U01\_Expt5\_Stories: Naturalistic Cognition Paradigm Story

This experiment was developed at MIT by Evelina Fedorenko and Hannah Small. For any question, please contact [hsmall@mit.edu](mailto:hsmall@mit.edu) (or [alan.bush@mgh.harvard.edu](mailto:alan.bush@mgh.harvard.edu)).

<https://github.com/Brain-Modulation-Lab/Task_MIT_Fedorenko>

## Required Hardware:

* Presentation monitor
* Keyboard for participant
* Speaker
* Tascam microphone

**Brief Description**

This experiment plays a ~5 min audio clip of a story while displaying a fixation screen.

Then, it asks comprehension questions one at a time, waiting for the participant to select 1 for A or 2 for B to continue to the next question.

Each story should be run once, except for the ‘Elvis’ story that should be run a second time on a separate day. The stories for each run are the following:

#1 Elvis

#2 Aqua

#3 Roswell

#4 KingOfBirds

#5 HighSchool

#6 MrSticky

#7 Tulips

#8 Elvis – second time on separate day

It should take ~40 minutes to run through the stories the first day, plus another ~5 min for the second run of the ‘Elvis’ story (run #8) on a separate day.

## How to run the task:

1. Verify Neural Signal Processors are recording.
2. Set the presentation monitor for visual task.
3. The keyboard should be accessible to the participant.
4. Set the speaker in front of the participant.
5. Set the TASCAM microphone close to audio speaker in ambient sound configuration.
6. Make sure TASCAM output is connected to Natus DC-4 and to presentation computer.
7. Open Desktop\MIT\Task\_MIT\_Fedorenko\U01\_Expt5\_stories\START\_STORIES\_EMU.m in Matlab and click RUN on the “Editor” tab in the toolbar or press F5. The following dialog box will appear:

Graphical user interface

Description automatically generated

* + Subject: enter the Subject ID (e.g. ‘MG001’)
  + Session: enter session type. For the experiment in the EMU enter ‘EMU’. If testing the task enter ‘test’.
  + Run: Enter run id (this specified the story, options in parenthesis)
  1. Click OK
  2. A concise task instruction will appear on screen. Remind task instructions to participant if deemed necessary.

"You will listen to a story and then answer questions about the story. Press SPACE to begin.”

* 1. Press the SPACE key to start the experiment.

1. Go to step ‘5’ and repeat for runs 2-7.
2. Download the log files from Desktop\MIT\Data\_Stories

**Subject Instructions**

* You will listen to a ~5min long story.
* Please listen attentively.
* After the story, you will be asked to answer a set of questions about the content. Press the ‘1’ or ‘2’ (or ‘a’ or ‘s’) key to select an answer.