THE UNIVERSITY OF MELBOURNE

HUMAN RESEARCH ETHICS
PROJECT APPLICATION FORM

How To Use This Form

1. **Consider and refer to relevant guidelines and regulations.**
   References to specific guidelines are provided, with hyperlinks, throughout this form. The primary guide for human research ethics in Australia is the ***National Statement on Ethical Conduct in Human Research (2007) - Updated May 2015***. Human research ethics applications at the University of Melbourne are reviewed and approved under the warrant of the *National Statement*. References to the *National Statement* are abbreviated (e.g. ***NS* §2.1**.)
2. **Use plain English.**
   Use clear, non-technical language in your application. Be concise. Spell out the first instances of acronyms and abbreviations. Avoid jargon. Do not repeat information. Following these directions ensures effective review of your application. It will avoid unnecessary delays which result if applications are not clear and concise.
3. **Consider ethical principles.**
   Your application will be reviewed according to the principles of ethical research outlined in the *National Statement*, namely:
   - **Research Merit and Integrity** (***NS* §1.1 - §1.3**)
   - **Justice** (***NS* §1.4 - §1.5**)
   - **Beneficence** (***NS* §1.6 - §1.9**)
   - **Respect** (***NS* §1.10 - §1.13**)
4. **Use the current version of the application form.**
   Ensure that you are using the current version by downloading **this form** each time you prepare a new application.
5. **Detailed instructions for specific questions are available online.**
   If you are unsure about how best to answer a particular question, consult the Human Research Ethics **Guidance Document**. That document provides detailed guidance on how to answer specific questions in this form.
6. **Where possible, avoid printing this form.**
   Consult your HEAG to find out if they still require hard copies of your application. If you must print this form, consider printing double-sided and in grayscale (black and white).
7. **Save your completed application as a PDF and upload it to Themis.**
   Refer to your local Human Ethics Advisory Group (**HEAG**) for detailed instructions on how and when to submit your application.

ANSWER ALL OF THE QUESTIONS IN THIS FORM

Ethics ID number: *(assigned by Themis)*	1953838.1	
Project Title: *(as recorded in Themis)*	Preferences and Decision-making under Risk and Uncertainty	
Responsible Researcher: *(as recorded in Themis)*	Amy Perfors	
Application Type: *(mark with an "X")*	X	**Minimal Risk**
		Standard Project

1. Project Details

1.1 Project Summary	Summarise your research project in plain language. **[Limit: 300 words]**

A) Aims and Objectives

[Briefly describe the broad aims and objectives of this project.]

The phenomenon of Ambiguity Aversion rests on the distinction between two types of imperfect knowledge: Risk and Uncertainty. 'Risk' is a measurable lack of certainty which can be expressed through mathematical probability, while 'uncertainty' is an unmeasurable lack of certainty (Knight, 1921). Ambiguity Aversion describes the preference for people, when given two options of identical utility, to prefer the option which entails risk over the option which entails uncertainty. A reasonably large body of work has sought to examine the conditions in which ambiguity aversion arises, it's causes, and its economic and philosophical characteristics. However, most of this work has tended to heavily favour experimental paradigms based on contrived economic bets and games (e.g. Ellsberg, 1961), while a minority of work has sought to ascertain the existence of ambiguity aversion in the 'real-world' and in qualitative as opposed to quantitative situations (e.g., Curley et. al., 1984; Bier & Connell, 1994). However, such attempts have not been systematic and have been circumscribed to merely one context.

The aim of the present research is to try to bring this effect 'outside of the lab' to see whether ambiguity arises in more qualitative situations, and many and varied real-life contexts. More specifically, we are interested in whether ambiguity aversion arises in (1) a variety of different contexts and situations, and (2) in qualitative situations as opposed to quantitative situations (as has most often been previously studied). If so, it will strengthen confidence in the scope and robustness of the ambiguity aversion effect in 'real-world' cases rather than mere laboratory games.

In order to investigate this issue, we will present to participants life-like vignettes from a variety of different contexts and ask them questions to ascertain their preferences for risk and uncertainty in these situations.

B) Key Question(s)

[What question, or questions, does the project intend to examine? Where relevant, state the specific hypothesis to be tested.]

1. Will ambiguity aversion be present when participants are presented with life-like vignettes which involve qualitative gains and losses in all different contexts? [Hypothesis: no]
2. Will there be differences in the degree of ambiguity aversion observed in response to life-like vignettes which involve losses and those which involve gains [Hypothesis: yes]

C) Research Design

[Outline the research design/approach. In particular, note the type(s) of participants, and type(s) of data collection.]

Participants will be recruited via Amazon Mechanical Turk (AMT), which provides a platform for finding workers (mostly American) to carry out online tasks that require human intervention, in exchange for payment. It is now widely in use within the social and psychological sciences for the purposes of conducting experiments. After answering instruction "check" questions designed to ensure they are fluent English speakers who read and understood their task, they will be presented with 1 to 4 short, life-like vignettes similar to the example shown below. The vignettes will involve participants choosing between hypothetical scenarios that introduce risk and/or uncertainty. Our design is between-subjects, which means that we have a total dataset of dozens of vignettes but each person will be shown only one or two, in order to minimize demand effects. All involve hypotheticals and involve familiar categories of everyday experience that most people will be well accustomed to (e.g. social situations, work situations, health situations etc.) and are very unlikely to frighten or emotionally bother participants. The experiment is expected to take around two to five minutes to complete. People will be paid at a rate of $10USD/hr, with an initial pilot being used to derive accurate time estimates; at this point we expect that the entire experiment will take no more than 5-7 minutes.

