

$$\dot{x}_i = x_i \left(\left(\sum_{j=1}^n a_{ij} x_j \right) - \left(\sum_{j=1}^n x_j \sum_{k=1}^n a_{jk} x_k \right) \right)$$

$$\sum_{i=1}^n x_i = 1$$

For $n = 3$ gives the hypercycle.

$$A = \begin{pmatrix} 0 & 1 & 0 \\ 0 & 0 & 1 \\ 1 & 0 & 0 \end{pmatrix}$$

P. Schuster Manfred Eigen. *The Hypercycle: A Principle of Natural Self-Organization*. Springer, Berlin, 1979.