## 1. Model Form

behavior

7. Isolation  $\times$ 

behavior

 $(\mathbf{z}_i - \mathbf{\bar{z}})(1 - \max_j(\mathbf{x}_{ij}))$ 

$f_{eg}^{z}(\beta,x,z)$
n Rehavior <sup>a</sup>

Effect of being isolated in the network on

behavior

Effect	Network Statistic	Effective Transitions in Behavior <sup>a</sup>	Verbal Description
1. Shape: linear and quadratic	$(\mathbf{z}_{i} - \overline{\mathbf{z}})$ and $(\mathbf{z}_{i} - \overline{\mathbf{z}})^{2}$	$\circ \leftrightarrow \bullet$	The two parameters together define a parabola shape of the objective function, allowing it to capture the basic shape of the observed distribution of the behavioral variable.
2. Average similarity	$(\sum_{j} \mathbf{x}_{ij} \text{sim}_{ij})/(\sum_{j} \mathbf{x}_{ij})$	$\bigcirc \longrightarrow \bigcirc \longleftrightarrow \bigcirc \longrightarrow \bigcirc$ $\longrightarrow \bigcirc \longleftrightarrow \bigcirc \longrightarrow \bigcirc$	Assimilation to neighbors' average behavior (small neighborhoods pull as much as big ones)
3. Sum of similarity	$\sum_{j} \mathbf{x}_{ij} sim_{ij}$	$\bigcirc \longrightarrow \bigcirc \longleftrightarrow \bigcirc \longrightarrow \bigcirc$ $\longrightarrow \bigcirc \longleftrightarrow \bigcirc \longrightarrow \bigcirc$	Assimilation to neighbors' average behavior (size of neighborhood determines size of effect)
4. Average alters	$(\sum_j \mathbf{x}_{ij} (\mathbf{z}_j - \mathbf{\bar{z}})) / (\sum_j \mathbf{x}_{ij})$	$\bigcirc \longrightarrow \bullet  \longleftrightarrow  \bigcirc \longrightarrow \bigcirc$ $\bullet \longrightarrow \bigcirc  \longleftrightarrow  \bigcirc \longrightarrow \bigcirc$	Main effect of neighbors' average behavior (contagion/influence, but not necessarily assimilation)
5. Indegree × behavior	$(\mathbf{z}_{i}-\mathbf{\bar{z}})\sum_{j}\mathbf{x}_{ji}$	$\bigcirc \longleftarrow \textcircled{\tiny } \longleftrightarrow \qquad \bigoplus \longleftarrow \textcircled{\tiny } \textcircled{\tiny }$	Effect of own popularity in the network on behavior
6. Outdegree ×	$(\mathbf{z}_{\mathrm{i}} - \mathbf{\bar{z}}) \sum_{\mathrm{i}} \mathbf{x}_{\mathrm{ij}}$	$\bigcirc \longrightarrow \bigcirc \bigcirc \longrightarrow \bigcirc \bigcirc$	Effect of own activity in the network on behavior