Example vignette:

> *You have a stock portfolio of two stocks: stock X and stock Y. You get a call from your stockbroker who advises you that he has received an anonymous tip that one of your stocks is about to plummet in value, while the other will continue to grow steadily. Due to taxation and investment regulations, you can only sell one of these stocks. Which of the following situations would you rather be in?*

A. *You know that either X or Y will plummet in value (but not both), and that there is 50% chance that it is X and 50% chance that it is Y.* B. *Either stock X or Y will plummet in value (but not both), but you do not know the exact probabilities.*

Specific Guidelines Checklist		
Type an "X" in the left-hand column beside all items that apply to your research project. Linked sections of the National Statement contain relevant guidelines and requirements that you need to address when completing your application.		
	Children and/or young people (< 18 years old) will be recruited as participants.	→ **Refer to *NS* §4.2.**
	People in dependent or unequal relationships will be recruited as participants. (There are pre-existing relationships between participants and researchers, or between participants and others involved in facilitating or implementing the research. E.g. student/teacher, patient/doctor, employee/employer.)	→ **Refer to *NS* §4.3.**
X	**People in countries other than Australia** will be recruited as participants.	→ **Refer to *NS* §4.8.**
	One or more of the following describes the research project: • it will be about **Aboriginal and/or Torres Strait Islander individuals or peoples**, their health, or their culture(s), language(s) or histories; • it will be about the impact(s) or effect(s) of some phenomenon or phenomena on **Aboriginal and/or Torres Strait Islander individuals or peoples;** • it will *specifically target* **Aboriginal and/or Torres Strait Islander people** to be recruited as participants; • it will be conducted in a geographic location where a significant number of the population are likely to be **Aboriginal and/or Torres Strait Islander.**	→ **Refer to *NS* §4.7.** → **Refer to *Values and Ethics*.** → **Refer to *GERAIS*.** → **This application is ineligible for minimal risk review.**
	One or both of the following describes the research project: • it will *specifically target* **women who are pregnant** to be recruited as participants; • it will be focused on **women who are pregnant and/or the human foetus** (including human foetal tissue or human embryos).	→ **Refer to *NS* §4.1.** → **This application is ineligible for minimal risk review.**
	People who may be involved in illegal activities will be recruited as participants, ***and the research project could potentially expose such activities.***	→ **Refer to *NS* §4.6.** → **This application is *likely* ineligible for minimal risk review.**
	People with cognitive impairment, intellectual disability, or mental illness will be recruited as participants.	→ **Refer to *NS* §4.5.** → **This application is ineligible for minimal risk review.**
	People who are highly dependent on medical care will be recruited as participants.	→ **Refer to *NS* §4.4.** → **This application is ineligible for minimal risk review.**
	None of the above applies to this research project.	

Comment on the above: The project will make use of Amazon's Mechanical Turk framework to recruit and remunerate participants in the experiment. We will use the infrastructure provided by AMT to ensure that only Americans can participate. The use of this framework is standard practice in many areas of psychology and the experiment will be conducted in full compliance with Amazon's Terms of Use for the Mechanical Turk platform. As far as we are aware, the Mechanical Turk system complies with all appropriate legislation and ethical procedures within the regions it operates.

Additional Modules Checklist		
Type an "X" in the left-hand column beside all items that apply to your research project. This checklist will help you determine if you need to complete any other modules in addition to this application form. Linked sections of the *National Statement* contain relevant guidelines and requirements that you need to address when completing this form and any applicable additional modules.		
	This research project will involve the **creation of a databank** (i.e. your stored data will be made available to other parties for secondary use in future research projects).	→ **Refer to *NS* §3.2.** → **Complete and attach the *Privacy and Databanks Module*.**
	This research project will involve the **collection of information for a databank** (i.e. your stored data will be made available to other parties for secondary use in future research projects).	→ **Refer to *NS* §3.2.** → **Complete and attach the *Privacy and Databanks Module*.**
	This research project will involve **accessing information from an existing databank** (i.e. you will be accessing and making use of stored data that was previously collected – not for this specific project – by other parties).	→ **Refer to *NS* §3.2.** → **Complete and attach the *Privacy and Databanks Module*.**
	This research project will involve obtaining identifiable (or potentially identifiable) **personal information (including health information)** about individuals ***without their consent.***	→ **Complete and attach the *Privacy and Databanks Module*.**
	This research project will involve the collection and/or use of **human tissue/biological samples or materials** (e.g. blood, saliva, cheek swabs, hair, human embryonic or foetal tissue).	→**Refer to *NS* §3.4.** → **Complete and attach the *Body Tissue and Genetic Research Module*.**
	This research project will involve **human genetics.**	→ **Refer to *NS* §3.5.** → **This application is ineligible for minimal risk review.** → **Complete and attach the *Body Tissue and Genetic Research Module*.**
	This research project will involve **medical interventions, therapies or trials.**	→ **Refer to *NS* §3.3.** → **This application is ineligible for minimal risk review.** → **Complete and attach the *Interventions, Therapies and Trials Module*.**
	This research project will involve **administration of ionising radiation.**	→ **Complete and attach the *Ionising Radiation Module*.**
X	**None of the above** applies to this research project.	

Comment on the above: All data will be non-identifiable and not added to a databank (defined in NS §3.2 as data that is aggregated over time). The data may be made available in completely anonymous and non-identifiable form to other researchers.

2. Background and Method

2.1 Background and Significance

Provide a summary of background information. Explain the significance of the proposed research in the context of this background. **Refer to *NS* §5.2.5.**

[Limit: 500 words]

A) Background:

[What is the current state of research/knowledge/discourse in this area?]

