*Local Networks Assignment*

Turn into Canvas prior to next class session (4/28)

Today's Assignment;

1. Compute Measures of Local Network Composition
2. Plot and Interpret Results

# 1. Compute Local Network Composition Measures

For "School 23" from the National Longitudinal Study of Adolescent Health Data, for each individual in the school, compute the following:

* network size (i.e., degree - separately for in, out & total)
* ego-network density
* transitivity
* Burt’s constraint

# 2. Evaluate Local Variation in the Graph

Construct the mixing matrix for gender and IQV scores for each node.

-**Bonus:** Build a random network and compare scores.

# 3. Graph and Interpret your results

-Plot the degree distribution

-**Bonus:** Plot the relationship between network size (total degree) and each of the other measures that you created (density, transitivity, constraint)

-Plot the network highlighting gender and transitivity

Interpret the results: What have you learned about School 23 by working through the local networks that comprise it?