

APPENDIX

Contrast Thresholds for RDSs and the Embedded Line Segment

Contrast thresholds were determined for each subject using the method of constant stimuli for RDSs with dot densities of 0.07%, 0.39%, 5.15%, and 28.28%. In a previous experiment, a proportional relationship was determined to exist between the contrast detection thresholds for static RDSs, as used in this study, and *dynamic* RDSs with the same dot density.^{53, 54} Therefore, each subject's average ratio between the detection threshold for static and dynamic RDSs was used to estimate the contrast detection thresholds for the remaining four static RDS densities. Based on these data, the multiplier (M: range = 5 to 16) required to scale the static RD density with the highest contrast detection threshold to a value of 100% was calculated for each subject. Each subject's contrast detection thresholds were then measured for the vertical line segment, when it was superimposed on each density of background RDS. The detection thresholds for the line segment were determined when each background RDS was set to M times its previously measured contrast detection threshold. When stereothresholds were determined, the contrast of both the line and the RD background were scaled by the same multiplier, M, of the measured detection thresholds.

Whereas the contrast-detection thresholds of the static RDSs decrease with increasing dot density (Appendix Figure 1a), the contrast-detection thresholds for the superimposed line segment varied little as a function of the background dot density (Appendix Figure 1b).

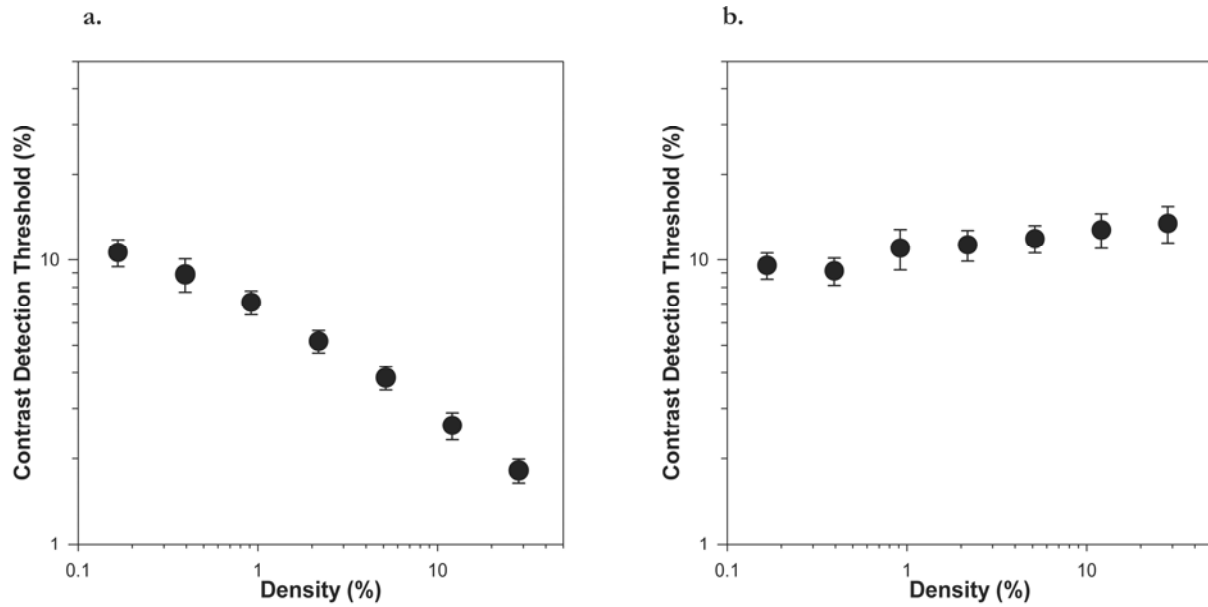


Figure 1. Contrast detection thresholds for RD and line stimuli. Error bars represent the standard error of the mean. (a) Contrast detection thresholds for background RDS densities ranging between 0.07% and 28.3%. The highest contrast detection threshold (i.e. for 0.07% density) was used to compute the multiplier, M , used subsequently to scale all stimulus contrasts to equal values above the detection threshold. (b) Contrast detection thresholds for a bright line segment superimposed on RD backgrounds of different density, each presented at M times its respective contrast detection threshold.