Supplementary material for:

Changes in theta and alpha oscillatory signatures of attentional control in older and middle age

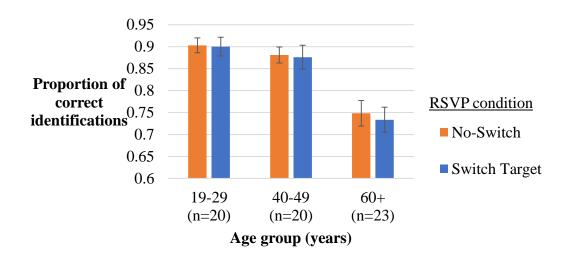**Eleanor Huizeling, Hongfang Wang, Carol Holland, & Klaus Kessler**

Figure SM1. Proportion of correct RSVP target identifications. Vertical bars represent the standard error of the mean.

Table SM1. MNI coordinates and atlas labels from which theta power differences between Switch Target and No-Switch conditions were extracted for correlation analyses.

Age group (years)	Positive(+)/ Negative(-) cluster	MNI coordinates	Label
40-49	+	-0.6 3.8 0.4	Left anterior cingulate and paracingulate gyri
40-49	-	-1.2 -8.4 1.6	Left cuneus
60+	+	-5.0 -1.6 -1.2	Left middle temporal gyrus
60+	+	-3.0 5.8 0.8	Left middle frontal gyrus
19-30	+	-3.0 -6.2 4.8	Left superior parietal gyrus

MNI coordinates of cluster peaks and their standardised anatomical labels based on the AAL atlas, the direction of the cluster (positive or negative) and the age group in which the cluster was observed in.

Table SM2. MNI coordinates and atlas labels from which alpha power differences between Switch Target and No-Switch conditions during the RSVP time window were extracted for correlation analyses.

Age group (years)	Positive(+)/ Negative(-) cluster	MNI coordinates	Label
19-30	+	0.2 -2.6 7.8	Right paracentral lobule
40-49	+	-1.0 -5.2 4.8	Left precuneus
60+	+	-5.4 -4.2 1.8	Left superior temporal gyrus

MNI coordinates of cluster peaks and their standardised anatomical labels based on the AAL atlas, the direction of the cluster (positive or negative) and the age group in which the cluster was observed in.

Table SM3. MNI coordinates and atlas labels from which alpha power differences between Switch Target and No-Switch conditions during the VS time window were extracted for correlation analyses.

Age group (years)	Positive(+)/ Negative(-) cluster	MNI coordinates	Label
19-30	+	4.2 1.8 0.8	Right inferior frontal gyrus, opercular part
40-49	-	4.6 -4.6 -4.2	Right cerebellum (crus II)
60+	-	-4.4 -5.2 -5.6	Left hemispheric lobule VIIB

MNI coordinates of cluster peaks and their standardised anatomical labels based on the AAL atlas, the direction of the cluster (positive or negative) and the age group in which the cluster was observed in.
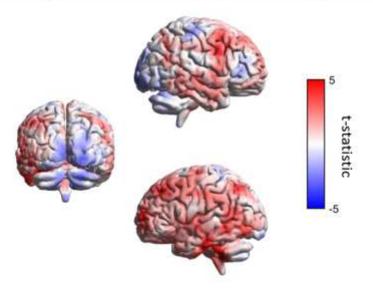

Figure SM2. Unthresholded effects in theta (3-5Hz) when contrasting Switch Target and No-Switch conditions in the 60+ years age group. Source plots present *t*-statistics. Note that the most significant positive clusters are identical to the clusters in Fig. 5. This figure illustrates negative effects in the occipital cortex that did not reach significance with the employed robust cluster-based permutation method.
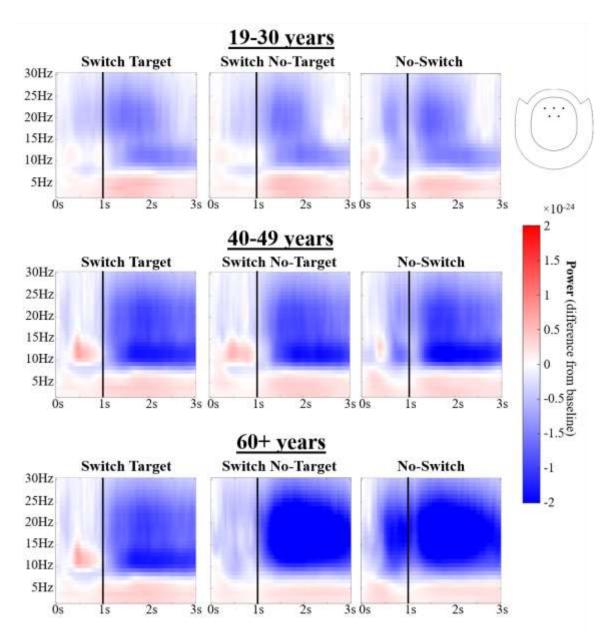
Figure SM3. TFRs present power in relation to a baseline period of -0.6s - -0.01s in a group of five frontal gradiometer pairs (gradiometer pair positions are illustrated as black dots on an empty topographical plot of the MEG helmet, top-right corner of the figure). The onset of the RSVP stream occurred at 0.0s. Black lines placed over TFRs indicate the onset of the VS display, and RSVP target onset occurred at either 0.7 or 0.9s.