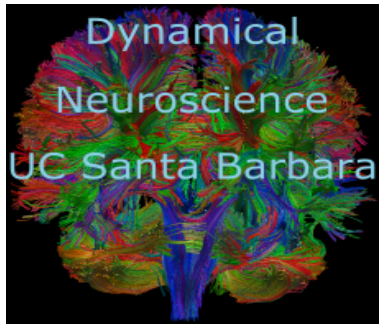


Category Learning in the Peripheral Vision

Paloma Alvarez, Vanessa Gomez, and John Vallada

Mentor: Luke Rosedahl

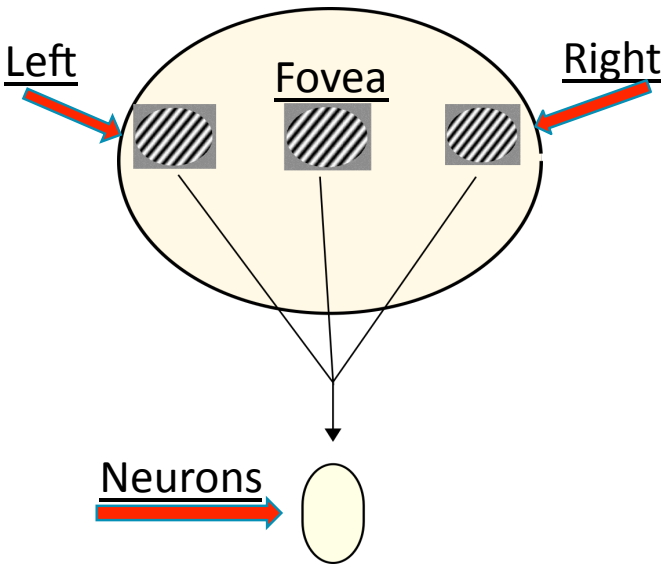
Advisor: Greg Ashby, Ph.D.

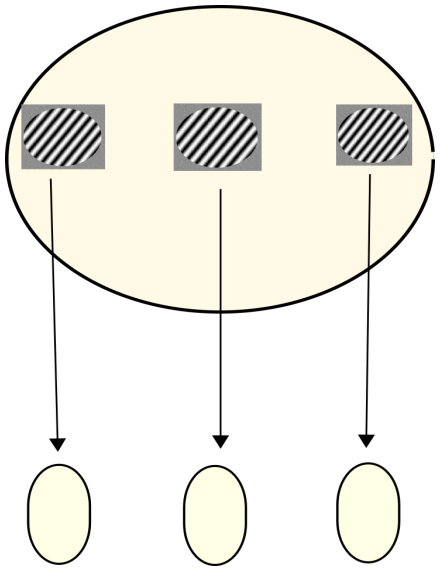
Motivation

Everyday we make category judgments

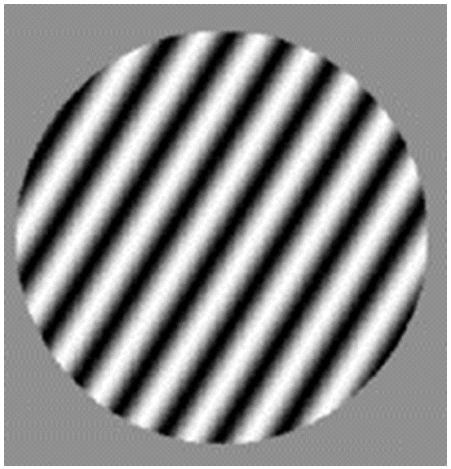
Project Goals

To determine if the left and right visual fields are trained independently during categorization



