
Name of Participant

STANDARD ADULT CONSENT FORM

TITLE OF RESEARCH: Behavioral and fMRI studies of Decision Making and Cognitive Performance

INVESTIGATORS: Jonathan D. Cohen, M.D., Ph.D.; Matthew Botvinick, M.D., Ph.D.; Leigh Nystrom, Ph.D.; Amitai Shenhav, Ph.D.; Marius Catalin Iordan, Ph.D.; Sebastian Musslick; Wouter Kool; Kevin Miller; Mark Straccia; Jin Hyun Cheong; Abigail Novick; Gecia Bravo Hermsdorff; Gus Baker; Laura Bustamante; Keith Perkins; Candace Rissi-Wise; Natsuko Sato; Cameron Ellis; Markus Spitzer; Seong Jang; Tolulope Adetayo; Chloe Hoeber; Allison Burton; Katie Tam; Thea Zalabak; Aaron Bornstein; Mannaseh Alexander; Temitope Oshinowo; Zsombor Gal; Tyler Giallanza; Connor Lawhead; Jeremy Lee; Elizabeth Tong; Javier Masís; Simon Segert

The following informed consent is required by Princeton University for any person involved in a University-sponsored research study. This study has been approved by the University's Institutional Review Panel for Human Subjects.

Introduction

You have been asked to perform in a study to learn more about what parts of the brain underlie human cognition and decision-making.

Procedures

In this experiment, you'll do something like playing a simple video game - objects will appear on a computer screen and you will be asked to respond to them, based on specific instructions, using either key presses or a joystick. Depending on the specific task, you might get to practice the simple video game beforehand.

During the task the position of your eyes and the diameter of your pupil may be recorded using an infrared camera known as a pupillometer. This measurement entails no risk.

During the task you may also have your vocal responses recorded using a microphone. This data may be stored on an outside server with no personal identifiers. This measurement entails no risk.

In some cases, you may be asked questions about your psychological well-being. These questions may be distressing in some cases. Your answers will be confidential, and you may choose to refrain from answering any questions that make you feel uncomfortable. Additionally, you may be asked to have your height and weight measured. You may opt out of providing this information or having this information exposed to you.

Risks and Benefits

If you are engaging in an experiment that involves questions about your psychological well-being, you may experience mental distress based on past experiences. Otherwise, the activities in the study will carry no risk to the participant.

Computer-based and physical experiments only involve operating a desktop computer or handling small objects. The task involved in these experiments requires some mental effort, and you may experience some fatigue during the experiment. However, for those studies, you will receive ample time rest periods and/or stretch breaks.

You will not receive any direct benefit from your participating other than the monetary payment or course credit you will receive for participation. You may also draw satisfaction from the knowledge that information generated by this study may help promote better understanding of how the human brain is organized and functions.

Confidentiality

The research team will make every effort to keep all the information you tell us during the study strictly confidential, as required by law. The Institutional Review Panel for Human Subjects (IRP) at Princeton University is responsible for protecting the rights and welfare of research volunteers like you. Any documents you sign, where you can be identified by name will be kept in a locked drawer in an office at the Psychology Department. These documents will be kept confidential.

Additionally, responses about your psychological well-being will be stored in an encrypted manner using an encryption protocol approved by the Princeton University Office of Information Technology (OIT). Only the researchers directly involved with the study in which you will participate will have access to this information via a secure server.

Compensation

If you are participating through the Psychology Department subject pool, you will receive one participation credit for each hour of the study. Otherwise, you will be paid \$12 per hour for a computer-based or physical study. Depending on which group you are assigned to within the experiment, you may receive an additional sum in 'rewards' earned during the computer task you will perform. If you decide to withdraw from the study before the study is over, you will still receive your compensation. If you are participating in a lengthy or multi-session experiment, we may offer you a completion bonus at the end of the final session. Similarly, if you are participating in an experiment that involves interacting with social media and are asked to abstain from using it during the period of the study, you may receive an additional monetary bonus at the end of the final session for successfully abstaining.

Further Questions

If you have questions about your rights and welfare as a volunteer in the research study, please contact the Institutional Review Board for Human Subjects. You may reach the IRB staff at 609.258.0865 or at irb@princeton.edu.

If you have any questions about this study or the research being conducted, you may contact Jonathan Cohen at jdc@princeton.edu.

You have:

- A. Provided me with a detailed explanation of the procedures to be followed in the project, including an identification of those that are experimental.
- B. Answered any questions that I have regarding the study.

I understand that:

- A. There may be no direct benefit to me from my participation in this study other than the monetary payment and the brain pictures as described above.
- B. The information obtained from this study will be confidential. It will be available to the investigators performing the study. My identity will remain anonymous in any publications resulting from this study.
- C. My participation is voluntary, and I may withdraw my consent and discontinue participation at any time. My refusal to participate will not result in any penalty.
- D. By signing this agreement, I do not waive any legal rights or release Princeton University, its agents, or you from liability for negligence.

I hereby give my consent to be the subject of your research.

Signature

Date

Audio Recordings

With your permission, we would also like to take audio recordings during the task. Please sign below if you agree to be audiotaped.

I hereby give my consent for audio recording:

Signature

Date

In some cases, we may be interested in re-contacting you for additional information or to participate in a follow-up experiment. If we do, your participation is completely optional and you would be compensated appropriately for your time.

Please indicate whether you are willing to be re-contacted following this study:

☐ **Yes**

☐ **No**

Signature

Date

THIS PAGE MUST BE PROVIDED TO THE SUBJECT

Please keep this sheet in case you have any questions about this research project.

1. TITLE OF RESEARCH: The Intrinsic Cost of Cognitive Control: Neural Foundations and Implications for Decision Making

2. For answers to any questions you may have about this research, contact:

PRINCIPAL INVESTIGATOR
Jonathan Cohen, M.D., Ph.D
PNI 238
(609) 258-2696

3. For answers to any questions you may have about your rights as a research subject, contact:

Princeton University Office of Research Integrity and Assurance
Email: irb@princeton.edu
Phone: (609) 258-0865

4. If you feel bothered or distressed by any of the questions you were asked, please call 1-800-273-8255 or another free, confidential, anonymous hotline. Additionally, if you are a student, urgent walk-in appointments are available on the 3rd floor of McCosh Health Center at Counseling and Psychological Services during regular business hours.