The world is replete with the unknown. But just how do we make decisions when faced therewith, as we are on a daily basis? To answer such a question, it is necessary to differentiate between two ontologically different phenomena which fall within the penumbra of what we, in common parlance, call 'unknown'. In this regard, an important distinction exists between 'risk' — a measurable lack of certainty represented by numerical probabilities (e.g. 'there is a 50% chance that it will rain tomorrow'), and 'uncertainty' — an unmeasurable lack of certainty (e.g. 'there is an unknown probability that it will rain tomorrow'; Knight, 1921). Interestingly, a large body of work has shown that, in decision-making tasks, humans prefer the former (risk) to the latter (uncertainty): a phenomenon known as ambiguity aversion.

Since ambiguity aversion was first described in 1961 by Daniel Ellsberg, it has been mostly studied through an 'economic game' paradigm. The quintessential example of this paradigm shows that people prefer to bet on an urn that contains 50 red balls and 50 blue balls than an urn that contains 100 blue or red balls, but the exact number of each is unknown (Ellsberg, 1961; Fellner, 1961). Studies following this paradigm, in which participants price or choose between bets which are situated within unrealistic and contrived games are pervasive in the behavioral economics literature of ambiguity aversion. While this paradigm is indispensable for understanding and modeling the decision rules that may underly people's decisions and has also shown the ambiguity effect to be somewhat robust (Machina & Siniscalch, 2014), it lacks external validity. That is, such studies tell us little about whether these results are applicable to contexts not directly 'under the microscope' and whether they will persist in the real world outside of the lab.

To answer this question, many 'applied' studies have examined ambiguity aversion in pecuniary contexts that are well suited to the quantitative toolkit of the economist. Here, the ambiguity effect has arisen in contexts such as asset markets (Füllbrunn, Rau, & Weitzel, 2014) and insurance (e.g., Kunreuther, Meszaros, Hogarth, & Spranca, 1995). However, there is very little work which has sought to examine the application of the ambiguity effect in more 'everyday' contexts which are not as readily understood in quantitative terms (e.g. social situations).

Here, a sparse literature has shown that ambiguity aversion arises in medical contexts such as decisions to vaccinate children (Ritov & Baron, 1990), undergo medical treatment (Curley et. al., 1984; Bier & Connell, 1994), as well as other miscellaneous contexts such as decisions relating to online phishing (Wang, 2011), and where to live based on health risks (Viscusi et al., 1991). However, such work has hardly been systematic, and has not explored a wide variety of different decision contexts.

Bier, V. M., & Connell, B. L. (1994). Ambiguity seeking in multi-attribute decisions: Effects of optimism and message framing. Journal of Behavioral Decision Making, 7(3), 169-182.

Curley, S. P., Eraker, S. A., & Yates, J. F. (1984). An investigation of patient's reactions to therapeutic uncertainty. Medical Decision Making, 4(4), 501-511.

Ellsberg, D. (1961). Risk, ambiguity, and the Savage axioms. The quarterly journal of economics, 643-669.

Fellner, W. (1961). Distortion of subjective probabilities as a reaction to uncertainty. The quarterly journal of economics, 670-689.

Füllbrunn, S., Rau, H. A., & Weitzel, U. (2014). Does ambiguity aversion survive in experimental asset markets?. Journal of Economic Behavior & Organization, 107, 810-826.

Knight, F. H. (1921). Risk, uncertainty and profit. New York: Hart, Schaffner and Marx.

Kunreuther, H., Meszaros, J., Hogarth, R. M., & Spranca, M. (1995). Ambiguity and underwriter decision processes. Journal of Economic Behavior & Organization, 26(3), 337-352.

Machina, M. J., & Siniscalchi, M. (2014). Ambiguity and ambiguity aversion. In Handbook of the Economics of Risk and Uncertainty (Vol. 1, pp. 729-807). North-Holland.

Ritov, I., & Baron, J. (1990). Reluctance to vaccinate: Omission bias and ambiguity. Journal of Behavioral Decision Making, 3(4), 263-277.

Viscusi, W. K., Magat, W. A., & Huber, J. (1991). Communication of ambiguous risk information. Theory and Decision, 31(2-3), 159-173.

Wang, P. A. (2011). Online Phishing in the Eyes of Online Shoppers. IAENG International Journal of Computer Science, 38(4).

B) Significance of This Research:

[Explain the significance of the proposed research project in light of existing research, knowledge or understanding. How does your research help to fill a gap in the literature? You may include relevant references, within the word limit.]

The present study seeks to, with awareness of the lacuna in the literature referred to above, assess the effect of ambiguity of 'real-world' qualitative decisions in a variety of contexts. The aim is therefore to ascertain whether the ambiguity effect is as robust and pervasive as it is oft thought to be. On this basis, we will present participants with vignettes taken from a variety of different real-life contexts such as social, existential, familial, technological etc. to ascertain to what extent ambiguity aversion arises in these qualitative and varied contexts. Because ambiguity aversion is thought to affect the decisions people make every day, the importance of understanding it cannot be understated. Indeed, it is important to ascertain the proper ambit of this effect — does it arise in various milieus and contexts. A better understanding of Ambiguity Aversion will also allow us to understand whether it is liable to being ameliorated, and what are its consequences and effects upon us.

2.2 Research Design and Method

Provide details of your research design and your proposed method. **Refer to *NS* §5.2.5 - §5.2.6.**

Attach a copy of any measures, scales, questionnaires, survey instruments (including online surveys), interview questions/themes, and/or focus group topics/questions to be used.

