

# COMP1710 Report

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June 2, 2019

## **Abstract**

This report details my reflections on two of the SONA experiments I attended during the COMP1710 course. The experiments were intended to understand the similarities with user-evaluations that I would conduct for web development.

## **Introduction**

During the COMP1710 course students were required to participate in SONA experiments that illustrates to them the necessity of user evaluation. This report details two SONA experiments I participated in, "Music and Emotion" and "Understanding the relationship between personality and job recruitment," as well as the similarities and differences between the two experiments and how these experiments were relevant to web design and development.

# **First Experiment - Music and Emotion**

## **Summary**

The purpose of this experiment was to conduct a questionnaire to check if listening to a specific piece/genre of music affects how you interpret someone's emotions[Fig 1]. I was to watch a selection of short videos depicting various emotions of people, and answer whether the emotions were genuine or acted out. During the experiment my physiological signals was captured using various wearables and headsets.

## **Experience**

Despite the experiment being easy to understand and do, I found it to be quite repetitive having to run through the same experiment multiple times with the only difference being a different piece of music. I had known prior the experiment would go on for an hour, but I feel the repetitiveness may have affected my decision making in the last few runs.

## **Strengths and Weaknesses of Experiment**

When the participant information sheet mentioned videos, I had gone under the assumption they would be around 10-30 seconds. However it was only until I started the experiment that I realised it was short 1-2 second clips. The initial setup before the experiment started also took quite some time as the eye-tracking device wasn't able to calibrate from its current position and required a lot of manoeuvring before it could finally calibrate the position of my eyes. The same situation occurred with the EPOC+ headset as most of the sensors were not able to properly and quickly calibrate without constant adjusting.

Exempting these issues, I felt the experiment did complete its objective of seeing how I would react to and answer questions when prompted with a specific piece of music. After each music piece, there would be a short questionnaire afterwards that asked what you felt as you were answering the questions and listening to the music.

## **Second Experiment**

### **Summary**

The purpose of the second experiment was to try and understand how personality influences job recruitment[Fig 2]. For the experiment I was to first complete a questionnaire, before then being asked to create a short speech describing myself as if I was in an interview. The experiment ends with another short questionnaire regarding the speech. During the questionnaires my heart rate was tracked, and in the interview a video from a webcam.

### **Experience**

I was not told prior what exactly the video recorded aspect of the experiment was about, so when I was told I had 5 minutes to write a short speech as if for a job interview, I was not prepared at all for it. Speeches are not something I'm good at, and when asked to prepare one on the spot, I found myself heavily pressured and couldn't think of what to say. It wasn't until the speech was over and I was given a minute or so that I was able to calm down and relax for the rest of the experiment.

### **Strengths and Weaknesses of Experiment**

Only after the experiment has ended that I was told the true purpose of the study[Fig 3]. Rather than seeing how personality variables influence job recruitment, it was to check how social identities are related to social anxiety. The job recruitment aspect was just one of the many ways to capture this type of data. Because of this I felt that this experiment was misleading in its true purpose, however now that I know the true purpose I can now see how the experiment relates to it.

## **Comparison of Both Experiments**

One immediate similarity between the two experiments were that they were conducted in person rather than completed through online. Both experiments measured and tracked inner body functions such as heart rate or brain activity, and mostly consisted of completing questionnaires of some form. The first experiment was different from the second experiment in that once the experiment started, you were left on your own until the experiment finished. With the second experiment I was frequently visited by the experimenter in between sections. In the second experiment after being prompted to write a speech I felt very nervous and pressured during the interview. Unlike the first experiment where, although repetitive, was still completed without any form of pressure or anxiety.

## **Experiment Relevance to Web Design and Development**

During the experiments for the questionnaires participants was either given a link to a survey website or to a self-created webpage to complete them in. The participant's first impression of the design and functionality of the website can have a hidden effect on their decision making throughout the experiment. If the website was designed to be as minimal as possible with clean design, there will be less of an impact it will have on the participant compared to a website with incompatible colours or little to no design.

## References

Fig 1

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### Participant Information Sheet

**Project Title:** Music and Emotion

**Researchers:**

The researchers conducting this experiment are Xinyu Hou, Yong Wei Lim, Jessica Sharmin Rahman, Zi Jin and Professor Tom Gedeon.

**Experiment:**

In this experiment, you will watch a selection of video while listening to some music pieces from different genres. Your task is to answer some questions about those videos and music pieces. During the experiment, you will wear a headset and a wrist worn device with an aim to collect your electroencephalogram (EEG), functional imaging of brain activities, Heart Rate Variability (HRV), Blood Volume Pulse (BVP) and Galvanic Skin Response (GSR). Your eye gaze and pupil dilation will be tracked by an eye tracking device placed in front of you.

