

# 1. Model Form

Network  
evolution  
  
Behavioural  
evolution

Timing of decisions	Decision rules
Network rate function	Network objective function
Behavioral rate function	Behavioral objective function

$$f_i^z(\beta, x, z) = \sum_k \beta_k^z s_{ki}^z(x, z) + \varepsilon(x, z, t, \delta)$$

- $f_i(\beta^z, x, z)$  is the value of the behavioral objective function for actor ( $i$ ), given:
  - the current set of parameter estimates ( $\beta$ ), and
  - $i$ 's current behavior ( $z$ )
  - state of the network ( $x$ ).
  - For  $k$  effects, represented as  $s_{ki}$ , which may be based on
    - the network ( $x$ ) or
    - individual attributes ( $z$ )
  - Estimated with some random disturbance ( $\varepsilon$ ) associated with  $x, z, t$  &  $\delta$
- Choice probabilities analogous to network part, but focusing on how behavior change would alter the objective function.