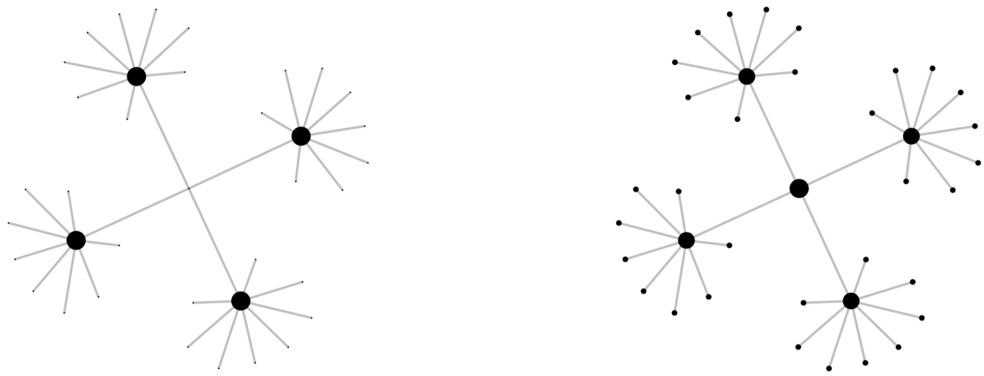
÷-vector centrality challenge

Classical spectral centrality measures define important nodes as those that are connected to important others. For example, in the case of *eigenvector centrality* e defined as

$$\lambda e = Ae,$$

where A is network adjacency matrix and λ is its leading eigenvalue, the importance of a node is **proportional** to the number **and** importance of its neighbors (see right side of figure below).



Recently proposed ÷-*vector centrality* x defines the importance of nodes as

$$x = Ax^{\div},$$

where $x^{\div}$ is a vector whose entries are the reciprocal of values of x, $x_i^{\div} = x_i^{-1}$. Thus, in contrast to before, the importance of a node is **proportional** to the number of its neighbors, but **inversely proportional** to their importance (see left side of figure above).

Give an example of a particular network and scenario where ÷-*vector centrality* would be **meaningful**. (*State what are network nodes and links, and what* x *measures.*)