

## Lab Assignment: Visual Search Task

Required reading: For this assignment, you should first read:

- Reisberg's chapter on object recognition (ch. 3)
- The instructions for the experiments in CogLab (Visual Search)
- Monday's lecture

### Background Information:

In the task you just completed, you were searching for a target (green circle). In some trials, there was only one type of distractor (blue squares). In those trials, you could find the target based on a single feature, such as its color (the green item). This is called a *feature search*, because you search for one of the object's feature (in this case, its color. Other features may be its size, shape, motion, texture, etc).

In other trials, there were two types of distractors (green squares; blue circles). In those other trials you couldn't identify the target by a single feature (many of the distractors were also green). Rather, had to look for an item that was both green *and* a circle. In other words, you had to combine color *and* shape. This is called a *conjunction search*: you are combining two features (color, shape) into a single object.

In the task, the number of distractors was variable. In some trials there were many distractors, while in other there were just a few.

Finally, the target was sometimes displayed but other times it was absent.

1 a. Given this information, name each of the three independent variables (IVs), and the levels for each IV.

I.V. \_\_\_\_\_ levels: \_\_\_\_\_

IV \_\_\_\_\_ levels: \_\_\_\_\_

IV \_\_\_\_\_ levels: \_\_\_\_\_

b. Name the dependent variable \_\_\_\_\_

1. Plot your *individual* data (or print it from CogLab).
2. When the target was present, reaction times to trials with a single type of distractor (blue squares) were \_\_\_\_\_ (*faster/slower?*) than RTs to trials with two types of distractors (blue circle and green squares). The difference between these two conditions \_\_\_\_\_ (*was/ was not*) modulated by the number of distractors in the display.
3. For trials with 64 distractors, RT for target-present trials was \_\_\_\_\_ (*faster/slower*) than for target-absent trials.

4. Extra- credit. Based on your individual data, would you say that your data for the *feature search* is most consistent with (hint: to answer this question, you may want to look back at our discussion of the Sternberg Search Task):
  - a. a parallel search
  - b. a serial self terminating search
  - c. a serial exhaustive search
  
5. Extra- credit. Based on your individual data, would you say that your data for the *conjunction search* is consistent with:
  - a. a parallel search
  - b. a serial self terminating search
  - c. a serial exhaustive search