

All possible transitions  
from  $\mathbf{x}_n$

Transition Probability  
(ERGM)

$$\mathbb{P} \left( \tilde{D}_n \mid \mathbf{x}_n, \Theta \right) = \sum_{\mathbf{x}} \mathbb{P} \left( \mathbf{x} \mid \mathbf{x}_n \right) \prod_{m \in \mathbf{O}(n)} \mathbb{P} \left( \tilde{D}_m \mid \mathbf{x}_m \right)$$