A) Participants (or Recruitment Targets, such as medical records):

[Describe the sample, i.e. the intended participants or recruitment targets. Explain the basis on which this sample was chosen. Include the number and age range and any other relevant demographic characteristics of participants, as well as any eligibility constraints (i.e. inclusion/exclusion criteria). If the project involves using records or previously-collected data/samples, rather than direct contact with human participants, state that.]

In order to obtain reliable and robust data, this project requires at least forty to fifty participants for each vignette presented. We will recruit these participants using Amazon's Mechanical Turk (AMT), which provides a platform for recruiting workers to carry out online tasks that require human intervention, in exchange for payment. Participants will be registered "Workers" within the AMT platform; most Workers contribute to AMT to make some extra money. All AMT workers are restricted to be 18 years of age or older. Our check items will ensure that they are fluent speakers of English.

Eligibility restrictions include the ability to read and understand the questions, which is ensured through the use of a short qualification which workers have previously passed checking their English ability. We will also have "check questions" within the experiment which participants cannot continue without getting correct. Participants will be informed before commencing the experiment that they may be excluded if they are not operating a web browser compatible with the software used to implement the experiment. In practice, in the event that a participant carries out the experiment using a non-compliant browser, full payment will still be made.

Note that due to the nature of AMT, wherein researchers transfer funds to Amazon and inform Amazon of which participants get reimbursement, the identity of the participants is unknown (and inaccessible) to the researcher. Researchers get information about completion of the tasks by Amazon-allocated identification numbers and subsequently inform Amazon which participants should be paid via an automated system.

B) Recruitment:

*[Describe how recruitment will occur. Explain how potential participants will be identified and approached. Who will do this? Refer to **NS §2.2**. If you will be using records or data only, and you will be completing the Privacy and Databanks Module, state "N/A." If you will be using records or data only, but you will not be completing the Privacy and Databanks Module, explain how the records/data will be identified, collected and accessed.]*

On AMT Workers are never contacted directly; rather, experiments are posted on the AMT platform as part of the list of tasks available for Workers to perform. Workers select which tasks they wish to contribute to and may return them without completion at any time without penalty.

C) Participant Incentives:

*[Do you propose to reward and/or reimburse and/or compensate participants in any way? If yes, give details here and comment on the special considerations discussed in **NS §2.2.10** and **NS §2.2.11**. If no, state "N/A."]*

Workers within Amazon's Mechanical Turk platform conduct tasks in exchange for payment, which is based on task rather than time. We set the rate of payment such that the average participant will receive an amount approximately equivalent to US $10.00 per hour, which is well above the "market rate" established for tasks on Mechanical Turk and above the minimum wage in most US states.

D) Participant Task(s):

[What will participants be asked to do? What is the approximate time commitment required of each participant? If using records or data only, state "N/A." If your research will be conducted in schools during class time, give details of the alternate activity arranged for students in the class who will not be participating in the research.]

The task is described above in detail, but briefly: participants will respond to a short life-like vignette to indicate their preferences and/or decision making in relation to hypothetical scenarios/contingencies based thereon. The task is estimated to take around two to five minutes.

E) Data/Material Collection Technique(s):

[What data/materials will be collected? Where will the data be collected? List/describe all sites.]

The experiment will be coded in JavaScript, which ensures precise control over characteristics such as randomisation, dependencies between questions, and presentation format. Data will consist of answers to the questions above as well as demographic questions including age, and gender. The software used to run the experiment will be deployed within Google's "App Engine" framework, although it will be accessed via Mechanical Turk. The Google App Engine framework has an associated database engine where the anonymous data will be stored. Access to this database is secure and will be restricted to the researchers. Once data has been downloaded from Google App Engine for analysis, it will be stored on secure computers in compliance with University data protocols. The data will also be backed up and held on University servers and may be made available in a non-identifiable form to the academic community (e.g., through GitHub).

F) Data Analysis:

*[How will data/materials be analysed? What methods/techniques/theories will be used? If qualitative methods will be used, refer to **NS §3.1**.]*

Participant responses will be analysed statistically using R. Statistical analyses may include frequentist or Bayesian statistics, as appropriate.

3. Risks, Benefits and Monitoring

3.1 Potential Risks to Participants	Does your research project pose any potential risks to participants? What are those risks? How will they be negated, minimised or managed? **Refer to *NS* §2.1.** **Note that the risks you identify here should also be described in your Plain Language Statement (PLS). Attach a copy of any distress protocol or adverse event protocol (if applicable).**

A) Potential Risks

[Identify, as far as possible, any potential risks to participants associated with the research project. Risks may arise from the nature of questions that participants are asked (such as discussing sensitive or distressing topics), or the tasks that participants will do, or the procedures that they will undergo. Potential risks might be physical, psychological, emotional, social, legal or economic in nature (this list is not exhaustive). Risks also may be associated with the research setting (e.g. outdoors, in unsecure housing, or in countries other than Australia). If you believe that any potential risks are minimal, please state this and explain why.]

We foresee minimal risk to participants associated with study conduct. Two risks we have considered are:

(a) Boredom, since the task is fairly dull. Participants will also give up their time to complete this study.

(b) Dislike, or mild discomfort, in relation to the presented vignettes.

B) Risk Management Strategy

[Describe what measures you have in place to negate, minimise or manage the potential risks you have identified. Depending on the type(s) of risks involved, participants may also need additional support (e.g. external counselling) during or after the study. Attach or include a copy of any distress protocol or adverse event protocol which you have developed.]

The measures that we have put in place to minimize the potential risks identified above are:

(a) Participants will be made aware of the potential risks outlined above before beginning the survey. They will be informed that they are not required to complete the study and that they are permitted to stop at any time. Before choosing to participate in the study they will also be shown an estimate of how long it will take and how much

money they can expect to earn.

