Figure 1. Grand Average ERPs from the central ROI in the semantic attraction portion of the study. Statistical analyses revealed significant N400 effects in both experimental conditions, and a significant P600 effect in the Attraction condition.
Figure 1a. Graph of effect sizes corresponding to the ERPs in Figure 1.
Figure 2. Definition of ROI used for statistical analyses in the semantic attraction portion of the study.
Figure 3. Relationship between N400 and P600 effect sizes (measured in microvolts) in the attraction condition. $b = .44$, $p = .024$, R-squared = .15. Results indicated that subjects with large N400 effects showed little P600 activity, and vice-versa.
Figure 4. Relationship between N400 and P600 effect sizes (measured in microvolts) in the no attraction condition. $b = .44$, $p = .012$, R-squared = .18. Results indicated that subjects with large N400 effects showed little P600 activity, and vice-versa.
Most "Positive" Subjects in the Attraction Condition

Figure 5. Average ERPs for the six subjects displaying the most positive effect sizes in P600 window for the attraction condition.
Figure 6. Average ERPs for the six subjects displaying the most negative effect sizes in PN400 window for the no attraction condition.
Most "Negative" Subjects in the No Attraction Condition

Figure 7. Average ERPs for the six subjects displaying the most negative effect sizes in PN400 window for the no attraction condition.
Most "Positive" Subjects in the No Attraction Condition

Figure 8. Average ERPs for the six subjects displaying the most positive effect sizes in P600 window for the no attraction condition.
Figure 9. Graphic representation of our N400-P600 continuum measure, which indexes each subject's tendency to show either a P600 or N400 effect in response to (in this case) our no attraction anomalies. A given subject's point on the continuum was defined by orthogonally projecting their data point onto the regression line.
Figure 10. Positioning of Subjects on N400-P600 continuum, achieved by orthogonally projecting points from figure 12 onto the regression line. The metric we used to quantify each subject’s location on this continuum was the Euclidean distance from each point and the y-intercept of the regression line, with subjects whose coordinates lied to the left of the x-coordinate of the y-intercept receiving negative values.
Figure 11. Comparison of using orthogonal projection versus predicted values from the regression equation for quantification of the N400-P600 continuum. We employed orthogonal projection because it relegates individuals poorly characterized by the regression model to the middle of the distribution of continuum values, as can be seen in the case of subject 17 above.
Figure 12. ERPs from the six highest-scoring subjects on our measure of Verbal Working Memory Updating, the Keep-Track task. We found a significant relationship between the tendency of a subject to show either an N400 or a P600 to our no attraction stimuli. The figure above indicates that subjects scoring higher tended to show more P600-like activity.
Figure 13. ERPs from the six lowest-scoring subjects on our measure of Verbal Working Memory Updating, the Keep-Track task. We found a significant relationship between the tendency of a subject to show either an N400 or a P600 to our no attraction stimuli. The figure above indicates that subjects scoring lower tended to show more N400-like activity.
Figure 14. Relationship between performance on our measure of Verbal WM Updating (the keep-track task) and our N400-P600 continuum measures. Negative measures indicate more N400-like activity, while positive measures indicate more P600-like activity.
Figure 15. Relationship between performance on our measure of Spatial WM Span (the spatial span task) and our N400-P600 continuum measures. Negative measures indicate more N400-like activity, while positive measures indicate more P600-like activity.
Figure 16. Definition of ROIs used for statistical analyses in the visual word form portion of the
experiment.
Figure 17 (Rotate 90 degrees clockwise). Grand-Average ERPs for Experiment 3. No Differences between conditions emerged in the P100 time-window. In the N170 time window, all three experimental conditions varied from control, but not from each other. Time window is -200 ms to 400 ms.

Figure 18. Grand-average ERPs from the visual word-form portion showing later components from the central ROI. All three experimental conditions elicited a P600. Pair-wise comparisons revealed that all four conditions differed statistically from one another in the P600 time window.
Figure 19. Relationship between vocabulary scores and individual average P100 amplitude across all conditions of the VWF portion of the study. Subjects scoring higher on our vocabulary test tended to have larger P100 amplitudes, calculated as the average of all four conditions in Experiment 3.
Figure 20. Relationship between Verbal WM capacity (as measured by the reading span task) and individual N170 effect sizes (computed as the average of the three anomalous conditions in the VWF portion of the study minus the control condition). Subjects scoring higher on the reading span task tended to have smaller N170 effect sizes.