Consent Form for Participation in a Research Study
University of Massachusetts Amherst

Principal Investigator:	Seamus Decker
Study Title:	Cognition, health and computer gaming
Sponsor:	UMass, Amherst, College of Social and Behavioral Sciences

1. WHAT IS THIS FORM?

This form is called a Consent Form. It will give you information about the study so you can make an informed decision about participation in this research study. This consent form will give you the information you will need to understand why this study is being done and why you are being invited to participate. It will also describe what you will need to do to participate and any known risks, inconveniences or discomforts that you may have while participating. We encourage you to take some time to think this over and ask questions now and at any other time. If you decide to participate, you will be asked to sign this form and you will be given a copy for your records.

2. WHO IS ELIGIBLE TO PARTICIPATE?

We are seeking to include a total of 90 male UMass students to participate in the study: 45 men age 18 to 25 with at least one-year of experience playing the World of Warcraft (WoW) online game; 45 men with no experience playing the WoW game or any other massive multi-player online games

3. WHAT IS THE PURPOSE OF THIS STUDY?

The Psychological Anthropology and Human Adaptation Laboratory (PAHA Lab) in the Department of Anthropology at the University of Massachusetts, Amherst is conducting a study to better understand how computer gaming influences cognitive function and health. We hope to publish our findings in *Ethos* an academic journal dealing with human psychology and human adaptation. By reviewing responses to the surveys, along with body measures, cognitive, and physiological measures we will be able to assess if computer gaming influences cognitive function and health.

4. WHERE WILL THE STUDY TAKE PLACE AND HOW LONG WILL IT LAST?

The research will be conducted, at the Psychological Anthropology and Human Adaptation Laboratory (PAHA Lab), E26 Machmer Hall, on the UMass, Amherst campus. The research will be conducted during the 2009-2010 school year. Each participant will visit the PAHA Lab once, and spend 80 to 90 minutes participating in the study.

Based on the results of this study, we may conduct future studies. There is no obligation to participate in any future studies if you participate in the present study.
Participants who are interested in being contacted in future for participation in future studies can leave their name and contact information on the final page of this consent form. Anyone can

decide not to participate in this study, or in any future study, at any time. Anyone who does not want to be contacted in future can advise the researchers of this at any time. If you decide you do not want to participate in any future study even after you have stated you are interested in participating in future studies, simply let the research assistant know, and your name and contact information will be deleted from our records, and you will suffer no negative consequences.

5. WHAT WILL I BE ASKED TO DO?

If you participate in this study you will make a visit to the PAHA Lab (E-26 Machmer Hall) where you will participate in three research activities:

1) Complete a written questionnaire about your eating, alcohol consumption and smoking, physical activity, personality, childhood recollections of parents, and demographic information (income, grade level, GPA, school, work & volunteer activities) which will take about 40 to 50 minutes to complete. To complete the survey, you will read statements or questions and mark your answers on the answer form.

2) Eleven body measurements ("anthropometric measures") will be collected: (1) height (stature); (2) weight (body mass); (3) waist circumference (waist girth); (3) hip circumference (hip girth); (4) upper arm circumference; (5) mid thigh circumference. In addition, six skinfold measures whereby a pinch of skin is precisely measured using a caliper to determine the subcutaneous fat layer thickness will also be taken: (7) triceps (back of the upper arm); (8) subscapular (below the shoulder blade); (9) abdominal (belly); (10) supra-iliac (above the hip bone); (11) thigh. For the body measures you will need to remove your shoes and socks, but otherwise can remain clothed. All measures will take about 10 to 15 minutes to complete. There is no risk of harm from these measures, although you may briefly experience a very mild discomfort resulting from the pinch of skin with the caliper. This pinching sensation is about as uncomfortable as if you were to lightly take a pinch of skin between your fingers.

3) Body composition measurement will be collected by an Omron body composition monitor. This machine will use "bioelectrical impedance" to calculate your body mass index (BMI), body fat percentage, skeletal muscle percentage, body age, amount of visceral fat, and your resting metabolism. This involves sending an extremely weak electrical current through your body, similar to the heart rate monitors on exercise machines at the gymnasium. For these measurements you will need to remove your shoes and socks, but otherwise can remain clothed. If you are pregnant, fitted with a cardiac pacemaker, or other implanted medical device you should not have measurements taken by the Omron body composition monitor.

4) Participate in a computer-based cognitive and physiological assessment task, which will take approximately 20 minutes to complete. During this assessment you will be presented with words on the screen and asked to differentiate between words with different meanings (e.g., good or rewarding words versus bad or punishing words) by pressing keys on the keyboard. During this task we will collect three physiological measures using small sensors secured to the fingers with a band of velcro. The sensors

will allow measurement of heart rate; nervous system activity; and temperature. Respiration will be measured during the task by wearing a small elastic belt. There is no risk of harm from these measures, although you may experience some mild discomfort resulting from holding the one hand with sensors on it motionless for 20 minutes during the course of the task.

6. WHAT ARE MY BENEFITS OF BEING IN THIS STUDY?

There are no direct benefits associated with participating in this study. You may benefit from this study by having your body mass measurements assessed. This information will be available to you immediately at the time of the measures. Although such information will not constitute a medical diagnosis nor medical advice, the information may alert you if there is a need for you to seek professional medical advice from your doctor. The benefit you may gain by participating is intended for informational use only. Do not rely on it to make decisions about your health. Always consult your doctor for personal medical advice. We expect this study to render benefits to young adult males and society in general by providing information about how computer gaming influences cognitive function and health, an area of increasing importance in contemporary life about which limited evidence currently exists.

