Terminologies:

A network is a collection of units (**nodes, vertices**), and the ties (**edges, arcs, arrows)** between them. Relationships encoded by ties can be mutual or one direction.

A node we want to study is an **ego**. Nodes share ties with the ego are **alters**.

An ego’s outcome exhibits **induction** or **contagion** if its outcome may be affected by his contacts’ outcomes.

Distance in a network:

1. (Usually) **geodesic distance**: d(i, j) = min, where = # of edges between two nodes i, j, provided arc(i, j) or arc (j, i).
2. d(i, j) = # {arc(i, j)}, number of paths between nodes i and j.
3. d(i, j) = , average path length between nodes i and j.

(to be continued)