### ACADEMIC PROJECT SUBMISSION DETAILS:

<table>
<thead>
<tr>
<th>Supervisor/s:</th>
<th>Andrew Evelo</th>
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<tbody>
<tr>
<td>Project Title:</td>
<td>Homegrown terrorism: The effect of social group threat on violence and aggression</td>
</tr>
<tr>
<td>Field:</td>
<td>Psychology / Social Psychology / Psychology &amp; Law</td>
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<tr>
<td>Division/School:</td>
<td>ALPSS - Division of Arts, Law, Psychology and Social Sciences</td>
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### EXPECTED OUTCOMES:

1. Scientific poster
2. Student gains transferable skills, many essential for advanced study: finding and critically reviewing scientific papers, data coding, data entry, statistical data analysis, meta-analysis, presentation/communication of scientific results, public speaking
3. Strengthening new relationship with external stakeholder (DIA), as an end-user that can realise research impact of findings from this larger project
4. Groundwork for at least one high-impact publication
5. Groundwork for external funding applications (e.g. Marsden Fast-Start)
6. Supports new and emerging researcher (Evelo) to establish larger programme of research, building research capacity

### STUDENT TASKS:

1. Conducting literature searches
2. Helping to develop data-coding materials
3. Extracting and quantifying data from scientific articles
4. Entering data and managing a database
5. Helping to analyse and interpret data
6. Critically discussing scientific literature and presenting results in meetings

### REQUIRED SKILLS:

1. Hardworking, dedicated, focused, and detail-orientated
2. Willingness and enthusiasm to learn new research skills
3. Familiarity with Google Scholar or PsychINFO or other article repositories
4. Familiarity with computers and data software (especially Excel, SPSS, or R)
5. Understanding of basic statistics (especially descriptive statistics)
6. Background in Psychology or related social science
7. Enthusiasm for the scientific method
PROJECT ABSTRACT:

In the last 20 years, there has been a rise in “homegrown” terrorist attacks by individuals acting alone, as opposed to those by organised terrorist groups such as the Ku Klux Klan or Al Qaeda. Some examples of these homegrown terrorists include Dylan Roof, who killed nine people at a church in South Carolina, and the Christchurch shooter, who killed 51 people at mosque in New Zealand. Examination of these and similar incidents suggests there are common precursors to individuals becoming radicalised, that is, becoming more willing to take violent action linked to extreme social or religious goals’ such as when adolescent males suffer a major life- or identity-crisis, detach from old social groups and attach to new, online social groups.

However, what we cannot tell from examining these incidents is what the psychological mechanisms are that lead an individual from identification with a fringe, online social group to violent behaviour towards other groups. This knowledge is necessary for preventing radicalisation and future terrorism incidents. Looking to social psychological theory, one possible mechanism is that potential homegrown terrorists come to perceive the presence of other “out-groups” as a symbolic threat to their new “in-group”, due to the groups holding conflicting values and beliefs. What is more, these individuals may see this symbolic threat as equivalent to an existential threat, which must be met with violence in order for their in-group to survive. There is a growing body of evidence that symbolic threats can lead to strong negative attitudes towards an out-group. However, less clear is whether symbolic threats can also lead to violent behaviour towards an out-group.

The main question of this research, therefore, is: to what extent does threat from an out-group lead to increased aggression towards them? To answer this question, we will conduct a meta-analysis. A meta-analysis is a quantitative analysis of extant research on a topic. It involves a systematic search of the literature, recording the findings of others, and then averaging those findings together in a meaningful way. A meta-analysis is an important scientific procedure that allows scientists to compare differing theories, to make sense of contradictory results, and estimate the importance of variables.

As a Summer Scholar, your duties will be to help perform many of the key meta-analytic tasks. This research is being led by Andrew Evelo, a postdoctoral Research Fellow who specialises in the overlap between social psychology and psychology and law. He has recently begun a collaboration with the New Zealand Government’s Department of Internal Affairs, with the overarching goal of reducing violent extremism in New Zealand. The results of this summer project will serve as foundation for future experimental work towards this goal.
# Summer Research 2020/21

## Project Abstract

### ACADEMIC PROJECT SUBMISSION DETAILS:

<table>
<thead>
<tr>
<th>Supervisor/s:</th>
<th>Maryanne Garry</th>
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<tr>
<td>Project Title:</td>
<td>The Little Engine that Probably Shouldn't: what causes the illusion of expertise?</td>
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<tr>
<td>Field:</td>
<td>Psychology / Cognitive psychology</td>
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<tr>
<td>Division/School:</td>
<td>ALPSS - Division of Arts, Law, Psychology and Social Sciences School of Psychology</td>
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### EXPECTED OUTCOMES:

