



*trees and networks*

# *Networks*

# *Definition*

*nodes, edges*

*Definition*

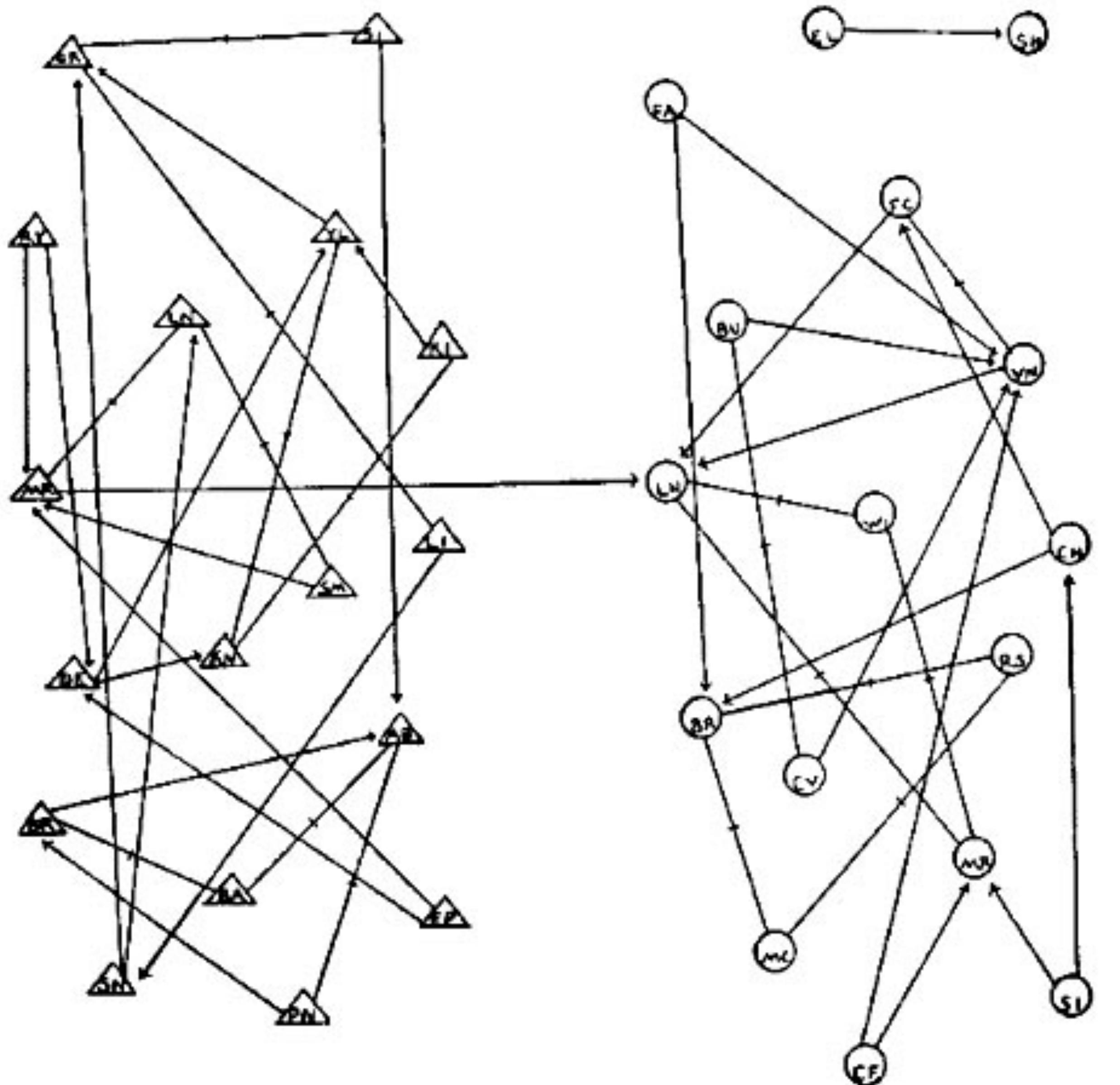
# Representation

*adjacency list* (a, b) (a, c) (c, d)

*adjacency matrix*

*Representation*

# *Applications*



Jacob Moreno  
1933 NY Times  
School network

*Build  
your own!*

*alice, bob*

*chris, dale*

*alice, chris*

*bob, dale*

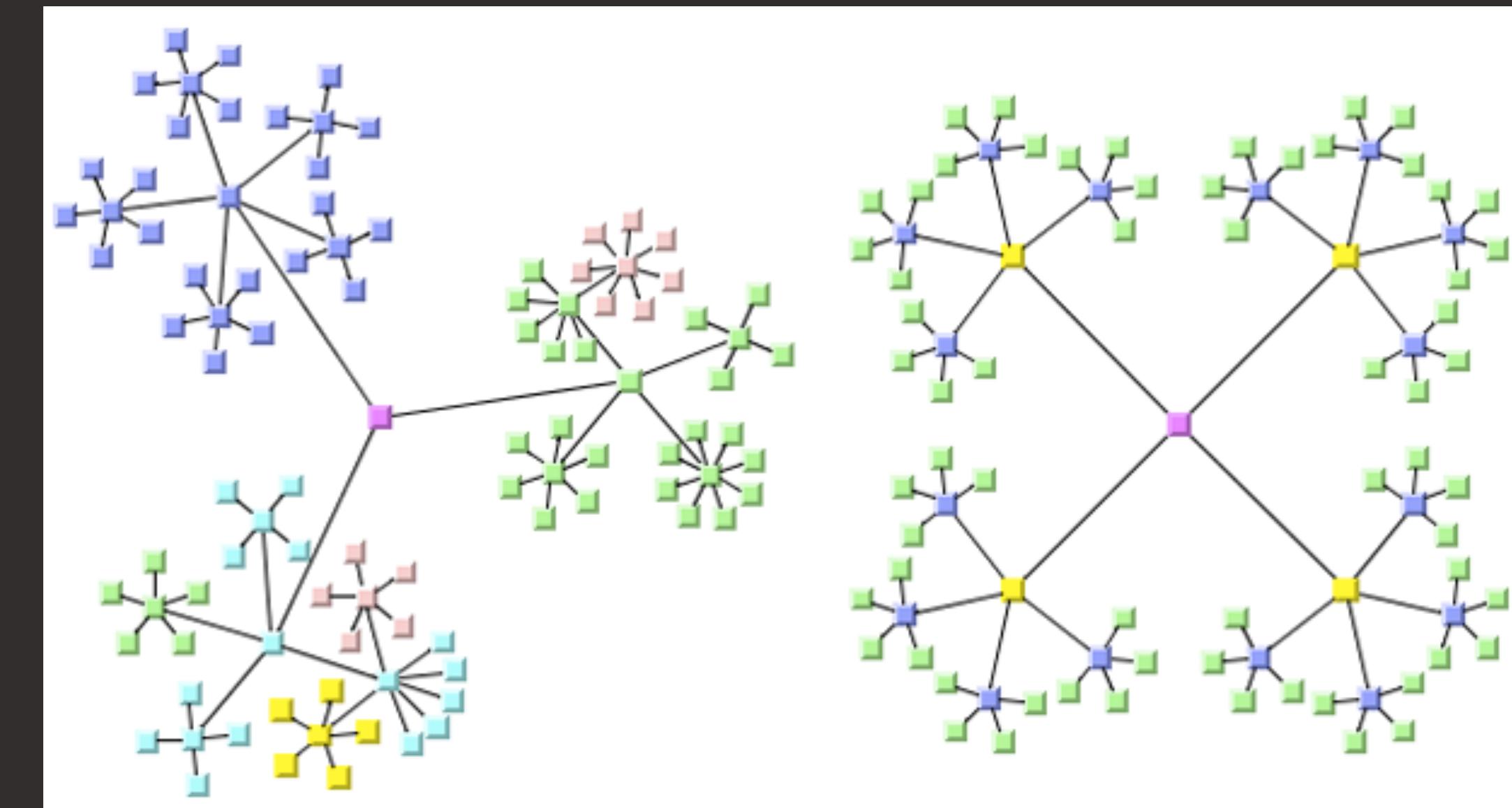
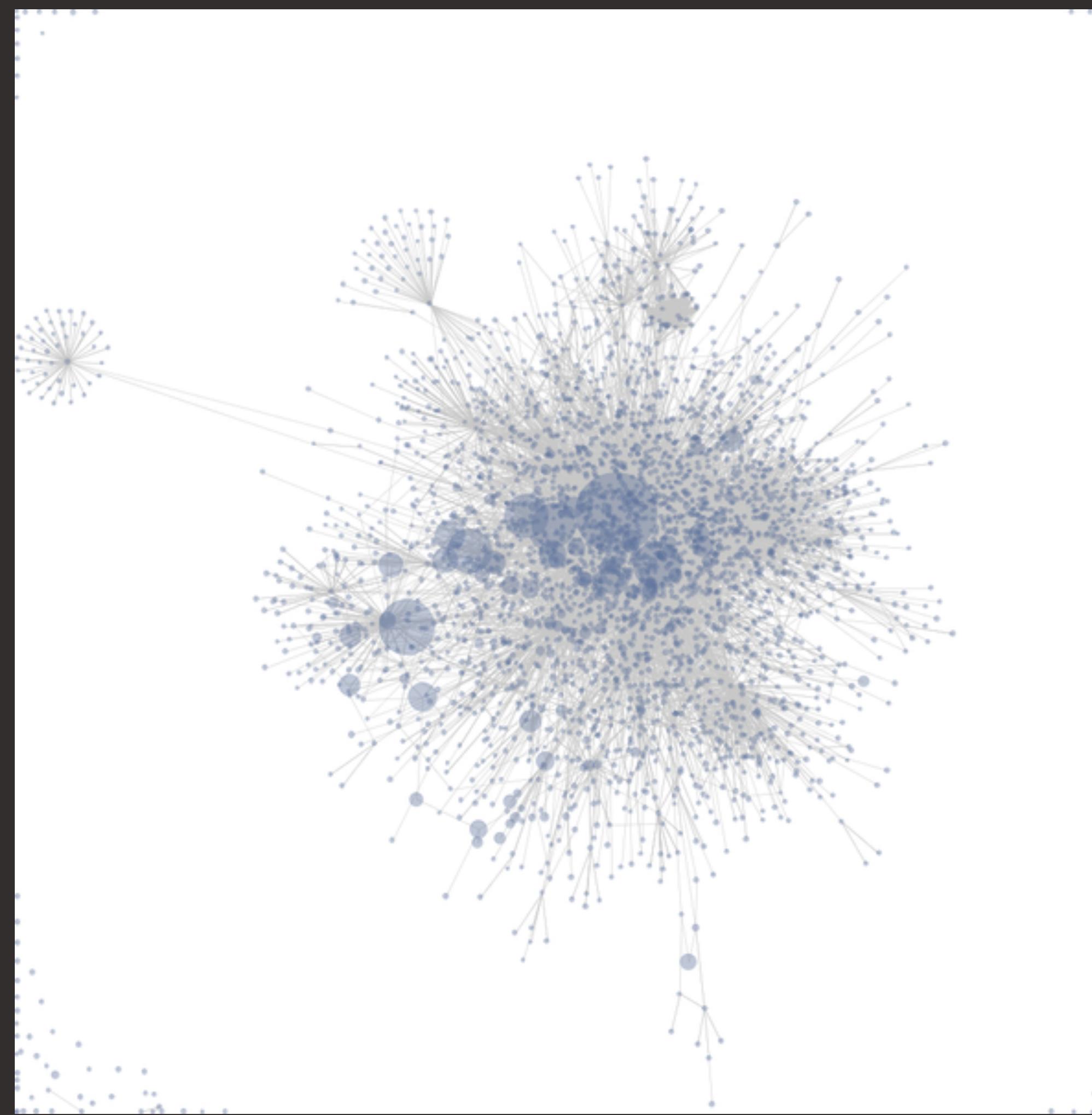
*bob, dale*

