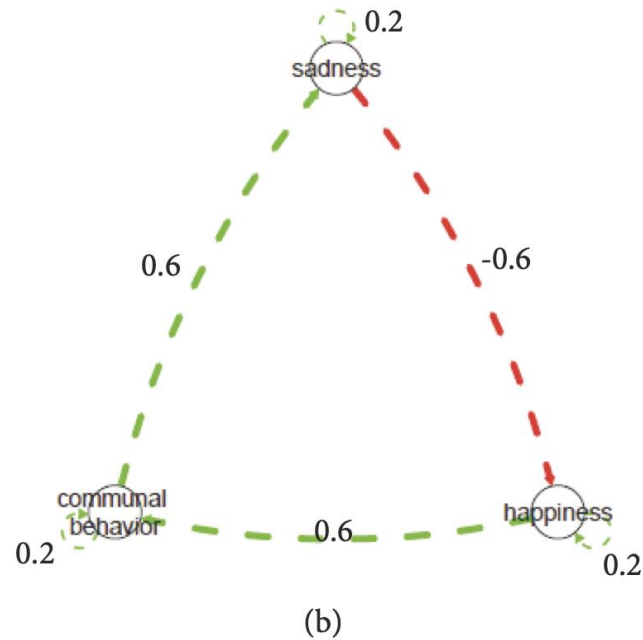
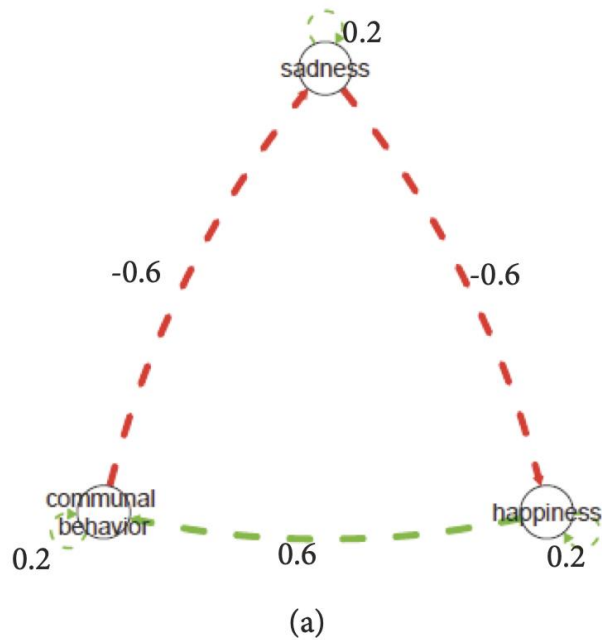
Wu, L., Wang, D., & Evans, J. A. (2019). Large teams develop and small teams disrupt science and technology. *Nature*, 566(7744), 378–382. <https://doi.org/10.1038/s41586-019-0941-9>



(a)

