

Supplementary Information

Results:

Source Localization Analysis

Encoding

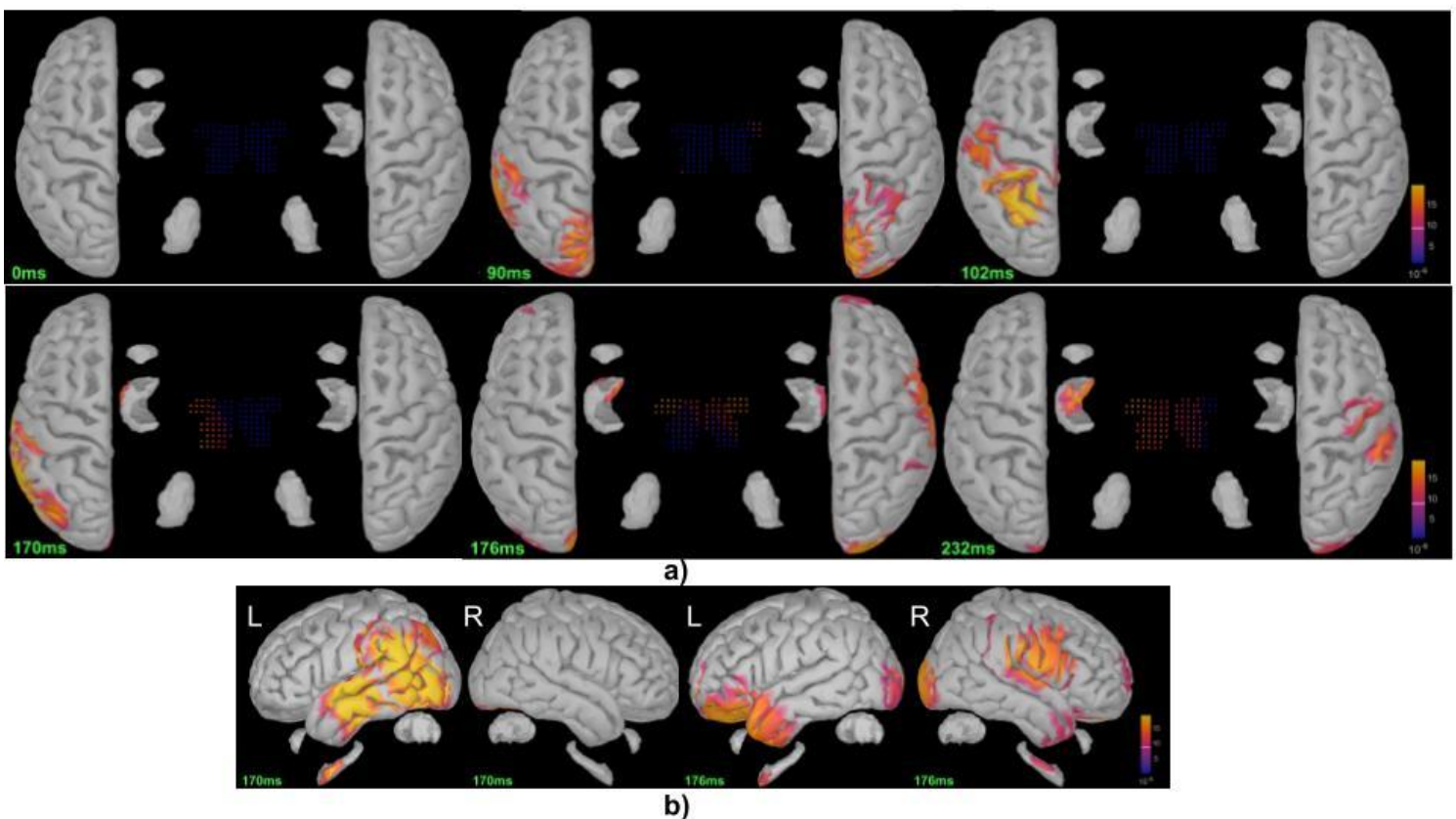


Figure 1-1 Activation plot of the encoding phase at different time stamps: 0ms, 90ms, 102ms, 170 ms, 176 ms, and 232ms [cluster size: 40; amplitude threshold > 45%]. Figure a) presents the cortical and subcortical surface (cortex, hippocampus) and volume (amygdala, thalamus) activation plot sliced temporally. The word was displayed on the screen at 0ms. The occipital cortex area responsible for visual stimuli is activated at approximately 90ms. In response to presented word perception and processing, the parietal region (~102ms) showed activation followed by temporal (~170ms), prefrontal cortex (~176ms) area along with hippocampus (majorly left anterior), thalamus and amygdala subcortex area (~170ms, ~176ms and ~232ms); Fig