

## **Online Consent Form for Participation in Research**

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**Study Title:** Behavioral Measures of Perception and Attention in Adults  
STUDY2019\_00000217

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### **Purpose of this Study**

The purpose of the study is to investigate human perception of sound and images. Using behavioral measures, we intend to search for correlations that suggest theoretical explanations for individual difference in perception.

### **Summary**

Many humans use audiovisual perception every day to navigate and interact with the world around them. One such feature is the ability to communicate with speech, especially in lively social environments; even across listeners with normal hearing thresholds, there exists measurable differences in individual performance when asked to process speech in noisy situations. In this study, we seek to understand the methods by which we perceive, gaining insight into the processes that inform and shape our own cognition. In addition, in identifying the means and methods that drive perception and cognition, we can provide theories on the mechanisms that underlie failures in these systems and potentially develop palliative treatments.

### **Procedures**

If you agree to take part in this study, we will ask you to indicate via ticking a box before you are presented with any study procedures. We may ask you to verify that you have normal hearing, normal or corrected-to-normal vision, or that you are wearing headphones if required by the task.

Once the consent document and any initial screenings are performed, we will commence with the test sessions. During your test we will ask you to do the following: (These will be indicated as instructions depending on the scope of the individual experiment.)

\_\_\_\_\_ Questionnaires (5-15 Minutes): Some of our funding agencies require us to provide them with gender, race, and ethnicity data for the subjects in our studies. We will ask you to complete a form asking for this information. This information is optional and you are not obligated to provide this information. Additionally, we will ask you to fill out a survey about your musical background and training as well as your noise exposure and hearing health history and handedness.

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\_\_\_\_\_ Computer tasks (5-45 minutes): Some tests may require you to complete tasks on a computer. You may or may not need to wear headphones for these tasks. You may listen to sounds of different types (such as noises, tones, or speech) and/or see images or shapes on the screen. You may be asked questions about the sounds or images you perceived. These questions may include, but are not limited to, whether or not a sound was present, which words were spoken, which sound was louder, or which direction a sound/image came from. Sometimes, the sounds and images will be presented together. You will answer by pressing a key or button, selecting a choice on a touch screen, or clicking on an item using a mouse.

\_\_\_\_\_ Speech-in-Noise Test (5-45 minutes): We may ask you to listen to some sentences with noise in the background and to type what you hear using a keyboard.

Each session of the study may take up to two hours, including questionnaires, testing, debriefing, and time for breaks. We expect this particular session to take \_\_\_\_ hours. You will be compensated hourly for your time.

### **Participant Requirements**

Participants must be adults of 18 years of age or older and be in the United States. Participants must have no known neurological disorders. Some tasks in the study may require that participants have hearing ability within certain audiometric thresholds. Additionally, as some tasks may require viewing and responding to images or words on a computer screen, participants must have normal or corrected to normal vision. Some tasks may require the use of a computer and headphones and cannot be completed by mobile device. If a participant begins an experiment but is found ineligible through screening for any of the above reasons, they will be reimbursed for their time, but their data will not be used for further study.

### **Risks**

The risks and discomfort associated with participation in this study are no greater than those ordinarily encountered in daily life or during while listening to sounds with in-ear headphones. You may be exposed to loud sounds from the stimuli, will be asked to self-calibrate prior to the start of the study to ensure the task is presented at a comfortable sound level. The tasks may induce boredom or mild eye strain, but you will be permitted to take breaks during the task.

### **Benefits**

There may be no personal benefit from your participation in the study but the knowledge received may be of value to humanity.

### **Compensation & Costs**

As part of participation in this study, you will receive compensation in one or more of the following ways (as indicated below):

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- ☐ Research credit (1/hour),
- ☐ Amazon Gift Card
- ☐ Venmo
- ☐ Paypal
- ☐ Direct Deposit via ACH
- ☐ Payment through MTurk/Prolific/etc

You will receive at least \$10 per hour for your participation if compensated monetarily. The study today should take approximately \_\_\_\_\_ hours, meaning you will be compensated in \_\_\_\_ research credit(s) and/or \$\_\_\_\_\_. You will not receive any compensation if you fail to complete the study.

