

Laidlaw Scholars Programme Revised Research Proposal

Tentative Proposed Start Date and Location:

The research project is presumed to start June 14th, 2021. The experiment will be run online, therefore there will be no need to travel outside of Toronto. If the some of the social distancing guidelines are lifted, then we may be able to hold some of the trials in person, although that is not necessary.

Introduction:

In a globalized world in which people are becoming increasingly codependent, it often feels like the intergroup conflict is rising. The Black Lives Matter Movement revealed a deep lack of understanding about the difficulties that Black individuals face in our modern world. The Israeli Palestinian conflict continues, despite efforts to bring peace to that region. Furthermore, political groups are also becoming more polarized, causing a stark division amongst the individuals of the same country, community, or even household. This is no more apparent than the ever-evolving rift between republicans and democrats in the United States of America. The results of this polarization have been devastating. We have seen the outcome of this division as the United States' polarization has interfered with its response to the current global pandemic, COVID-19. Now more than ever empathy for others who differ from ourselves is critical. However, how can we cultivate greater empathy?

One way to promote empathy may be achieved through the introduction of awe, defined by feelings of wonder and amazement (Stellar et al, 2018). When one initially recounts the word *awe*, they may associate it with some sort of supernatural or spiritual connotation. While this is true, it may also take the form of daily experiences such as a taking a walk in nature, making a

visit to the museum, or meditating. Individuals who experience awe commonly feel minuscule in relation to a vast presence, a sense that what an individual has just experienced is much bigger than oneself (Collado and Manrique, 2020; Nelson-Coffey, 2019; Stellar et al, 2017). It is a collective emotion that, oftentimes, arises as an impactful yet fleeting experience that surpasses one's current perspective of the world (Bai et al, 2017; Keltner & Haidt, 2003; Piff et al, 2015). Research on awe has grown exponentially, demonstrating its benefits for promoting prosociality, curiosity, and humility (Anderson et al, 2020; Guan et al, 2019; Stellar et al, 2017). Previous literature has suggested that this occurs as a result of feeling that an individual's personal objectives are of lesser significance when experiencing a presence that is vaster than oneself, which in turn encourages these outcomes. These features of awe, its capacity to make one feel small and its positive self-relevant and interpersonal outcomes suggest it may also help to promote empathy.

Research Question:

Therefore, this research proposal aims to identify whether inducing the feeling of awe can cultivate affective empathy.

Methodology:

The research project will span over 8 weeks. The first week will be dedicated to creating the survey used for the experiment. The survey will include questions concerning the participant's demographical information and a questionnaire. We will also take this time to create the survey required for the study that will be used to test an individual's empathetic accuracy abilities. The next 5 weeks will be devoted to data collection, and finally, the last 2 weeks will be used to analyze the data collected. Afterwards, the remainder of the summer will

be reserved to write the report concerning the results that were obtained from the research conducted.

Seeing that I have been working in the lab as an RA for the past year, I am not required to do anymore training in order to conduct this project. The sole supervisor in this project is, Prof. Jennifer Stellar, wherein her role is outlined later in the proposal under the sub-heading, “Research Advisor”.

This study follows 2 phases, wherein phase 1 will be dedicated to collecting the stimuli (This is achieved by asking participants to film themselves while recalling an event/memory, and they are then told to watch the video while indicating what emotions they have felt at that point in time) and phase 2 will measure the perceiver’s empathetic accuracy.

Phase 1: Target Phase

First the participants (the targets) are asked to complete a short survey that will inquire about their demographic information. They will then be asked to complete the 10-item Berkeley Expressivity Questionnaire (BEQ; Gross, 2000). This questionnaire will be used to measure the participant’s sense of their ability to outwardly express their emotional experience to others. All survey/questionnaires will be provided to the participants via Qualtrics link.

The participants will be asked, over zoom, to record a 1-2 minutes video of each of the 3 past memories of life events- the first being a neutral, the second a positive, and the last a negative memory. After each video that participants must rate how positive or negative they felt as they recalled the story, on a 9-point Likert scale. Then they must complete a modified version

of the *modified Differential Emotions Scale (mDES)*, wherein they indicate to what extent they felt each of the emotions provided on a 4 point likert scale.

Once they have completed the task above, for the neutral video, then the same participant will be asked to film another video wherein they recall a positive memory, then a negative memory, following the same protocol as indicated above. Once they have completed the session, they will be asked for consent to use their videos in Phase 2 of the study.

The full protocol for Phase 1 is provided in Abstract 1.

Phase 2: Perceiver Phase

500 participants recruited from a community-based platform, such as *Amazon Mechanical Turk* or *Prolific*, to take part in an online study. The demographic we will be aiming this study towards are individuals who are 18 years or older, likely from North America.

The participants will be asked to watch the stimuli collected from phase 1 and indicate what emotions they infer the target had felt while recalling the memory in the video (under the 2 conditions of the study). The participants (perceivers) will first complete the same demographic questionnaire that the participants (targets) in phase 1.

The perceivers will be randomly split into two groups. The first group will watch awe inducing videos, which have been piloted in the lab and have been validated to express the target emotion. The second group of participants will watch neutral videos (such as instructional videos) before undergoing the empathetic accuracy test.

