

Exploratory Graphs: Theory of Graphical Perception

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Background - perceptual tasks

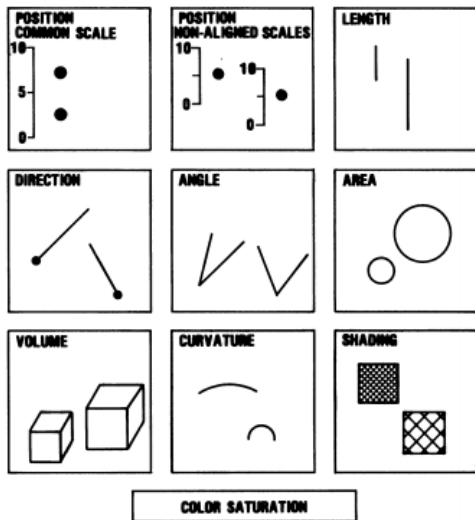


Figure 1. Elementary perceptual tasks.

Graphical perception: Theory, Experimentation, and Applications to the Development of Graphical Models

Position versus length

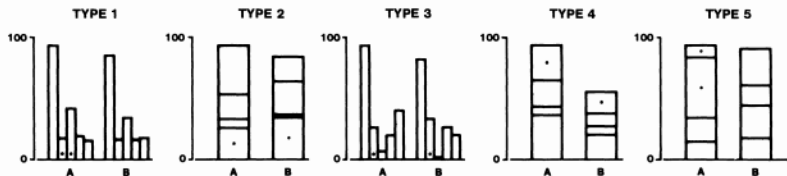
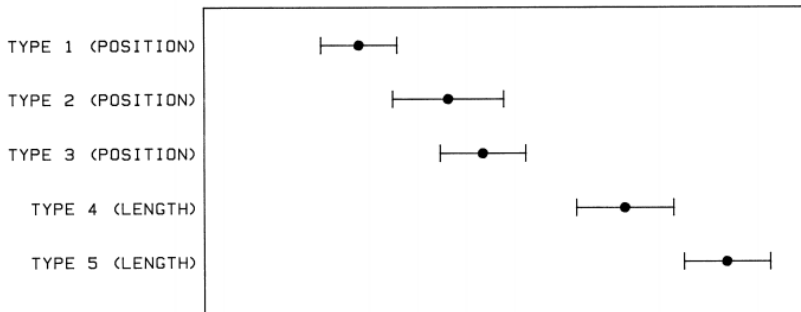


Figure 4. Graphs from position-length experiment.

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Position versus length - results



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Position versus angle

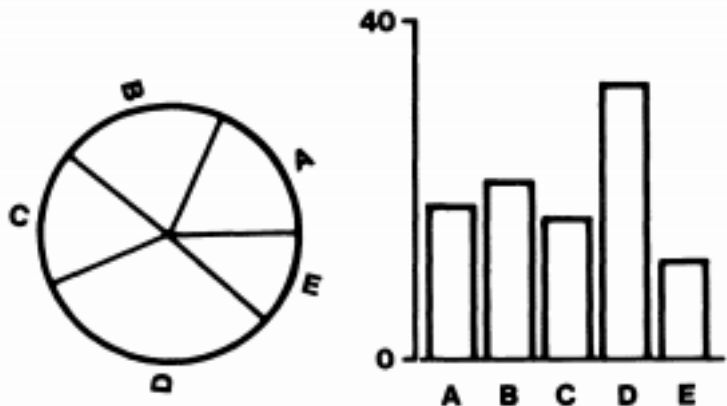
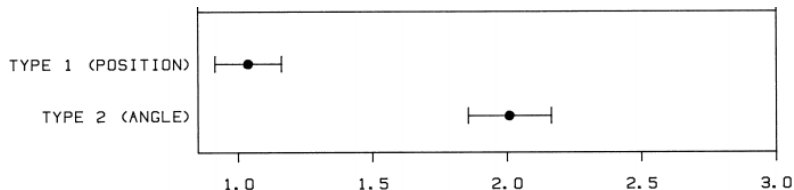


Figure 3. Graphs from position-angle experiment.

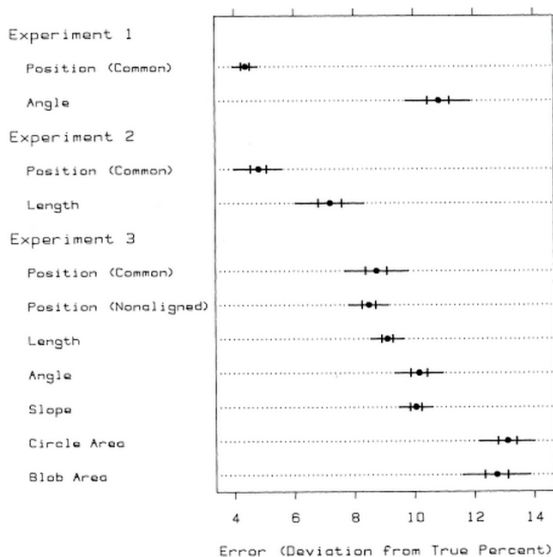
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Position versus angle - results



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More experimental results



Graphical Perception and Graphical Methods for Analyzing Scientific Data

Summary

- ▶ Use common scales when possible
- ▶ When possible use position comparisons
- ▶ Angle comparisons are frequently hard to interpret (no piecharts!)
- ▶ No 3-D barcharts. Please.