*dale, fred*

*alice, chris*

*fred, erin*

# *Techniques*



# *Node-link*

# *Layouts*

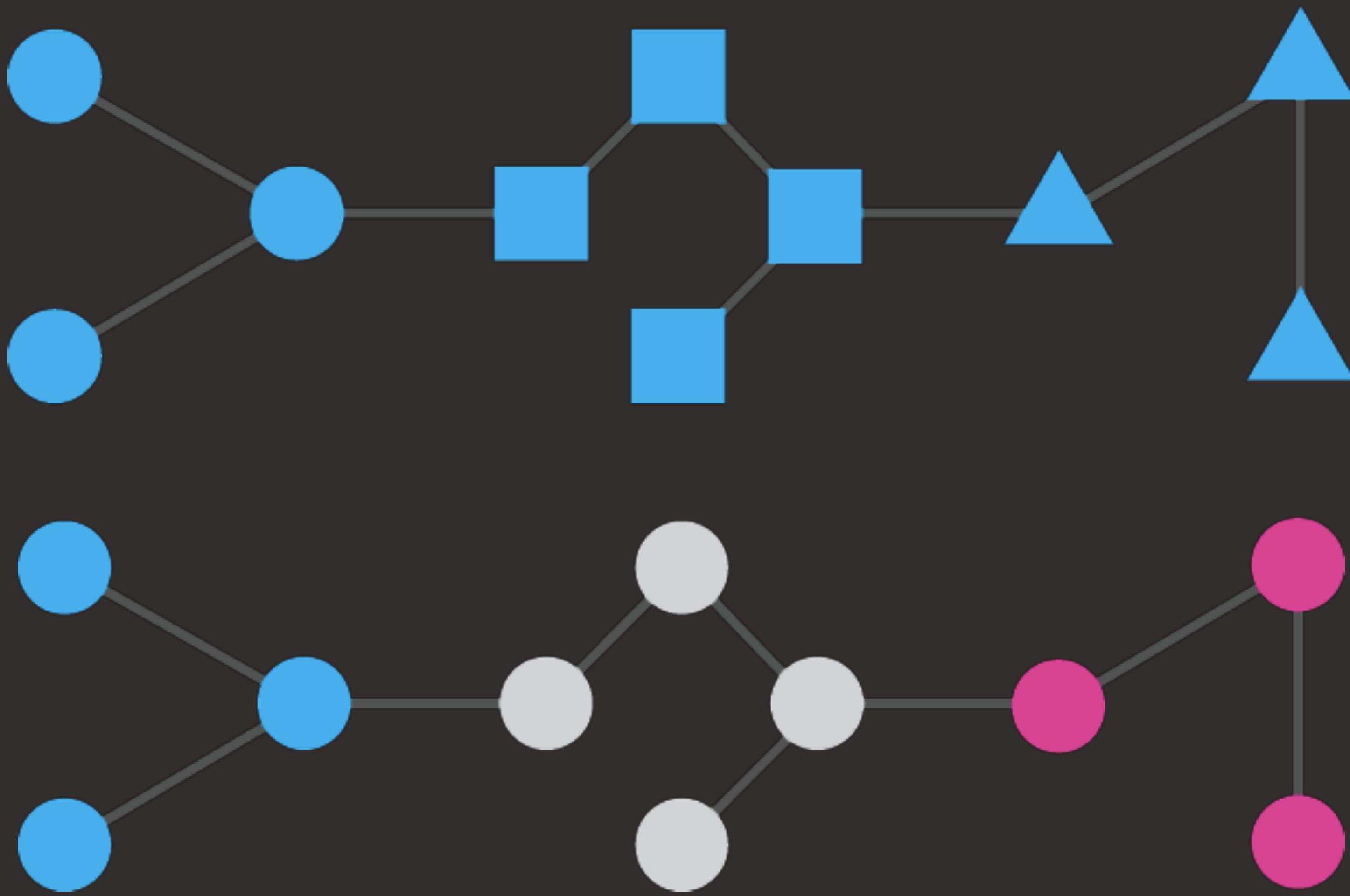
Force-directed

Radial

# *Design options*

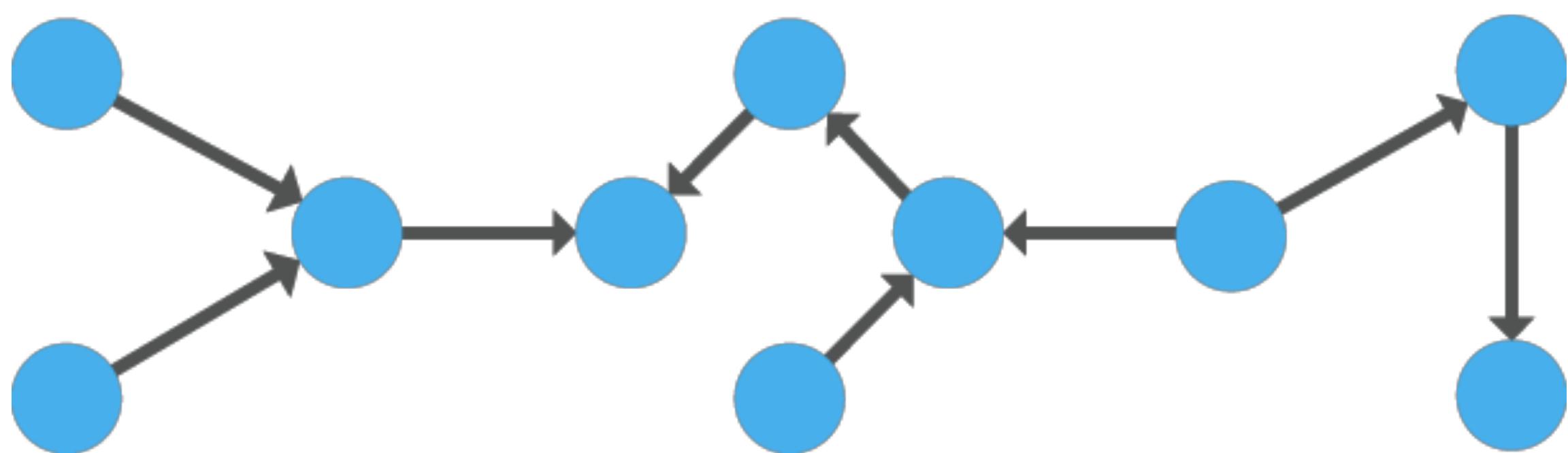
