



Figure 2 - Supplement 4 - Individual data and BCIbias model fit
The figure display two plots per participant, the “yes [the rubber hand felt like

my own hand]” answers as a function of visuo-tactile asynchrony (dots) and corresponding BCIbias model fit (curves) are plotted on the left; the right plot represents the evolution of the BCI decision criteria with sensory noise and the 3 dots highlight the decision criteria for the conditions tested in the present study. As in the main figure, black, orange, and red correspond to the 0%, 30%, and 50% noise levels, respectively. This model did not assume that the observer treats an asynchrony of 0 as minimal. In this alternative model, the decision criterion is the same as in the BCI model; however, a parameter μ (representing the mean of the distribution of asynchrony) is taken into account when computing the predicted answer. A negative μ means that the RHI is most likely to emerge when the rubber hand is touched first, a positive μ means that the RHI is most likely to emerge when the participant’s hand is touched first. The estimated bias is modest (± 50 ms) for most of our participants (11 out of 15). 5 participants showed a positive bias and 10 a negative, and thus no clear systematic bias was observed. Notably, on the group level, the bias did not significantly differ from 0 ($t(14)=-1.61$, $p = 0.13$), and the BIC analysis did not show a clear improvement in the goodness-of-fit compared to our main BCI model (lower bound: -32; raw sum of difference: 22; upper bound: 85). In light of these results, we did not discuss this additional model further.