

Supplementary Materials

In our main manuscript, we subtracted the neural similarity values produced by the *unrelated* pairs from the *semantically-related* and *form-related* pairs to isolate *item-specific* pre-activation. The large number of *unrelated* pairs across triplets (31,374 pairs) provided a highly reliable measure of non-item-specific neural similarity (Wang et al., 2018). In previous work, we have shown that the time series of non-item-specific neural similarity values show a similar time course and rise-and-fall morphology as classic event-related components (Wang & Kuperberg, 2023).

To confirm that this was the case in the present study, we examined the time courses of the neural similarity values produced in all three individual conditions, see Supplementary Figure 1. As expected, the shape of the spatial similarity time series mirrored that of known event-related potentials, with peaks at ~120ms (corresponding to the N1/P1), at ~200ms (corresponding to the P200), and at 400ms (corresponding to the N400) following the onset of the pre-target word (i.e. following -700ms).

Supplementary Figure 1. The time course of the neural similarity values produced by the *unrelated* pairs and each of the two types of related pairs. Shown are the mean neural similarity values between the *form-related* and *unrelated* pairs (r). Standard errors are indicated with shading. **A.** Semantically-related and unrelated pairs. **B.** Form-related and unrelated pairs. The predicted target word was presented at 0ms, and the pre-target word was presented at -700ms, with a duration of 300ms.

