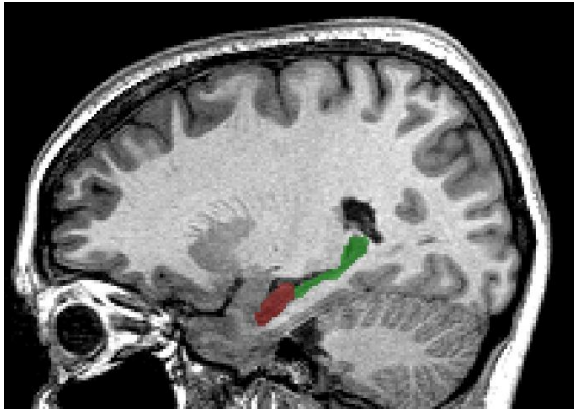
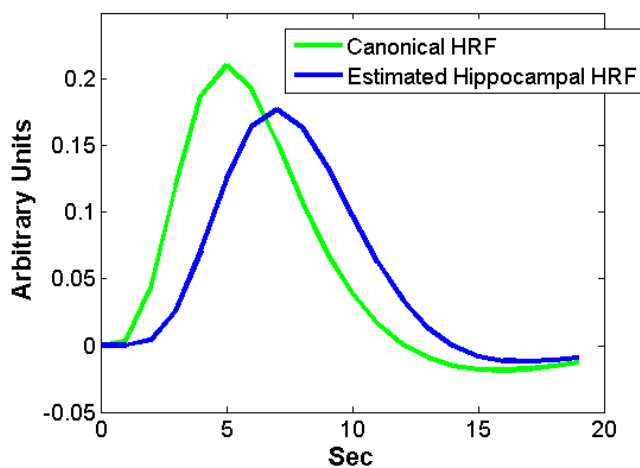


