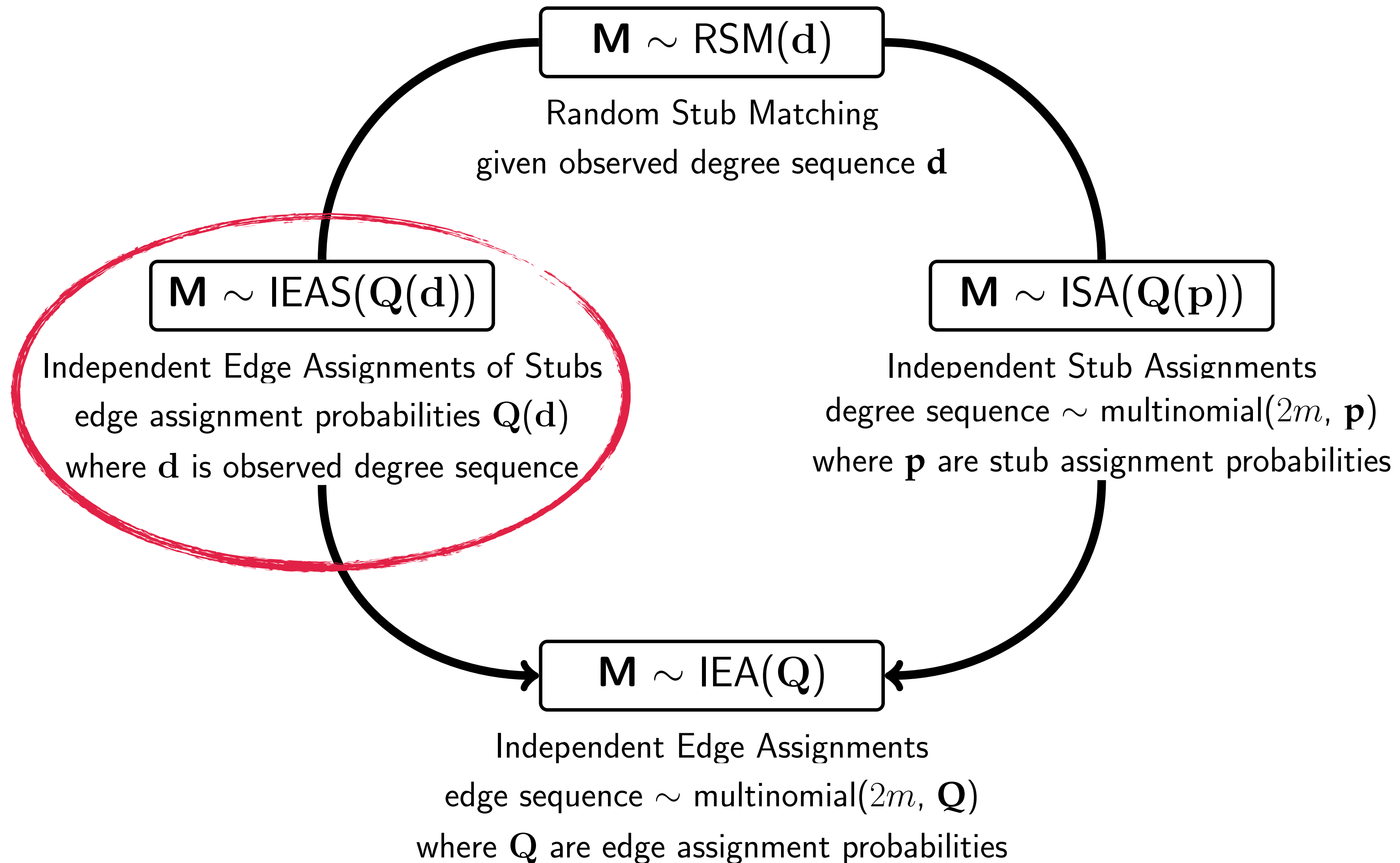


# random multigraph models



# random multigraph models: statistics

statistics for analysing structural features under multigraph models

measures defined using the distribution of edge multiplicities:

- ☑ number of loops and non-loops: tendency for within and between vertex category edges  
→ homophily/heterophily
- ☑ tendency for isolated vertices → network diffusion
- ☑ simple occupancy of edges → simple/complex network\*
- ☑ single ties within vertex category → isolation
- ☑ tendency for strengthening ties and if overlapping for multiple edge types → multiplexity

\* “if a graph contains loops and/or any pairs of nodes is adjacent via more than one line a graph is complex” [Wasserman and Faust, 1994]