(b) All vignettes are:

a. Proposed as hypotheticals;

b. Presented as general; and

c. from familiar categories of everyday experience that most people will be well accustomed to (e.g. social situations, work situations, health situations) and should not frighten or emotionally bother participants. We will warn them in the instructions that they will be presented of such scenarios of common everyday experience, and if they are afraid of or disturbed by such things, they should not participate.

3.2 Potential Risks to Non-Participants

Does your research project pose any potential risks to non-participants? (This could possibly include risks to researchers or independent contractors.) If so, how will these risks be minimised? **Refer to *NS* §2.1.**

[Describe any potential risks and your risk management strategy for non-participants, if applicable. Risks to non-participants might include things such as potential breach of privacy, stigmatisation of a particular group, or knowledge about familial genetics. If you believe that any potential risks to non-participants are minimal, please state this and explain why.]

None.

3.3 Risks, Benefits and Justification

In light of the risks and expected benefits of the research project, explain how the expected benefits of the research justify any risks it may pose. **Refer to *NS* §1.6 - §1.7 and *NS* §2.1.**

A) Expected Benefits

[Describe any expected benefits of this research. Include potential benefits to the community or society, and any specific potential benefits to participants, beyond general positive feelings that may arise from participating in research and having one's voice heard. Note that it is generally not necessary to demonstrate specific benefit to participants in order to show that research is ethically justifiable.]

A better understanding of Ambiguity Aversion in life-like situations will also allow us to understand when it is likely to arise, whether it is liable to be ameliorated, and what are its consequences and effects on us. This research will help us understand human decisions and preferences and, ideally, lead to better decision making in society, both in private and the public sphere. In addition to knowing that they have contributed to this societal-level benefit, the participants will directly benefit from the study by pecuniary means; they will be paid at a rate of approximately $10 dollars per hour for their time and effort. As stated above, this rate is well above the "market rate" established for tasks on Mechanical Turk and above the minimum wage in most US states.

B) Justification of Risks by Expected Benefits

[Explain how the expected benefits of the research justify the risk(s) which you identified in questions 3.1 and 3.2. Pay particular attention to any risk(s) to participants that are greater than inconvenience.]

The risks are minimal and the expected benefits large, both for increasing our understanding of ambiguity aversion and, more generally, decision making under risk and uncertainty, outside the lab and into more relevant areas of everyday life. There a quite pragmatic implications of this proposed research, allowing people to understand and improve their decision making, in all facets of their lives.

3.4 Management and Monitoring

How will researchers manage and monitor conduct of the research project? **Refer to *NS* §5.5.**

A) Management

[Provide details of how and by whom the research project will be managed, throughout the life of the project, to ensure that it complies with the protocols set out in this application, and with all relevant legislation and regulations. Address cases where several people are or may be involved in recruiting, interviewing, obtaining data or data analysis.]

A/Prof Perfors will keep all data on a password-protected computer associated with the University of Melbourne and will be responsible for storage, making the data available to student researchers for analysis (who will also use password-protected computers). In order to ensure that the research protocol is correctly followed, the responsible

researcher will meet with the student on a regular basis throughout the duration of the project. Before being downloaded the data will be hosted on Google App Engine but destroyed once it is downloaded. The data may also be made available (e.g., on GitHub) in anonymised and de-identified form (since AMT prohibits researchers from accessing personal information about participants, this will be trivial).

B) Monitoring

[If the research will be carried out at some distance from the responsible researcher (i.e. interstate or in countries other than Australia), describe the systems in place to ensure compliance with the research protocols you have outlined in this application. If the research will be undertaken by a student, describe how the student will be supervised to ensure compliance with the protocols, including details of any local supervision to be organised for research conducted overseas or interstate.

Research is carried out by people clicking on a URL and completing it in their home. No monitoring is necessary.

C) Independent Contractors

[If any independent contractors (i.e. persons not listed in Themis as researchers on this project) will be carrying out any part of the research, provide details of the contractors involved, explaining their role and their qualifications/experience to fulfil this role. Include details of any training that will be provided to the contractors. Confirm that the contractors will be provided with a copy of the approved ethics protocol, and advised of their responsibilities in relation to the research. If no independent contractors will be involved, state "N/A".]

There are no independent contractors involved in this research.

4. Consent

4.1 Obtaining Informed Consent		**Type an "X" in the left-hand column beside as many of the following options as apply** to your research project. **Use the space provided below** to explain how you will obtain informed consent from participants. If you seek a waiver of consent, or the use of opt-out consent, use the space provided to justify your request. **Refer to *NS* §2.2, *NS* §2.3.**
X	**Written consent** will be sought from (or on behalf of) participants.	→ **Refer to *NS* §2.2.6.** → **Attach a copy of your consent form(s).**
	Verbal consent will be sought from (or on behalf of) participants.	→ **Refer to *NS* §2.2.5 - §2.2.6.** → **Explain why you have chosen this form of consent, and how an individual's consent to participate will be recorded.** → **Attach a copy of your consent script(s).**
	Consent will be implied, rather than explicitly obtained.	→ **Refer to *NS* §2.2.5 - §2.2.6.** → **Explain why you have chosen this form of consent.**
	Third parties (e.g. parents/guardians of minors) will provide consent on behalf of participants.	→ **Refer to *NS* §2.2.12.** → **Explain who will be providing consent on behalf of participants and why.**
	Third parties (e.g. community elders, school boards) will be involved in whole of community participation decisions.	→ **Refer to *NS* §2.2.13.** → **Provide details of which third parties will be involved, why they will be involved, and how this will be accomplished.**
	This application seeks a **waiver of consent.**	→ **Explain why you are seeking this option. Justify your request by referring to the conditions described in *NS* §2.3.10 - §2.3.11.**
	This application proposes to use **opt-out consent.**	→ **Explain why you are seeking this option. Justify your request by referring to the conditions described in *NS* §2.3.6.**

[Write your responses here. If you will be obtaining consent from participants, describe who will obtain consent. Explain how it will be established that potential participants are competent to understand the research and to participate voluntarily, particularly if they are in a dependent relationship with the researcher(s). If you will not be obtaining consent from individual participants, justify your request for a waiver of consent, or for use of opt-out consent.]

