Supplement

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Supplementary control analysis 1: Traditional averaging of FRPs

Although deconvolution-based approaches have a long tradition in hemodynamic studies (Dale & Buckner, 1997; Serences, 2004), they are not yet commonly applied to EEG data. The goal of the present study was not to compare deconvolution-based approaches in detail with traditional averaging-based approaches (for this, see Dimigen & Ehinger, 2021). Nevertheless, we still performed a control analysis using the traditional averaging of fixation-locked EEG epochs, without overlap correction. This averaging analysis was based on the same pool of fixations as the linear deconvolution analyses. For each first-pass first fixation on the pretarget character (*n*-1) and the target character (*n*), a 1000 ms segment (from -200 to 800 ms relative to fixation onset) was cut from the artifact-corrected continuous EEG and baseline-corrected with a 100 ms pre-fixation baseline. To keep the analyses directly comparable, we again removed the EEG segments containing residual non-ocular artifacts (see section *Exclusion of non-ocular artifacts*). Segments were then averaged, first within each participant and then across participants. As can be seen by comparing Figure 4 with Supplementary Figure S1, the averaging analysis provided a highly similar pattern of results, suggesting (1) that our findings are not caused by differences in temporal overlap and (2) that our findings hold up across different analytic approaches. Additional comparisons between deconvolved and averaged FRPs can be found at the OSF repository of the study (https://osf.io/tfh8u).

Supplementary Figure S1

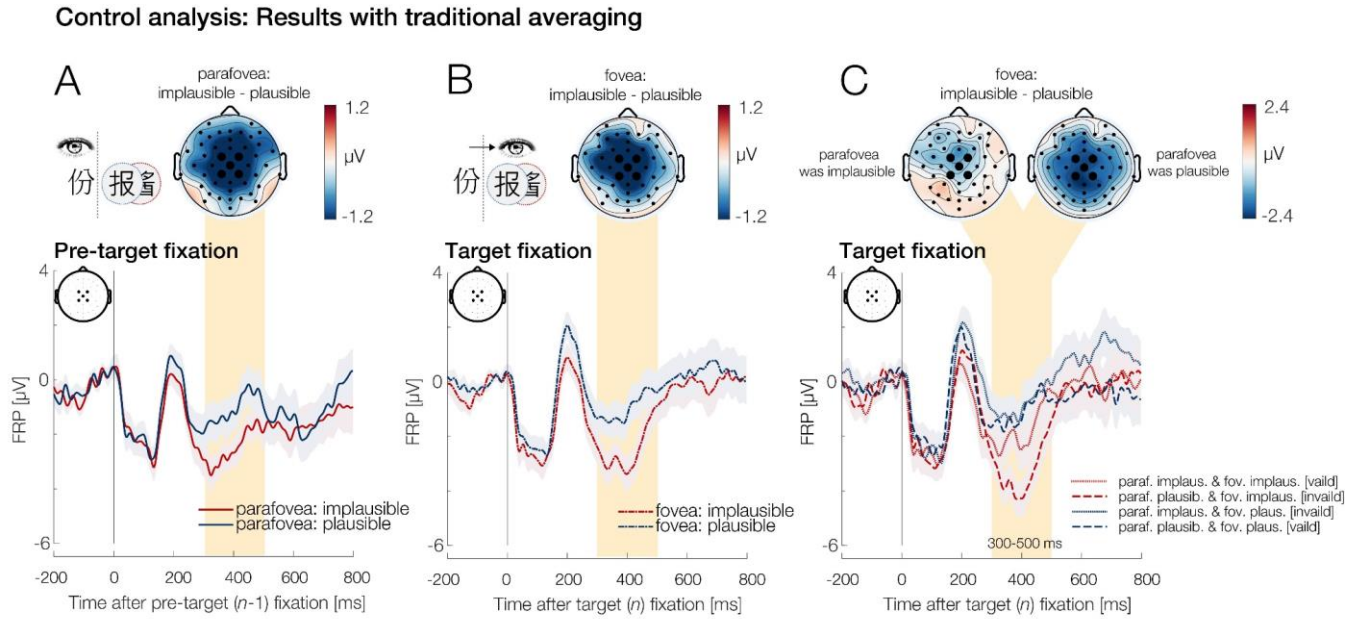

Figure S1. Parafoveal and foveal N400 effects, as obtain with classic averaging. This figure is analogous to Figure 4 of the manuscript.