# *Nodes*

# *shape vs. color*

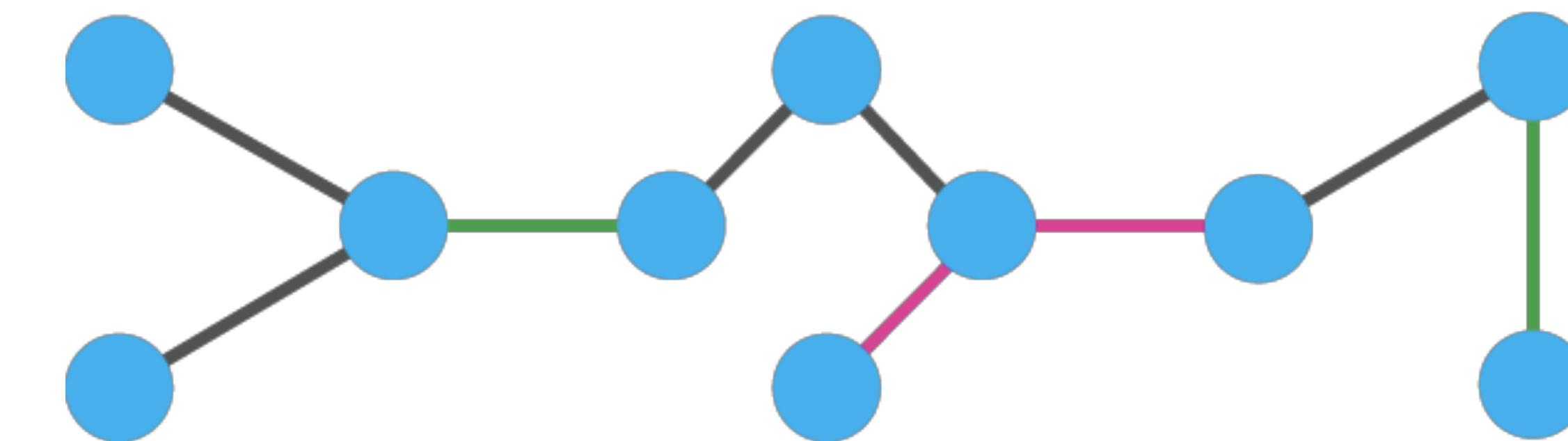


# Edges

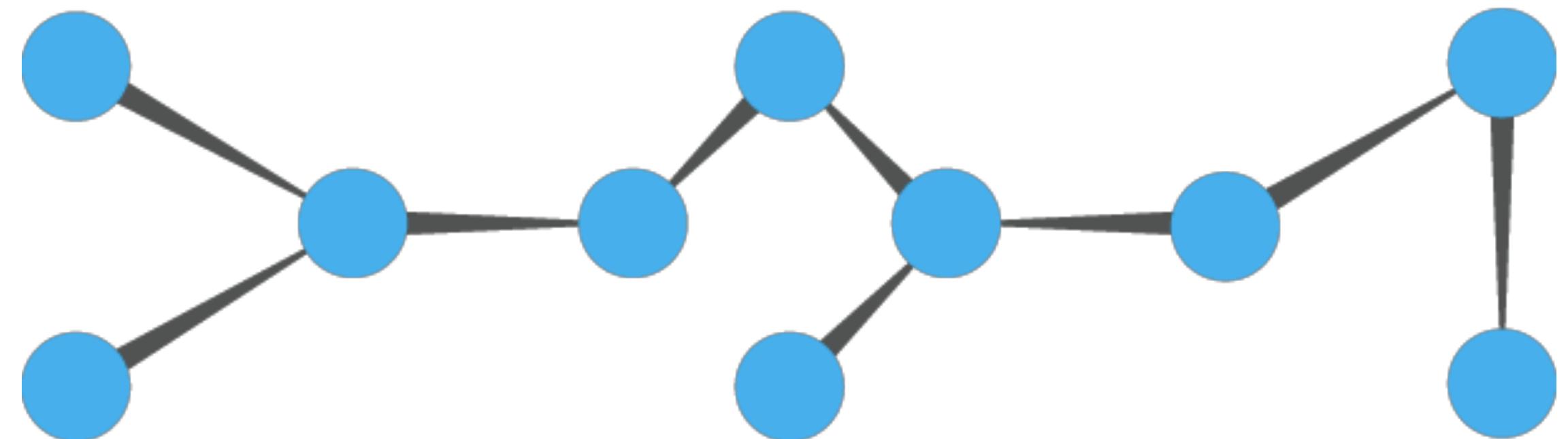
Edge Direction



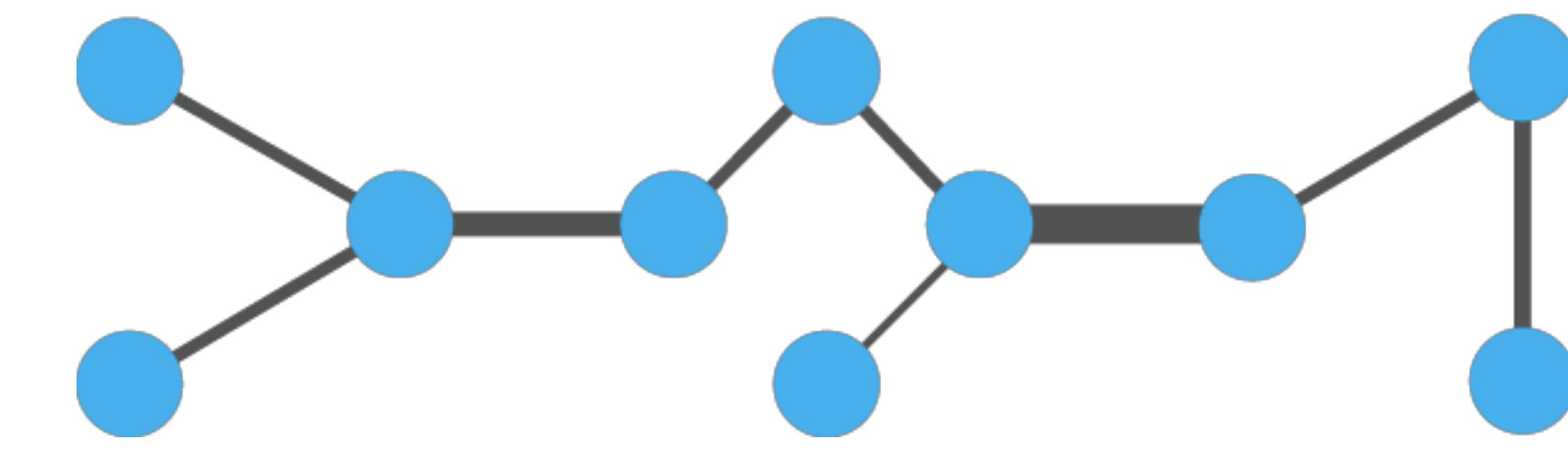
Edge Color



Edge Tapering



