

Original Model:

Harrison, J. Richard and Glenn R. Carroll. 2002. "The Dynamics of Cultural Influence Networks." *Computational and Mathematical Organization Theory* 8:5-30.

As Replicated in:

Kitts, James A. and Paul T. Trowbridge. 2007. "Shape Up Or Ship Out: Social Networks, Social Influence, and Organizational Demography." – *Computational and Mathematical Organization Theory* 13(4): 333-353.

SIMULATION PROTOCOL

SET PARAMETER VALUES:

$CM = 0.5$	<i>Selectivity (mean culture for founders & recruits)</i>
$CS = 0.15$	<i>Multiplier for culture dispersion for founders & recruits</i>
$ER = 0.04$	<i>Random turnover</i>
$AR = 0.4$	<i>Selective attrition</i>
$N = 25$	<i>Number of organization members</i>
$a = 0.05$	<i>Rate of cultural change</i>
$b = 0.075$	<i>Rate of structural change</i>
$\alpha = 0.01$	<i>Slope of decrease of incumbent-to-recruit influence (due to tenure discrepancy)</i>
$\beta = 0.02$	<i>Slope of decrease of recruit-to-incumbent influence (due to tenure discrepancy)</i>
$maxt = 300$	<i>Total number of iterations</i>

SET INITIAL CONDITIONS:

Initialize culture C_i for founding members $i \in \{1, 2, 3, \dots, N\}$ according to [6]

Initialize tenure t_i for founding members $i \in \{1, 2, 3, \dots, N\}$ as zero

Initialize influence network S_{ji} for founding dyads $i, j \in \{1, 2, 3, \dots, N\}$ $i \neq j$ according to [7]

Compute mean culture, \bar{C}

BEGIN Loop Over Iterations (from 1 to maxt)

For all members i , compute ΔC_i based on S and C according to [1]

For all dyads $i-j$,

Compute ΔS_{ji} based on C , S , and \bar{C} according to [4]

Update $S_{ji} = S_{ji} + \Delta S_{ji}$

For all members i

Compute RD_i based on C_i and \bar{C} according to [5]

If $-\log(U) < RD_i$ then member i exits the organization

For all members i that exited, reinitialize C_i according to [6]

For all dyads $i-j$ in which either i or j exited:

Reinitialize S_{ji} according to [7]

For all members i that did not exit:

Update $C_i = C_i + \Delta C_i$

Update tenure $t_i = t_i + 1$

Compute mean culture, \bar{C}

RETURN Loop Over Iterations

RECORD OUTPUT:

Save final response values (mean of last 24 iterations) for \bar{S}