CONSENT FORM

High-resolution Measurement of Head and Eye Movements

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This consent form describes a research study, what you may expect if you decide to take part and important information to help you make your decision. Please read this form carefully and ask questions about anything that is not clear before you agree to participate. You may take this consent form home to think about and discuss with family or friends.

Key Information

- Being in this research study is voluntary – it is your choice.
- If you join this study, you can change your mind and stop at any time.
- If you choose not to take part, your educational status and/or employment status will not be changed in any way.
- The purpose of this study is to investigate the coordination between head and eye movements, particularly related to 3D perception.
- You are being asked to take part in this study because you are at least 18 years old, have normal visual acuity in each eye (20/20 or better with or without optical correction), normal stereo vision (stereoacuity of 80" or better, with or without optical correction), and have no known visual deficits (e.g. astigmatism, strabismus, amblyopia, etc.). Note that some experiments are restricted to subjects who possess normal vision *without* optical correction (no glasses or contact lenses).
- Your participation in this study will last for 1 to 3 visits of 1 hour each. These visits will be separated by at least 3 days.

Purpose of Study

The purpose of this study is to learn more about the correlation between head movements and eye movements. In this project, we will measure eye movements with high precision during the performance of everyday visual tasks. We will be comparing the data that we get from you and other subjects to the results of previous research, to better develop our understanding of visual perception.

Description of Study Procedures

If you decide to take part in this study, you will be asked to undergo the following procedures:

274 Meliora Hall, Box 270270
G-4110 Med. School, Box 319
Rochester, NY 14627-0270
(585) 275-2459
(585) 271-3043 fax

First, you must remove all metal items that you are wearing before entering the Oscillating Field Monitor (OFM). There is no hazard if metal is accidentally brought inside, but metal objects nearby the field degrade the quality of the data. We will then position you comfortably in a seated position in front of a visual scene, making sure to align your head with the apparatus to optimize recording quality. We will place a head-tracking cap on your head; this is a normal cap equipped with small sensors for recording head movements and rotations. These sensors are similar to those you may have noticed in current virtual reality helmets.

An ophthalmologist will place specially designed contact lenses in your eyes. These lenses, known as eye coils, are standard tools for tracking the position of the eye that have been used in the fields for decades. They contain very thin wires that are used to detect the orientation of the lens in a magnetic field created by the machine. The strength of the field is extremely low, lower than the magnetic field of the earth. If the lenses bother you, the ophthalmologist may place a few numbing drops in the eye, to ensure that they are comfortable. You can, of course, ask to remove the lenses at any time. The ophthalmologist will do that for you.

You will then undergo calibration of the apparatus. In this phase you will be asked to maintain the head immobile. To do so, you will be able to rest on a head holder and/or a custom designed bite bar.

After this initial procedure, you will be able to move freely. You will be asked to observe visual scenes with common everyday objects, either real physical scene or images rendered on a display. The experimenter will ask you questions related to the images, like whether you have seen this particular object before, whether two objects differ in some detail, or where is an object located. You will report your answer pressing buttons on a videogame joypad in your hands.

You will not keep eye coils on your eyes for longer than 25 minutes. At the end of this time, the experiments will be interrupted, and the ophthalmologist will remove the contact lenses. The experimenters will remove the head cap and take the joypad from you.

The ophthalmologist will then carefully examine your eyes to ensure that the contact lenses did not scratch your cornea. To this end, he/she may decide to put fluorescent drops in your eye and examine the eye under a special light (black light), a standard routine for seeing tiny scratches. Under the conditions of these experiments, scratches are exceedingly rare. But in the unlikely event that a scratch occurred, the ophthalmologist will tell you how to proceed. Corneal scratches heal completely and very rapidly, typically within 24 hours.

After the experiment, you will be able to return to your normal activities.

Number of Subjects
Approximately 100 subjects will take part in this study.

Risks of Participation
The study involves minimal risk. There is a small risk of corneal abrasion, i.e. a scratch of the eye's outer surface. This risk is considered to be very low and on par with the risks associated with contact lens use. Corneal abrasions resolve themselves very rapidly, typically within 24 hours. To eliminate all possible risks associated with abrasions, all the handling of the eye coils and their placements in the eye will be performed by an ophthalmologist. Additionally, there is a risk that you may become stressed from the study procedures. You are free to stop the study procedures and/or withdraw from the study at any time. Finally, there is a risk of loss of privacy. The study team will make every effort to protect your privacy. See "Confidentiality of Records" below.

Benefits of Participation
You will not benefit from being in this research study.

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

Payments
You will be paid $50 per session for taking part in this study. You may potentially be paid up to $150, for three sessions of participation.

Confidentiality of Records
The University of Rochester makes every effort to keep the information collected from you private. In order to do so, you will be assigned a random, unique number for identification purposes. This number will be used in identifying subject data files and in all reports, publications, and references to the subjects.

Sometimes, however, researchers need to share information that may identify you with people that work for the University, regulators or the study sponsor. If this does happen we will take precautions to protect the information you have provided. Results of the research may be presented at meetings or in publications, but your name will not be used.

Circumstances for Dismissal
You may be withdrawn from the study if you do not keep appointments for study visits or if you cannot complete study activities.

New Study Information
If we discover any new information that might make you change your mind about continuing in the study, we will let you know.

Sponsor Support
The University of Rochester is receiving payment from the National Science Foundation and Facebook for conducting this research study.

Contact Persons
For more information concerning this research or if you feel that your participation has resulted in any emotional or physical discomfort please contact: Dr. Michele Rucci at 617-353-7671 or Dr. James Aquavella at 585-820-9345.

Please contact the University of Rochester Research Subjects Review Board at 265 Crittenden Blvd., CU 420628, Rochester, NY 14642, Telephone (585) 276-0005 or (877) 449-4441 for the following reasons:

- You wish to talk to someone other than the research staff about your rights as a research subject;
- To voice concerns about the research;
- To provide input concerning the research process;
- In the event the study staff could not be reached.

Voluntary Participation
Taking part in this study is voluntary. You are free not to take part or to withdraw at any time, for whatever reason. No matter what decision you make, there will be no penalty or loss of benefit to which you are entitled. In the event that you do withdraw from this study, the information you have already provided will be kept in a confidential manner.

If you are a student at the University of Rochester, this will not affect your class standing or grades. You will not be offered or receive any special consideration if you take part in this research.

If you are an employee of the University of Rochester, taking part in this research is not a part of your University duties, and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

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SIGNATURES/DATES

After reading and discussing the information in this consent form you should understand:

- Why this study is being done;
- What will happen during the study;
- Any possible risks and benefits to you;
- Other options you may have instead of being in the study;
- How your personal information will be protected;
- What to do if you have problems or questions about this study.

Subject Consent

I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions. I agree to participate in this study. I have received (or will receive) a signed copy of this form for my records and future reference.

_____
Subject Name (Printed by Subject)

_____ _____
Signature of Subject Date

Person Obtaining Consent

I have read this form to the subject and/or the subject has read this form. I will provide the subject with a signed copy of this consent form. An explanation of the research was given and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information. I have given the subject adequate opportunity to read the consent before signing.

_____
Name and Title (Print)

_____ _____
Signature of Person Obtaining Consent Date