Consent will be achieved online by having participants click 'Next' after response to the consent form, a copy of which is attached to this application.

4.2 Limited Disclosure	Do you propose to use limited disclosure, concealment or deception for this research project? (Answer Yes or No. If Yes, use the space below to explain.) **Refer to *NS* §2.3.**	
	YES or NO:	**NO**

*[If NO, you may leave this space blank. If YES, provide a justification for the limited disclosure, concealment or deception. Comment on the special considerations discussed in **NS §2.3**. Indicate whether you intend to debrief participants, and justify that position. If you are seeking a waiver of consent for all participants, select NO.]*

4.3 Future Use of Data, Materials, or Tissues		Do you intend for the data and/or materials and/or tissues collected for this research project to be reused in future research? **Type an "X" in the left-hand column beside as many of the following options as apply** to your research. **Use the space provided** to specify which data/materials/tissues will be reused, if any. **Refer to *NS* §2.2.14.**
	Consent (or waiver of consent) will be **specific.**	→ Data/materials/tissues will be used *only* for this research project (i.e. **no future use**).
	Consent (or waiver of consent) will be **extended.**	→ Data/materials/tissues used in this research project may also be used in future projects that are *closely related* to this project, *or in the same general area* of research as this project.
X	Consent (or waiver of consent) will be **unspecified.**	→ Data/materials/tissues used in this project may also be used in *any* future research.

[If data/materials/tissues from this research project will not be reused, select "specific" above and state "N/A" here. If data/materials/tissues will be reused, describe which of them will be reused explain and how such future use will occur. If different conditions of consent apply to different data/materials/tissues, explain which conditions apply to which data/materials/tissues. If you will also be completing the Privacy and Databanks Module, you may simply write "Refer to Privacy and Databanks Module" here.]

Data may be made publicly accessible via a suitably open format and platform (e.g., OSF or github), in accordance with ARC requirements. However, information that may be used to identify individual participants will not be available.

4.4 Conflict of Interest	Does your research present or involve any conflict of interest, whether potential, real, or perceived; or will the researcher(s) have dual roles in relation to the participants? (Answer Yes or No. If Yes, use the space below to explain.) **Refer to *NS* §5.4, University of Melbourne *Code of Conduct for Research* §2.5, and *Australian Code for the Responsible Conduct of Research* §7.2.**	
	YES or NO:	NO

[If YES, explain what the potential conflict of interest is and how it will be managed. If applicable, you may also need to include a comment on the Plain Language Statement and Consent form declaring that potential conflict of interest. If NO, you may leave this space blank.]

There are no conflicts of interest. All participation is anonymous and voluntary. Researchers have no association with Amazon.

4.5 Information for Participants	How will relevant information about the research project be provided to potential participants? **Attach a copy of any advertisement (print or online), Plain Language Statement (PLS), consent form, letter, email, telephone script, and/or debriefing statement** to be used. **Refer to *NS* §5.2.23.**

[Explain how participants will be informed about the research project. If applicable, explain what arrangements will be made for informing participants with low literacy skills, and/or for translation/interpreting of these materials for participants who are speakers of languages other than English. If you are seeking a waiver of consent for all participants, state "N/A."]

Information as provided in the attached PLS and consent form will be provided to each participant at the link of the study URL. They will be unable to continue to the study until they click a button attesting that they have read and comprehended the information in the PLS and consent form.

Plain Language Statement (PLS): Your PLS must satisfy the requirements set out in the *National Statement* (***NS* §2.2.1 - §2.2.3, §2.2.6**). The Research Ethics and Integrity's website has **guidance on composing your plain language statement**, as well as an **example PLS template**. A list of PLS requirements is also provided at the end of this form. ***Ensure that your PLS is written in plain language. Ensure that the information contained in your PLS is consistent with the information in your application.***

Consent Form: Your consent form must satisfy the requirements set out in the *National Statement* (***NS* §2.2**). The Research Ethics and Integrity's website has **guidance on composing your consent form**, as well as an **example consent form**. A list of consent form requirements is also provided at the end of this form. ***Ensure that your consent form is written in plain language. Ensure that the information contained in your consent form is consistent with the information in your applicatio***

5. Dissemination and Data Management

5.1 Providing Results to Participants	How will the results of the research project be provided to participants in an accessible format? **Refer to *NS* §1.5.**

[Describe how participants will be given access to the results of the research. If you will only be using pre-collected data and/or tissue, state "N/A". If you are seeking a waiver of consent, state "N/A".]

Since participation is anonymous, none of the specific results will be made available to specific people. When published, information about the publication will be posted on the websites of the researchers involved, whose names participants will have been made aware of, so that interested participants may seek it out.

5.2 Reporting Project Outcomes	How will outcomes of the research project be made public? **Refer to *NS* §1.3.**

[Describe the format and means by which you intend to make the project's results public.]

If successful, the project will be published in a high-quality scientific journal such as Psychological Science or Cognition, with the manuscript posted on the authors' websites in compliance with copyright requirements. Results will also be shared with other researchers through informal networks and conference presentations.