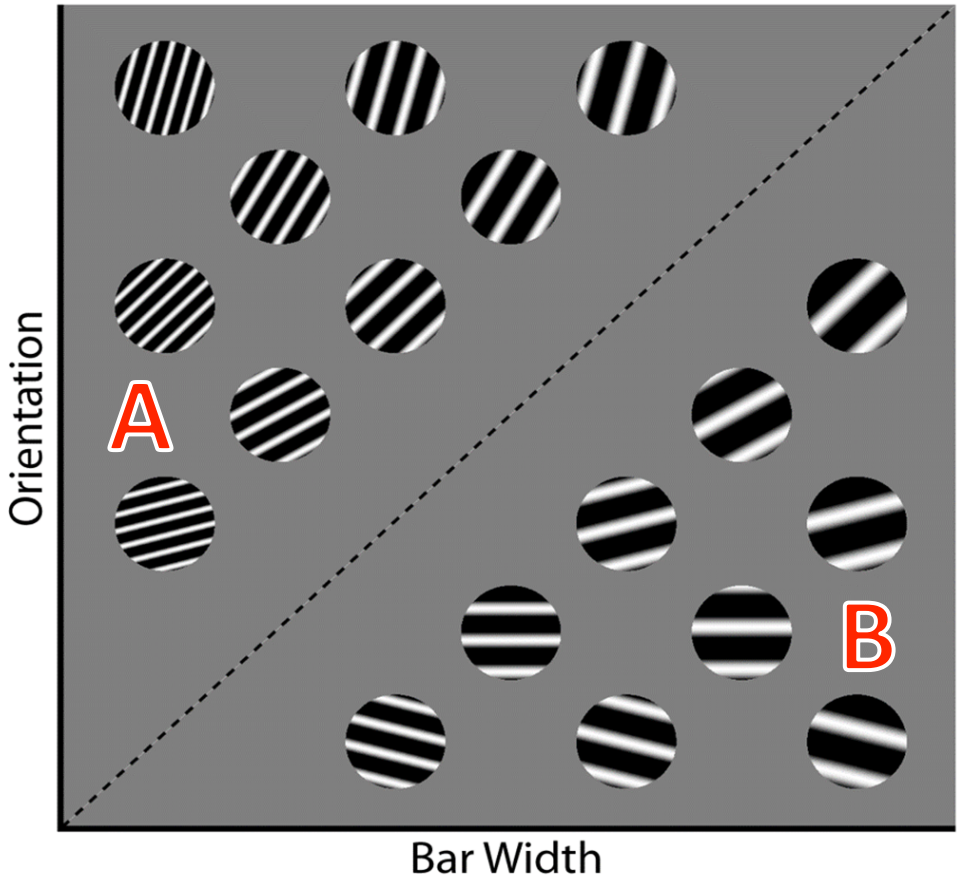


Experimental Method

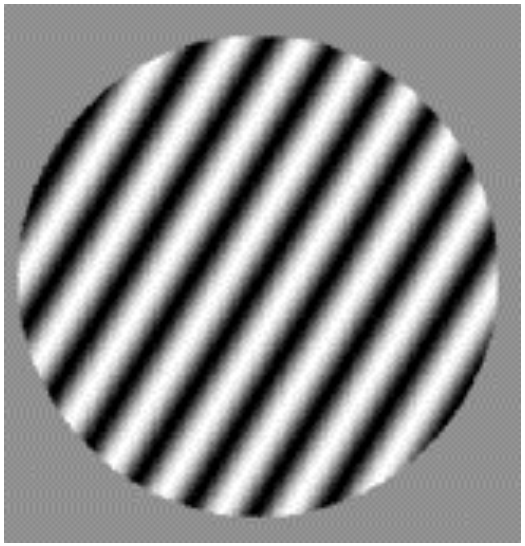


Gabor Disc

- Learn to categorize discs into one of two categories
- Discs will vary on two different dimensions