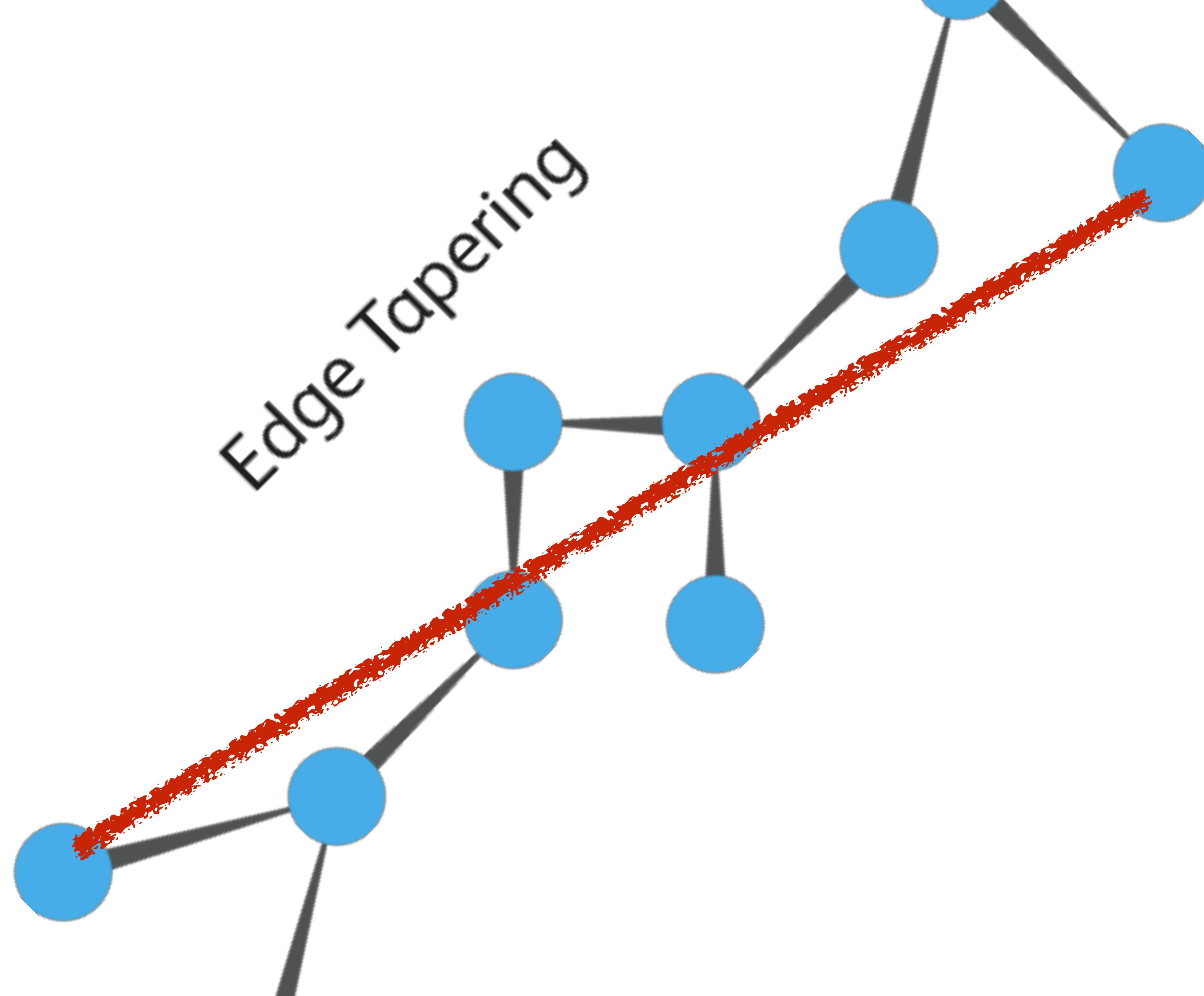
Edge Size

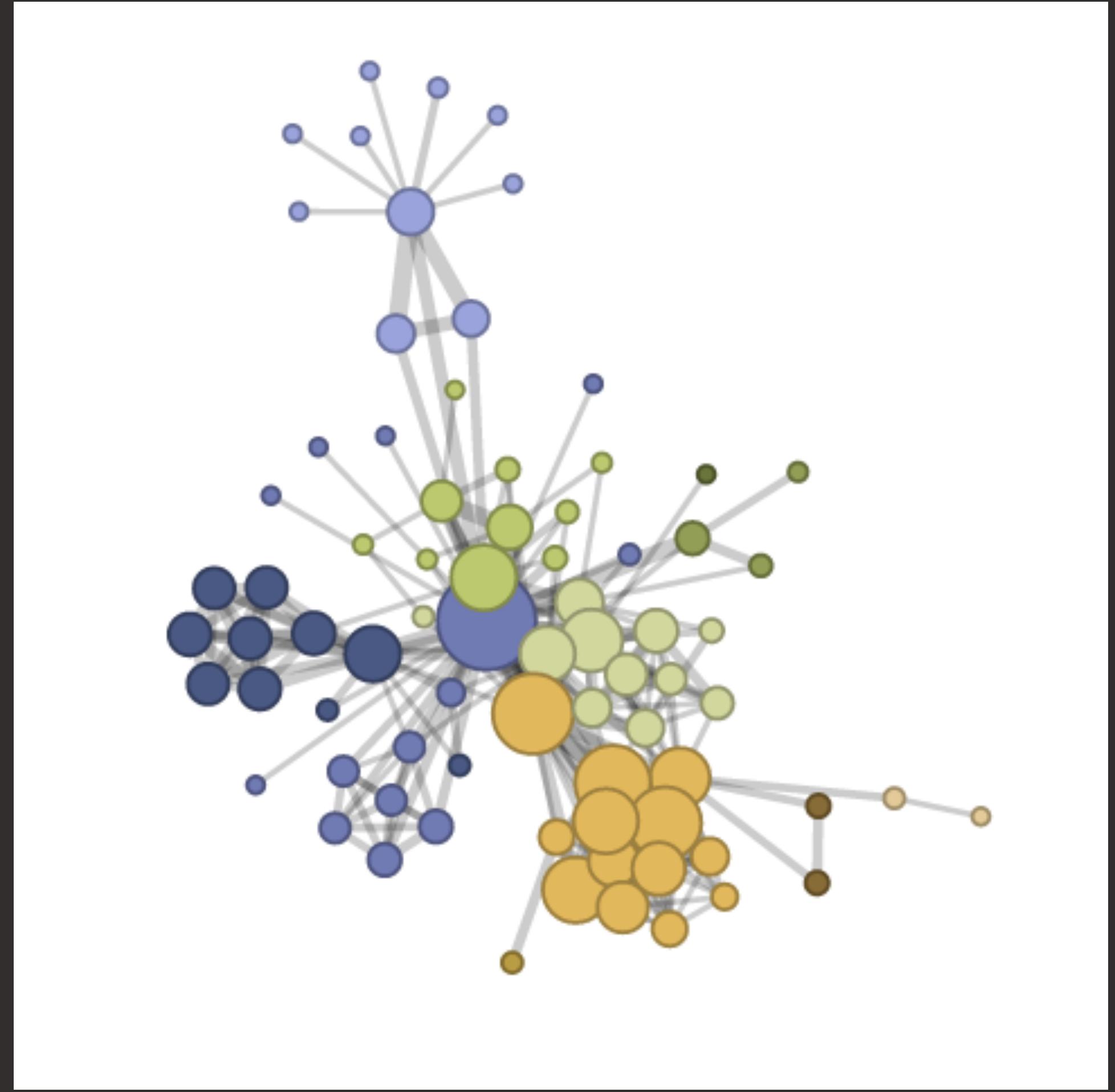


*direction*

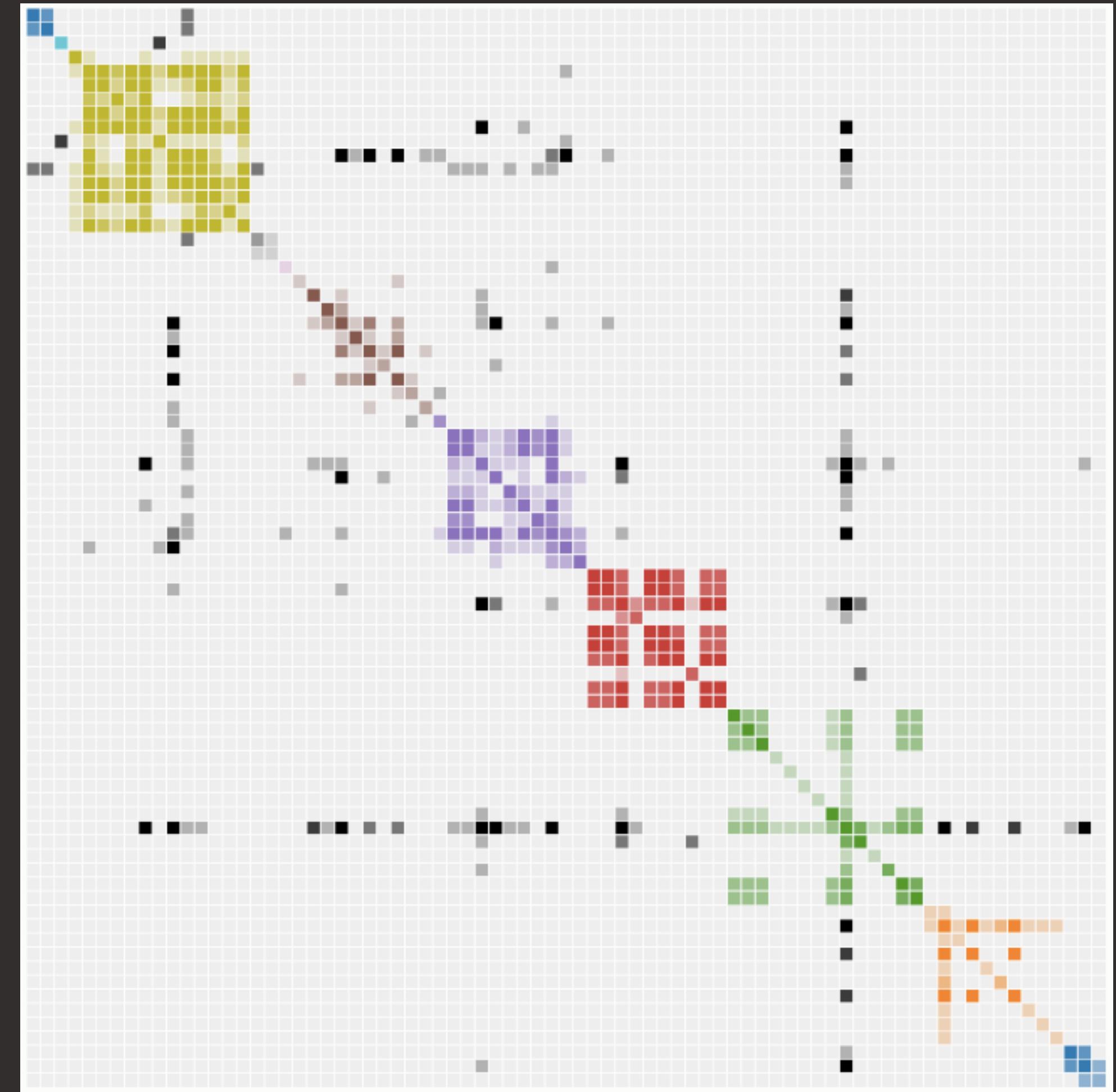
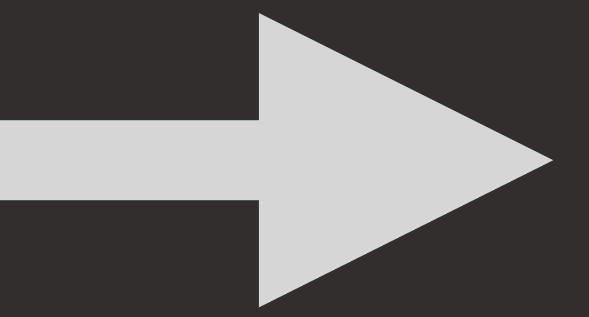
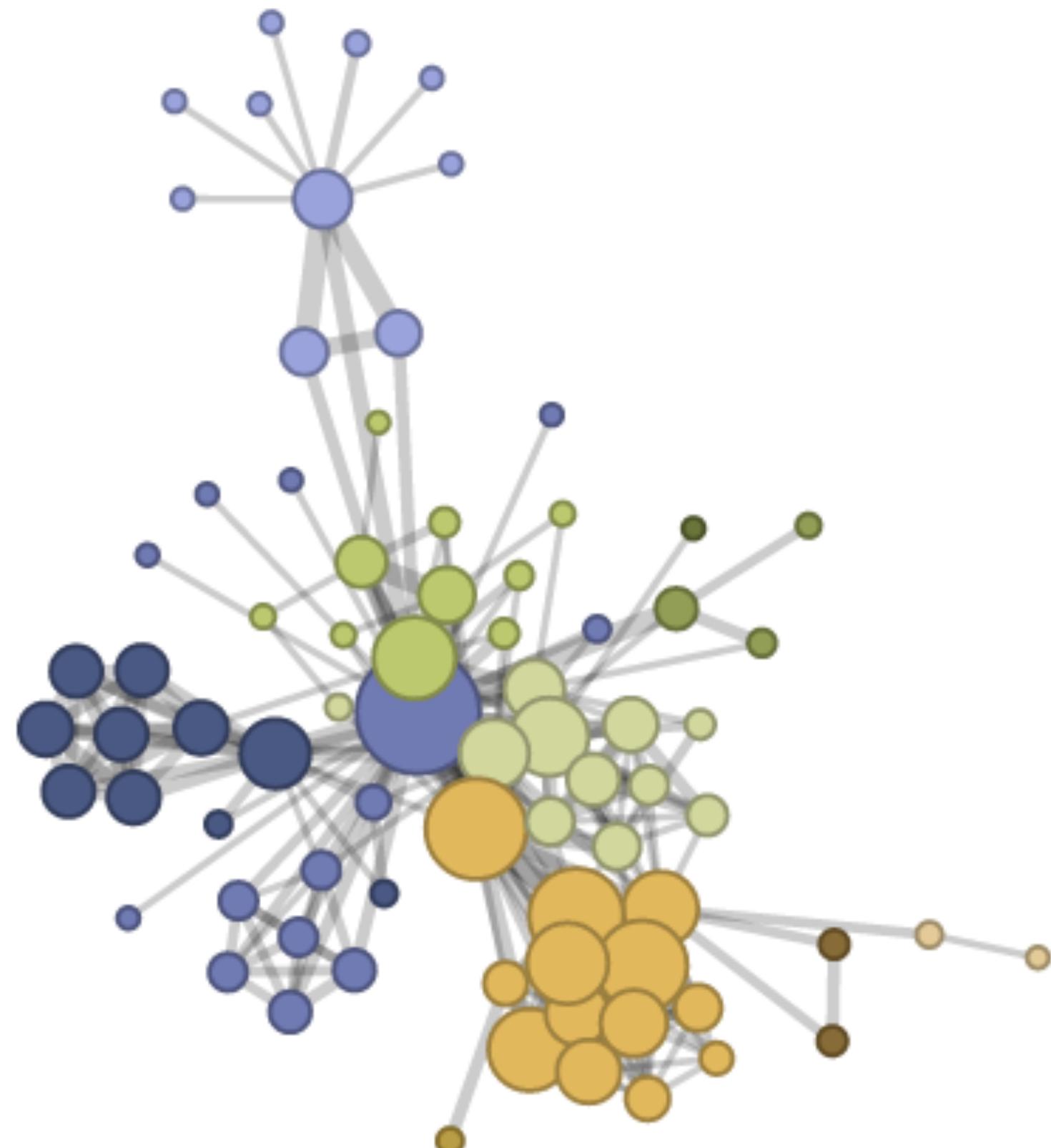
*value*

