



Supplementary Figure 2. TOA equivalent of reward bias and side bias in the two experiments. (A-B) Histograms plot the number of subjects with given TOA equivalent values of side bias (A), and reward bias (B) under different reward conditions during Experiment 1. In Experiment 1, there was no evidence for side bias except in the neutral condition (two-sided signed-rank test; neutral: -8.11 ± 17.21 msec, $p = 0.002$, $d = 0.47$; gain: -7.14 ± 16.60 msec, $p = 0.083$, $d = 0.40$; loss: -7.60 ± 22.72 msec, $p = 0.083$, $d = 0.36$). Furthermore, reward bias toward the more rewarding side was significant only in the loss condition (two-sided signed-rank test; gain: 1.79 ± 5.92 msec, $p = 0.128$, $d = 0.36$; loss: 7.25 ± 10.56 msec, $p = 0.0001$, $d = 1.0$). The dashed lines show the medians, and each asterisk indicates a significant difference from 0 (two-sided signed-rank test, $p < 0.05$). (C-D) The same as in panels A-B but for Experiment 2. In Experiment 2, there was no evidence for side bias in any conditions (two-sided signed-rank test; neutral: 2.54 ± 19.77 msec, $p = 0.55$, $d = 0.12$; gain: 4.41 ± 14.63 msec, $p = 0.72$, $d = 0.06$; loss: 1.69 ± 22.20 msec, $p = 0.88$, $d = 0.13$). Moreover, reward biases were significantly larger than zero in both gain and loss conditions (two-sided signed-rank test; gain: 3.82 ± 10.40 msec, $p = 0.041$, $d = 0.43$; loss: 9.45 ± 14.00 msec, $p = 0.006$, $d = 0.67$).