

# Class 8: Spread of disease in networks

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Sociology 204: Social Networks, Spring 2021  
Princeton University

3/3: Large scale sexual network in Likoma, Malawi



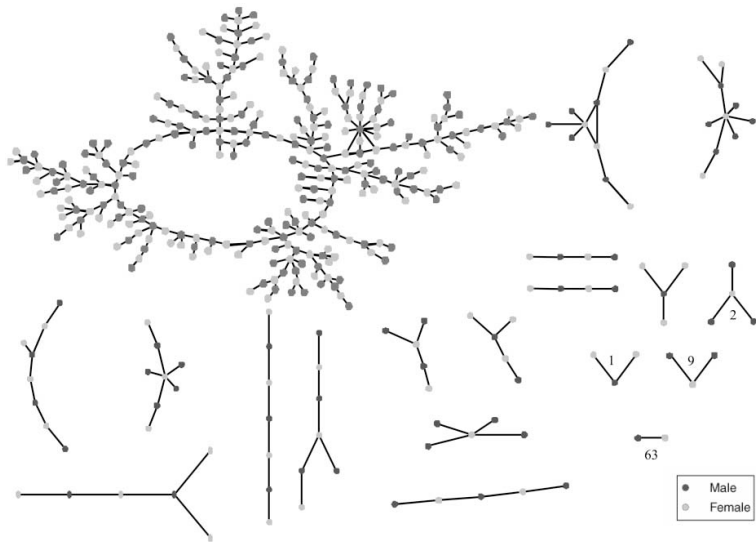


FIG. 2.—The direct relationship structure at Jefferson High

# **Sexual network structure and the spread of HIV in Africa: evidence from Likoma Island, Malawi**

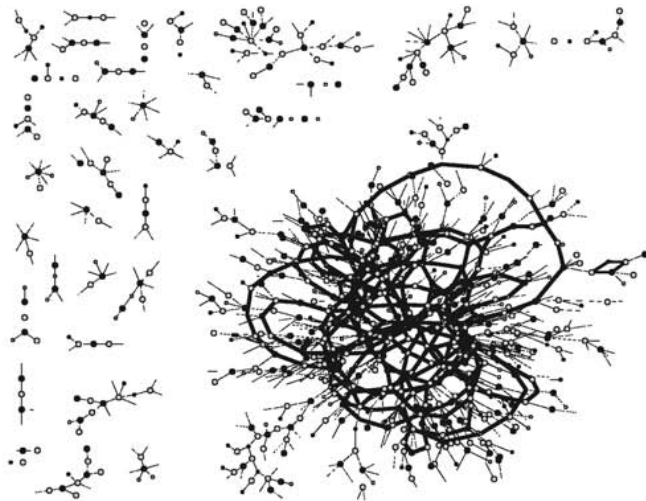
**Stéphane Helleringer and Hans-Peter Kohler**

<http://www.ncbi.nlm.nih.gov/pubmed/18090281>

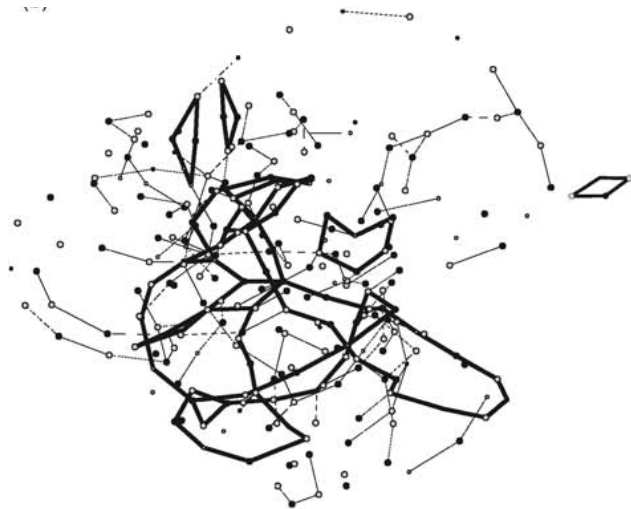


*How to get to zero:*

***Faster.  
Smarter.  
Better.***

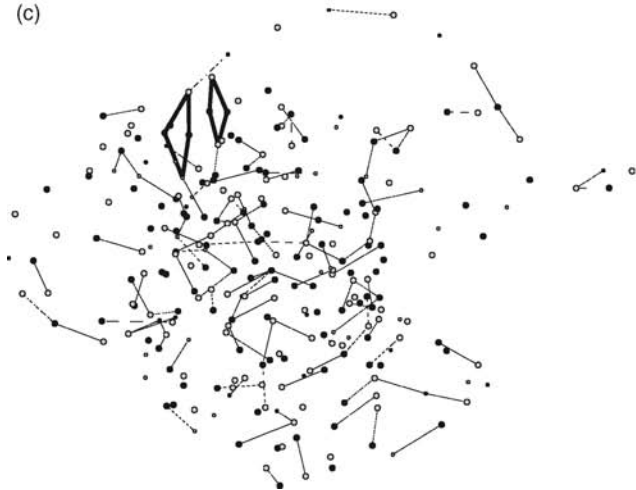


Last 3 years



Last year

(c)



Right now



members (Fig. 2b). Short-length cycles (i.e. two individuals having two partners in common) are also present within the network of relationships that were ongoing at the time of the survey (Fig. 2c). For comparison, Bearman *et al.* [25] did not find any short-length cycles among students of a US high school over an 18 month period.

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- ▶ simple rules by individuals can aggregate to complex network patterns

## Next class: Madness of Crowds

- ▶ Watts, Chapter 7.
- ▶ Asch, S.E. (1955). Opinions and social pressure. *Scientific American*, 193(5):31-35. (Available on Canvas)
- ▶ Easley D. and Kleinberg, J. (2010). “Networks, Crowds, and Markets: Chapter 16”. (skim mathematical model in Sections 16.3-16.6)
- ▶ Tierney, J. (2007). Diet and fat: A severe case of mistaken consensus. *New York Times*