Visual World Paradigm

Team Pegasus

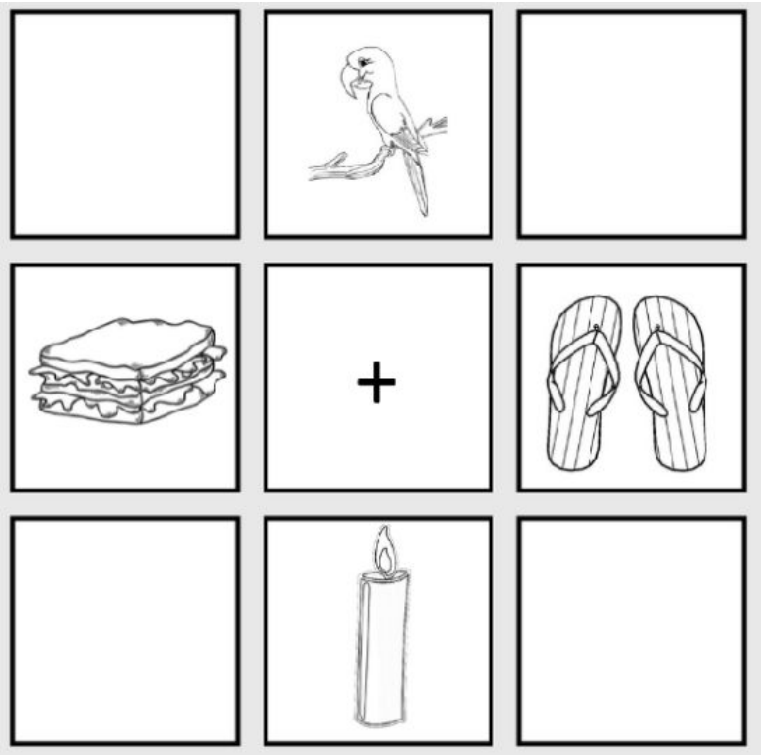
Milestone 5

Research Question

A classical visual world study showing how people predict upcoming words with the help of eye tracking data.

Our study project investigates on the effect of presence of competitor words (cohort and rhyme) on the gaze pattern of the participants. Based on our hypothesis, we propose that fixations on competitor words will exhibit an increase while attending to the target word.

Stimulus



Referent: sandal

Cohort: sandwich

Rhyme: candle

Distractor: parrot

Conditions

1. **Full Competitor Set (FC)**- a referent (Re), a cohort (C), a rhyme (Rh), and an unrelated (U).
2. **Cohort Competitor Set (CC)**- a referent, a cohort, and two unrelated.
3. **Rhyme Competitor Set (RC)** - a referent, a rhyme, two unrelated
4. **Unrelated Set (UC)** - a referent, three unrelated

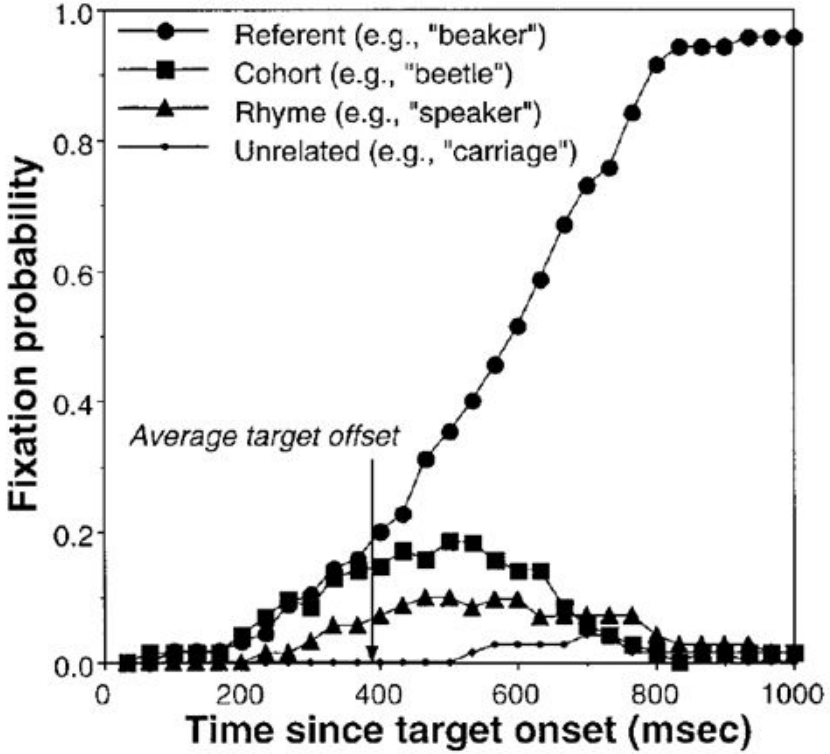
Condition No	**Trials (how many examples of such)**	**Conditions**		
		Competitor Set	Target	Distractors
1	6	FC	Re	C, Rh, U
2	6	FC	C	Re, Rh, U
3	6	FC	Rh	Re, C, U
4	6	FC	U	Re, C, Rh
5	6	CC	Re	C, U, U
6	6	CC	C	Re, U, U
7	12	CC	U	Re, C, U
8	6	RC	Re	Rh, U, U
9	6	RC	Rh	Re, U, U
10	12	RC	U	Re, Rh, U
11	6	UC	Re	U, U, U
12	18	UC	U	Re, U, U

