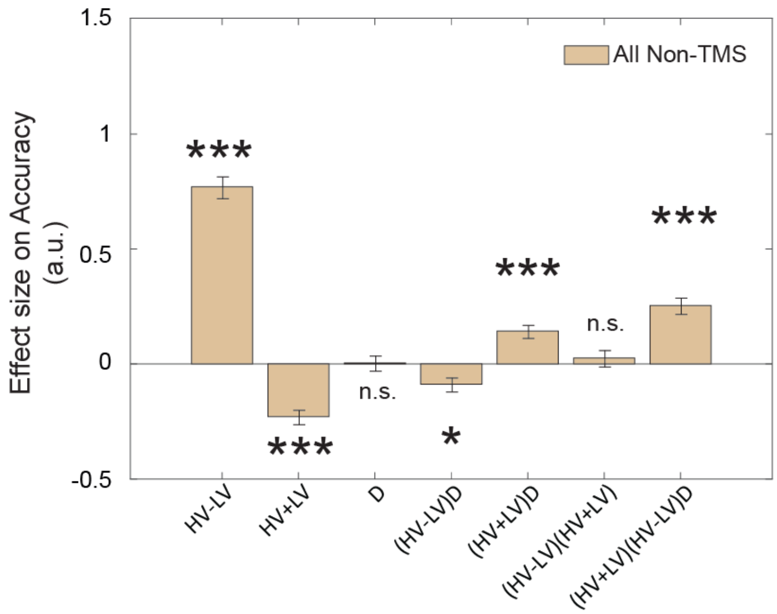
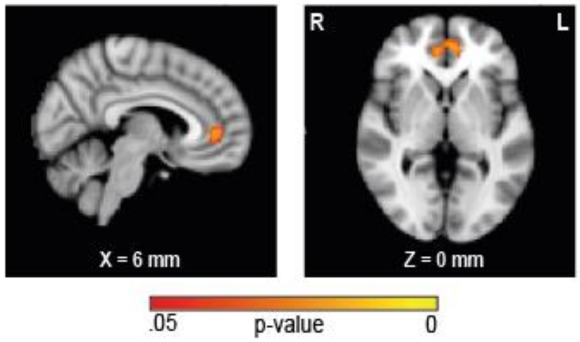
Supplementary Figures:

Supplementary Figure S1



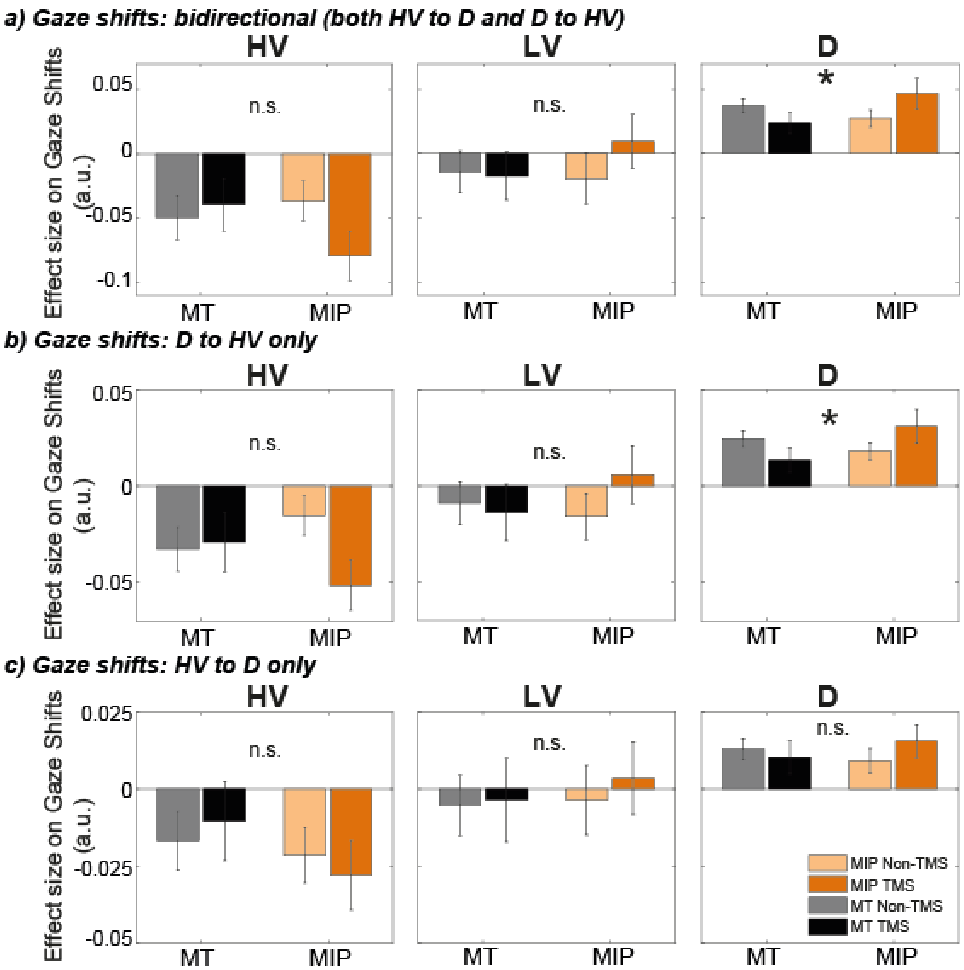
Supplementary Figure S1: Participants showed smaller negative distractor effect when HV+LV was large. Divisive normalisation models predict that the size of the negative distractor effect is smaller when HV+LV is large, since the distractor value contributes less to the overall value of HV+LV+D. To test whether this was the case in our data, we applied a GLM (which is identical to GLM5 of Chau et al., 2020) in which accuracy in all Non-TMS trials was predicted using the terms, HV-LV, HV+LV, and D, as well as all two-way and three-way interactions: $\beta_0 + \beta_1 z_{(HV-LV)} + \beta_2 z_{(HV+LV)} + \beta_3 z_{(D)} + \beta_4 z_{(HV-LV)} z_{(D)} + \beta_5 z_{(HV+LV)} z_{(D)} + \beta_6 z_{(HV-LV)} z_{(HV+LV)} + \beta_7 z_{(HV-LV)} z_{(HV+LV)} z_{(D)} + \varepsilon$. We found a positive effect of (HV+LV)D on accuracy ($t(30) = 5.07$, $p < 0.001$, $d = 0.91$, CI = [0.09, 0.2]), which was broadly consistent with the divisive normalisation prediction In addition, as in Figure 2c, this analysis showed a significant (HV-LV)D effect, suggesting that the distractor effect reversed as a function of choice difficulty). These results are consistent with previous work (cf. Appendix 3, Chau et al., 2020). *$p < 0.05$, ***$p < 0.001$. Error bars denote standard error.

Supplementary Figure S2



Supplementary Figure S2: VBM reveals association between MIP TMS and frontal region:
We conducted a region of interest analysis on parietal/occipital regions and identified an association between the effect of MIP stimulation on the distractor effect and MIP (Figure 3). For completeness, we also conducted a whole-brain analysis. The MIP effect reported in Figure 3 was no longer significant. Instead, we found an association between the TMS effect and the pregenual anterior cingulate cortex (pgACC), with larger MIP TMS effects associated with smaller pgACC GM (*p* = 0.018, centred around MNI X(0), Y(48), Z(4)).

Supplementary Figure S3



Supplementary Figure S3: Eye-movement patterns show shift under MIP stimulation:
We used the predictors HV-LV, HV+LV, and D-HV to predict gaze shifts for consistency (figure 3), since these predictors were used throughout all analyses, and since our predictions are focused on the distractor value, which is captured well by the predictor D-HV. However, to predict gaze shifts, absolute option values are arguably more interpretable. We therefore repeated the same analyses, but using the predictors HV, LV, and D, instead of HV-LV, HV+LV, and D-HV. The results do not change qualitatively. There were no effects for the predictors HV or LV on gaze shifts from D to HV, from HV to D, or both ($F <$ 3.74, $p > 0.062$). When we tested the impact of D on gaze shifts, we found a Site x Stimulation interaction for bidirectional gaze shifts (both D to HV and HV to D; $F(1,30) = 6.61$, $p = 0.015$, $\eta_p^2 = .18$, and gaze shifts from D to HV ($F(1,30) = 5.80$, $p = 0.022$, $\eta_p^2 = 0\ .16$), but not for gaze shifts from HV to D ($F(1,30) = 0.98$, $p = 0.330$).**a-c)** A GLM (predictors: HV, LV, D) was used to predict gaze shifts between different options, namely bidirectional gaze shifts between D and HV (a), directional gaze shift from D to HV (b), and directional gaze shifts from HV to D (c), for each participant and each condition. A Site x TMS ANOVA was then applied to the resulting beta values. TMS over MIP increased the number of gaze shift from D to HV (Site x Stimulation interaction, * $p < 0.05$), but not from HV to D.