Supplementary Results

The data for normalized accuracy rate, reaction time from noun onset, and reaction time from rTMS onset are shown in Supplementary Tables 1 and 2. Error rates (ER) and reaction times (RT) in the absence of rTMS in sham trials were comparable in the two groups (for ER: student \( t \)-test \( t = 0.02, P = 0.98 \); for RT \( rTMS \) train onset: \( t = 1.03, P = 0.33 \); for RT noun onset: \( t = 0.61, P = 0.56 \)).

As noted in the main text, analysis of the error rates revealed a significant interaction between STIMULATION SITE \( \times \) GROUP, indicating that rTMS was effective and varied between groups and stimulation sites. No such effects were found in the analysis of reaction times. ANOVA for RT from rTMS train onset was STIMULATION SITE: \( F_{4,16} = 1.66, P = 0.17 \); GROUP: \( F_{1,16} = 0.76, P = 0.4 \); STIMULATION SITE \( \times \) GROUP interaction: \( F_{4,64} = 0.24; P = 0.85 \). ANOVA for RT from noun onset was STIMULATION SITE: \( F_{4,16} = 0.53, P = 0.71 \); GROUP: \( F_{1,16} = 0.86, P = 0.37 \); STIMULATION SITE \( \times \) GROUP interaction: \( F_{4,64} = 0.45; P = 0.77 \). These results suggest that differences in error rates cannot be accounted for by a mere speed–accuracy trade-off (as supported also by the finding of a trend for slightly longer RT with V1 stimulation compared with sham and S1 in the blind subjects).

To further test this issue, we also computed the difference in RT and ER for each stimulation site from the RT and ER for the sham site on a subject-by-subject basis (\( \text{deltaRT} = \text{RT}_{(\text{cortical stimulation})} - \text{RT}_{(\text{sham})} \); \( \text{deltaER} = \text{RT}_{(\text{cortical stimulation})} - \text{RT}_{(\text{sham})} \)). If the observed increase in error rate was simply due to a speed–accuracy trade-off, one would expect more errors (\( \text{delta ER} > 0 \)) to occur with shorter reaction times (\( \text{delta RT} < 0 \)) and vice versa (Supplementary Fig. 1). A speed–accuracy trade-off would be manifest in points scattered in the second and fourth quadrants. No such trend is seen in the data for either the blind subjects or the sighted ones.