University of Nevada, Reno
Consent Form, Biomedical Research

Title of Study:	**Neuroimaging and behavioral study of complex stimuli and tasks**
Principal Investigator:	***Mark Lescroart, Ph.D. (775) 682-6807***
Study ID Number:	**1992692**

Summary of Key Elements

With this form we are asking for your consent to participate in our study. Participation is not mandatory for a grade in any class, nor for standing in any laboratory, graduate program, or job. In this study, we will ask you to attend to and make judgments about different images or videos shown on a computer monitor. You will respond with button presses. During the study, in addition to collecting your button-press responses, we may capture videos of your eyes to track what you are looking at throughout the course of the experiment. The main risk of this study is to your privacy, since it may be possible to use the images of your eyes as a biomarker. We will minimize this risk by keeping the eye images on password-protected computers and by de-identifying the eye images prior to showing to or sharing them with other researchers. There is also a mild risk of discomfort due to sitting still for an hour or from motion sickness due to motion in the stimuli. You may stop the experiment at any time if you are uncomfortable. Please continue reading or more information about all elements of the study.

Introduction

Before you agree to participate in this research study, it is important that you read and understand the following information. This form describes why we are performing this study, what we will be doing, why we are doing it, and any possible risks or discomforts that you may experience. Your decision to participate in this study is voluntary, and you may withdraw from the study at any time and without suffering any negative consequences.

This is not a medical study. The experimental procedures used in this study are not designed to detect, diagnose, treat, or cure any disorder. Your choice to participate in this study will have no impact on any medical care you may be receiving. We cannot promise you any personal benefit from participating in this study. However, the results of this study may reveal new insights into how the brain supports fundamental cognitive processes like perception and attention.

You do not have to be in this study. If you choose not to participate, you will not be affected in any negative way—not in any class, undergraduate or graduate program, laboratory, or job.

Take as much time as you need to decide. If you say yes now but change your mind, you may withdraw the study at any time by informing a member of the research team. Withdrawal from the study will have no effect on any medical treatment you are receiving or your relationship with the research team.

There may be words or text in this consent form that you do not understand. If you are unsure what a word means or have questions about any part of this form, please ask a member of the research team for clarification.

Study Purpose

Human visual perception is extremely flexible. People can make many kinds of judgments about the shape of objects, the motion of objects, and the layout of a scene. The goal of this study is to understand the basic visual processes occurring by default in your brain, as well as whether – and how – your expectations about upcoming events and attention to particular visual features influence your ability to process visual sensory information.

To study this question, we will ask you to make judgments about visual stimuli, such as, for example, whether two shapes are the same in some way or whether a moving object will collide with another. Tasks will vary by experiment within this study. Tasks may ask you to attend to or remember different parts of a visual stimulus. You will provide answers via button presses, usually on a computer keyboard.

During some experiments, we may also use an infrared camera to track your pupil while you perform experimental tasks. We will use the location of your pupil – that is, what you are looking at – to measure what you are paying attention to.

Why are we asking you to be in this study?

The goal of this study is to understand how neurologically healthy adults perceive and attend to visual stimuli to perform visual tasks. We have no reason to expect that any experimental findings we obtain will vary across gender or people of different racial, ethnic, or cultural backgrounds. Therefore, there are no restrictions on study enrolment based on these characteristics. Over the course of this study, we expect that approximately 100 people will participate.

You should *not* participate in this study if you are under the age of 18, or under the appointed care of a legal guardian.

What will you be asked to do if you agree to be in the study?

If you agree to be in this study, you will be asked to attend 1-3 study sessions. You may be eligible to continue participation in further studies in the lab after this time, but we will ask for your consent again if you participate in a different experiment. Study sessions will be conducted on the University of Nevada, Reno campus. You will be responsible for arranging travel to and from each study session. If you need help arranging transportation because of a disability, please bring this to our attention as soon as possible. We may be able to arrange disability access parking or other forms of assistance.

During study sessions, you will meet with a member of the research team on the University of Nevada, Reno campus. The experimental tasks require you to attend to, remember, and make judgments about visual stimuli rendered on a computer monitor by pressing buttons on a computer keyboard. During some tasks we will use an infrared camera to track your gaze; we use these recordings as an independent measure of what you are paying attention to, and to assess whether you are following task instructions. We anticipate that each training session will take 45-60 minutes, and you will be compensated for your time via course credit in SONA. If you were recruited into this study outside of SONA, you will be compensated at a rate of $10/hour.

How long will you be in the study?

Each study visit will last approximately 60 minutes.

