Lecture 3: More on the small world problem and some history

Sociology 204: Social Networks, Spring 2021

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2/3: Random graphs

Empirical approach
(Harvard approach)

vs.

Modeling approach
(MIT approach)

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- What is the point of mathematical models?

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- How will we work with mathematical models in this class?

Erdos - Renyi Model

Demo

http://www.netlogoweb.org/launch#http://ccl.northwestern.edu/netlogo/models/models/Sampl%20Models/Networks/Giant%20Component.nlogo

We all get connected very quickly . . .

Is this is a good model for the social network at Princeton?

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No. Not everyone is equally likely to be connected.

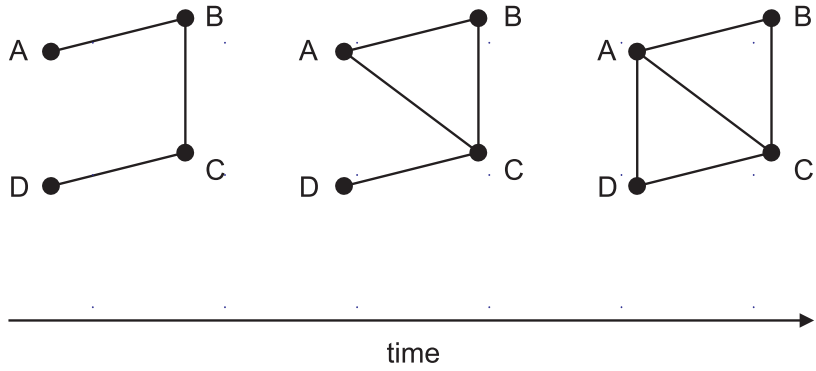
Network models

- Erdos-Reyni (dyadic)

Network models

- Erdos-Reyni (dyadic)
- Rappaport (triadic), wants the balance between randomness and order

2.3



For a detailed mathematical treatment of random graphs, I recommend: