**List of statistical tests**

**(The large-scale organization of shape processing in the ventral and dorsal pathways; by Freud, Culham, Plaut and Behrmann)**

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|  | What was tested? | Statistical tests | N | page |
| Experiment 1 and Experiment 2 | Voxel-based Piecewise Regression (Figure 2C and 3C) | T tests (significance of correlation between slope and y-coordinate)  And  F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left)  **Dependent variable:** Correlation between slope and y-coordinate | 11 | 6-7,9-10 |
| Location of regression inflection point (Figure 2D and 3D) | F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left)  **Dependent variable:** y coordinate of regression inflection point. | 11 | 8,10-11 |
| Average shape sensitivity (Figure 2E and 3E) | F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left)  **Dependent variable:** average shape sensitivity | 11 | 8,10-11 |
| Voxel-based Piecewise Regression (tools excluded)  Figure supplement 2A and 3A | T tests (significance of correlation between slope and y-coordinate)  And  F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left)  **Dependent variable:** Correlation between slope and y-coordinate | 11 | 17 |
| Voxel-based Piecewise Regression (Cortical distance based on z and y axes)  Figure supplement 2A and 3A | T tests (significance of correlation between slope and y-coordinate)  And  F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left)  **Dependent variable:** Correlation between slope and distance | 11 | 8 |
| ROI analysis (Figure supplement 2C and 3C) | T tests (single-sample test). Test whether slope is greater than 0. | 11 | 9 |
| RSA (first level)  (Figure 4B and 5B) | T tests (single-sample test). Test whether correlation with shape model is greater than 0. | 11 | 12-15 |
| RSA (second level)  (Figure 4D and 5D) | F (repeated measures, with)  **Independent variable:** ROIs (between-pathways, within dorsal pathway, within ventral pathway)  **Dependent variable:** correlation between activation pattern of different ROIs | 11 | 12-15 |
| Behavioral performance (Figure 6A) | F (repeated measures)  **Independent variable:** level of scrambling  **Dependent variable:** recognition accuracy | 11/10 | 16-17 |
| Correlation between behavioral performance and fMRI activation (Figure 6B) | T tests (significance of correlation performance and slope) | 11/10 | 16-17 |
| Experiment 1 vs. Experiment 2 | Voxel-based analysis | F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left), Experiment (between-subjects)  **Dependent variable:** Correlation between slope and y-coordinate | 22 | 10 |
| ROI analysis (Figure supplement 3C) | T tests (single-sample test). Test whether slope is greater in experiment 1 compared with experiment 1 | 22 | 10-11 |
| Location of regression inflection point | F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left),Experiment (between-subjects)  **Dependent variable:** y coordinate of regression inflection point. | 22 | 10-11 |
| Average shape sensitivity | F (repeated measures, with)  **Independent variable:** pathway (ventral, dorsal), hemisphere (right, left) ,Experiment (between-subjects)  **Dependent variable:** average shape sensitivity | 22 | 10-11 |
| RSA (Figure supplement 5A) | T tests (single-sample test). Test whether the correlation to the shape model is greater in experiment 1 compared with experiment 1 | 22 | 12-15 |