Codebook

1. Demographic data (demographic_data.csv):

1.1 SubjectID
The unique ID of each participant to be able to identify it and use a repeated measures ANOVA. ID matched between data frames of experimental and demographic data. Class of variable: Nominal Parameter values: The ID consisted of the letter S and a two-digit number ranging from 01 to 38. E. g. “S05”.
1.2 Sex
Sex of the participant. Class of variable: Nominal Parameter values: Female = w Male = m Diverse = d Missing value = NA
1.3 Age
Age of the participants in full years. Class of variable: Integer Parameter values: Subjects included in analysis must be aged between 18 and 35 years. Missing value = NA
1.4 Hand
Handedness of the subject. Class of variable: Nominal Parameter values: Left-handed = left Right-handed = right Ambidextrous = ambi Missing value = NA

2. Experimental data (experimental_data.csv):

2.1 Subject ID
The unique ID of each participant to be able to identify it and use a repeated measures ANOVA. ID matched between data frames of experimental and demographic data. Class of variable: Nominal Parameter values: The ID consisted of the letter S and a two-digit number ranging from 01 to 38. E. g. “S05”.
2.2 Stimulation
The frequency of TMS stimulation over the right parietal cortex which the participants received. Factor “Stimulation” for the repeated measures ANOVA. Class of variable: Nominal Parameter values: 4Hz rhythmic TMS = tms4 7Hz rhythmic TMS = tms7 5.5Hz rhythmic TMS = tmsC
2.3 Cue
During the delayed matched to sample task, arrays of coloured squares were presented on screen in both visual hemifields. An arrow presented prior to the set of squares indicated which of the two samples should be memorized and matched to the after the retention interval presented set of squares. Factor “Cue” for the repeated measures ANOVA Class of variable: Nominal Parameter values: Right hemifield trials = right Left hemifield trials = left
2.4 K
Standardized measure for Working Memory capacity. K = S * (H – F), where H is the hit rate (correct answers in the task), F the false alarms (wrong answers in the task) and S the set size. We calculated one single K-value for each participant and stimulation condition (4Hz, 7Hz, 5.5Hz) across all memory loads (4, 5, 6 items). Class of variable: Continuous variable. Range of values for K: $K \in \mathbb{Q}$ Range of values observed in the experiment: [-0.901, 3.611]

3. New variables added during statistical analysis:

3.1 Stimulation_Cue
Combined factor of the two factors Cue and Stimulation. Class of variable: Nominal Parameter values: tms4 x left hemifield trials= tms4_left tms7 x left hemifield trials= tms7_left tmsC x left hemifield trials= tmsC_left tms4 x right hemifield trials= tms4_right tms7 x right hemifield trials= tms7_right tmsC x right hemifield trials= tmsC_right
3.2 k_correct
Baseline-corrected K-value which was used in the final repeated measures ANOVA. Baseline was the 5.5Hz Stimulation condition. Baseline correction was undertaken by subtracting the 5.5Hz K-value of one hemifield condition of a participant from its 4Hz/7Hz K-values of the same hemifield condition. Formal: k_correct = K-value (4Hz/7Hz) – K-value (5.5Hz) Example: k_correct = K-value (Participant 1,tms4_left) – K-value (Participant 1, tmsC_left) Consequently, for each participant there were 4 K-values in the final data frame. Class of variable: Continuous variable. Range of values for baseline corrected K: k_correct $\in \mathbb{Q}$ Range of values observed in the experiment: [-1.524, 1.212]