Orientation
A
B
Bar Width

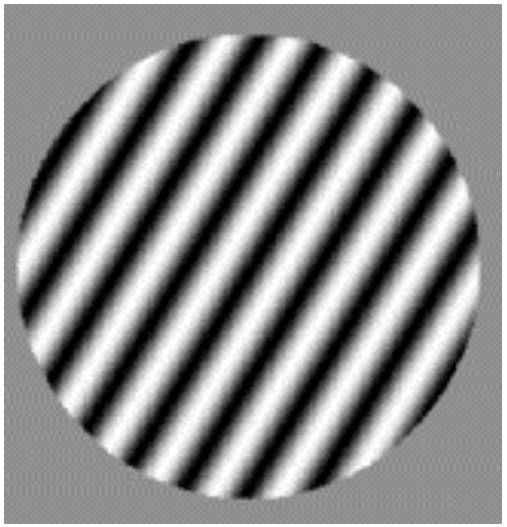
Left



A

B

Right

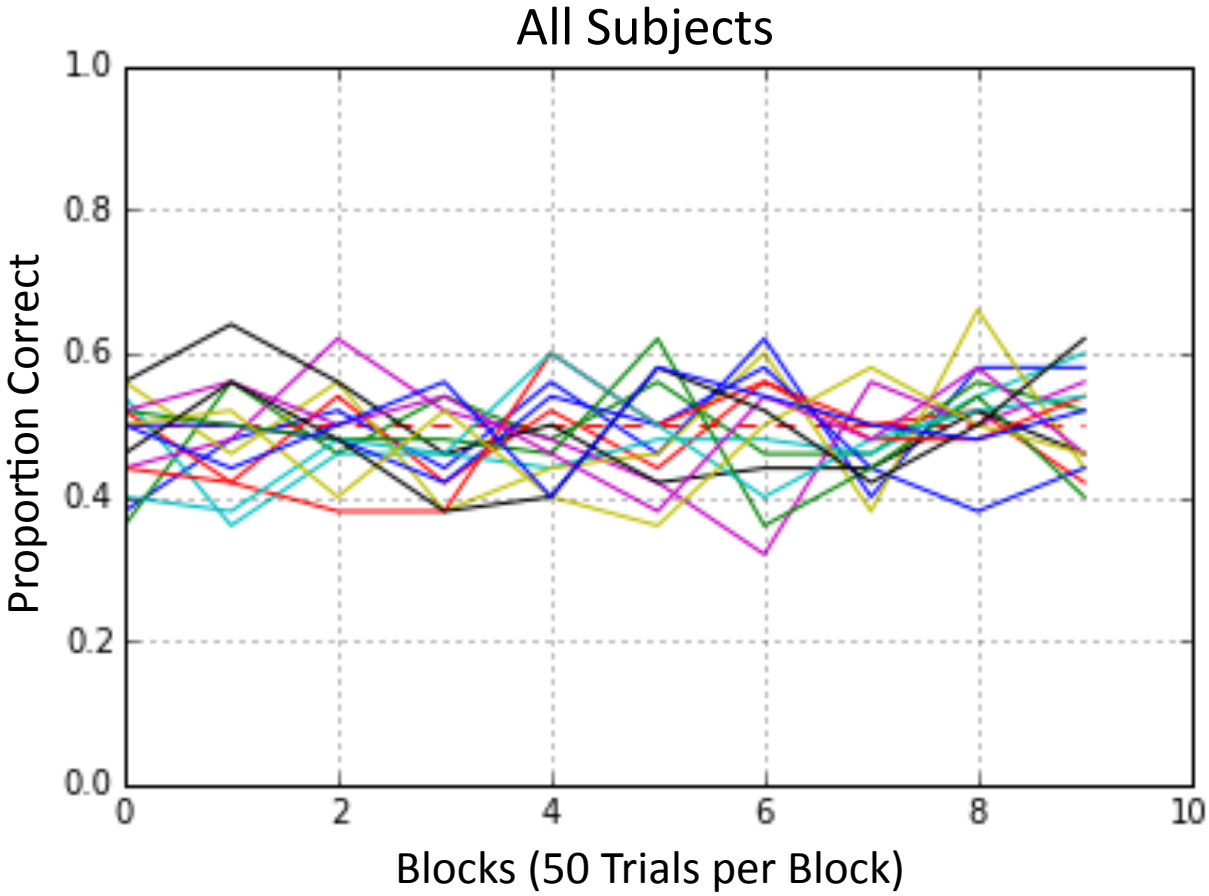


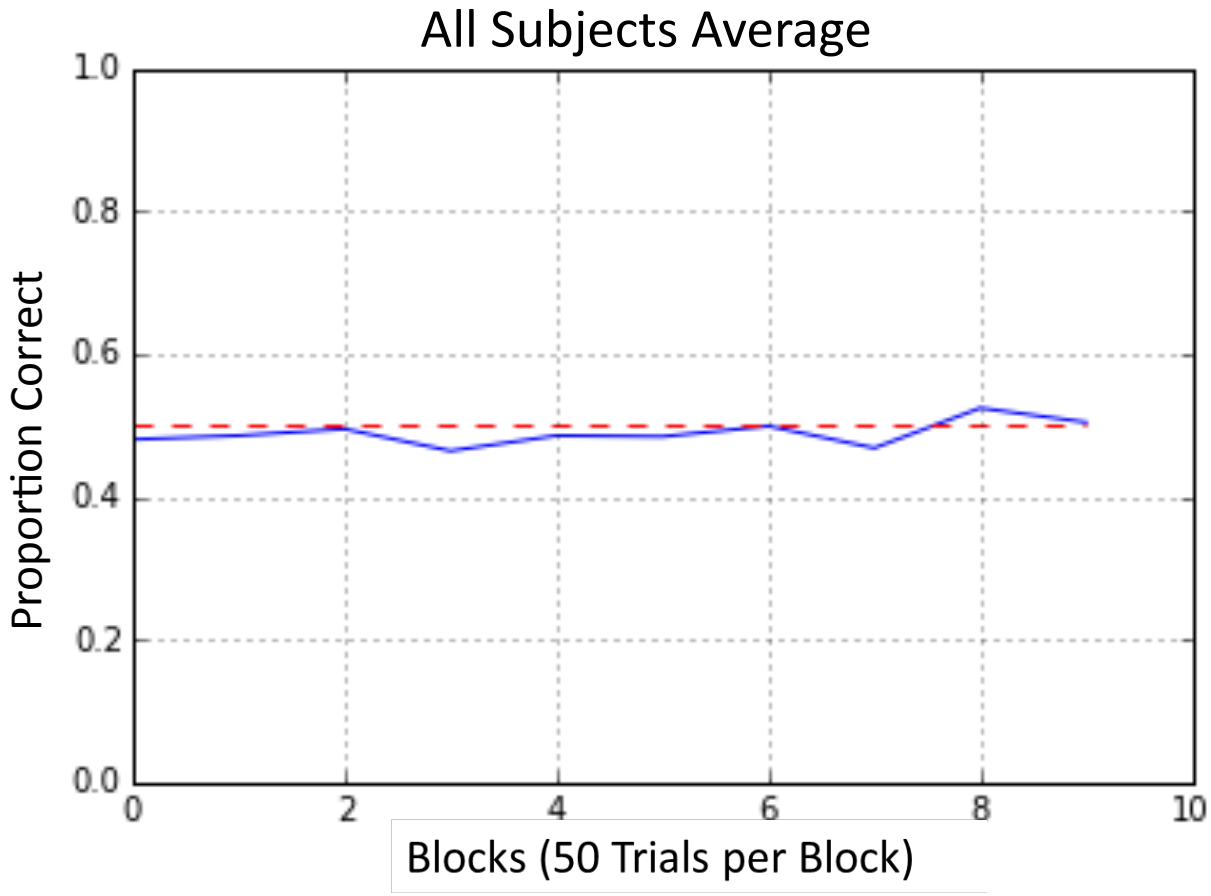
B

A

Data (delete slide) say for next slide

- 17 subjects
- Around 45 minutes
- 10 blocks of 50 trials
- 500 trials


All Subjects
Proportion Correct
1.0
0.8
0.6
0.4
0.2
0.0
0
2
4
6
8
10
Blocks (50 Trials per Block)


All Subjects Average
Proportion Correct
1.0
0.8
0.6
0.4
0.2
0.0
0
2
4
6
8
10
Blocks (50 Trials per Block)

Discussion & Conclusion

- Data did not support left and right visual fields being trained independently

- Likely conclusion, left and right side are not trained 100% independently

Future Directions

- Eye Tracker
  - Train them on right visual field for 500 trials
  - Test on right and left visual fields
  - If performance is poor on the left side it would imply there is somewhat independent training

Summary

- Learned about categorization
- The importance of research and remodifying experiments
- Amazing opportunity to work with mentors!

Acknowledgements

Ellie Sciaky

Anchal Agarwal

Jens-Uwe Kuhn

Mentor: Luke Rosedahl

Advisor: Greg Ashby