**Devices**

In this experiment, your physiological signals will be captured by three devices:

1. Emotiv EPOC+ device, which is a black round headset collecting raw EEG data.
2. Obelab Nirsit device, which is a white round headset collecting functional images of brain activities
3. Empatica E4 device, which is a black roundish watch with a button on it, aiming to collect HRV, BVP and GSR;
4. TheEyeTribe eye-tracking device, which is a black bar tracking eye gaze point and pupil dilation.

**Tasks**

In this experiment, you will watch a series of videos while listening to music from the computer screen and answer questions involving those videos and music pieces. After completion of tasks, all sensors will be removed. Only during the observation and identification of the experiment, the equipment will be recording your biometrics.

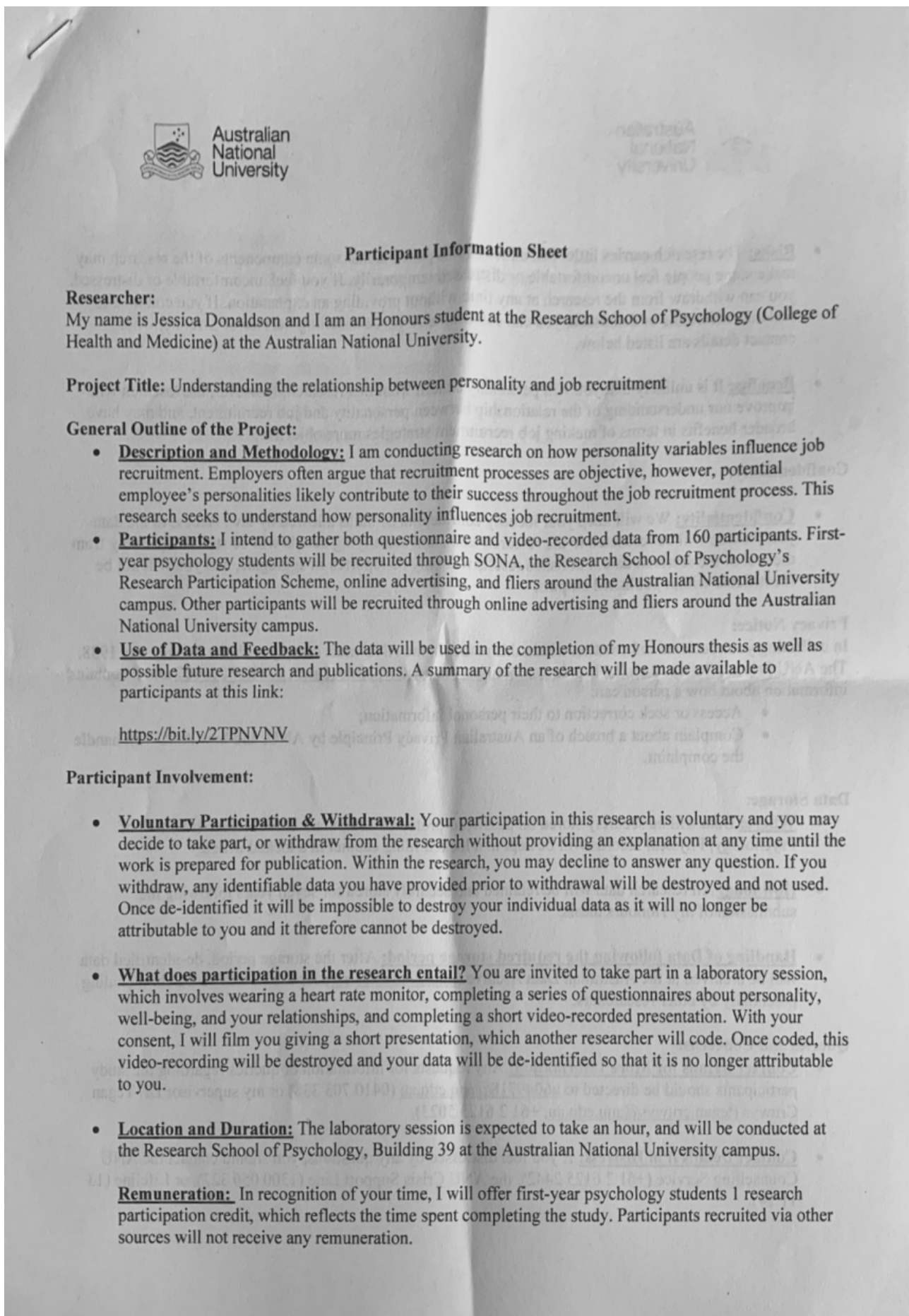
At the start of the experiment, you will:


- i) Fill demographic information.
- ii) Read instructions and press the **Next** button.
- iii) Watch the videos while listening to some music and answer the questions. Press **Next** to continue.
- iv) Repeat step v) until all the texts have been displayed.
- v) Fill in the post-experiment questionnaires and press **Submit**.
- vi) Read the Thank you page and wait patiently for the experimenter to collect the form, and give you any further instructions.