Edge Tapering

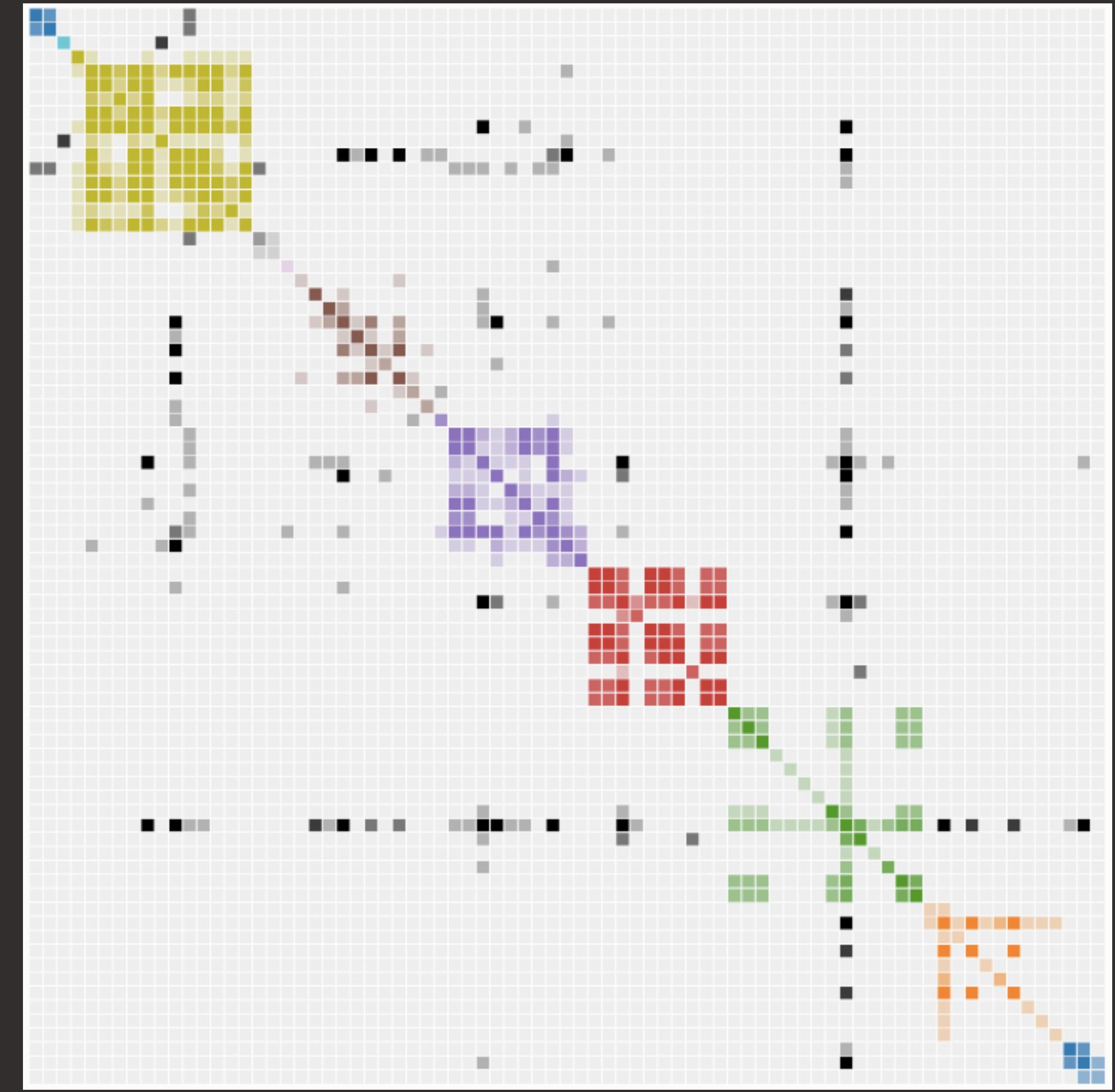
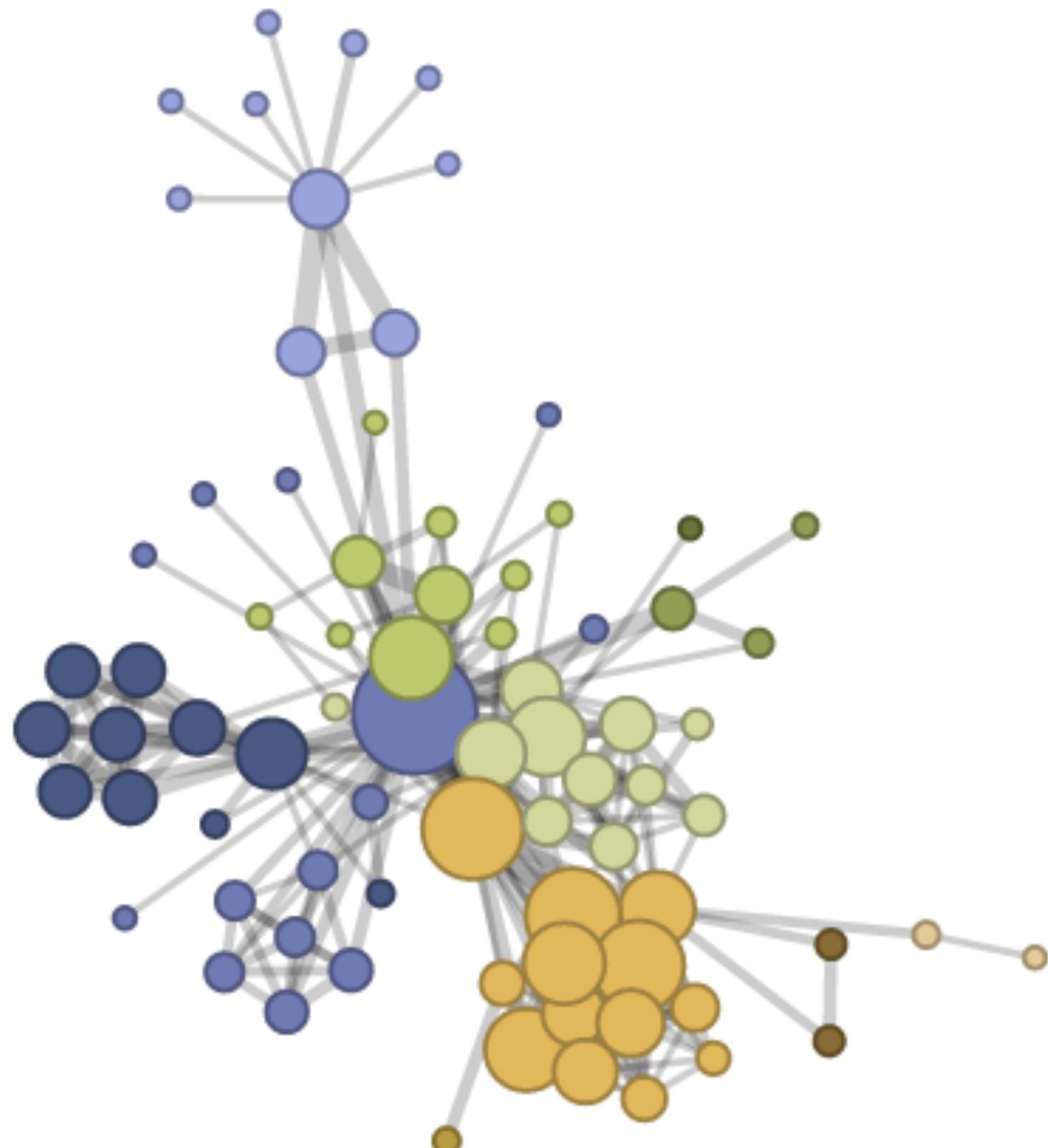




