SUPPLEMENTARY MATERIALS

Exemplar search task

Design

The exemplar search task included eight blocks, and contained 224 exemplar match trials, 224 foil trials, and 48 no exemplar match trials. Category match trials consisted of a specific target (e.g., a standing suitcase) appearing on one side, while an object from the nontarget category (e.g., a lying watering can) appeared on the other side. Foil trials consisted of an object from the target's category (e.g., a standing bottle) and an object form the nontarget category (e.g., a lying watering can). No exemplar match trials displayed objects from the nontarget category only (Figure S1). Each of the eight blocks contained 28 exemplar match trials, 28 foil trials, and six no exemplar match trials.

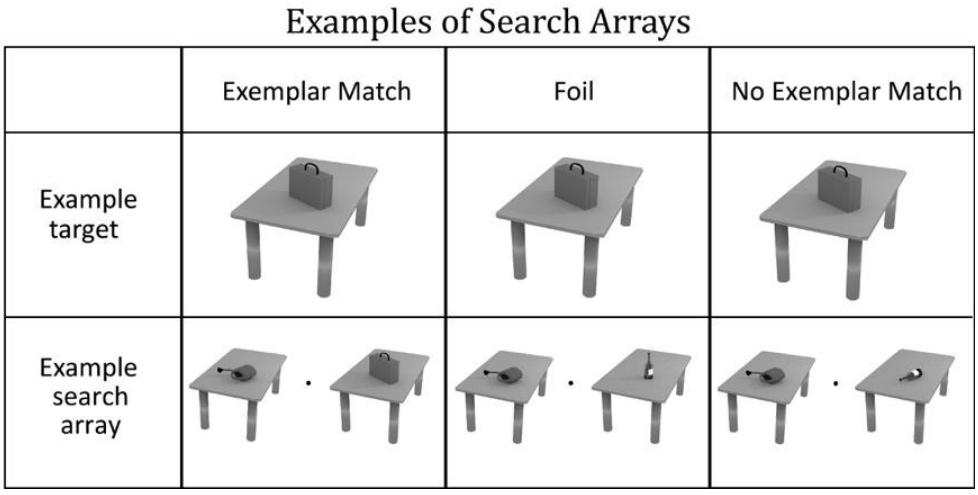

Figure S1. Examples of search arrays for the exemplar search task from Experiment 1A.

ERP results

The ERP results from the exemplar search task in all experiments are presented in Figures S2-S4. Assessing the presence of an N2pc component in each trial type across experiments, a 2 (laterality) × 2 (trial type) x 5 (experiment) ANOVA revealed a significant main effect of laterality, $F(1, 75) = 19.04$, $p < 0.001$, $\eta^2 = .002$, and a significant interaction between laterality and trial type, $F(1, 75) = 21.04$, $p < 0.001$, $\eta^2 = 0.001$. A paired samples *t*-test between contralateral and ipsilateral mean amplitudes revealed a significant N2pc component for exemplar match trials, $t(79) = 5.22$, $p < 0.01$, but not for foil trials, $t(79) = 0.40$, $p = 0.69$. We found a marginally significant interaction between trial type and experiment, $F(4, 75) = 2.28$, $p = 0.07$, $\eta^2 = 0.002$, but no evidence for a three-way interaction, $F(4, 75) = 0.86$, $p = 0.49$, suggesting that N2pc differences between exemplar trials and foil trials were similar across all experiments.

Since we did not find an N2pc for foil trials in any of the experiments, we only compared the N2pc for exemplar match trials across experiments. A one-way ANOVA of the difference waves revealed a marginally significant effect of experiment, $F(4,75) = 2.21$, $p = 0.07$, $\eta^2 = 0.11$. Planned independent *t*-tests (corrected $\alpha = 0.0125$) between experiments showed that the N2pc for exemplar match trials was marginally smaller in Experiment 1B compared to the N2pc in Experiment 1A, $t(30) = -2.27$, $p = 0.03$, suggesting that visual search is more difficult when searching for exemplars among a broader object set. There were no significant differences between Experiments 1B and 2, Experiments 2 and 3, or Experiments 2 and 4, $|t|(30) < 1.35$, $p > 0.18$, confirming that the other experimental manipulations did not affect efficiency in target selection.

