Supplementary Materials

Saccade Landing Angle Analysis

The 40° separation between the two objects in each pair was chosen to ensure that saccades were directed discretely to one of the two objects, minimizing the proportion of saccades directed to the center of the group. Typically, such a "global effect" is observed only for angular separations less than 30° (Ottes, Van Gisbergen, & Eggermont, 1984). To ensure that this design feature was successful, we analyzed the angle of the saccade vector from the cue-matching object in the first pair to the objects in the second pair (Supplementary Figure 1). This analysis was limited to the first eye movement to leave the cue-matching object in the first pair. The data were normalized, such that on *switch* and *same* trials, the cue-matching object in the second pair was plotted at 0°, and the distractor object was plotted at 40°. For *both* trials, the first-cued-color object is plotted at 0°, and the second-cued-color object is plotted at 40°. Consistent with our assumptions, the distributions of saccade angle were clearly bimodal, indicating that saccades were typically directed to one of the two objects, rather than landing between them. This is illustrated most clearly in the *both* condition, with approximately half of the saccades directed to each of the two objects.

CIE color coordinates

Both Experiment 1A and 1B used the following colors: red (x = 0.444, y = 0.233, 26.46 cd/m^2), yellow (x = 0.488, y = 0.459, 28.13 cd/m^2), green (x = 0.281, y = 0.499, 26.89 cd/m^2), blue (x = 0.198, y = 0.118, 25.30 cd/m^2), dark grey (x = 0.302, y = 0.300, 12.89 cd/m^2), and light grey as background (x = 0.301, y = 0.298, 62.76 cd/m^2).

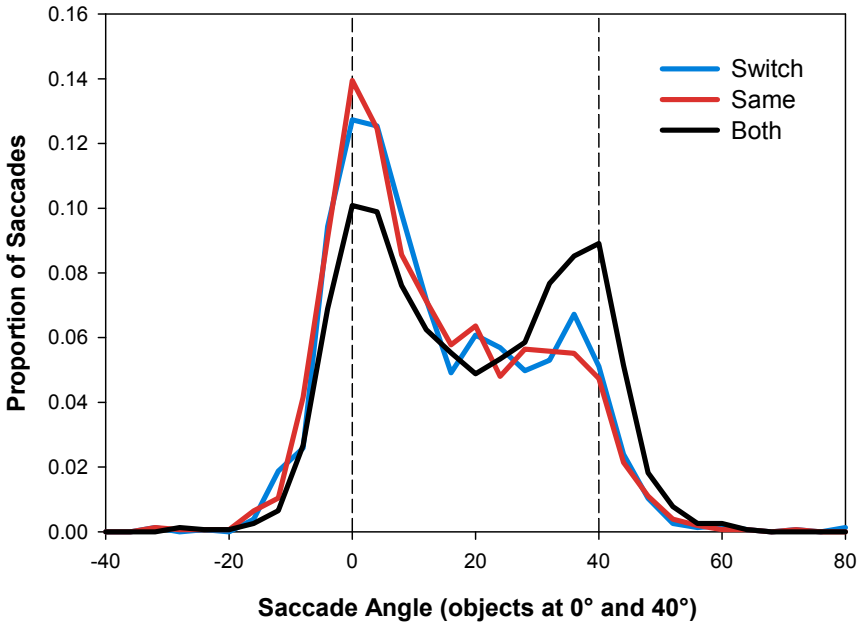
References

Ottes, F. P., Van Gisbergen, J. A. M., & Eggermont, J. J. (1984). Metrics of Saccade Responses To Visual Double Stimuli: Two Different Modes. *Vision Research*, *24*(10), 1169–1179. http://doi.org/10.1016/0042-6989(84)90172-X

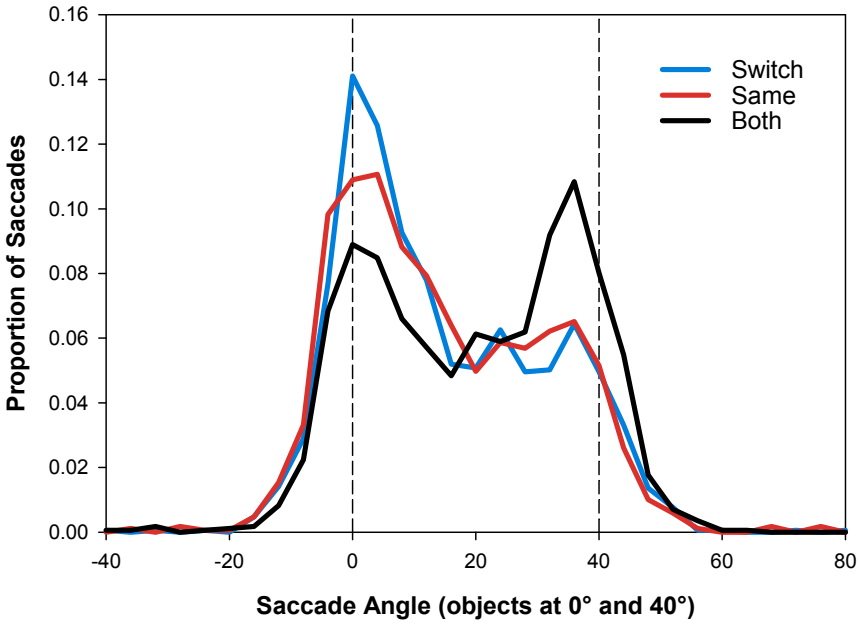
Supplementary Table S1. Mean manual response accuracy for line-match task for the three different trial types in both Experiments 1A and 1B.

Trial Type	Experiment 1A	Experiment 1B
Switch	93.28%	89.15%
Same	94.03%	92.77%
Both	92.65%	88.75%

Experiment 1A



Experiment 1B



Supplementary Figure 1. Angle of the saccade vector from the cue-matching object in the first pair to the objects in the second pair. For the *same* and *switch* conditions, the data were normalized to plot the cue-matching object at 0° and the distractor at 40°. For the *both* condition, the first-cued-color object is plotted at 0° and the second-cued-color object at 40°.