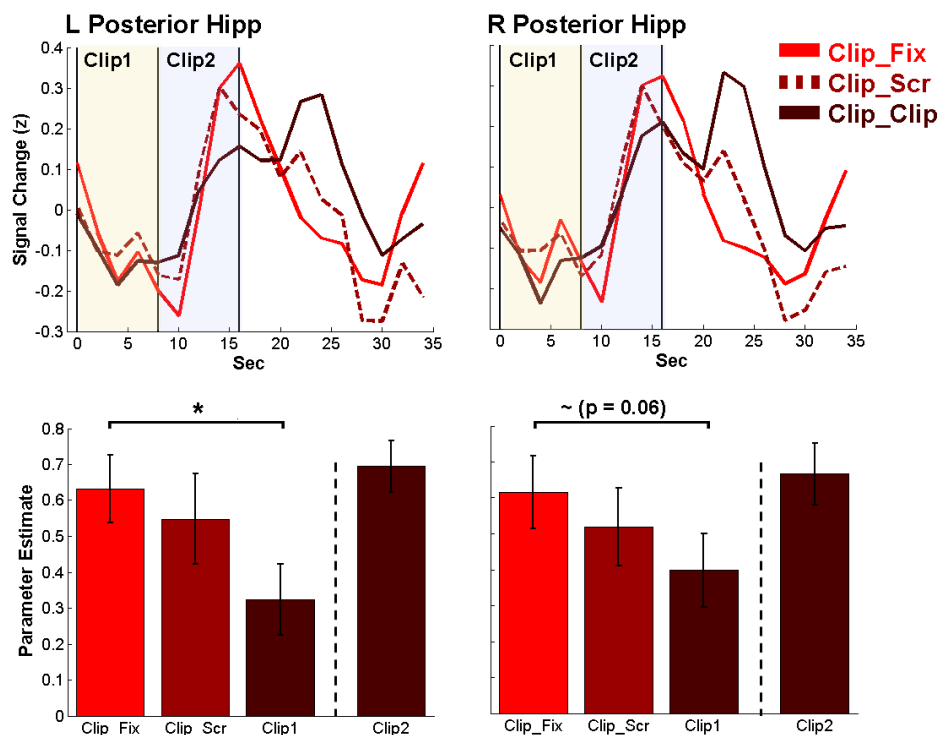
Supplementary Figures



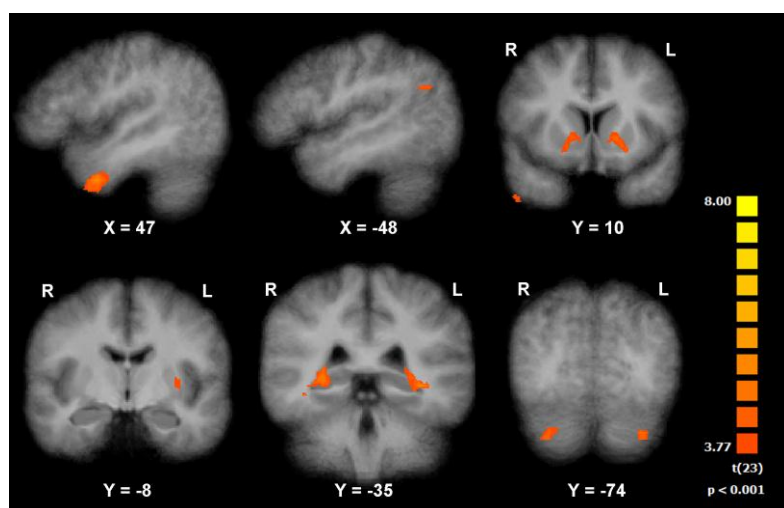
Supplementary Figure 1. Example of Anterior-Posterior Hippocampal Division. Labeling of anterior (red) and posterior (green) right hippocampus superimposed on a T1-weighted anatomical sagittal image of a single participant.



Supplementary Figure 2. Estimated Hippocampal HRF vs. the Canonical HRF. The estimated hippocampal HRF (blue; parameters time-to-peak=7s; time-to-undershoot-peak=14s) is based on the hippocampal response to single clips (relative to clip offset), derived from an independent dataset (Ben-Yakov & Dudai, 2011). The estimated HRF is plotted against the canonical HRF (green; parameters time-to-peak=5s; time-to-undershoot-peak=15s).