7. **WHAT ARE MY RISKS OF BEING IN THIS STUDY**?

The only potential risks associated with participating in this study are minor embarrassment due to topics such as eating and weight, and the potential for mild discomfort resulting from holding the one hand with physiological sensors on it motionless during the course of the task and some mild discomfort resulting from the pinch of skin. The survey items may cause some immediate minor embarrassment due to questions about topics such as eating, drinking, and smoking. All responses are completely confidential, and no one except the research team will be able to know how you answer any of the questions in the survey. The body measures may cause some immediate minor embarrassment from being measured by another person. To minimize the risk of embarrassment, all body measures will be taken by a trained researcher. If you are not pregnant, fitted with a cardiac pacemaker or other implanted medical device there is no risk from the body composition monitor. The computer-based cognitive and physiological assessment task may cause some immediate minor discomfort from holding one hand motionless while physiological measures are collected with sensors on the hand. There is no risk of electrocution or injury from the physiological measures. The risk of minor discomfort from holding the hand motionless during the computer-based cognitive task will be minimized by providing participants with a cushion on which to rest the hand, and by assisting participants to adjust their chair and posture to achieve the most comfortable position prior to starting the task. A possible inconvenience may be the time it takes to complete the study, which we estimate will be 80 to 90 minutes for each participant.

Participants who are not 21 years of age or older, should know that questions 18 through 23 in this study are about consumption of alcoholic beverages. Every effort will be made to maintain the confidentiality of your responses, but there is a low risk of breach of this information. As with all questions, you may skip these questions if you do not feel comfortable answering or do not want to answer.

8. HOW WILL MY PERSONAL INFORMATION BE PROTECTED?

The following procedures will be used to protect the confidentiality of your study records: Apart from the informed consent form, participants' names will not be recorded on any paper questionnaire response forms, nor in any digital computer files. Instead, each participant's name will be recorded on a single page (hereinafter referred to as NAME PAGE) in association with a random participant ID number. All paper and digital copies of research data will be associated ONLY with this six-digit participant ID number. None of the paper survey forms or electronic data files (e.g., database, spreadsheet, etc.) will contain any information that would allow individual participants' identities to be identifiable except the random participant ID number. All documents related to this study (including the NAME PAGEs) will be kept in a locked filing cabinet, inside a locked office. All documents related to this study will be destroyed three (3) years after the close of the study. All computer files will be password protected and all computers hosting such files will also have password protection to prevent access by unauthorized users. Only the members of the research staff will have access to the passwords. At the conclusion of this study, the researchers may publish their findings. Information will be presented in summary format and you will not be identified in any publications or presentations. Study data will not be released.

9. WILL I RECEIVE ANY PAYMENT FOR TAKING PART IN THE STUDY?

Upon completion of the study, you will receive $20.00 as a token of thanks for your participation in the study. After receiving your signed informed consent forms, your completed survey forms, your anthropometric measures, and the computer and physiological assessment task the research assistant will give you $20. Compensation provided will be prorated in the event that a participant does not complete the entire study. You are eligible to receive half the compensation ($10) after completion of half the study, and the other half after completion.

10. WHAT IF I HAVE QUESTIONS?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact the principal investigator, Seamus Decker (413-545-3592). If you have any questions concerning your rights as a research subject, you may contact the University of Massachusetts Amherst Human Research Protection Office (HRPO) at (413) 545-3428 or humansubjects@ora.umass.edu.

11. CAN I STOP BEING IN THE STUDY?

You do not have to be in this study if you do not want to. If you agree to be in the study, but later change your mind, you may drop out at any time. There are no penalties or negative consequences of any kind if you decide that you do not want to participate. If you decide you do not want to participate in the study even after you have started to participate, simply let one of the researchers know; you will be dropped out of the study, all information you provided will be deleted, and you will suffer no negative consequences.

In the event that you decide you are interested in being contacted about future studies, you will be notified of all significant new findings during the course of the study that may affect your willingness to continue.

12. WHAT IF I AM INJURED?

None of the procedures or activities in this study are likely to cause any injury or physical harm. However, University regulations require the following statement to be included as a legal disclaimer: The University of Massachusetts does not have a program for compensating subjects for injury or complications related to human subjects research, but the study personnel will assist you in getting treatment.

13. SUBJECT STATEMENT OF VOLUNTARY CONSENT

I HAVE READ THIS FORM AND DECIDED THAT I WILL PARTICIPATE IN THE PROJECT DESCRIBED ABOVE. THE GENERAL PURPOSES AND PARTICULARS OF THE STUDY AS WELL AS POSSIBLE HAZARDS AND INCONVENIENCES HAVE BEEN EXPLAINED TO MY SATISFACTION. I UNDERSTAND THAT I CAN WITHDRAW AT ANY TIME.

_____	_____	_____
Participant Signature:	Print Name:	Date:

By signing below I indicate that the participant has read and, to the best of my knowledge, understands the details contained in this document and has been given a copy.

_____	_____	_____
Signature of Person Obtaining Consent	Print Name:	Date:

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Based on the results of this study, we may conduct future studies. There is no obligation to participate in the future study if you participate in the present study.

Please indicate however, if you agree for us to contact you in the future about possible participation in any future studies.

May we contact you in the future about additional research? _____Yes _____ No

If you checked yes, please provide your contact information (address, email, telephone):

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