# *Limitations?*

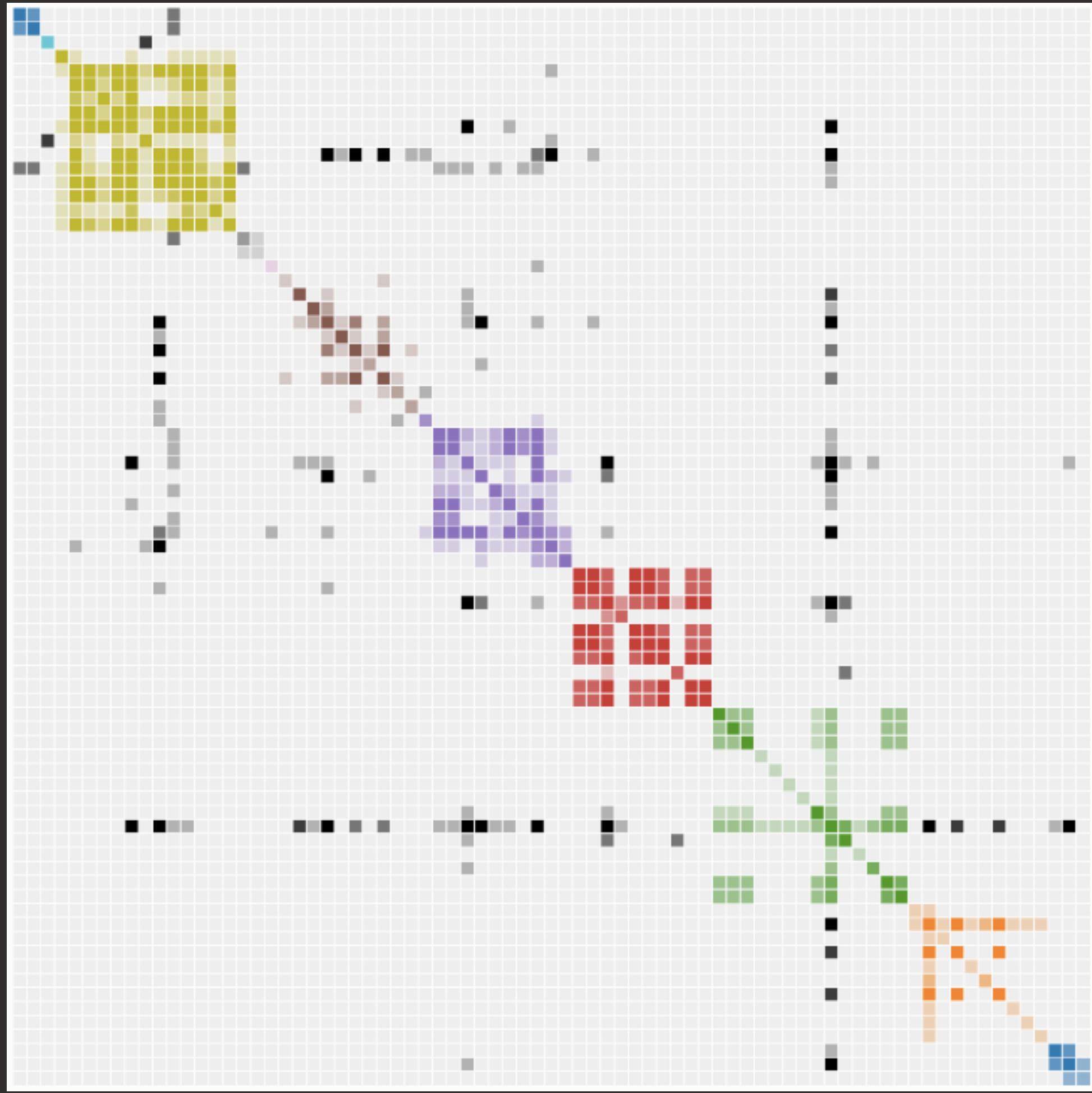


# Matrices

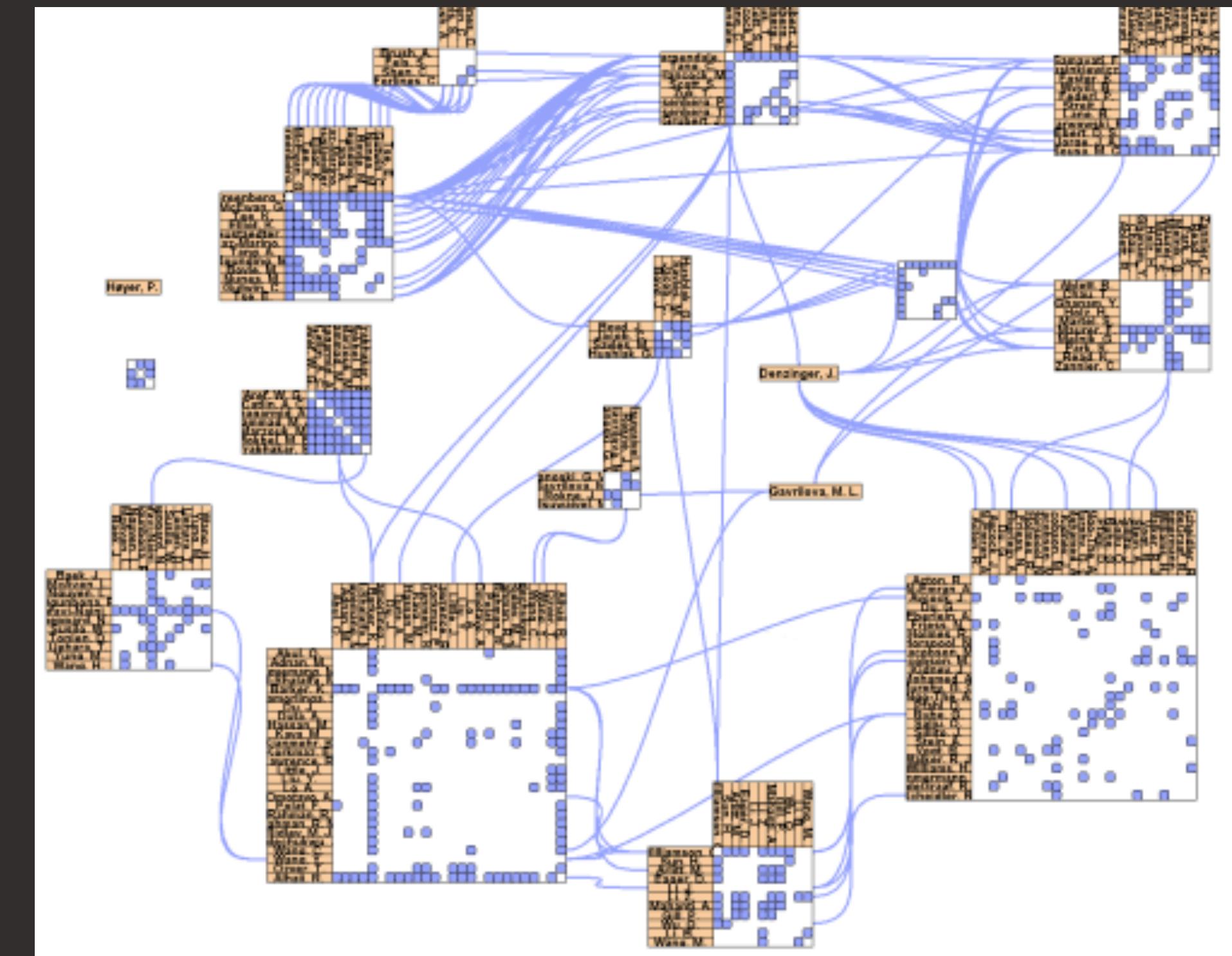
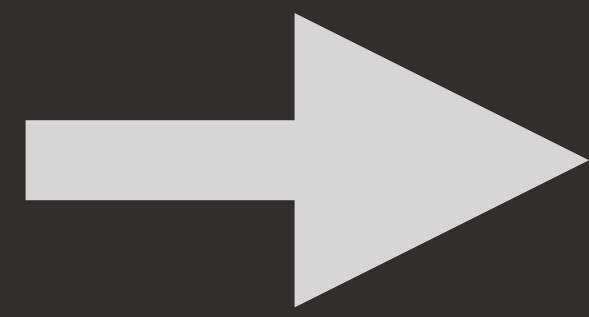
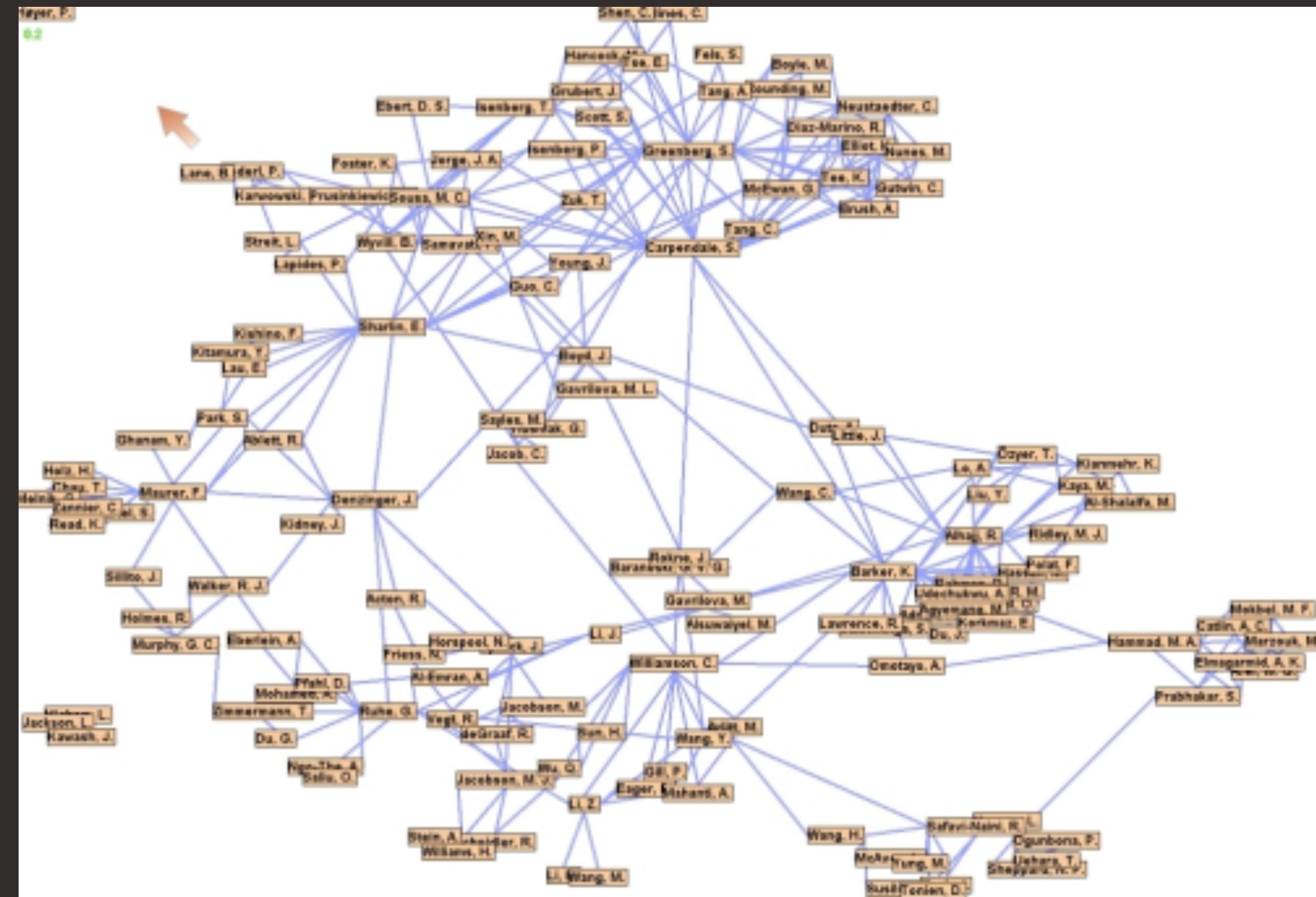


