



S2 Fig. Condition-wise simulations of the final estimate difference and prior-dependent updating as a function of ω_1 and ω_2 . (a, c, e) Simulation of the final estimate difference, including all three bead ratio conditions (51:49, 60:40, 90:10) for a (a) base-rate neglecting

agent ($\omega_1 = 0.87$, consistent with the base-rate neglecting agent simulated in Fig 2), **(c)** an unbiased Bayesian observer ($\omega_1 = 1.0$; all data points fall on the 0 line on the y-axis, so some data points are not visible because they overlap) and a **(e)** prior overweighting agent ($\omega_1 = 1.12$; an equivalent ω_1 above 1 as the prior underweighting agent's ω_1 is below 1). The model predicts an interaction between bead-ratio condition and the final estimate difference for the prior underweighting and the prior overweighting agents. Methods are consistent with those described in Fig 2b.