**Use of Data and Feedback**

The data collected will be used to draw conclusions about certain interaction techniques and the nature of the tasks. Any data collected, either raw or processed, may be used research and publications. The

Fig 2



 Australian National University

**Participant Information Sheet**

**Researcher:**  
My name is Jessica Donaldson and I am an Honours student at the Research School of Psychology (College of Health and Medicine) at the Australian National University.

**Project Title:** Understanding the relationship between personality and job recruitment

**General Outline of the Project:**

- **Description and Methodology:** I am conducting research on how personality variables influence job recruitment. Employers often argue that recruitment processes are objective, however, potential employee's personalities likely contribute to their success throughout the job recruitment process. This research seeks to understand how personality influences job recruitment.
- **Participants:** I intend to gather both questionnaire and video-recorded data from 160 participants. First-year psychology students will be recruited through SONA, the Research School of Psychology's Research Participation Scheme, online advertising, and fliers around the Australian National University campus. Other participants will be recruited through online advertising and fliers around the Australian National University campus.
- **Use of Data and Feedback:** The data will be used in the completion of my Honours thesis as well as possible future research and publications. A summary of the research will be made available to participants at this link:  
<https://bit.ly/2TPNVNV>

**Participant Involvement:**

- **Voluntary Participation & Withdrawal:** Your participation in this research is voluntary and you may decide to take part, or withdraw from the research without providing an explanation at any time until the work is prepared for publication. Within the research, you may decline to answer any question. If you withdraw, any identifiable data you have provided prior to withdrawal will be destroyed and not used. Once de-identified it will be impossible to destroy your individual data as it will no longer be attributable to you and it therefore cannot be destroyed.
- **What does participation in the research entail?** You are invited to take part in a laboratory session, which involves wearing a heart rate monitor, completing a series of questionnaires about personality, well-being, and your relationships, and completing a short video-recorded presentation. With your consent, I will film you giving a short presentation, which another researcher will code. Once coded, this video-recording will be destroyed and your data will be de-identified so that it is no longer attributable to you.
- **Location and Duration:** The laboratory session is expected to take an hour, and will be conducted at the Research School of Psychology, Building 39 at the Australian National University campus.

**Remuneration:** In recognition of your time, I will offer first-year psychology students 1 research participation credit, which reflects the time spent completing the study. Participants recruited via other sources will not receive any remuneration.

**Fig 3**



**Participant Debriefing Sheet:**

Understanding the relationship between personality and job recruitment

**What was the aim of this study?** The experiment you just participated in was interested in how social identities, or the groups with which we identify, are related to social anxiety. More specifically, we were interested in whether having multiple social identities primed (i.e., thinking about three important groups) would reduce anxiety symptoms more than having a single social identity primed (i.e., thinking about one important group) versus a control (i.e., thinking about the weather). Please note that you can still choose to withdraw your data now that you know the study's aims.

**How did the study work?** To investigate our research aims, it was necessary that we not tell you exactly what the study was about. Not all participants had the same experience during the research. Your social identity salience was manipulated, which means that participants were primed to think of zero, one, or three groups before completing the speech task.

**Our predictions:** We predict that participants in the multiple identity condition (i.e., thinking about three important groups) would report lower levels of anxiety than those in the other two conditions. This is because multiple social identities have previously been shown to be protective for our health.

**Confidentiality:** Your speech, which we recorded, will be coded by another researcher who is blind to your experimental condition and/or by automated coding software. Once this is complete, the recording will be destroyed and only the coded data will be used. All research data will be stored either in a locked filing cabinet in a locked office or on password-protected computers, and will only be accessed by the research team.

**Further contact information:** We thank you for your participation in this study. Please see your information sheet for the researcher's contact details and how you can obtain the study's results.

If you feel distressed by any questions, you should contact the ANU Counselling Service (+61 2 6125 2442), the ANU Crisis Support Line (1300 050 327), or Lifeline (13 11 14).

We advise you to retain a copy of this sheet for your own records and ask that you do not discuss the study's aims until the end of data collection in September.