

# Title Here...

Erik J. Peterson

Rescorla-Wagner value updates are defined by,

$$V(s, t) \leftarrow V(s, t) + \alpha * \delta \quad (1)$$

*tentatively* where

$$\delta = r(t) - V(s, t) \quad (2)$$

with  $r(t)$  calculated as either

$$r_c(t) = \{1, 0\} \quad (3)$$

or

$$r_d(t) = \frac{r_c(t)}{D} \quad (4)$$

where

$$D = \sqrt{(\bar{\theta} - \theta)^2 + (\bar{W} - w)^2} \quad (5)$$

and in all cases

$$V_{initial}(s, t) = 0. \quad (6)$$

$$p(s_1) = \frac{e^{\beta V(s_1, t)}}{e^{\beta V(s_1, a)} + e^{\beta V(s_2, a)}}; \quad s_1 = (s_i, q), \quad s_2 = (s_i, w). \quad (7)$$