There will be no cost to you if you participate in this study.

### **Future Use of Information**

In the future, once we have removed all identifiable information from your data (information), we may use the data for our future research studies, or we may distribute the data to other investigators for their research studies. We would do this without getting additional informed consent from you (or your legally authorized representative). Sharing of data with other researchers will only be done in such a manner that you will not be identified.

### **Confidentiality**

By participating in the study, you understand and agree that Carnegie Mellon may be required to disclose your consent form, data and other personally identifiable information as required by law, regulation, subpoena or court order. Otherwise, your confidentiality will be maintained in the following manner:

Your data and consent form will be kept separate. Your research data will be stored in a secure location under Carnegie Mellon's control. By participating, you understand and agree that the data and information gathered during this study may be used by Carnegie Mellon and published and/or disclosed by Carnegie Mellon to others outside of Carnegie Mellon. However, your name, address, contact information and other direct personal identifiers will not be mentioned in any such publication or dissemination of the research data and/or results by Carnegie Mellon. Note that per regulation all research data must be kept for a minimum of 3 years.

The researchers will take the following steps to protect participants' identities during the study: following the consent process, you will be assigned a unique ID number that will be tied to any data collected during the course of the study. A key that will link your name to your ID is kept in a password-protected file that cannot be accessed by anyone outside of this lab. The ID number will be used in identifying your data files and in all reports, publications, and references to you. Any interview or questionnaire information will also be coded with your ID number and stored separately from any of your identifying data.

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Written consent forms will be scanned and stored electronically. Paper copies will be kept in a locked file cabinet separate from all measurement data for one year, and then destroyed.

Annotation services will not be used as a part of this study.

Information from this study may be reviewed and copied by the sponsor, the university, and by regulators responsible for research oversight.

With different types of payment methods, especially those with third party vendors, such as Venmo, the researchers and the vendor may collect and use personal information (first and last name, email addresses, phone numbers, banking information) provided by you in order for your payment to be processed. All personal information collected by the researcher will be eliminated once the payment is processed.

### **Payment Confidentiality**

Payment methods, especially those facilitated by third party vendors (such as Venmo, Amazon, PayPal), may require that the researchers and/or the vendor may collect and use personal information (first and last name, email addresses, phone numbers, banking information) provided by you in order for your payment to be processed. As with any payment transaction there is the risk of a breach of confidentiality from the third party vendor. All personal information collected by the researcher will be held as strictly confidential and stored in a password-protected digital file, or in a locked file cabinet, until payments are processed and reconciled. This information will be destroyed at the earliest acceptable time.

### **Rights**

Your participation is voluntary. You are free to stop your participation at any point. Refusal to participate or withdrawal of your consent or discontinued participation in the study will not result in any penalty or loss of benefits or rights to which you might otherwise be entitled. The Principal Investigator may at his/her discretion remove you from the study for any of a number of reasons. In such an event, you will not suffer any penalty or loss of benefits or rights which you might otherwise be entitled.

### **Right to Ask Questions & Contact Information**

If you have any questions about this study, you should feel free to ask them now. If you have questions later, desire additional information, or wish to withdraw your participation please contact the Principal Investigator by mail, phone or e-mail in accordance with the contact information listed on the first page of this consent.

If you have questions pertaining to your rights as a research participant; or to report concerns to this study, you should contact the Office of Research Integrity and Compliance at Carnegie Mellon University. Email: [irb-review@andrew.cmu.edu](mailto:irb-review@andrew.cmu.edu) . Phone: 412-268-1901 or 412-268-4721.

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### **Voluntary Consent**

Your participation in this research is voluntary. You may discontinue participation at any time during the research activity. You may print a copy of this consent form for your records.

I am age 18 or older. ☐ Yes ☐ No

I have read and understand the information above. ☐ Yes ☐ No

I want to participate in this research and continue with the tasks. ☐ Yes ☐ No