

Brain Cognitive Society, IITK

Workshop-April 2020

Project Report

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Aim:

Replicating experiments based on paper on Feature Analysis in Early Vision. To test the search from asymmetries, amongst converging and parallel lines.

Experiment 1:

Subject was required to find a pair parallel lines amongst other curved lines as fast as possible.

There was a total of 4 different cases where the number of objects on the screen would change. They were 6, 12, 18, 24 respectively. Each case had 10 iterations with 5 blanks.

Experiment was hosted on PsyToolkit.



Figure 2.1 A typical target



Figure 1.2 A typical distractor

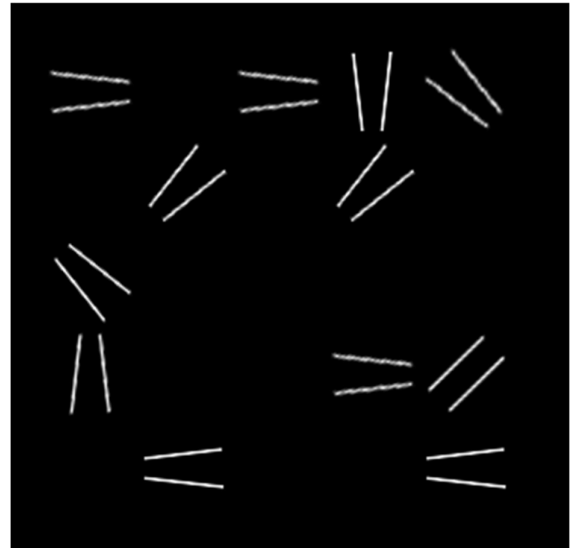


Figure 3 An example from the Expt. 1.

Experiment 2:

Subject was required to find a pair of converging lines amongst other parallel lines as fast as possible.

There were a total of 4 different cases where the number of objects on the screen would change. They were 6, 12, 18, 24 respectively. Each case had 10 iterations with 5 blanks.

Experiment was hosted on PsyToolkit.

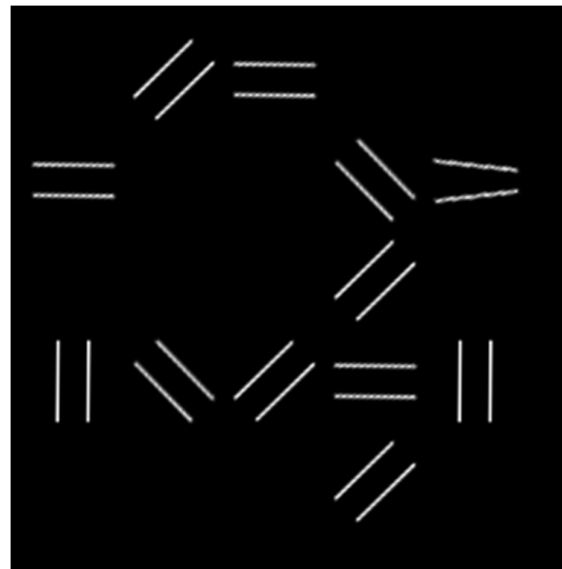


Figure 4 An example from Expt. 2.

Report:

A total of 10 people participated in the experiment which gives us the following distribution of data

Sr No.	Expt 1				Expt 2			
	False Alarms	Correct Rejection	Miss	Hit	False Alarms	Correct Rejection	Miss	Hit
1	1	19	6	34	0	20	3	37
2	1	19	3	37	5	15	0	40
3	2	18	2	38	1	19	0	40
4	4	16	4	36	2	18	0	40
5	4	16	5	35	0	20	0	40
6	1	19	7	33	1	19	0	40
7	5	15	10	30	0	20	0	40
8	3	17	3	37	2	18	1	39
9	0	20	8	32	1	19	0	40
10	1	19	4	36	0	20	0	40
Total	22	178	52	348	12	188	4	396

	Expt. 1				Expt. 2			
	6 Objects	12 Objects	18 Objects	24 Objects	6 Objects	12 Objects	18 Objects	24 Objects
MEDIAN	959	1416	1909	2139.5	643.5	793.5	865.5	892.5
AVG	1140.87	1682.82	2204.92	2390.4	740.84	924.27	1008.66	1098.89
SD	640.5037	893.754	1199.9168	1236.2319	425.8695	537.75748	575.16182	752.17958
MODE	791	1429	4000	4000	562	602	705	702

NOTE: The values in the above table are in milliseconds(ms).