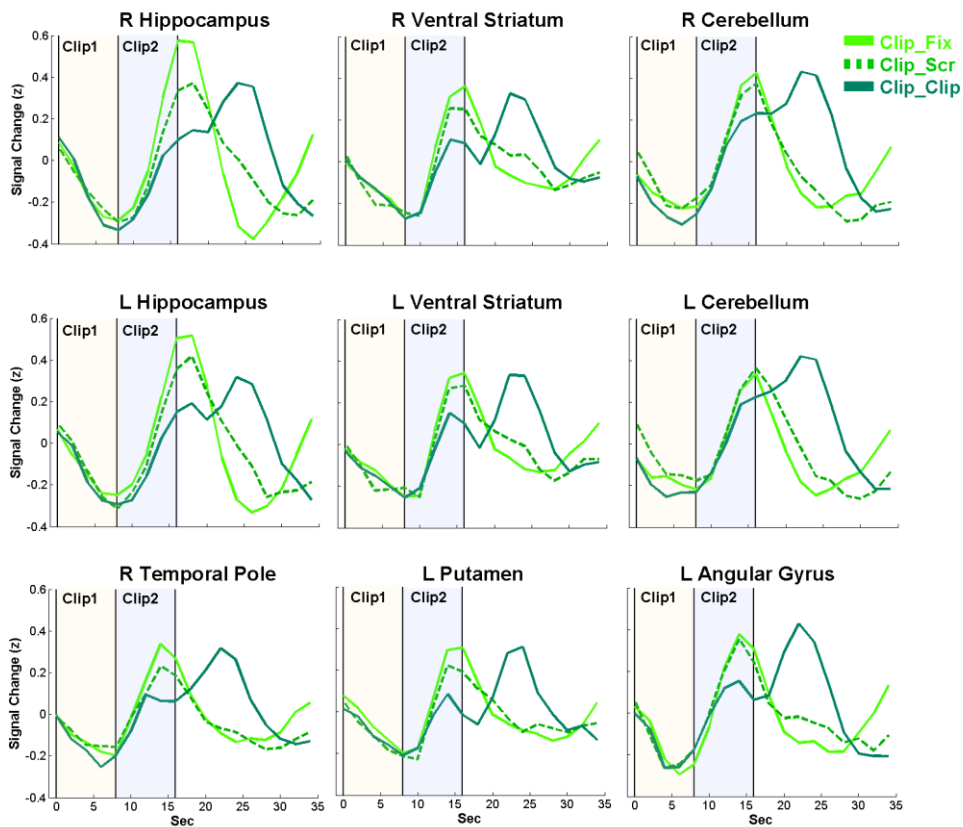


Supplementary Figure 3. Amplitude of posterior hippocampal response at event offset – only Remembered clips. A replication of the analysis presented in Figure 6, using only Remembered clips. The top row depicts the average response in the posterior hippocampus to each condition (Clip_R_Fix, Clip_R_Scr and Clip_R_Clip). The bottom row depicts the amplitude of the response in each condition (beta value estimates).



Supplementary Figure 4. Brain regions demonstrating an offline response modulated by interfering stimuli. Regions showing a main effect of offline response in conjunction with a parametric modulation corresponding to the memory performance in each condition (Clip_Fix+Clip2 > Clip_Scr > Clip1), each at

$p < 0.001$ (minimal cluster size 5 contiguous functional voxels, random-effects GLM, $N=24$). As this was an exploratory analysis, a relatively weak threshold was used (although it is noteworthy the effective p -value is smaller, since the map represents a conjunction of the main effect and the parametric modulation). Data are shown on sagittal and coronal slices of the group-average brain.



Supplementary Figure 5. Average time-course in brain regions demonstrating an offline response modulated by interfering stimuli. The average response (average of the z-scored data over trials and participants) to each condition (Clip_Fix, Clip_Scr and Clip_Clip), in brain regions demonstrating a parametric offline response (Supplementary Figure 2). The solid vertical lines represent the onsets and offsets of the clips.

Supplementary Tables

Supplementary Table 1. Detailed Statistical Analysis of Behavioral Results (Post-Hoc *t*-tests)

Comparison	<i>t</i> -value (df=23)	<i>p</i> -value	Effect Size (Cohen's <i>d</i>)
Clip_Fix > Clip_Scr	3.04	0.006	0.31
Clip_Fix > Clip1	4.36	2.3X10 ⁻⁴	0.51
Clip2 > Clip_Fix	0.76	0.45	0.07
Clip_Scr > Clip1	1	0.33	0.15
Clip2 > Clip_Scr	2.58	0.02	0.38
Clip2 > Clip1	4.45	1.8X10 ⁻⁴	0.59

Supplementary Table 2. Effect of Second Clip Presentation on Hippocampal Response at Clip Offset (Clip_Fix vs. Clip1) – Detailed Statistical Analysis

Region	<i>t</i> -value (df=23)	<i>p</i> -value	Effect Size (Cohen's <i>d</i>)
Left Anterior Hippocampus	0.24	0.81	0.05
Right Anterior Hippocampus	0.08	0.93	0.02
Left Posterior Hippocampus	3.23	0.004	0.66
Right Posterior Hippocampus	2.92	0.008	0.57

Supplementary Table 3. Dm Effect for Single Clips (Clip_R_Fix vs. Clip_F_Fix) at Clip Offset

Region	<i>t</i> -value (df=23)	<i>p</i> -value	Effect Size (Cohen's <i>d</i>)
Left Anterior Hippocampus	2.45	0.02	0.41
Right Anterior Hippocampus	3.02	0.006	0.55
Left Posterior Hippocampus	1.62	0.12	0.29
Right Posterior Hippocampus	1.17	0.26	0.19

Supplementary Table 4. Difference in Dm Effect (Remembered-Forgotten) between Single Clip and Clip1/Clip2 in the Anterior Hippocampus

Comparison	<i>t</i> -value (df=23)	<i>p</i> -value	Effect Size (Cohen's <i>d</i>)
Clip_Fix vs. Clip1 Dm			
L	2.02	0.055	0.57
R	2.12	0.04	0.52
Clip_Fix vs. Clip2 Dm			
L	-1.37	0.18	0.34
R	-0.43	0.67	0.11