1. Research Poster
2. Student learns a bucket of important, transferable skills
3. Publications
4. Groundwork for external funding
5. New collaborative relationships

### STUDENT TASKS:

1. Working seriously, consistently, and enthusiastically, on an international team
2. Helping develop materials
3. Helping to collect data
4. Helping to analyse and interpret data
5. Presenting findings in project meetings
6. Conducting literature searches
7. Reading scientific literature critically and discussing it at project meetings

### REQUIRED SKILLS:

1. Dedicated, focused, careful, responsible
2. Skill on a Macintosh desirable
3. Decent stats background
4. Not afraid of numbers nor learning new analytical techniques
5. Comfortable with technology and learning new technology
6. Enthusiastic about breaking out of your comfort zone
PROJECT ABSTRACT:

Illusions of expertise are all around us. Some of these are amusing; we’ve all laughed at social media posts like “I watched a YouTube video and then cut my partner’s hair during lockdown. It did not go well.” Others can be outright dangerous. It is therefore important to address the causes and consequences on illusions of expertise.

In our lab, we have discovered a reliable illusion of expertise, caused not by narcissism, or individual quirks’ but a routine mental processes colliding with everyday activities such as briefly observing expertise, which rapidly creates an illusion of expertise that could happen to anybody.

For instance, when we show English speakers a 3-minute video in which a Danish teacher shows her new colleague around the school, those who see the version with English subtitles are more confident than those who don’t that they are becoming fluent in Danish that they could follow the lead story on the Danish news, understand Danish directions to another building, and make more friends who speak only Danish despite no change in their Danish vocabulary. The subtitles provide an extra dose of information that seems helpful, but isn’t. As a result, people rapidly develop the belief they understand Danish. This belief is, in a word, ridiculous.

Here's what we think is happening: when we ask our participants if they could understand Danish television, directions, or make friends who don’t speak English, they conjure up related thoughts and images and run a mental simulation of these scenarios. That’s what people do, after all, when they’re asked about things they might do in the future. So, our participants “hear” the news spoken by the Danish TV broadcasters, and “see” themselves speaking Danish with friends. It feels plausible, even familiar. What’s more, when people think about how to perform specific actions, there is increased activity in the premotor brain regions involved in preparing for action. These (and related) findings have led scientists to conclude that mental simulations’ that is, imagined future experiences’ let people pre-experience events, stepping into the future and returning with information they use to guide their cognitive and behavioural “next steps”.

But the twist is that people don’t run all possible mental simulations. Instead, they run biased ones’s simulations that depict them, and our future, in a positive light. Therefore, in this project, we will address the prediction that the illusion of expertise will be larger when we ask people to mentally simulate doing the same skill for “good” (say, speaking Danish to share a funny story) than for “bad” (speaking Danish to share a nasty rumour).

You’ll join a international team working to uncover the mechanisms and consequences of this illusion of expertise.
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<tr>
<th>Supervisor/s:</th>
<th>Maryanne Garry and Mevagh Sanson</th>
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<tr>
<td>Project Title:</td>
<td>The Science of Story: Can Hollywood Help Scientists Communicate?</td>
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<td>Field:</td>
<td>Psychology / Cognitive psychology</td>
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**EXPECTED OUTCOMES:**

1. Research Poster  
2. Student learns a bucket of important, transferable skills  
3. Publications  
4. Groundwork for external funding  
5. New collaborative relationships with Dr. Randy Olson (USC film school) and Professor Morton Gernsbacher (University of Wisconsin)

**STUDENT TASKS:**

1. Working seriously, consistently, and enthusiastically, on an international team  
2. Helping develop materials  
3. Helping to collect data  
4. Helping to analyse and interpret data  
5. Presenting findings in project meetings  
6. Conducting literature searches  
7. Reading scientific literature critically and discussing it at project meetings

**REQUIRED SKILLS:**

1. Dedicated, focused, careful, responsible  
2. Skill on a Macintosh desirable  
3. Decent stats background  
4. Enthusiasm for good writing, as a reader and maybe even as a writer  
5. Good background in cognitive psychology  
6. Not afraid of numbers nor learning new analytical techniques  
7. Comfortable with technology and learning new technology  
8. Enthusiastic about breaking out of your comfort zone
PROJECT ABSTRACT:

When scientific findings are communicated effectively, people, other scientists, policy-makers, entrepreneurs, and laypeople alike can better understand and make use of that knowledge, to obvious benefit. All too often, however, important scientific knowledge is communicated ineffectively, leaving people apathetic or overwhelmed. How can scientists improve the communication of their findings?