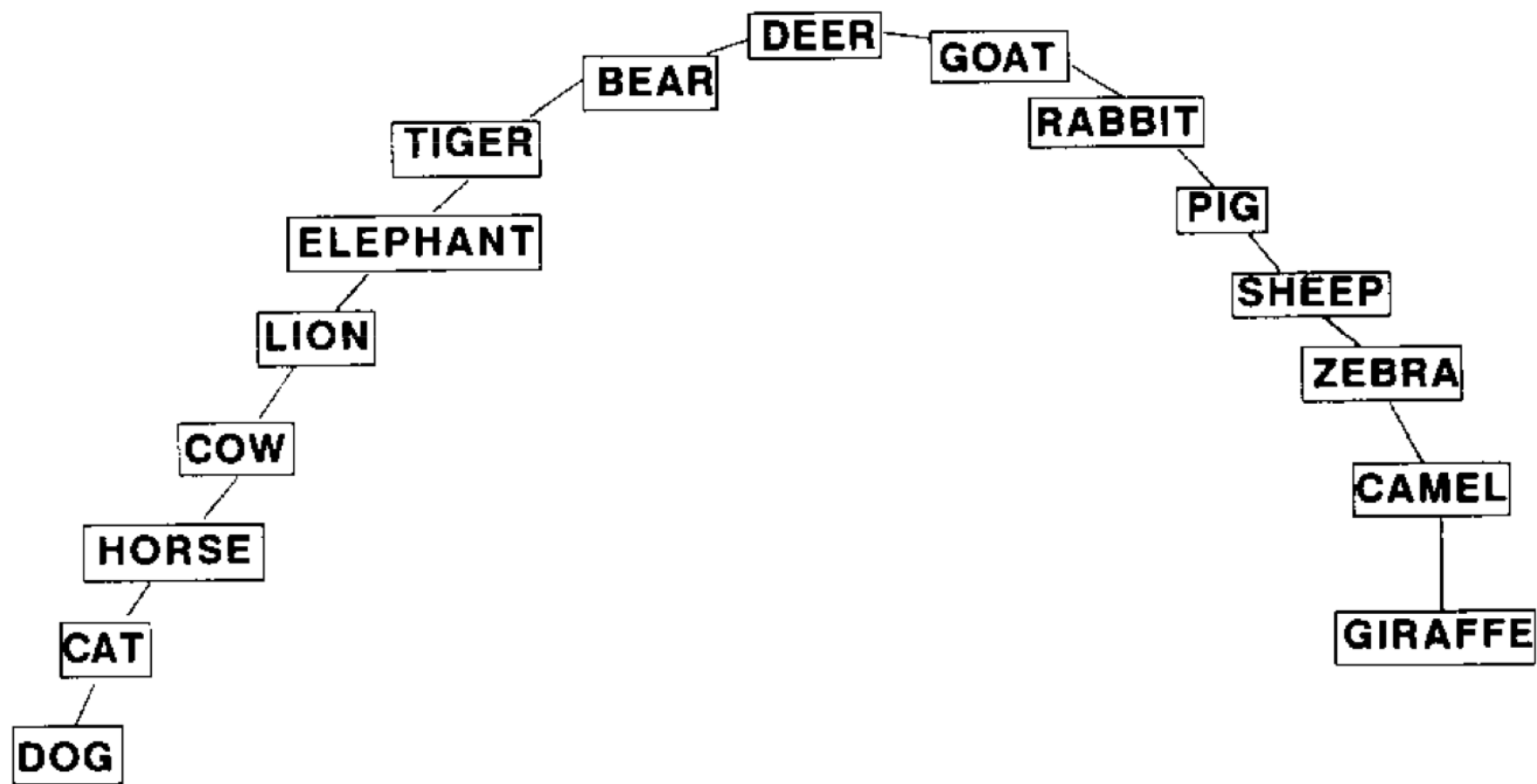


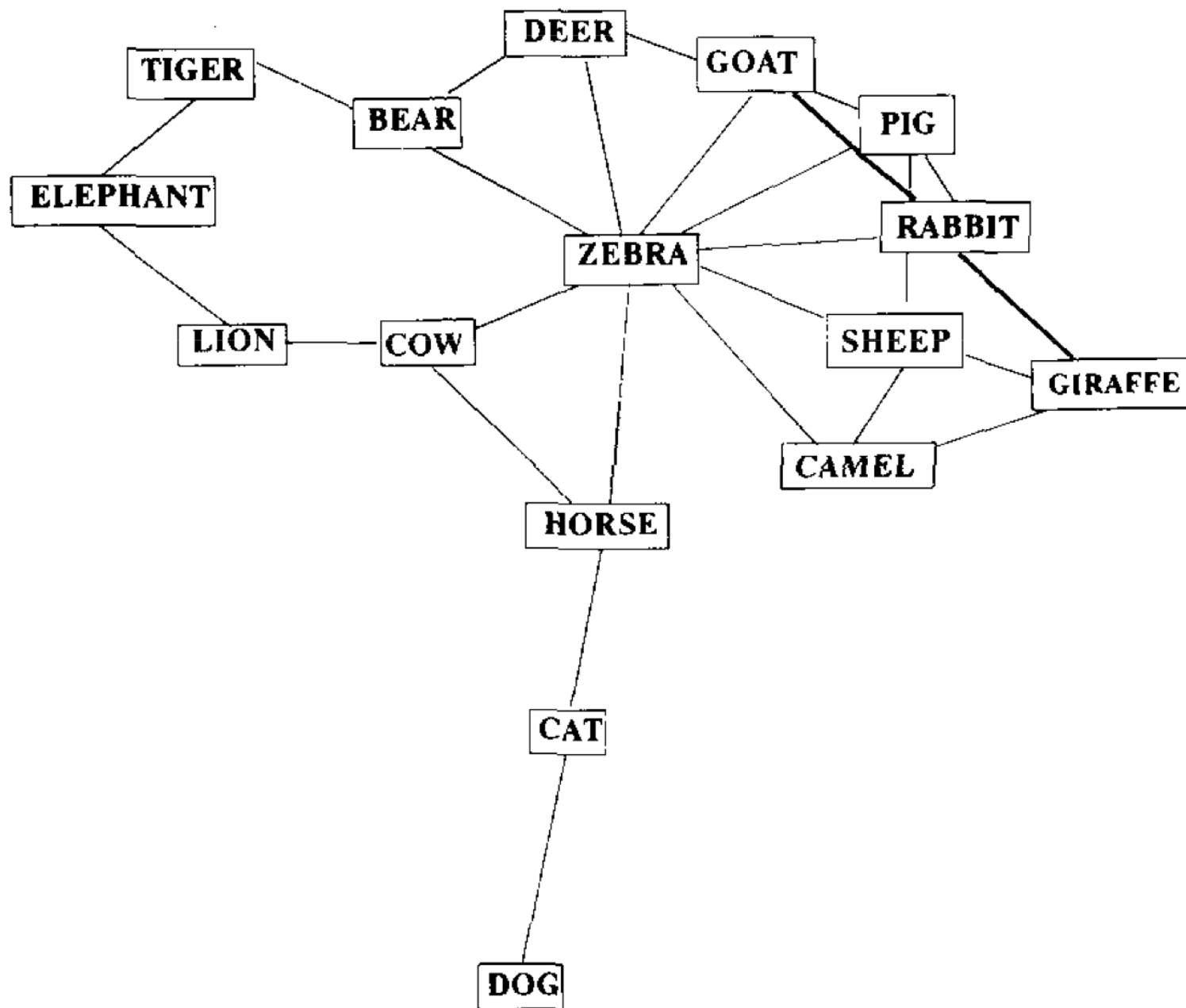
(b)



Yang, X., Ram, N., Gest, S. D., Lydon-Staley, D. M., Conroy, D. E., Pincus, A. L., & Molenaar, P. C. M. (2018). Socioemotional dynamics of emotion regulation and depressive symptoms: A person-specific network approach. *Complexity*, 2018(1), 5094179.

<https://doi.org/10.1155/2018/5094179>





Brainstorm Time - What Networks Could Be?

- Pick a topic
- Think of a network
- What's the node? What's the tie?
- Node size/color? Tie width/color?
- What will it tell us?