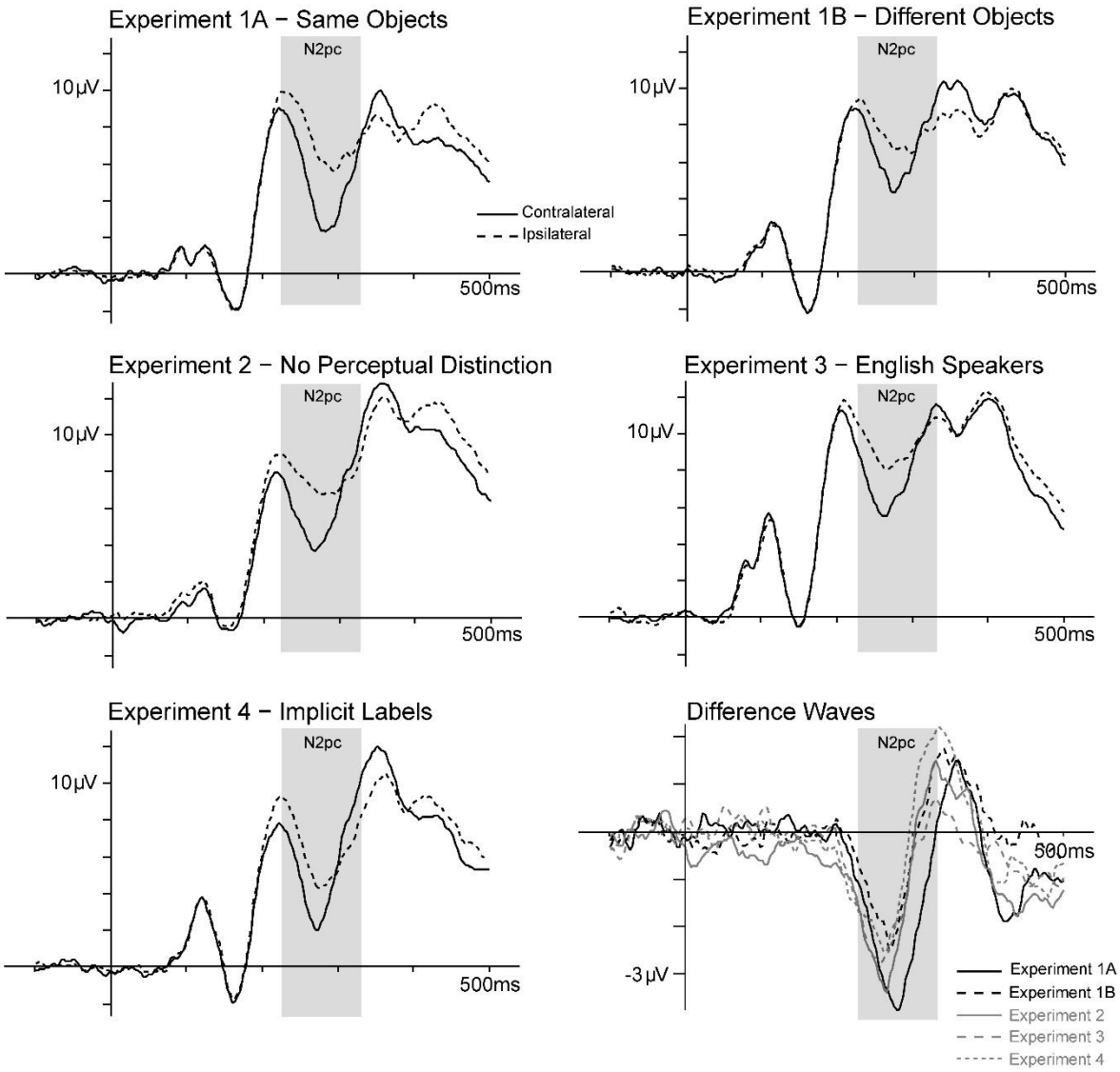

Figure S2. Grand average ERPs elicited by search arrays for exemplar match trials at posterior electrodes PO7/8 contralateral and ipsilateral (and difference waves) to the exemplar target in all experiments.