One suggestion, championed by biologist-turned-documentarian, Randy Olson, is to make use of specific storytelling techniques borrowed from Hollywood. He travels the world teaching scientists to use a “Set-up/Plot twist/Resolution” structure when they communicate their findings. Despite many anecdotal success stories from scientists who have adopted this structure, there have “ironically” been no scientific examinations of how well and why using this structure improves science communication.

This gap in our knowledge is a problem for at least three reasons: First, if we can’t quantify how beneficial this structure is, we can’t tell if scientists’ efforts to conform to it are warranted. Second, to the extent the structure is beneficial, if we don’t know why that is, what the structure’s key ingredients are then we are limited in how well we can reliably produce its benefits. And third, filling this gap would have important implications for psychological theory. Looking to the cognitive and psycholinguistic literatures reveals several lines of research that lead to varying predictions about how much and why this structure might matter, depending on how “benefit” is defined, but no data that speak directly to the issue.

Therefore, in our lab we have begun a program of research designed to remedy this gap and answer the overarching question of how scientists can improve the communication of their findings. We have started by addressing the issue at a “macro” level. We are gathering a large sample of articles published in a wide variety of scientific journals, extracting linguistic information from them to calculate the degree to which each article contains elements of this “set-up and plot twist” structure, and recording how many times each article has been cited. We predict that the more the articles conform to this structure, the more citations they will have received. This finding would suggest that communicating findings using this structure leads those findings to have greater impact.

Over summer, you will join an international team working to address the issue at a more “micro” level. We will conduct experiments to examine the importance of the “plot twist” element. We predict this element has opposing effects in the short term versus the long term. More specifically, when a “story” about scientific findings changes direction, people may have to initially work harder to keep following its thread. But this increase in mental work may pay off later, in the form of people having better memory for the “take home message” from the findings and being more likely to take action based on those findings, the ultimate hallmark of success in science communication.
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<th>Supervisor/s:</th>
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<tr>
<td><strong>Project Title:</strong></td>
<td>Ngā Rākau Taketake: Whānau narratives to promote whakamārama</td>
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<tr>
<td><strong>Field:</strong></td>
<td>Psychology/Māori culture</td>
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<tr>
<td><strong>Division/School:</strong></td>
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### EXPECTED OUTCOMES:

1. Contribution (through research) to building relationships among multiple and diverse groups that will go on to co-design activities to protect the ngahere, taonga species and te taiao
2. Refinement of a broad research question that will support development of strategies to unlock the potential for mana whenua, community and researchers
3. Knowledge building and information dissemination across different forums (namely a research poster)

### STUDENT TASKS:

1. Recruit and conduct interviews on their interactions and experiences of te taiao
2. Write interview summaries for each whānau and manage the feedback process to whānau
3. Undertake analysis of the interview summaries
4. Prepare a pūrākau narrative of the findings
5. Prepare a technical report describing their research process
6. Summarise research into a poster for dissemination

### REQUIRED SKILLS:

1. Familiarisation with ethical review processes
2. Experience of recruiting participants and conducting semi-structured interviews (individual, focus group and/or intergenerational)
3. Interview summary writing (presenting pertinent information from interviews in a succinct and meaningful manner for different audiences)
4. Pūrākau methodology (reviewing summaries, discussing themes and collaborating to verify narratives)
5. Analysis through coding and extracting examples for key information to write meaningful research
6. Dissemination of research (learning key skills for presentation of information to different audiences)
Māori cultural beliefs, values and practices are intimately connected to te taiao “the natural environment” and are grounded in an inherent understanding of the inter-relativity between humans, the natural environment, the celestial spheres, and the entire universe. While te taiao is of unique cultural significance, contemporary Māori live in diverse realities, so beliefs, values and behaviour cannot be viewed through a singular lens, and instead are likely to diverge according to whānau, hapū, iwi, socio-economic factors, residential status, and strength of cultural identity, among other factors.

The two proposed summer student research projects will be grounded in Kaupapa Māori research principles and methodologies, and aim to capture examples of the diverse realities and understandings Māori give to te taiao, ngahere, and taonga species. Using a pūrākau methodology, the summer students will be encouraged to take into account cultural notions that enables us to express our stories to convey our messages, embody our experiences and keeps our cultural notions intact (Lee, Hoskins & Doherty, 2005, p8).

Successful applicants do not have to be located in Hamilton over the period of the internship. However, the summer researcher(s) must be committed to regular meetings with their supervisors and to the wider team (via telephone and/or video conference) to ensure continuous support is present and satisfactory progress is made.

These summer projects were made possible with the support of “Mobilising for Action” research investment within the Biological Heritage Challenge and as such will contribute to a larger project that involves collaborations of Māori academics and researchers at different universities (Auckland, Waikato and Massey).