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| **Time window** | **Final model with goodness of fit (*R*2) \*** |
| **W1: 160–216 ms** | **DV:** EEG voltage in microvolts  **Random intercepts:** Participant ID, interaction Participant ID by Time point, Electrode, interaction Electrode by Participant ID, interaction Conceptual modality switch by Participant ID, interaction Electrode by Participant ID by Conceptual modality switch.  **Fixed effects:** Time point, Anterior/Posterior brain area, Participants’ handedness, interaction Anterior/Posterior brain area by Conceptual modality switch, interaction Conceptual modality switch by Quick/Slow group.  **Model fit *R*2 = .794** |
| **W2: 270–370 ms** | **DV:** EEG voltage in microvolts  **Random intercepts:** Participant ID, interaction Participant ID by Time point, Electrode, interaction Electrode by Participant ID, interaction Conceptual modality switch by Participant ID, interaction Electrode by Participant ID by Conceptual modality switch.  **Fixed effects:** Time point, Anterior/Posterior brain area, Conceptual modality switch, interaction Anterior/Posterior brain area by Conceptual modality switch, interaction Conceptual modality switch by Anterior/Posterior brain area by Quick/Slow group.  **Model fit *R*2 = .862** |
| **W3: 350–550 ms** | **DV:** EEG voltage in microvolts  **Random intercepts:** Participant ID, interaction Participant ID by Time point, Electrode, interaction Electrode by Participant ID, interaction Conceptual modality switch by Participant ID, interaction Electrode by Participant ID by Conceptual modality switch.  **Fixed effects:** Time point, Anterior/Posterior brain area, Conceptual modality switch.  **Model fit *R*2 = .807** |
| **W4: 500–750 ms** | **DV:** EEG voltage in microvolts  **Random intercepts:** Participant ID, interaction Participant ID by Time point, Electrode, interaction Electrode by Participant ID, interaction Conceptual modality switch by Participant ID, interaction Electrode by Participant ID by Conceptual modality switch.  **Fixed effects:** Time point, Participants’ Age, Conceptual modality switch.  **Model fit *R*2 = .748** |

\* The time windows were chosen objectively, based on previous literature and visual inspection (for a discussion, see Luck & Gaspelin, 2016). Maximal, random slope models (with random slopes tested but only random intercepts significant) were built stepwise based on Likelihood Ratio tests, over a maximum of 10 million iterations (see Barr, Levy, Scheepers, & Tily, 2013). To see the order in which factors were entered, and the results for each, see document ‘Mixed effects models analysis of ERPs’. Analysis performed in R (R Core Development Team, 2015).

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| **Data** | **Variable** | **Levels or contrasts** | **Estimate / Contrast *t*** | **Statistical test2** |
| **All W1** | Brain area | Anterior | Intercept | χ2(1, *N* = 46) = 10.50, *p* = .001 |
| Posterior | 1.07 |
| Conceptual Modality Switch (CMS) | General switch contrast | 0.67 | χ2(2, *N* = 46) = 1.40, *p* = .498 |
| Switches contrast | -0.96 |
| CMS x  Brain area | – | – | χ2(4, *N* = 46) = 48.59, *p* < .001 |
| Group | Quick | NA | χ2(1, *N* = 46) = 0.14, *p* = .708 |
| Slow | NA |
| CMS x  Group | – | NA | χ2(3, *N* = 46) = 0.58, *p* = .900 |
| CMS x  Brain area  x Group | – | – | χ2(6, *N* = 46) = 23.63, *p* < .001 |
| **W1, Quick,**  **Anterior** | CMS | General switch contrast | 0.32 | χ2(2, *N* = 23) = 0.20, *p* = .903 |
| Switches contrast | -0.30 |
| **W1, Quick,**  **Posterior** | CMS | General switch contrast | 0.80 | χ2(2, *N* = 23) = 0.68, *p* = .712 |
| Switches contrast | -0.13 |
| **W1, Slow,**  **Anterior** | CMS | General switch contrast | -0.48 | χ2(2, *N* = 23) = 2.67, *p* = .264 |
| Switches contrast | -1.55 |
| **W1, Slow,**  **Posterior** | CMS | General switch contrast | 1.03 | χ2(2, *N* = 23) = 1.16, *p* = .560 |
| Switches contrast | -0.25 |
| **All W2** | Brain area | Anterior | Intercept | χ2(1, *N* = 46) = 83.91, *p* < .001 |
| Posterior | 4.02 |
| CMS | General switch contrast | 2.55 | χ2(2, *N* = 46) = 6.40, *p* = .041 |
| Switches contrast | -0.07 |
| CMS x  Brain area | – | – | χ2(2, *N* = 46) = 10.89, *p* = .004 |
| Group | Quick | NA | χ2(1, *N* = 46) = 0.13, *p* = .724 |
| Slow | NA |
| CMS x  Group | – | NA | χ2(3, *N* = 46) = 0.80, *p* = .849 |
| CMS x  Brain area  x Group | – | – | χ2(6, *N* = 46) = 51.55, *p* < .001 |
| **W2, Quick,**  **Anterior** | CMS | General switch contrast | 1.35 | χ2(2, *N* = 23) = 1.88, *p* = .391 |
| Switches contrast | 0.05 |
| **W2, Quick,**  **Posterior** | CMS | General switch contrast | 1.83 | χ2(2, *N* = 23) = 4.59, *p* = .101 |
| Switches contrast | -1.12 |
| **W2, Slow,**  **Anterior** | CMS | General switch contrast | 0.71 | χ2(2, *N* = 23) = 0.59, *p* = .744 |
| Switches contrast | -0.26 |
| **W2, Slow,**  **Posterior** | CMS | General switch contrast | 2.14 | χ2(2, *N* = 23) = 6.19, *p* = .045 |
| Switches contrast | 1.33 |
| **All W3** | Brain area | Anterior | Intercept | χ2(1, *N* = 46) = 61.01, *p* < .001 |
| Posterior | 2.26 |
| CMS | General switch contrast | 3.06 | χ2(2, *N* = 46) = 9.47, *p* = .009 |
| Switches contrast | 0.61 |
| CMS x  Brain area | – | NA | χ2(2, *N* = 46) = 2.75, *p* = .252 |
| Group | Quick | NA | χ2(1, *N* = 46) = 0.34, *p* = .560 |
| Slow | NA |
| CMS x  Group | – | NA | χ2(2, *N* = 46) = 1.69, *p* = .638 |
| CMS x  Brain area  x Group | NA | NA | [Rank deficiency] |
| **All W4** | Brain area | Anterior | NA | χ2(1, *N* = 46) = 2.85, *p* = .091 |
| Posterior | NA |
| CMS | General switch contrast | 2.75 | χ2(2, *N* = 46) = 7.58, *p* = .023 |
| Switches contrast | 0.37 |
| CMS x  Brain area | – | NA | [Not converging] |
| Group | Quick | NA | χ2(1, *N* = 46) = 0.32, *p* = .575 |
| Slow | NA |
| CMS x  Group | – | NA | χ2(3, *N* = 46) = 1.98, *p* = .577 |
| CMS x  Brain area  x Group | NA | NA | [Rank deficiency] |

1 In the first column, the *R*2 reflects the goodness-of-fit of the full final model. In the third and fourth columns, hyphens appear instead of data that do exist but are already reflected in the follow-ups and in the plots. Follow-up LMEs in the fifth were not Bonferroni-corrected, following Armstrong (2014: *Ophthalmic Physiol Opt*), because ‘the study is restricted to a small number of planned comparisons’ (p. 4), based on preceding studies, especially Hald et al. (2011: *Frontiers in Psychology*).