

Population i 's adaptation depends on the r_i and a_{ij} terms that affect it.

$$\begin{aligned}\mathbf{S}(a_{ij}) &= \frac{\partial}{\partial a_{ij}}(r_i + \sum_j a_{ij} X_j^*) \\ &= X_j^*\end{aligned}$$

The “ideal direction” of change in these interactions is always positive.