Homework1 – Centrality

1. Centrality measures are usually positively correlated. When they are not (low) correlated, it probably tells you something interesting. Think of 2 or 3 configurations in which they are not correlated and explain their implications.

2. In the 1970s, Roger and Kincaid studied the diffusion of family planning methods in 24 villages in Korea. The files Korea1.net and Korea2.net contain the communication networks among women in to villages: a village with successful family planning (korea1.net) and a village in which family planning is not widely adopted (Korea2.net). In both networks, a line indicates that two women discussed family planning. In addition, we know which women adopted family planning methods at least temporarily (Korea1_adopers.csv and Korea2_adopters.csv). We also know which women were members of the local Mothers' Club, which played an important role in the diffusion of family planning methods (Korea1_members.csv and Korea2_members.csv). All the files can be downloaded from the course website Session Week2.

   Combine visualization and some quantitative measures to analyze the networks and discuss whether centrality and network structure are associated with the success of the family planning program on one village and its relative failure in the other village.