Task: Click on the centroid (center of gravity) of just one color of dots.

Partial report paradigm in which a post-stimulus cue indicates the color of dots whose centroid is to be reported. On interleaved singleton trials, only one dot per color is displayed.

b. Sample stimuli showing number of colors (C), shapes (S) and items per centroid (N).

e. Theory predictions: Minimum number of computed centroids based on target weight and response accuracy

c. Results

Many different conditions were run, only post-cued trials (blue) with 28-32 dots are considered here. Main Expts: The number of stimulus colors (centroids) is indicated above the abscissa on left-bottom graph. Data for three subjects. (a) Response error (pixels). (c) Attention color-filter selection accuracy. (e) Minimum number of dots an ideal detector needs to match Ss responses.

d. Theory: Use data with n-1 centroids plus optimum guessing to predict performance with n-centroid stimuli. Prediction failure implies subject can compute at least n centroids. e. Predictions of centroid filter quality (target weight) and centroid judgment error for three subjects.

Abscissa: Number of stimulus centroids. Ordinate: Response accuracy. Blue line: data; red line: n-1 predicts n; yellow line: n-2 predicts n. Minimum number of subject-computed centroids derived from each graph is indicated in lower left corner.

Conclusion: One subject can compute at least 7 concurrent centroids following a brief exposure, the other two subjects can compute at least 5 concurrent centroids indicating that these three subjects have at least 7,5,5 salience maps.