Next the participants will complete an empathic accuracy task which aims to measuring an individual's ability to accurately recognize the emotions of others. They will be asked to watch

the stimuli recorded from phase 1 and indicate what the target was feeling at that point in time. The perceivers will answer the same questions as the targets from phase 1, as they will indicate how positive/negative they thought the target felt on a 9-point Likert scale, then they will complete the mDES scale, for each video. We will be measuring their accuracy rates, and the threshold in which they begin to predict the emotion correctly.

When the last set of questions are completed, the participants will be asked to sign the consent form to ensure we are able to use their answers, then they will be able to submit their work.

Research Advisor:

Throughout this project, my advisor, Dr. Jennifer Stellar, will be working closely with me to oversee part of the design, data collection and analysis. Dr. Stellar will aid in ensuring that I am on track with my work, as we would be meet biweekly to discuss my progress. My research advisor will also advise on ethics board approval, seeing that we are working with human participants. Furthermore, seeing that I have been working in the lab for the past year, there is no training that I must attend to before starting my research.

Outcomes:

I predict that participants who watched the awe-inducing video, compared to the neutral video, will more accurately identify the emotions of the individuals in the test- thus indicating awe may potentially enable individuals to increase empathy towards those who hold different perspectives and values to one another.

This topic is very relevant to the events that are taking place all over the world today. Disagreements and differences in values or beliefs are a common phenomenon across the globe, but they need not reduce our empathy and cause individuals to harbour ill sentiments towards one another. This lack of empathy is detrimental to both our advancements as a society and our mental and emotional wellbeing. Should we find that awe can in fact promote empathy, this may offer a pathway to greater understanding of those who are different from ourselves. Therefore, I chose this research question, alongside my supervisor, because we believe studying empathy in the laboratory may translate to large-scale impacts when facing intergroup conflict on a global scale.

Throughout my life I have never shied away from leadership positions, whether it be through group projects at school, executive positions in clubs or societies, or even spearheading charity events in my community. Although, I have never taken part in a program like the *Laidlaw Scholars Programme*, where-in I am presented with the opportunity to help the global community and apply the knowledge I learn to the real world on such a grand scale. I believe that the *Laidlaw Scholars Programme* will help me improve on the qualities I mentioned earlier, those specifically being communication and problem solving. I hope that by heading my own research project with the mentorship of my supervisor, I will learn how to deal with the problems that may arise during the data collection and or analyzing phases. I believe that it is one thing to learn about how to conduct experiments in class but, it's a completely new experience being able to legitimately: plan, develop, execute and analyze your own real-world research. Moreover, I believe I will enhance my communication and problem-solving skills, through the training sessions and the "leadership-in-action" experiences provided, as I take part in these events alongside my peers.

I believe that this will help me in my career aspirations as well, seeing that I wish to pursue a career in academia by attending an MD/PhD program following my undergraduate degree. Therefore, I believe, that through this program I will be able to learn more about how to lead a research team and the responsibilities that a researcher must shoulder. With the help of my supervisor, I trust that I will be better equipped for when I conduct my own research in graduate-school. I have already learned a great deal from Professor Stellar, simply by planning this proposal and working in her lab throughout the past few months. And so, I am extremely excited to take part in this program and have the opportunity to direct my own research this summer!

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Abstract

Protocol: Target Phase

Phase 1: Collection of Stimuli

1. You will schedule a zoom meeting for each target
2. Send them the Qualtrics link in chat box
3. Give them a random ID number (e.g., 1)
4. Tell them to turn off their camera and fill out the survey
 - a. Targets complete a short demographic survey, the Berkeley Expressivity Questionnaire (BEQ; Gross, 2000)
5. Remind them that they will be recorded while they discuss 3 events
 - a. Ask for consent to use videos we will record in Phase 2 of the study
 - i. If they say yes, tell them they can change their mind later, you'll ask them again.
6. Start recording session and ask them to record their screen as a back-up
7. A little instructions for the next part.
 - a. Tell them you'll leave your camera on, but mute yourself and you'll be listening to them so that they will be more natural in their video
 - b. As for time, you'll keep time and let them know when they should wrap up. Aim for 1 minute or so, but you will let them know if they need to finish up.
 - c. Don't stop and ask to restart, it's totally ok if you make a mistake or rephrase that will make you more natural
8. Recall first (neutral) event
 - a. I'm going to give you a few minutes to think about what you want to say. Why don't you let me know when you're ready, take all the time you need.
 - b. Recall what you did yesterday
 - i. Prompt: "Please recall what you did yesterday, remember to talk for about a minute."
9. Have them turn off camera and go back to Qualtrics study and fill it out until they hit a stop sign
10. Recalling a major life event that was positive (for 1 or 2 minutes-we may use 4 videos)
 - a. Prompt: "Please take a few moments to recall a major life event that was positive that you could talk about for a minute."
 - b. I'm going to give you a few minutes to think about what you want to say. Why don't you let me know when you're ready, take all the time you need.
 - c. Fill out emotions questions on qualtrics.

"Please indicate how much you felt the following while you were speaking in the video, not what you felt during the event, but what you felt while you were speaking about it."

 1. Positive
 2. Negative
 3. Amused
 4. Angry
 5. Ashamed

6. Awe
7. Contemptuous
8. Disgust
9. Embarrassed
10. Grateful
11. Guilty
12. Hate
13. Hopeful
14. Inspired
15. Interested
16. Joyful
17. Love
18. Proud
19. Sad
20. Fear

11. Same protocol for a negative event

- a. “Please take a few moments to recall a major life event that was negative that you could talk about for a minute.”
- b. All steps are the same except the prompt.