

Auditory Superstitious Perception

Procedure & Checklist

Contact Information

If you have questions, encounter any technical difficulties, or need to get in contact with someone, then please contact me (David) via text or phone at 413-884-2553.

Running the Code

Do this section at least 10 minutes before the subject arrives

- Log into the experimental computer
- Open **Visual Studio Code** (“VS Code”)
- If the **auditory_superstitious_perception** folder is not already open, then click on the **File** tab on the top of the VS Code window
- Click on the **Open Folder...** option from the dropdown menu. This will open a folder search window (**DO NOT CLICK “Open File...”**).
- Select the **auditory_superstitious_perception** (or similar) folder from the desktop.
- Click **Select Folder** on the bottom right of the popup window. This should open the files/folders in the VS Code window.
- Open a VS Code terminal (**Terminal -> New Terminal** if one is not automatically opened for you on the bottom of the screen).
- Enter **./venv/scripts/activate** You should now see a green (**venv**) to the left of where you enter text in the terminal. This means that the packages necessary for running the experimental code are now activated.

- Type **python runExperiment.py** (if this doesn't work then try **./venv/scripts/python.exe runExperiment.py**) into the terminal. This should open a pop up terminal window. If you get an error saying that a package is missing, then the virtual environment was not activated and repeat the previous steps.
- Click **Yes** to prompt that pops up ("Do you want to allow this app to make changes to your device?")
- When you are given the option, click **Continue to Experiment** ("Experimenter mode is ACTIVE. Choose how to proceed.")

The experiment should now be running and you should see a screen that lets you test the audio levels. If the screen does not automatically pop up, go to the taskbar at the bottom of the screen, hover your mouse over the active apps, and select the one that looks like an experiment screen with a grey background.

Selecting Audio Output & Adjusting Audio Levels

- Select your experimental headphones from the list of available devices. It may say **(last used)** next to this option.
- Using an artificial ear (red box with a microphone thing on top), select the **slow** mode on the artificial ear. Use the two provided audio options to adjust the headphone levels audio to **58-60db**. If you click the volume buttons and nothing happens, then try using **FN + volume up/volume down**. It should be loud enough to clearly hear the stimuli, but not so loud that it might be uncomfortable for the subject.
- Once the audio is at an appropriate level, press the **continue** button.

Entering Relevant Information

Do this section BEFORE the subject arrives. Then leave the computer as is so that you can proceed from the "subject's name" screen after greeting the subject.

- Enter the **experimenter's name** (your name).

- Enter the **subject number** (**Format:** mmddyyyyxx where **mm** = month, **dd** = day of the month, **yyyy** = year, **xx** = subject of the day... For example, the *third* subject of the day on *June 9th 2026* will have a subject number of **06092026003**).
- Stand outside of the testing room while waiting for the subject. It can be hard for subjects to find the correct room.

Greeting the Subject

- When the subject arrives, greet them politely and try to be friendly with them. Follow the **greeting tips and recommendations** at the bottom of this section.
- Ask the subject to turn their phone off and place it out arm's reach (have them put it on a separate table so that they cannot see it while performing the experiment if possible). Please ask them politely to do this. Also inform them that they should not use their phone at any point during the experiment. If the subject cannot do this, then please note this in the *Experimenter Notes* section at the end of the experiment.
- Have the subject sit down at the experimental computer.
- Have the subject enter their **name** and **email address** if they consent (this will be used to provide them their credits).

Greeting Tips and Recommendations:

- You want the subject to trust you and be excited to do this experiment and try their hardest.
- Think about this from the perspective of the subject... they are about to sit in a room with a stranger for an hour and a half. They may be nervous or concerned. It is on you to dispel this anxiety and make them feel comfortable.
- *Only share information about the study that is present in the instructions screens of the experiment. Do not give away important details about the experiment before the subject takes the experiment.*
- Be **excited** about the experiment!! You want them to feel as if they are really contributing to an important scientific mission. Also, express gratitude and excitement that the subject decided to take time out of their day to come participate in the experiment.

Consent Forms

- The consent form (in the experimental code) is the first thing the subjects will have to do.
- Before the subject begins the consent form, tell them that they can ask you questions about the consent screen and that they will receive a paper copy of the consent form after they complete the experiment.
- Have them read/fill-out the consent forms and tell them to inform you when they have provided their digital signature. Be prepared to answer any questions that they may have.