b) depicts the vital role Wernicke's (retrieve the meaning of the particular word) and Broca's (pronounce the word in yourself) cortex area in vWM whose activation is shown approximately around 170ms and 176 ms respectively.

Recall

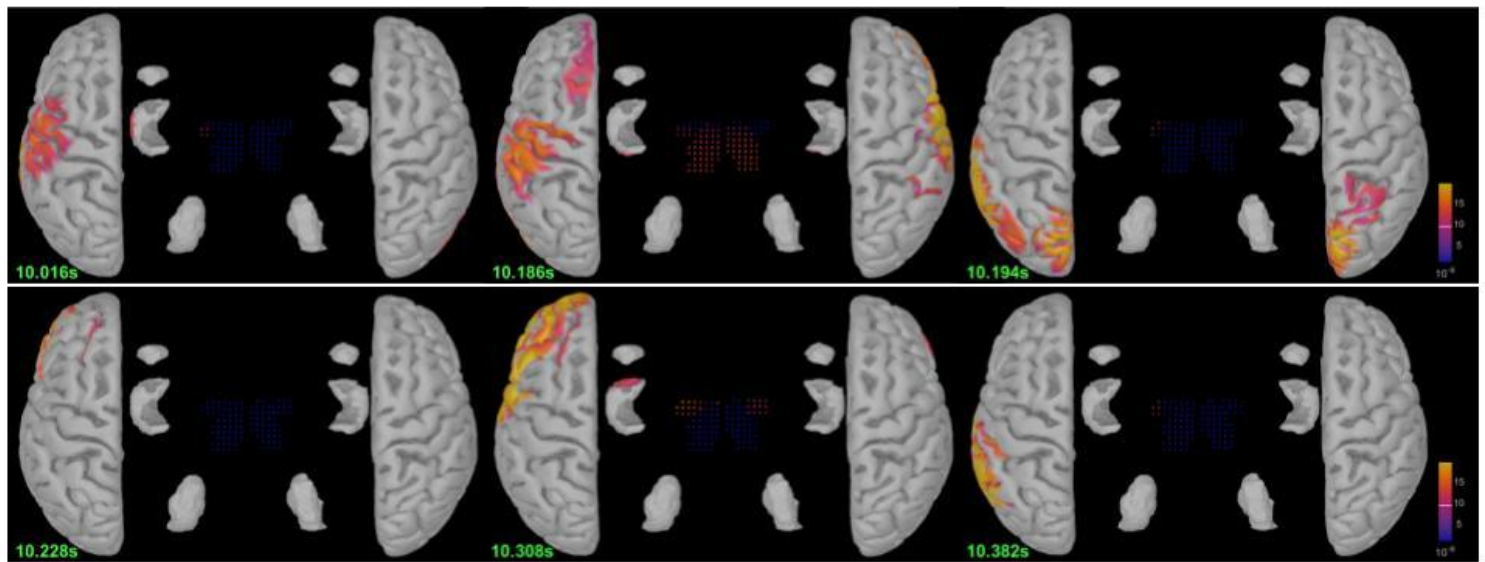


Figure 1-2 Activation plot of the recall phase (start at 10s) at different time stamps: 10.016s, 10.186s, 10.194s, 10.228s, 10.308s, and 10.382s [cluster size: 40; amplitude threshold > 45%]. The superior parietal cortical regions showed sustained activity (~10.016s and ~10.186s) along with posterior cortical (~10.194s and ~10.382s) and frontal (majorly dorsolateral prefrontal) area (~10.228s and ~10.308s). The activation plots show the major activation of the thalamus (~10.186s and ~10.308s) followed by the amygdala and then the hippocampus (~10.016s and ~10.308s) subcortex area.