# Advantages

# *Tradeoffs*

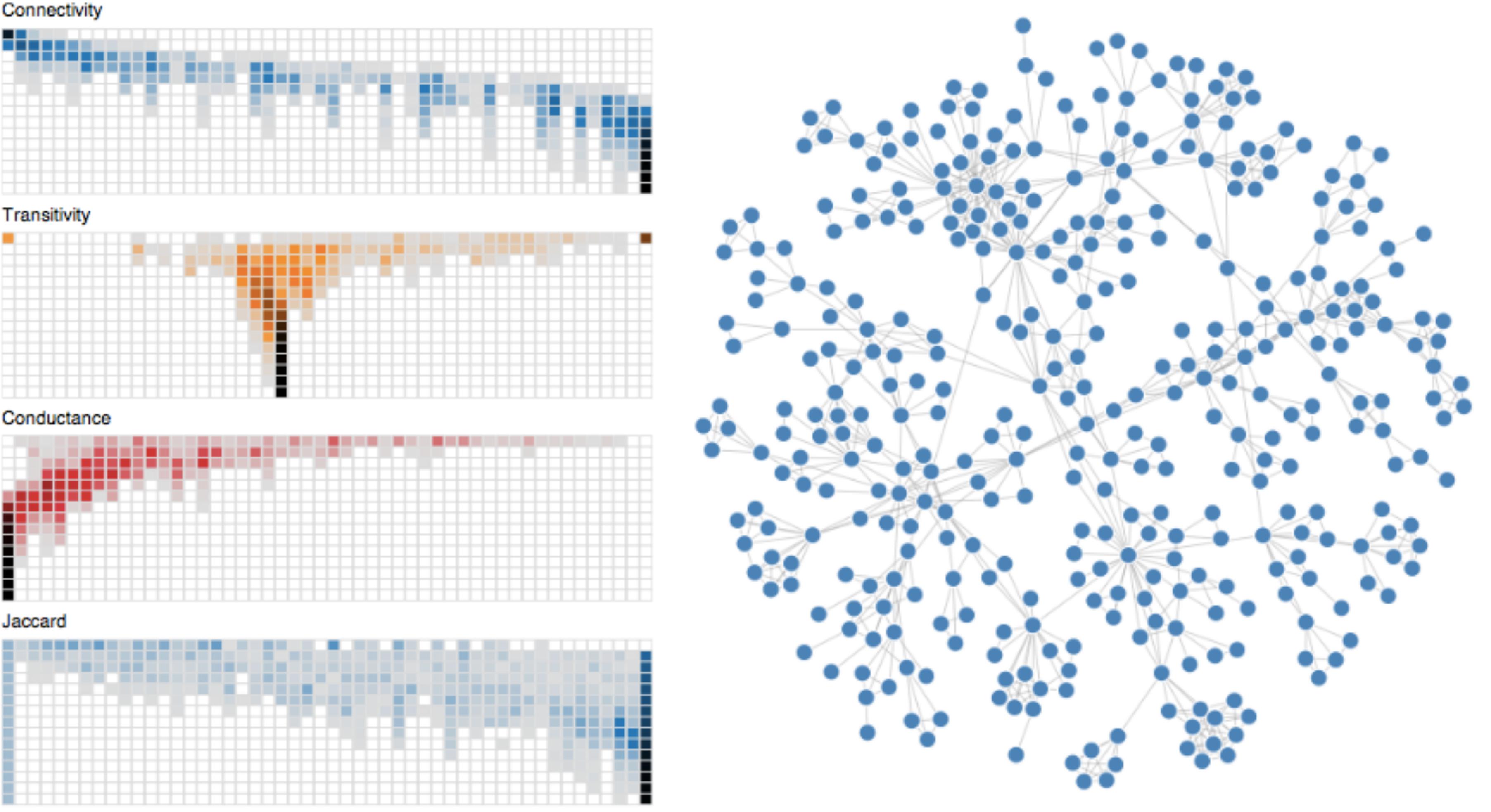


*State-of-the-art*



# Node-Trix

# Graph Prism



# Trees

# *Definition*

a: b, c, d

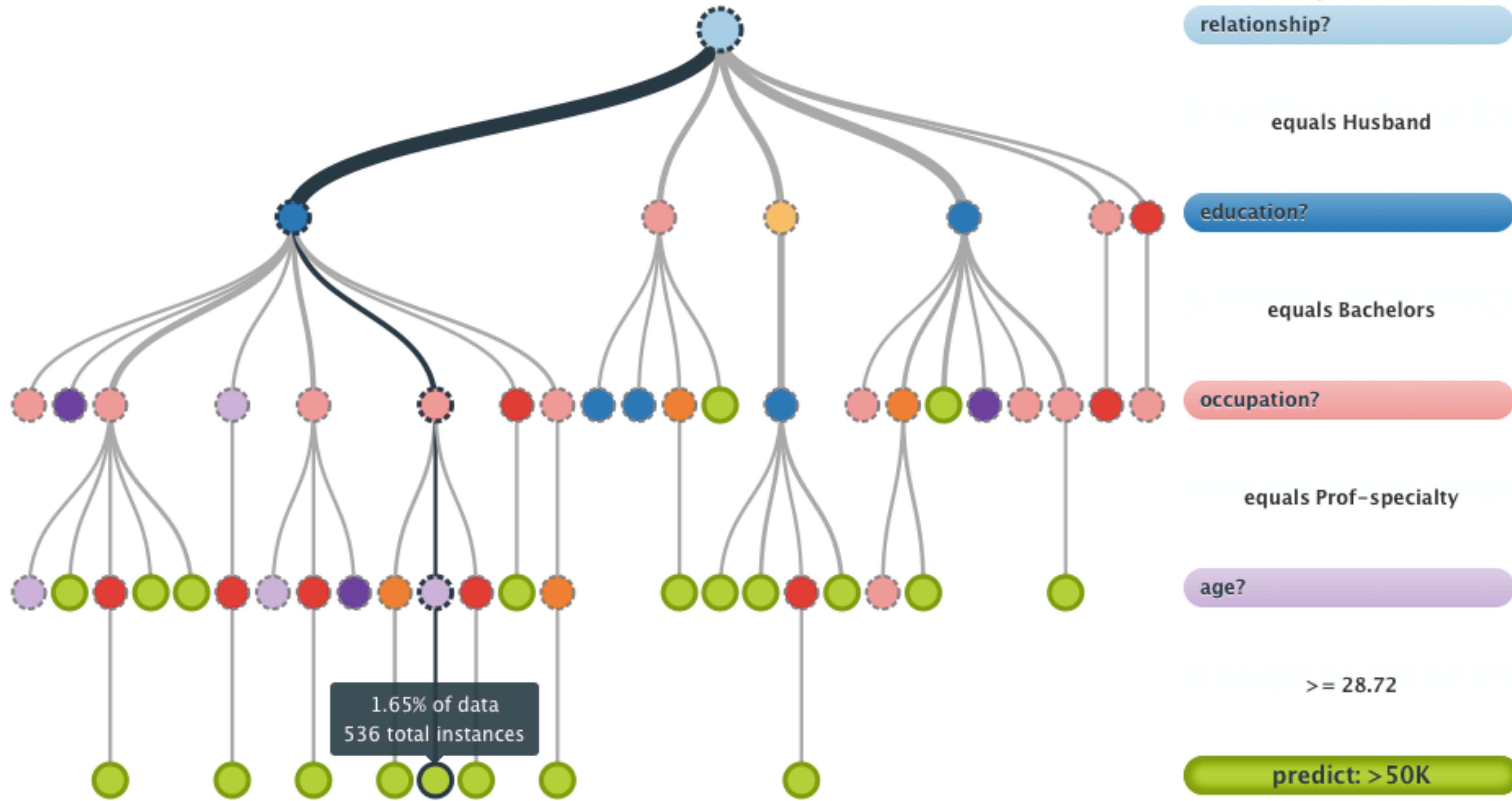
b: e, f

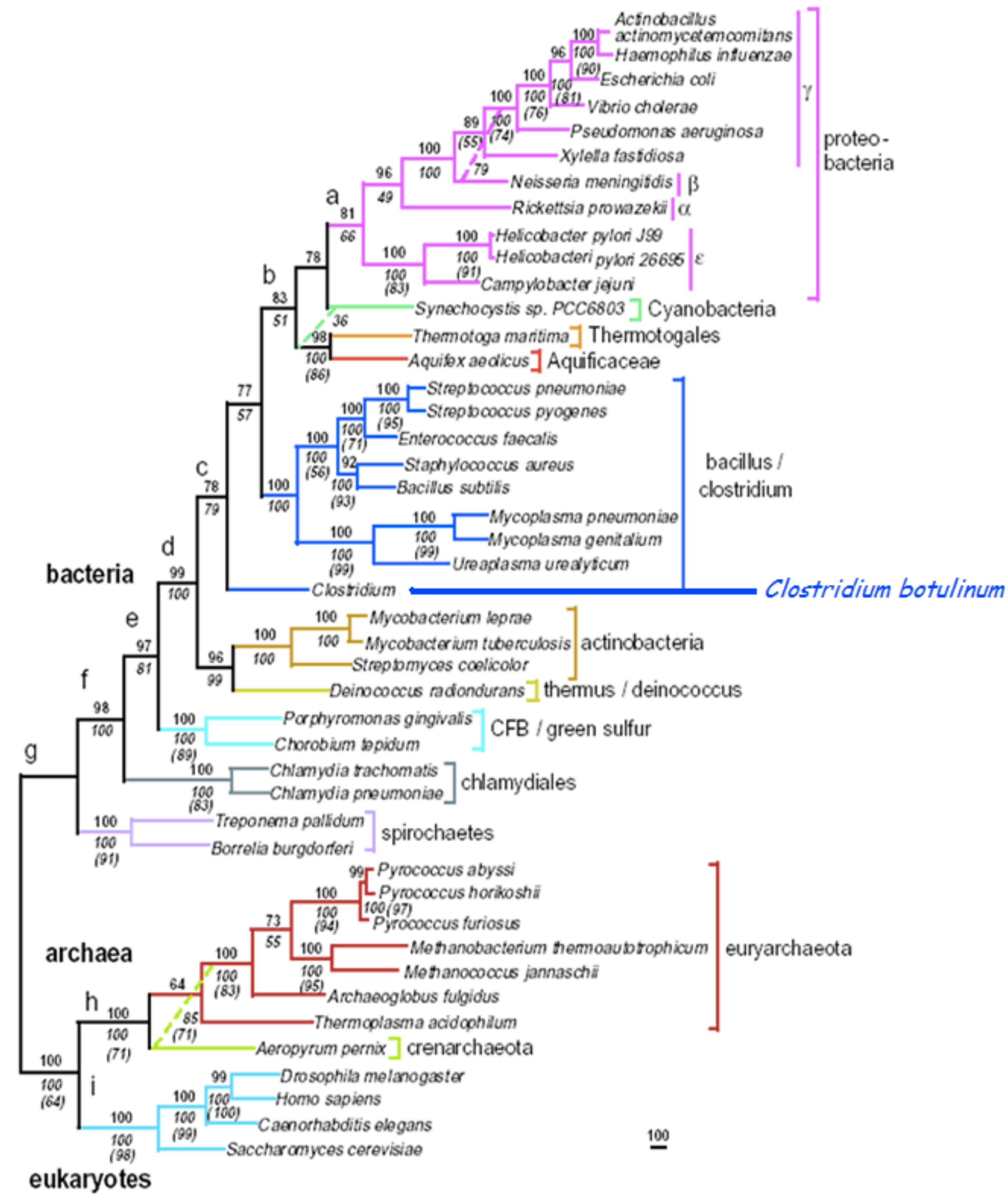
c: g

*Representation*

# *Applications*

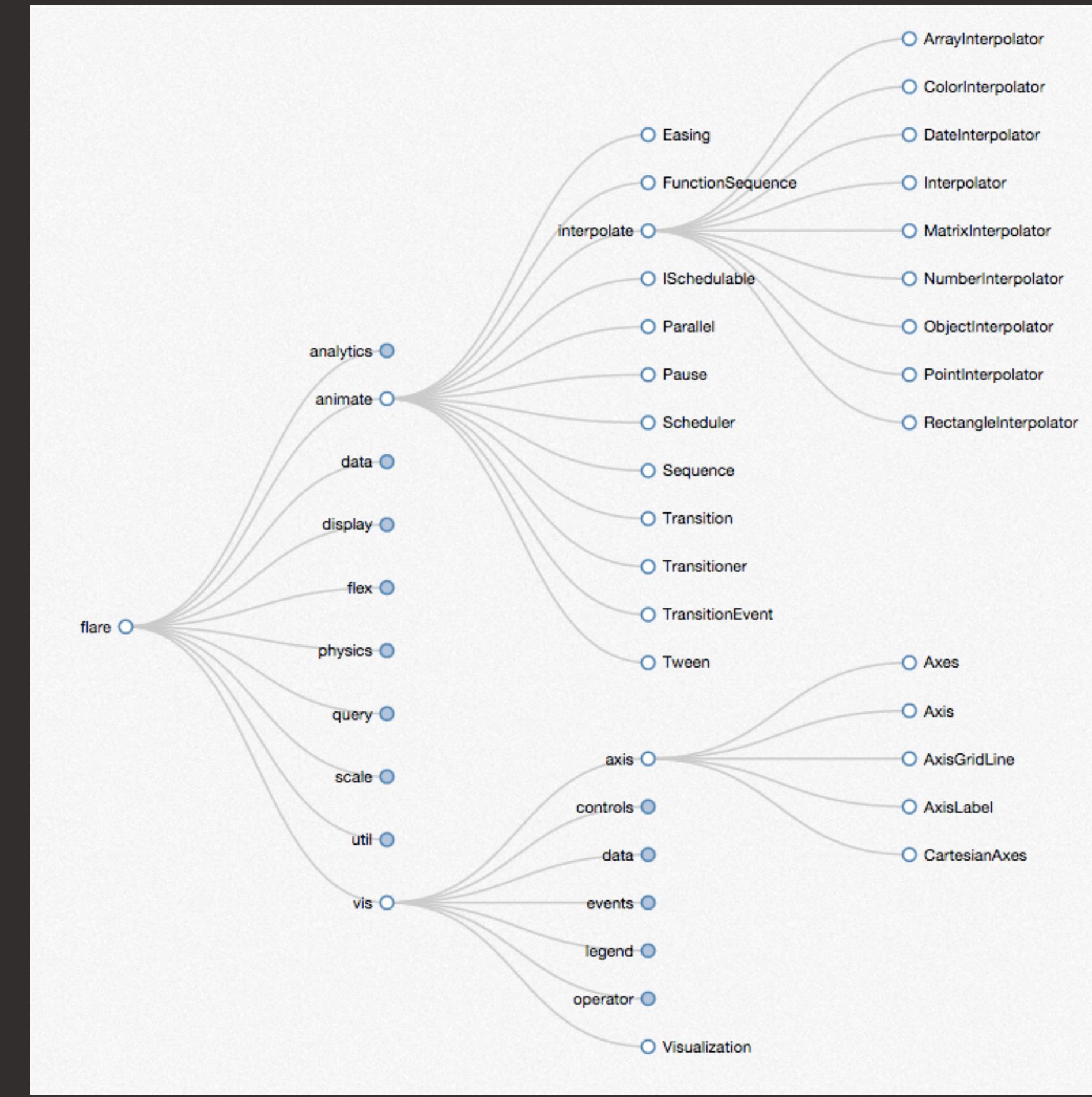