Analysis

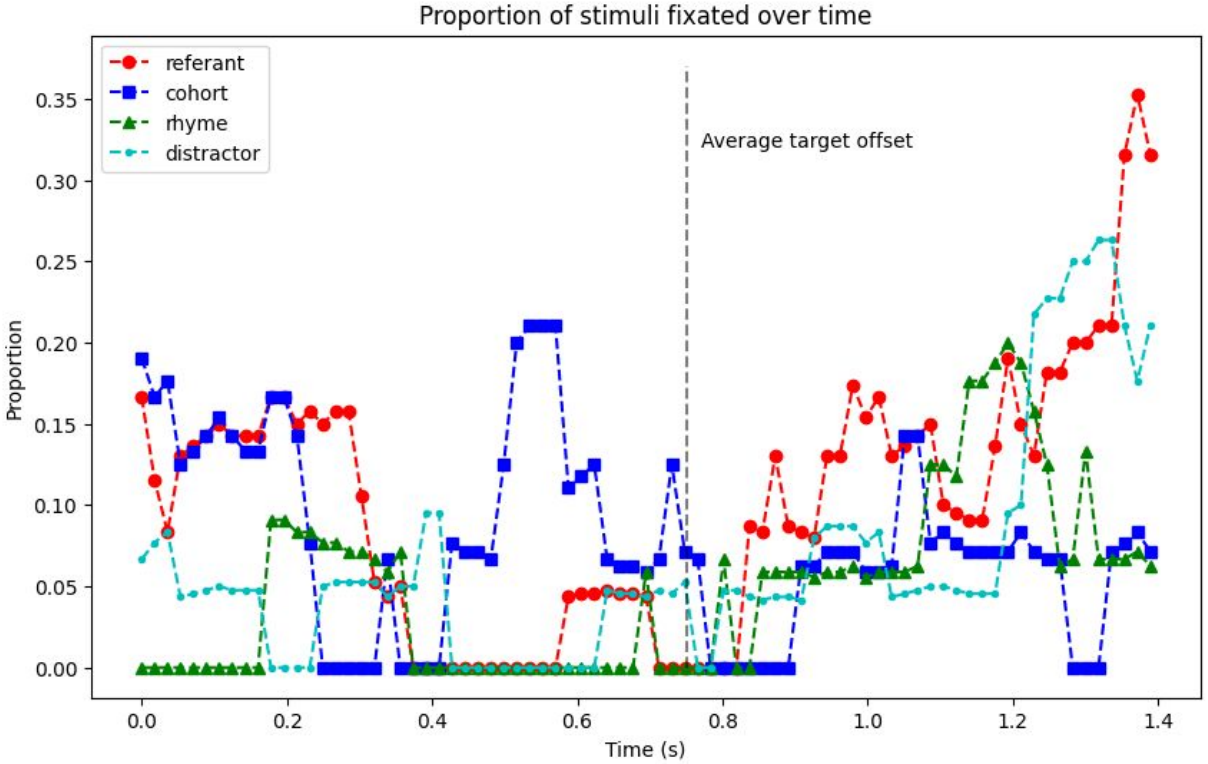
We plot the fixation probabilities over time for the trials on which the referent was presented with a cohort and/or rhyme competitor.