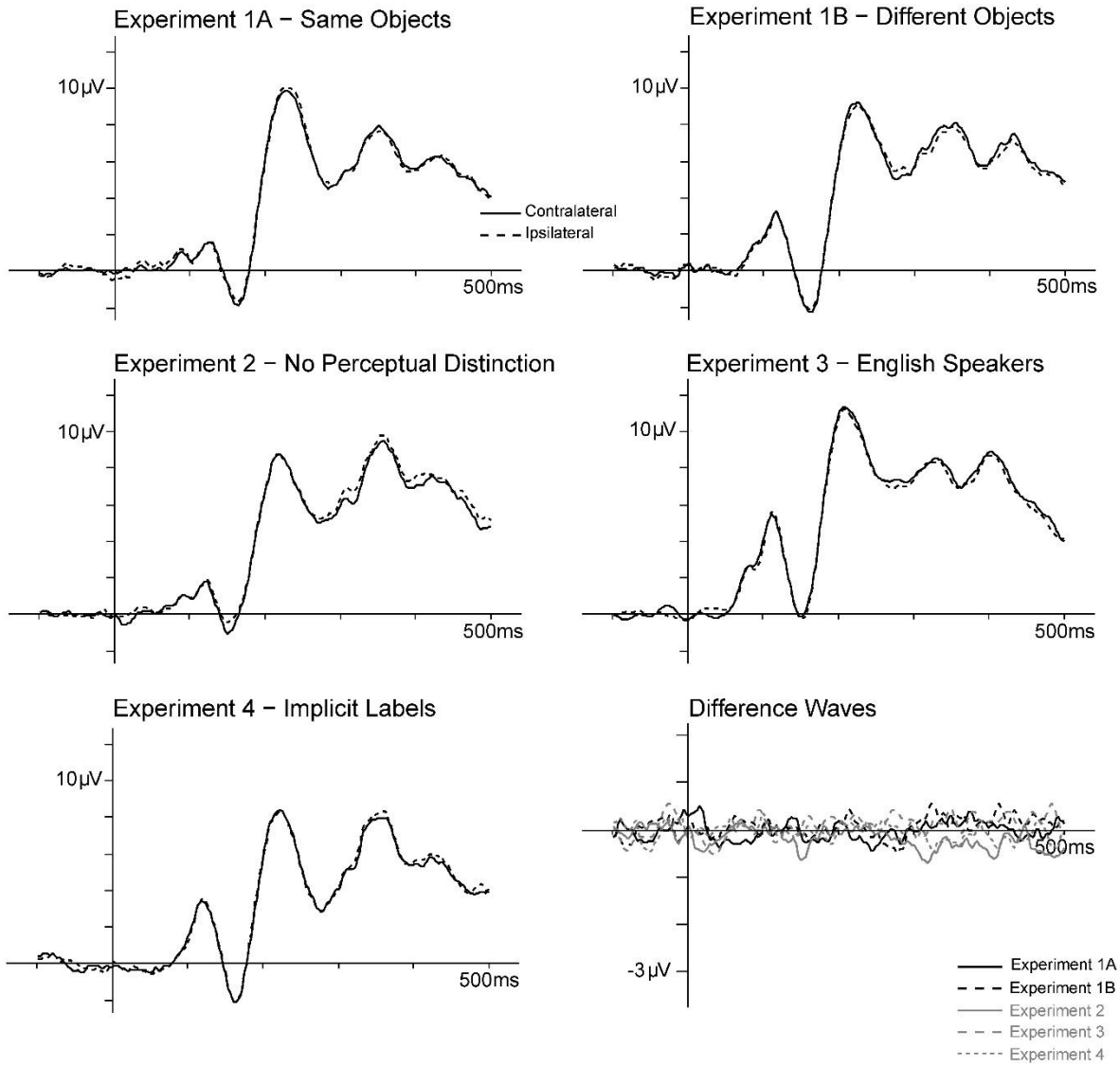

Figure S3. Grand average ERPs elicited by search arrays for foil trials at posterior electrodes PO7/8 contralateral and ipsilateral (and difference waves) to a nontarget object from the same category as the target object in all experiments.

