

Instructions: Order Your Mind fMRI (SEQ)

For this task, you will be asked to memorize a sequence of lines/orientations at the beginning of each section (explain/show example of circles with diameter line drawn through). Throughout the experiment, you will have to memorize sequences consisting of 2 chunks with 3 orientations. There are only 3 possible orientations. Each chunk will be made up of the same 3 orientations but in a different order. Please memorize the sequences in the order from left to right. Questions?

After memorizing the given sequence, you will move on to the response section by pressing the spacebar. Here, the sequence will disappear and you will have to recall the sequence from memory. Starting from the left-most orientation of the sequence (the first), you will be asked to remember each element of the sequence from left to right, one by one (then repeat from the beginning). So, you will need to keep track of the current position of the sequence being tested.

For each trial, you will see a white cross appear in the center of the screen before the test orientation appears. Please use this as a cue to prepare for your upcoming response, so **think of the specific element corresponding to the current test position**. Once the orientation appears, please indicate if this matches the orientation you imagined in your head beforehand by using the “?” key for match and the “z” key for mismatch. Question?

Now It's important that you respond as quickly and accurately as possible, as there is a cut off time for your response. If you notice you responded but are still getting an error, it is either because you are responding too slow or you responded incorrectly. For this reason, please prepare and begin recalling where you are in the sequence and what orientation is expected in the position you are being tested on well before the probe shows up.

If you make an error, the entire sequence will show up on the screen with the error position highlighted red. Please take a moment to try to re-learn the sequence and correct your errors to move on. The entire sequence will stay on screen until you respond correctly to the error trial and the trial following your error correction. Question?

<For behavioral>

* Some subjects may perform < 90% accuracy on average. If so, exclude them.

<For fMRI>

You will perform the exact same task you practiced. The sequences are made of the chunks you memorized. The only difference is that the timing between each test is a bit longer (but you will still be asked to make quick and accurate responses within the response-deadline). *Explain task-agnostic fMRI specific stuff (e.g., not moving the body, not moving eyes, a button box, etc).

*Note to experimenter

Participants can totally button mash and get away with not correcting their errors since any input will result in moving to the next trial. Don't think it's necessary to explicitly state this to the participant since it's rare you get that level of disregard for the task, but be aware!

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Example image:

