Instructions for Experiment r9  
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Overview

The r9 experiment is one of a series of experiments on the spatial resolution of selective attention. It’s ultimate goal is to measure accuracy as a function of a relevant stimulus and an irrelevant stimulus that is separated by some distance. General instructions for setting up the room, computer and, if need be, the EyeLink device can be found separately in the "EyeLink Device Instructions"

Stimuli

The required judgment will be the relative location of a small disk of light. This target disk is presented at a fixed eccentricity on opposite sides of a fixation cross. One display marked by a tone briefly appears. Your task is discriminate whether the target disk appeared on the left or right side of fixation.

Display Sequence and Responses

The experiment consists of blocks of trials with breaks between blocks. At the beginning of the block of trials, a fixation pattern appears with white peripheral disk that marks the location of the relevant stimuli. Each trial consists of a series of events:

1. Fixation and Cue. A trial begins with a central fixation cross and central line cue for about 0.5 seconds. Be sure to fixate the cross with your eyes and maintain fixation throughout the trial. If you do not accurately fixate, we will not be able to use the data. The central line cue is to remind you of the relevant locations. They are constant for a block of trials.

2. Warning interval. The cue disappears and the fixation point remains alone for about 0.5 seconds.

2. Display interval. Next the critical stimulus display is presented in one display interval. The interval is marked by a tone. The interval is very short (0.1 seconds).

3. Prompt. After the display, a question mark prompt appears below
fixation. Your task is to decide whether the target disk occurred to the right or left of fixation. Respond using the numeric keypad. If the disk is to the left, press the "0" key; if it is to the right, press the "period" key. Take you time to respond. For the most difficult displays, your judgment may be only an educated guess.

4. **Feedback.** After the display, no tone indicates the correct response and a low tone indicates an error.

5. **Intertrial Interval.** There is 1 second between trials. Blink your eyes as needed between trials.

**Number of Trials and Blocks**

There are 32 trials per block and 8 blocks in a single session of this experiment. The program will pause between blocks. Please rest during these pauses! Close your eyes and relax. Do not try and rush through the experiment.

**Breaks and Aborts**

If you need additional breaks during a block, delay your response to an individual trial.

To abort the experiment, the preferred choice is to hold down the "a" key. It may take a moment, but the program should terminate when it reaches the appropriate place in the trial sequence. Using this method saves the data obtained thus far in the experiment. Alternatively, one can use the universal mac abort by pressing CMD-<period>. Then, to restore the display, you must press CMD-<zero>, followed by carefully typing "clear screen" (you will not be able to see what you type). This sequence will put you back in MatLab.

**Details of the displays**

**Two-stimulus condition.** In this experiment, all trials are what we call the two-stimulus condition. In it, one is always presented with two stimuli. One stimulus is always at the relevant location and a second foil stimulus is at a nearby irrelevant location. Your task is to judge the presence of the stimulus at the relevant location and ignore the stimulus at the irrelevant location. The irrelevant stimulus is presented independently of the presence of the stimulus at the relevant location. The two stimuli also both vary in contrast. Although
both stimuli are always presented, often you may only see a single stimulus and
not be sure which one it is.

NEW INSTRUCTIONS: Under these conditions, try and attend only to the
relevant location and make your best "guess" based on that location alone. It is
OK to sometimes miss the target when trying to use information from only the
relevant location.

OLD INSTRUCTIONS (do not use for R9): Under these conditions, assume it is
the relevant target and respond accordingly.

Analysis

Run the program "sann14". The program prompt for the number of files and
the filenames. It prints the results to both a text file (.txt suffix) and the
command window. After it runs, print out the text output file (or the equivalent
part of the command screen) and the graph as desired.

Thank you for participating in these experiments!

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