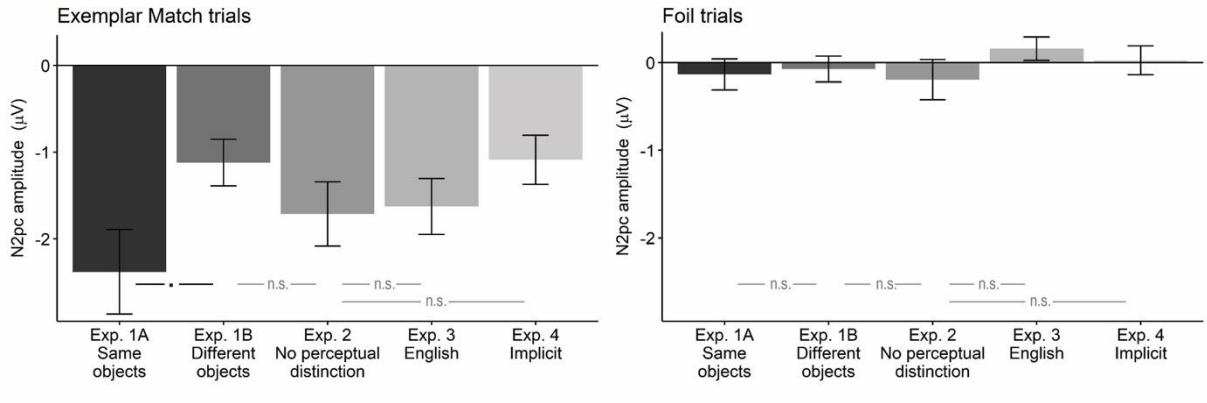

Figure S4. Mean N2pc amplitudes for exemplar match trials (left panel) and foil trials (right panel) from all experiments. Error bars represent ±1 SE.

Behavioral results

The behavioral results of the exemplar search task are presented in Figure S5. A 3 (Trial Type) x 5 (Experiment) omnibus ANOVA on accuracy revealed a main effect of trial type, $F(2,150) = 8.93$, $p < 0.001$, $\eta^2 = 0.06$; we found no evidence for differences based on Experiment, $F(4,75) = 0.79$, $p = 0.54$, nor a Trial Type x Experiment interaction, $F(8,150) = 0.75$, $p = 0.62$. Follow-up pairwise Bonferroni-corrected comparisons (adjusted $\alpha = 0.017$) showed that accuracy for no exemplar match trials was significantly higher than that for exemplar match trials, $t(79) = 3.87$, $p < 0.001$, and for foil trials $t(79) = 3.96$, $p < 0.001$. There was no difference in accuracy between exemplar match trials and foil trials, $t(79) = 0.95$, $p = 0.34$.

An omnibus analysis on reaction times showed a small effect of Trial Type, $F(2,150) = 4.47$, $p = 0.02$, $\eta^2 = 0.002$; there was no significant main effect of Experiment, $F(4,75) = 0.35$, $p = 0.85$, nor an interaction between Trial Type and Experiment, $F(8,150) = 1.41$, $p = 0.22$. Pairwise *t*-tests (corrected $\alpha = 0.017$) revealed that response times for exemplar match trials were marginally faster than those for no exemplar match trials, $t(79) = -2.42$, $p = 0.02$. There were no significant differences in reaction times between exemplar match trials and foil

trials $t(79) = -1.84$, $p = 0.07$, nor between foil trials and no exemplar trials, $t(79) = -1.43$, $p = 0.16$. Taken together, these findings confirm that our experimental manipulations did not affect participants' behavior on the exemplar search task.

