Visual World Paradigm

Classical visual world study on how people predict the upcoming words

Milestone 2

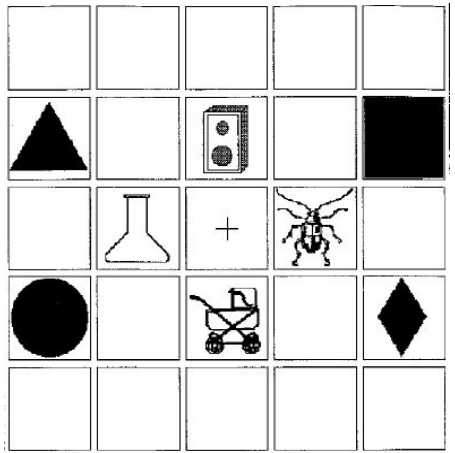
Team Pegasus

Research Question

How eye movements can provide insights into different cognitive processes, such as how we pay attention, access and recognize words as they unfold, and understand their meaning?

Data Collection - Procedure

1. The set of images to be used in the experiment will be shown and **named** to each participant before the experiment **twice** for word familiarity.
2. Once the participants are familiar with the words, we show a 5x5 grid stimuli as follows, where each grid cell is about 5x5 cm.



Data Collection - Procedure

3. Participants should be seated about 57 cm from the screen (eye to screen distance).

4. Around 2 seconds after the stimulus screen appears, the experimenter prompts the participant to fixate at the central cross, which marks the start of the data collection.

5. The experimenter then instructs the participant (using auditory stimulus) to fixate on one of the objects. In the original experiment, participants were asked to pick and drop the object. We can implement this in OpenSesame if feasible.

6. After 1 sec, the experimenter again instructs to fixate in the central cross, which marks the end of one trial.

Conditions and Levels

Condition	**Levels**	**Within/Between**
Combination of objects	full competitor set; cohort competitor set; rhyme competitor set; unrelated set	within subjects or in between two groups
Picture Salience	one picture is visually more attention-grabbing; all pictures have similar levels of salience.	Within subjects
Image Color	Color; Line drawings	Within subjects

Randomization and Balancing

1. Keep equal gender ratio for both groups (for between group experiments).
2. Typically in age group 20-35.
3. Trials will be randomly ordered.
4. Only participants with at least **B2** level of English proficiency will be allowed.
5. Participants should have corrected to normal vision.

Stimuli Examples

The following examples belong to the *full competitor set*. The other sets will be formed by a combination of these objects. *(two sample stimuli are uploaded in ILIAS)*

1. Sandal, Sandwich, Candle, Parrot.
2. Dollar, Dolphin, Collar, Beaker.
3. Pickle, Pitcher, Nickel, Speaker.
4. Carrot, Carriage, Parrot, Nickel.
5. Beaker, Beetle, Speaker, Carriage.

As per the reference paper: All stimuli were recorded as isolated words which were subsequently spliced into smaller stimuli. Each token of a stimulus word was recorded at a 44.1 kHz sampling rate with a sampling size of 16 bits.