

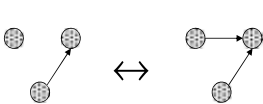

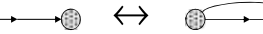
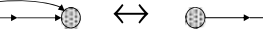
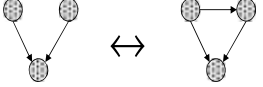
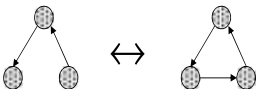
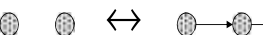


1. Model Form

$$f_i(\beta, x) = \sum_k \beta_k s_{ki}(x) + \varepsilon(x, z, t, j)$$

Effect	Network Statistic	Effective Transitions in Network ^a	Verbal Description
1. Outdegree	$\sum_j \mathbf{x}_{ij}$		Overall tendency to have ties
2. Reciprocity	$\sum_j \mathbf{x}_{ij} \mathbf{x}_{ji}$		Tendency to have reciprocated ties
3. Preferential attachment	$\sum_j \mathbf{x}_{ij} \sqrt{\sum_h \mathbf{x}_{hj}}$		Tendency to attach to popular others (with decreasing marginal sensitivity to alter's popularity)
4. Transitive triplets	$\sum_j \mathbf{x}_{ij} \sum_h \mathbf{x}_{ih} \mathbf{x}_{hj}$		Tendency toward triadic closure of the neighborhood (linear effect of the number of indirect ties)
5. Transitive ties	$\sum_j \mathbf{x}_{ij} \max_h (\mathbf{x}_{ih} \mathbf{x}_{hj})$	 (number of intermediaries is irrelevant)	Tendency toward triadic closure of the neighborhood (binary effect of indirect ties)
6. Actors at distance 2	$\sum_j (1 - \mathbf{x}_{ij}) \max_h (\mathbf{x}_{ih} \mathbf{x}_{hj})$	 (number of intermediaries is irrelevant)	Tendency to keep others at social distance 2 (negative measure of triadic closure)
7. Balance	$\sum_j \mathbf{x}_{ij} \text{strsim}_{ij}$		Tendency to have ties to structurally similar others (structural balance)
8. 3-cycles	$\sum_j \mathbf{x}_{ij} \sum_h \mathbf{x}_{jh} \mathbf{x}_{hi}$		Tendency to form relationship cycles (negative measure of hierarchy)
9. Betweenness	$\sum_j \mathbf{x}_{ij} \sum_h \mathbf{x}_{hi} (1 - \mathbf{x}_{hj})$	 (no direct link from left to right actor)	Tendency to occupy an intermediary position between unrelated others (broker position)