4. Descriptive Network Statistics: Centrality measures

Introduction to Social Network Analysis in R

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Descriptive Network Statistics (Metrics) Centrality

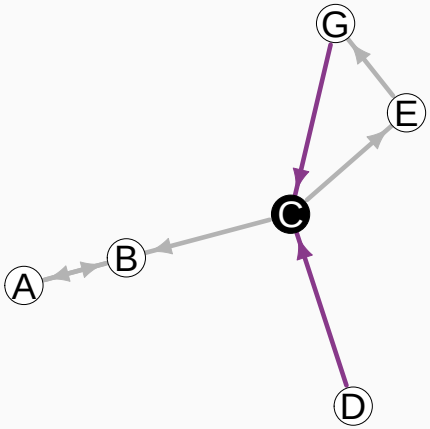
Introduction to Social Network Analysis(SNA) in R

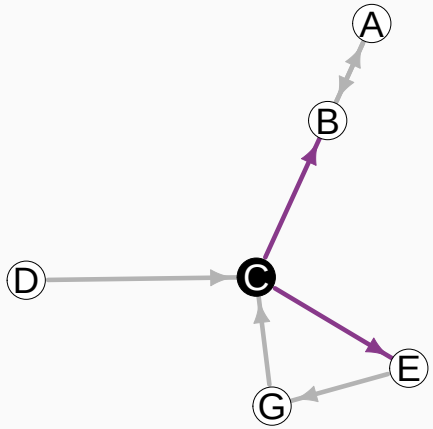
1. Introduction to basic concepts in SNA
2. Visualization of networks.
3. Metrics - Individual nodes.
4. Metrics - Whole network.
5. Project.

Descriptive Network Statistics (Metrics) Centrality

Descriptive Network Statistics (Metrics) Centrality

Degree Centrality





Indegree and Outdegree

Centrality

Closeness Centrality

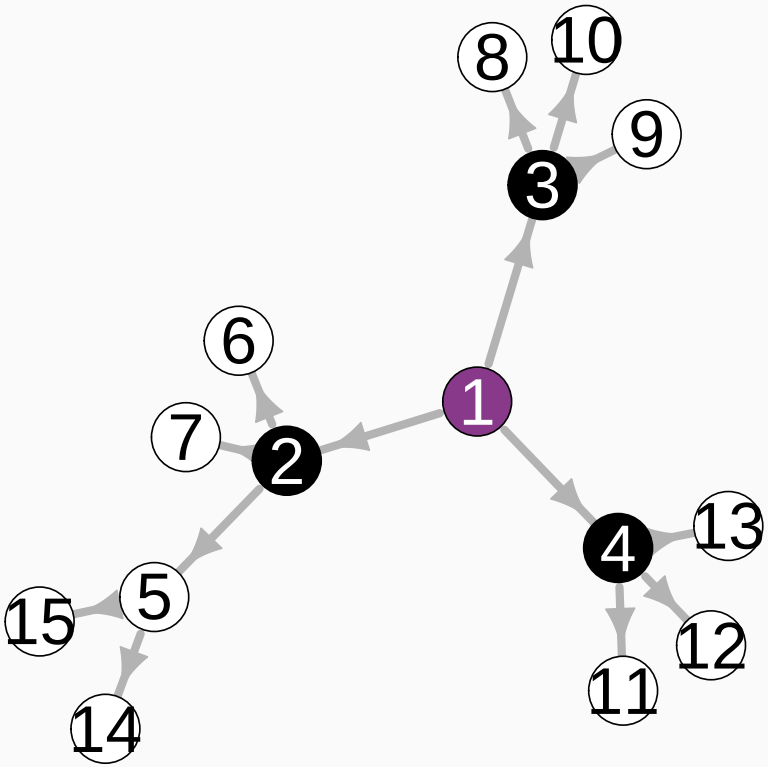
- Based on the distance to all other nodes.
- Inverse of the node's average geodesic distance to others in the network.

Betweenness Centrality

- Based on its brokerage position.
- Number of shortest that pass through the node.

Tease out local versus global patterns

Centrality



Let's try these metrics!

Several other centrality metrics for both nodes and edges in `igraph` package

Summary:

Today we looked at

1. Some more Descriptive Network Statistics

Next session:

1. Community detection
2. Project.