Experiment Instructions

- Tell them that you will read the instructions to them as they navigate through the introduction and initial instruction screens.
- Read the instructions off of their screen as they go, and be prepared to answer any questions that the subject may have.
- After reading each instruction screen to the subject and answering any questions, tell them to press the **spacebar** to proceed.
- When the subject reaches the final instruction screen (the screen titled **A final note before beginning**), get verbal confirmation that they understand the instructions.
- Inform them that after this screen they will begin the first block of the experiment.
- Inform them that each block has its own instructions and they will read these instructions by themselves.
- Emphasize that they can and should ask you questions if they don't understand something.
- Tell them to press the **spacebar** to proceed.

Break Screen

- When the subject reaches the break screen after the first block, encourage them to go to the bathroom, get water, etc... If they do not need to get water or use the bathroom, then ask them to stand up, stretch, take a little walk. Inform them that it is important that they take a little time to refresh themselves and that it is important they take a little break. **Make them wait at least two minutes between blocks and try to keep breaks under 5 minutes. Request that the subject not use their phone during this time.**
- Once they are ready to proceed, tell them to press the **F** key to begin the second block.

Debrief and Subject Dismissal

- When the subject completes the entire experiment and all of the questionnaires, thank them for their time and ask them if they have any questions. **Then YOU ABSOLUTELY MUST read the subject the following debrief statement:**

We want to say thank you for taking the time to participate in our experiment. This is the debrief statement for the experiment you just participated in. The purpose of this study is to understand how people are able to extract information from highly noisy stimuli. In this experiment, we tested various aspects of your ability to extract relevant information by showing you randomly generated audio samples, some with a high correlation to the Wall that you heard and some with no correlation. Your participation in this experiment helps us get a better understanding of how people transform muddled and noisy inputs into coherent thoughts and ideas. Please do not share this information with anybody else. It is important to our experiment that subjects do not know this before they complete the experiment. I am now handing you a copy of the consent form and this debriefing statement that you digitally signed at the beginning of the experiment. If you have any concerns

about the experiment and would like to talk to someone who is not a member of the experimental team about this experiment, then please use the contact information listed there. Thank you again for your time.

- Give the subject a stapled copy of the consent form they digitally signed + debrief statement that you just read to them.
- Politely show the subject out.
- Return to the computer and press the **F** key. If you noticed **anything** strange or outside of protocol during the experiment (e.g. subject took a phone call mid-experiment, there was a glitch in the code, etc...), then write it here. Once complete, press the **Enter/Return** key. This should quit the experiment.
- Wait for experimenter mode to fully deactivate and then you may exit the terminal.
 - **If the subject does not consent to the experiment and they ask to get full credit, then inform them that they will not get full credit.**
 - **If the experiment crashes *in the middle of the experiment* then inform the subject that they are done, thank them for their time, and inform them that they will be receiving full credit for their participation.**
 - **If the experimental computer does not work or *if the subject has not begun the experiment* then ask to reschedule with the subject. We only give credit if the subject has begun the study, intends to complete the study, and there is a mistake/technical difficulty on our end.**
 - **If the subject withdraws consent in the middle of the study (as is their right), then use the ESC key to quit out of the experiment.**

Uploading Data

- Plug in Ethernet cable (by the window farthest from right side computer)
- Go to a web browser and open up the Box folder (named “**SP2**” where we store results (<https://uchicago.app.box.com/folder/366870765060>)).
- Open the folder where we store the results (**SP2 —> Experimental Data**)

- Click on the button that says **New +**
- Select **Folder Upload** from the dropdown menu.
- Upload the entire deidentified_results folder from the folder with the experimental code.**
- Once the folder has been uploaded, rename it to the current date + the room you ran the subject in + which computer in the room it was (**Format: mm_dd_yyyy or mm-dd-yyyy**). For example... **01_04_2026**. If you are running multiple subjects then you can wait until you finish running your final subject of the day to upload their folder. If a folder by that name already exists for whatever reason, just add an “**_1**” to the end of the folder name (e.g “**01_04_2026**” → “**01_04_2026_1**”).

You have now completed the experiment