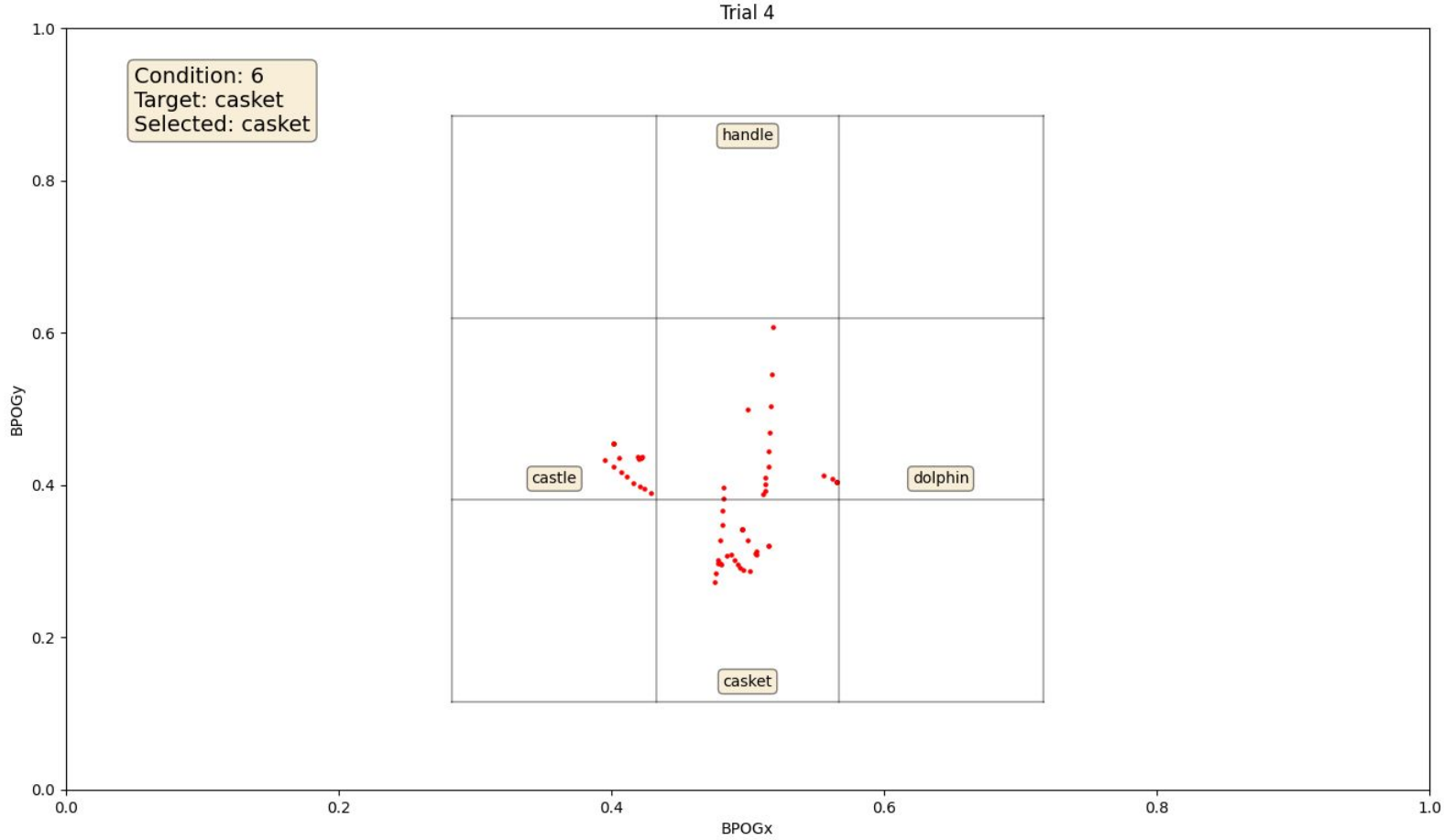
- Fixations to the referent were averaged across the full competitor trials, the cohort-only and rhyme-only competitor trials.
- Fixations to the cohort objects were averaged across the full competitor and cohort-only conditions and fixations to the rhyme were averaged over the full competitor and rhyme-only trials.

Expected Results



Our results


Proportion of stimuli fixated over time
referant
cohort
rhyme
distractor
Average target offset
Proportion
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0.35
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
Time (s)


Trial 4
Condition: 6
Target: casket
Selected: casket
handle
castle
dolphin
casket
BPOGy
BPOGx
0.0
0.2
0.4
0.6
0.8
1.0