Participation in additional experiments

This study consists of several interrelated experiments. You may be invited to participate in additional experiments after completing your initial study. (Any experiment may consist of multiple study sessions). If we invite you to participate in an additional experiment, we will explain all study procedures for you and we will ask you for your consent. That is, you will be asked to review and sign a new copy of this form after we have explained the new experimental procedures to you. You can decline to participate in additional experiments, and you can withdraw from the study even if you have already agreed to participate. Declining to participate or withdrawing from the study will have no impact on your relationship with members of the research team.

Right to Refuse or Withdraw

You may refuse to participate or withdraw from the study at any time. Refusing to participate or withdrawing from the study will not impact your relationship with the research team. Any compensation you have earned before withdrawing from the study is yours to keep.

If we make any changes to the experimental protocols described in this document, we will inform you and ask for your consent again.

Discomforts, Inconveniences and/or Risks

Behavioral studies of task performance such as this one are generally considered to have minimal risk. You may experience some discomfort from sitting still for a long period of time. You may take breaks between testing sequences (every ~5-10 minutes), and you will be instructed in how to pause the experimental task to take additional breaks if necessary.

It is important to follow instructions regarding eye movements (usually, to maintain fixation) in this study. We may collect eye tracking data to monitor your eye movements and wakefulness. This involves capturing videos of your eyes, which will contain images of your irises. Such images could possibly be used as a biomarker to verify your identity, for example for the purposes of opening a bank account. We will minimize potential risk to your privacy by storing these images securely and anonymizing any image that we display in publications or share with other researchers (see below).

During study sessions you may see videos depicting first-person motion. Such videos are known to make some people uncomfortable. Please let a member of the research team know if you experience any motion sickness or other discomfort. You may stop the testing session at any time if you are uncomfortable. You will not be asked to continue in the study if you experience motion sickness due to the stimuli, and you will be compensated for the time you have spent in the experiment.

What happens if you become injured because of your participation in the study?

In the event that this research activity results in an injury, treatment will be available. This includes first aid, emergency treatment, and follow-up care as needed. Care for such injuries – including any financial cost - are solely your responsibility.

Benefits

Your participation in this study will reveal new information about how perceptual and attentional processe work, but you will not receive any kind of medical or health benefit from participating. Your choice to participate will not affect your normal medical care in any way.

Who will pay for the costs of your participation in this research study?

No costs are associated with participation in this study.

Will you be paid for being in this study?

You will receive financial compensation for your time participating in this study. You will be compensated at a rate of $10/hour for behavioral training sessions and $20/hour for fMRI testing sessions. You will receive your compensation at the end of each study session.

Confidentiality

Who will know that you are in in this study and who will have access to the information we collect about you?

Members of the research team, the University of Nevada, Reno Institutional Review Board, Renown South Meadows Medical Facility, the US Department of Health and Human Services (DHHS), and the National Science Foundation (who are funding this study) will have access to your study records.

How will we protect your private information and the information we collect about you?

We will treat your identity with professional standards of confidentiality and protect your private information to the extent allowed by law. We will do this by de-identifying all data obtained from you as a part of this study. Specifically, at the beginning of the study you will be assigned a random coded identifier (a random word or alphanumeric code). All data we obtain from you as part of this study –including behavioral data and eye tracking data—will be indexed using this code. An index linking your personal information to this code will be securely stored on a password-protected laboratory server. Only members of the research team will have access to this index.

De-identified data collected as part of this study will be publicly shared with other researchers via data repositories, including Open Neuro and the Center for Open Science. Data sharing allows other researchers to perform large-scale meta-analytic reviews and test hypotheses not anticipated as part of this study. De-identified data sharing is also required by many scientific publications and funding agencies.

De-identified data will be maintained in perpetuity. If your de-identified data is used in another study – whether by this research team or a research team at another institution – you will not experience any benefit. While unlikely, the use of your data may result in commercial profit, such as a product, material, or process. You will not be compensated for the use of your data.

Do the researchers have monetary interests tied to this study?

The research team and their families have no financial interests in the design or outcome of this study.

Whom can you contact if you have questions about the study or want to report an injury?

At any time, if you have questions about this study or wish to report an injury that may be related to your participation in this study, contact Dr. Mark Lescroart at (775) 682-6807.

Whom can you contact if you want to discuss a problem or complaint about the research or ask about your rights as a research participant?

You may discuss a problem or complaint or ask about your rights as a research participant by calling the University of Nevada, Reno Research Integrity Office at (775) 327-2368. You may also use the online *Contact the Research Integrity Office* form available from the *Contact Us page* of the University's Research Integrity Office website.

Agreement to be in study

If you agree to participate in this study, you must sign this consent form. We will give you a copy of the form to keep.

Participant's Name Printed

Signature of Participant | Date

Signature of Person Obtaining Consent | Date