Retrieval

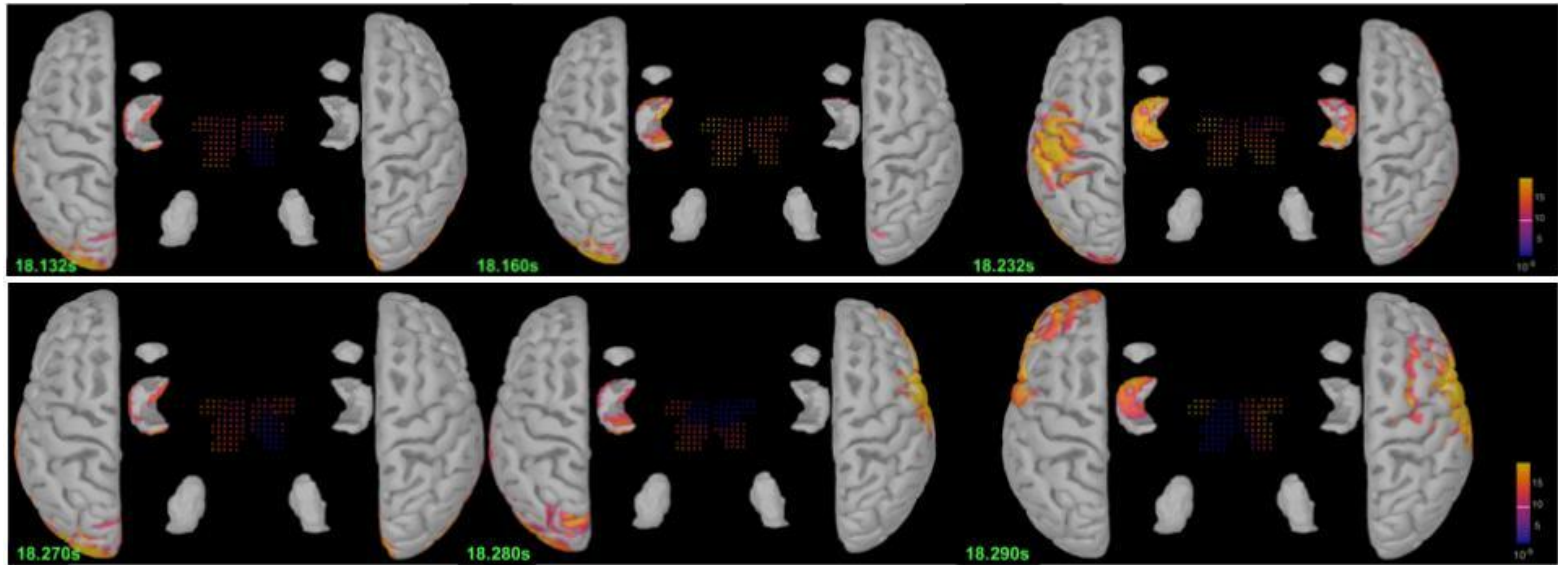


Figure 1-3 Activation plot of the retrieval phase (start at 18s) at different time stamps: 18.132s, 18.160s, 18.232s, 18.270s, 18.280s, and 18.290s [cluster size: 40; amplitude threshold > 45%]. In response to the displayed probe word, the occipital area activated at approximately 18.132s. A sustained activation was observed in the temporal (~18.232s), parietal (~18.232s), prefrontal, and right frontal (~18.280s and ~18.290s) cortex area. The activation plots depict the hippocampus (majorly left) activated throughout, followed by the thalamus and amygdala subcortex area.