Decision path for: income  
relationship?





*Where do we  
find trees?*

# *Techniques*



# “Node-link”

# *Layouts*

Vertical /  
Horizontal

Radial

# *Limitations*

*Space-filling*

Treemaps

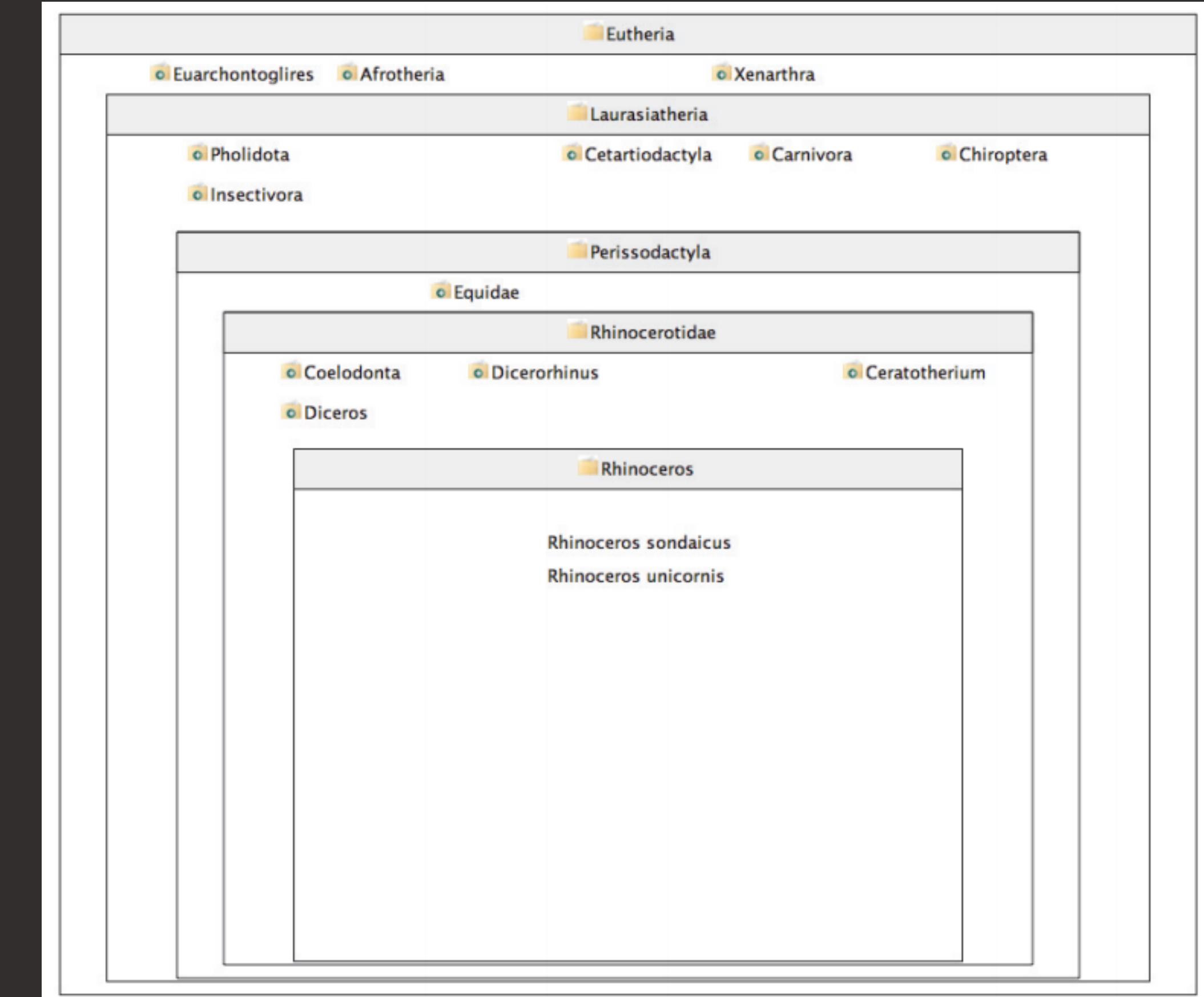
treevis

*State-of-the-art*

*Which do you  
prefer?*



*tree*



*nested boxes*