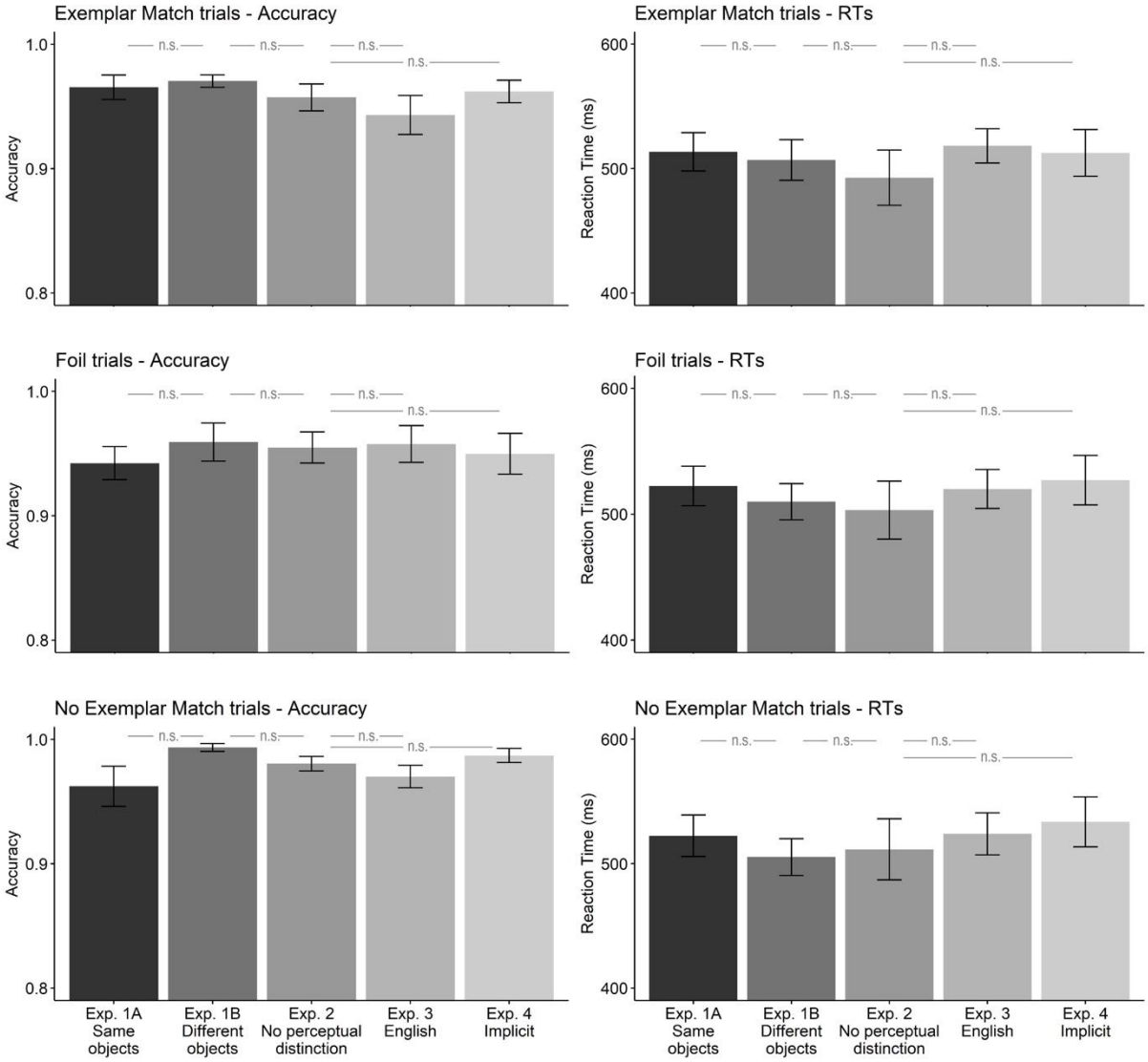

Figure S5. Accuracy (left panels) and response times (right panels) to exemplar match trials (upper panels), foil trials (middle panels) and no exemplar match trials (lower panels) from all experiments. Error bars represent ±1 SE.