5.3 Data Management	How do you propose to manage the data collected in this research project? Specify what types of data will be collected, how they will be stored and in what format. How will access to the data be controlled and by whom? Discuss retention, security, and data sharing plans. What measures will be taken to protect participants' privacy, and their data? **Refer to *NS* §1.11, the *Australian Code for Responsible Conduct of Research* §2, and the University of Melbourne *Code of Conduct for Research* §2.1.**

A) Privacy and Confidentiality

[What measures will be taken to protect participants' privacy and the confidentiality of participants' data? Describe the format in which the data will be stored (e.g. digital video file, database of survey responses, paper forms.) Describe whether the data will be identifiable. That is, will it be possible for researchers or others to match data to specific participants? If so, how will this be possible? If not, how will such matching be prevented?]

Data will be anonymous and not identifiable. Researchers do not have access to specific identity information of any researcher and the only demographic questions are generic enough (e.g., age and gender) to not uniquely identify specific people; moreover, anyone may refuse to answer any demographic questions without penalty.

B) Security and Storage of Data

[What short-term storage will you use during the data collection phase? Whose responsibility will it be to manage this? What long-term storage will you use after the data collection phase? Whose responsibility will it be to manage this? Who will have access to unprocessed (raw) data? What security measures will be in place to control access to data?
NOTE: If your research will generate digital and non-digital data, separate this section into two parts: "Security and Storage of Non-Digital Data" and "Security and Storage of Digital Data."]

Short-term storage of the data will be on the researchers' password-protected computers. In the long term, the data will be stored on secure servers hosted by the Melbourne School of Psychological Sciences and a non-identifiable version of the data may be made available online.

C) Retention

[For how long will you keep the data generated by this research project? How will you ensure that data is retained if/when the researcher(s) leave the University? For data that are not intended to be kept indefinitely, how will you eventually dispose of the data?
*NOTE: the minimum retention period for research data and primary materials is five years after the last publication, or public release, arising from the research (**University Code §2.1**). Longer minimum retention periods apply for certain types of research – refer to the requirements of relevant regulations.]*

Records will be retained for a minimum of five years following publication of study findings.

6. Other Issues

6.1 Other Ethical Issues	Are there any other issues, not addressed above or in additional modules, which are relevant to the ethical review of your research project? **Refer to the relevant sections of the *National Statement* identified in the Specific Guidelines Checklist, if applicable.**

[Use this space to address any relevant ethical issues that are not addressed elsewhere in this application. If there are no other issues relevant to the ethical review of your research project, state "N/A."]

None.

Attachments Checklist

Review your answers above to determine which attachments (if any) are required for your application. **Type an "X" in the left-hand column beside all items that apply to your research project.** Attach a copy of the items you have selected.

X	**Plain Language Statement (PLS) for Participants**
X	**Consent Form for Participants**
	Additional PLS(s) (e.g. for parents, teachers, schools)
	Additional Consent Form(s) (e.g. for parents, teachers, schools; or assent forms for children)
	Recruitment Materials (e.g. advertisement(s), posters, letter(s) or email(s) of invitation)
	Questionnaire(s) and/or Survey Instrument(s)
	Measure(s) and/or Scale(s)
	List of Interview Questions and/or Themes
	List of Focus Group Questions and/or Themes
	Participant Distress Protocol
	Adverse Event Protocol
X	**Debriefing Statement**
	Approval(s) of research by an HREC external to the University of Melbourne
	Other External Approval(s) (e.g. schools, communities)
	Full Protocol (for Medical Research)
	Translations and/or Back-Translations (where languages other than English used)
	Privacy and Databanks Module
	Body Tissue and Genetic Research Module
	Ionising Radiation Module
	Interventions, Therapies and Trials Module
	Other Documents (e.g. contracts, agreements) – specify which:

Plain Language Statement (PLS) Requirements:

1. Clearly identify the University of Melbourne (i.e. by prominent placement of the University's logo) and the department(s)/ school(s)/faculty(-ies) involved. If printed, the PLS should be on University of Melbourne letterhead.
2. Clearly identify the title of the project, and the name(s) and contact details of the Principal Researcher and Other Researchers. For student projects, specify the student's level of study.
3. Clearly explain the purpose of the research project.
4. Clearly explain what participants will be asked to do, and provide an estimated time commitment.
5. If participants will be photographed, audio- or video-recorded, clearly state as much.
6. Clearly explain any risks arising from participation, as well as any procedures or measures in place to minimise such risks.
7. Describe any expected benefits to the wider community. If applicable, also describe any expected benefits to participants.
8. List any payments, incentives or reimbursements to be made to participants.
9. State that involvement in the project is voluntary and that participants are free to withdraw from participation at any time. Explain any implications of withdrawal, including whether it will be possible for participants to withdraw any data already collected from or about them.
10. Describe the likelihood and form of dissemination of the research results, including publication.
11. Describe the arrangements in place to protect the confidentiality of participants' data, and advise participants of any legal limitations to such confidentiality. If the sample size for the project is small, advise participants that this may make them identifiable.
12. The project HREC number (which is the ethics ID number assigned by Themis) and the date and version number of the PLS must appear on the PLS. If the PLS is printed, put this information in the footer.
13. Explain what will happen to participants' data after the research project ends (i.e. how long it will be retained, whether it might be used again for future research and if so who would have access.)
14. Include the following statement: "This research project has been approved by the Human Research Ethics Committee of The University of Melbourne. If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the Manager, Human Research Ethics, Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: +61 3 8344 2073 or Email: humanethics-complaints@unimelb.edu.au All complaints will be treated confidentially. In any correspondence please provide the name of the research team or the name or ethics ID number of the research project."
15. If the research is externally funded, state the amount(s) and source(s) of funding for the research.
16. If there are any potential conflicts of interest for any of the researchers, sponsors (if applicable) or institutions, disclose these potential conflicts of interest.
17. If any participants will be in a dependent relationship with any of the researchers, state that decisions about participation will not affect the dependent relationship. (E.g. students' grades will not be affected if they decline to participate or withdraw from the project at any stage).

