

Supporting Information

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SI Text

Experiment 1: Analysis of Correct Detection Rate of the Target Stimuli and Average Response Time for Nontarget Stimuli Measures (Online and Offline Stimulation). Analysis of the two parts of the experiment for correct detection rate of the target stimuli and average response time for nontarget stimuli measures did not reveal a significant difference between online and offline stimulation. For the first half of the experiment, no difference was found between the two conditions for correct detection rate of the target stimuli [prefrontal cortex stimulation = 67.1% (MSE = 6.1%), sham stimulation = 62.8% (MSE = 5%), $t(13) < 1$, Cohen's $d = 0.14$] and average response time for nontarget stimuli [prefrontal cortex stimulation = 0.4 s (MSE = 0.03), sham stimulation = 0.39 s (MSE = 0.02), $t(13) < 1$, Cohen's $d = 0.07$]. For the second half of the experiment, there was also no difference between the two conditions for correct detection rate of the target stimuli [prefrontal cortex stimulation = 63.8% (MSE = 5.5%), sham stimulation = 60% (MSE = 4.8%), $t(13) < 1$, Cohen's $d = 0.24$] and average response time for nontarget stimuli [prefrontal cortex stimulation = 0.41 s (MSE = 0.02), sham stimulation = 0.4 s (MSE = 0.03), $t(13) < 1$, Cohen's $d = 0.14$]. To compare the results of the two halves, for each of the measures, we conducted two-way repeated measures ANOVA with type of stimulation (stimulation, sham) and part of the experiment (first half, second half) as factors. For the correct detection rate, both main effects and the interaction were nonsignificant [$F(1,13) < 1$]. For the average response time for nontarget stimuli, neither the main effects [type of stimulation: $F(1,13) < 1$; time of stimulation: $F(1,13) = 1.495$; $P = 0.243$] nor the interaction [$F(1,13) < 1$] was significantly different.

Experiment 2: Analysis of Correct Detection Rate of the Target Stimuli and Average Response Time for Nontarget Stimuli Measures (Online and Offline Stimulation). Analysis of the two parts of the experiment for correct detection rate of the target stimuli and average

response time for nontarget stimuli measures also did not reveal a significant difference between online and offline stimulation. For the first half of the experiment, there was no significant difference between the two conditions for the correct detection rate of the target stimuli [prefrontal cortex stimulation = 66.25% (MSE = 6.5%), sham stimulation = 63.75% (MSE = 7.5%), occipital cortex stimulation = 64.77% (MSE = 5.2%), $F(2,28) < 1$, $\eta^2 = 0$] and the average response time for nontarget stimuli [prefrontal cortex stimulation = 0.41 (MSE = 0.26), sham stimulation = 0.41 (MSE = 0.17), occipital cortex stimulation = 0.40 (MSE = 0.12), $F(2,28) < 1$, $\eta^2 = 0$]. For the second half of the experiment, there was no significant difference between the two conditions for the correct detection rate of the target stimuli [prefrontal cortex stimulation = 68.8% (MSE = 4.6%), sham stimulation = 46.9% (MSE = 7.4%), occipital cortex stimulation = 58.5% (MSE = 6.3%), $F(2,28) = 2.94$, $P = 0.068$, $\eta^2 = 0.17$] and the average response time for nontarget stimuli [prefrontal cortex stimulation = 0.42 (MSE = 0.26), sham stimulation = 0.41 (MSE = 0.15), occipital cortex stimulation = 0.40 (MSE = 0.2), $F(2,28) < 1$, $\eta^2 = 0$]. To compare the results of the two halves, for each of the measures separately, we conducted mixed repeated measures ANOVA with a within-subject factor part of the experiment (first half, second half) and between-subject factor type of stimulation (prefrontal cortex, sham, occipital cortex). For the correct detection rate, neither the main effect of part of the experiment [$F(1,28) = 4.039$, $P = 0.054$] nor the interaction [$F(2,28) = 3.121$, $P = 0.06$] was significant. For the average response time for nontarget stimuli, neither the main effect of part of the experiment [$F(1,28) < 1$] nor the interaction [$F(2,28) < 1$] was significant.