

Le Pelley model equations:

$$\Delta V_S^{n+1} = \sigma \alpha_S^n \beta^+ \cdot (1 - \partial V_S^n) \cdot |R^n| \quad (1)$$

$$\overline{\Delta V_S^{n+1}} = \sigma \alpha_S^n \beta^- \cdot (1 + \partial V_S^n) \cdot |R^n| \quad (2)$$

α_i^n = associability of the CS i on trial n .

β = Learning rate parameter for the US, where β^+ (excitatory) & β^- (inhibitory)

λ_i^n = intensity of the US with stimuli i at trial n .

$V_{i,j}^n$ = associative strength of the CS i on trial n .

$\overline{V_{i,j}^{n+1}}$ = inhibitory associative strength of the CS i on trial $n + 1$.

σ = salience associability multiplicative factor

R = Reinforcing value (excitatory/inhibitory)

$\partial V_S^n = V_S - \overline{V_S}$ Difference between the excitatory and inhibitory CS-US association.