Consent Form Requirements:

1. Clearly identify the University of Melbourne (i.e. by prominent placement of the University's logo) and the department(s)/ school(s)/faculty(-ies) involved. If printed, the consent form should be on University of Melbourne letterhead.
2. Clearly identify the title of the project, the name(s) and contact details of the Principal Researcher and Other Researchers. For student projects, specify the student's level of study.
3. If participants will be photographed, audio- or video-recorded, clearly state as much.
4. State that involvement in the project is voluntary and that participants are free to withdraw consent at any time, and to withdraw any unprocessed data previously supplied. Also state that the purpose of the project is research.
5. Describe the arrangements in place to protect the confidentiality of participants' data, and advise participants of any legal limitations to such confidentiality. If the sample size for the project is small, advise participants that this may make them identifiable.

Declaration by the Responsible Researcher

The information contained in this application is, to the best of my knowledge and belief, accurate.
I have read the University's current human ethics guidelines. I accept responsibility for the conduct of the procedures set out in the attached application in accordance with: those guidelines, with the **University's *Code of Conduct for Research***, and with any other condition laid down by the University of Melbourne's Central Human Research Ethics Committee (CHREC), its Human Ethics Sub-Committees (HESCs), or by the Human Ethics Advisory Group (HEAG) which will review this application. I have attempted to identify all risks related to the research that may arise in conducting this research. I acknowledge our obligations as researchers and the rights of the participants stipulated in the ***National Statement on Ethical Conduct in Human Research (2007) - Updated May 2015***. I certify that the research team has the appropriate qualifications, experience and facilities to conduct the research described in the attached application, and to deal with any emergencies and contingencies related to research that may arise throughout the life of the project.
If approval is granted, the project will be undertaken in strict accordance with the approved protocol and relevant laws, regulations and guidelines.
I, the Responsible Researcher, agree to:

- start this research project only after obtaining final approval from the HESC (if this is a standard project), or the HEAG (if this is a minimal risk project);
- carry out this research only where adequate funding is available to enable the research to be carried out according to good research practice and in an ethical manner;
- provide additional information as requested by the CHREC, HESC, or HEAG;
- provide progress reports to the CHREC, HESC, or HEAG as requested, including annual and final reports;
- maintain the confidentiality of all data collected from, or about, research participants and maintain security procedures for the protection of their privacy;
- submit an amendment if any modification to the research design or protocol is proposed (including any change of researchers) and to proceed with the research only after the amendment has been approved by the HESC (if this is a standard project) or by the HEAG (if this is a minimal risk project);
- notify the HESC (if this is a standard project) or the HEAG (if this is a minimal risk project) in writing immediately if any adverse event occurs during the course of the research;
- notify the HESC (if this is a standard project) or the HEAG (if this is a minimal risk project) in writing immediately if any complaints are received about the research;
- comply with an audit of the research undertaken, if requested by the CHREC, HESC, or HEAG;
- use only the data/tissue samples collected for this research, and for which HESC/HEAG approval has been given.

I certify that all members of the research team have read this application and the ***National Statement on Ethical Conduct in Human Research (2007) - Updated May 2015*** and that they have agreed to comply with the provisions of the latter.

Responsible Researcher Name	Signature	Date
Amy Perfors		14 February 2019

Declaration by Human Ethics Advisory Group (HEAG)

For HEAG use only. Enter the date the application was received, then type an "X" in the left-hand column beside each item as applicable.		
Date Application Received:		
	Technical review has been completed by the HEAG.	The merit of the proposed research project set out in this application has been reviewed on technical grounds. **Refer to *NS* §1.1.**
	Ethical review has been completed by the HEAG.	The HEAG has reviewed the proposed research project set out in this application for compliance with the principles of Human Research Ethics.
	The **Minimal Risk** review process is appropriate for the proposed research project set out in this application.	→ **Complete Declaration A (below)**
	The **Standard Project** review process is appropriate for the proposed research project set out in this application	→ **Complete Declaration B (below)**

Declaration A (Minimal Risk):	The HEAG has reviewed this project. The HEAG considers the methodological/technical and ethical aspects of the proposal to be appropriate to the tasks proposed. **The HEAG grants approval for this research project to commence.** The HEAG considers that the researcher(s) has/have the necessary qualifications, experience and facilities to conduct the research described in the attached application in a manner that complies with the University's policy on the management of research data and records, and to deal with any emergencies and contingencies that may arise. *[Note: If the HEAG Chair is also a researcher in this project, the declaration should be signed by another authorised member of the HEAG.]*

Name of HEAG Chair/Authorised Member	Signature	Date

Declaration B (Standard Project):	The HEAG has reviewed this project and considers the methodological/technical and ethical aspects of the proposal to be appropriate to the tasks proposed. **The HEAG regards this project as ready to submit to the HESC.** The HEAG considers that the researcher(s) has/have the necessary qualifications, experience and facilities to conduct the research described in the attached application in a manner that complies with the University's policy on the management of research data and records, and to deal with any emergencies and contingencies that may arise. *[Note: If the HEAG Chair is also a researcher in this project, the declaration should be signed by another authorised member of the HEAG.]*

Name of HEAG Chair/Authorised Member	Signature	Date