

# KiwiCAM VII

NOVEMBER 10 – 11 | 2018  
SCHOOL OF PSYCHOLOGY  
UNIVERSITY OF WAIKATO  
HAMILTON



# FRIDAY | NOVEMBER 9

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5:00 PM

## STUDENT EARLY BIRD SOCIAL EVENT

Please join us upon your arrival in Hamilton at Cook Street Social for a casual get-together. Cook Street Social is located at 7 Cook Street, Hamilton East, which is a short walk from most accommodation.

# SATURDAY | NOVEMBER 10

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8:30 AM

## REGISTRATION AND BREAKFAST

9:00 AM

## WELCOME

9:15 AM

## KEYNOTE SPEAKER

Signs, Lines, & Wines

Professor Samuel G. Charlton

10:00 AM

## MORNING TEA

10:30 AM

## SESSION 1 (CHAIR: KATIE KNAPP)

The colour of words: How dichromats construct a colour space

Armin Saysani

Keeping up appearances: The effect of variability in appearance on face learning

Morgan Reedy

"Walk the plank!" Inducing fear through virtual reality

Kealagh Robinson

The Dome of the Sky and the Moon Illusion

Daniel Lett

Isolating the time of choice challenges the postdictive paradigm

Konstantina Vasileva

12:00 PM

## LUNCH

1:00 PM

## SESSION 2 (CHAIR: KEALAGH ROBINSON)

"Eye remember": False memories in therapy

Olivia Siewwright

Do infants use common ground to resolve ambiguous requests in third-party communication?

Mary Beth Neff

Gaming & Working Together: Can video games increase real world cooperation?

Shaun Garea

Does similarity to a communicative partner influence how children perspective-take?

Laura Anderson

**2:15 PM**

**SESSION 3 (CHAIR: RYAN BURNELL)**

Dissociation is more often a positive experience than a negative one

Monique van Blerk

Do 15-Month-Olds Understand the Beliefs of Others?

Michaela Dresel

The helpful and harmful functions of memories people have realized

Jade Wright

Reward encourages a sustained proactive control strategy to ignore emotional distractors

Anne Rijnink

How do people make judgements about the functions of their memories?

Samuel Bell-Tyrer

**3:45 PM**

**POSTER SESSION (SEE PAGE 4 FOR THE LIST OF PRESENTERS)**

**5:30 PM**

**STUDENT SOCIAL EVENT & DINNER**

Details to be confirmed.

## **SUNDAY | NOVEMBER 11**

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**8:45 AM**

**BREAKFAST**

**9:15 AM**

**KEYNOTE SPEAKER**

Mechanism of Conscious and Unconscious Perception

Dr David Carmel

**10:00 AM**

**SESSION 4 (CHAIR: BRIDGET BURDETT)**

The Effect of Aniracetam on the Performance of Pigeons in the Delayed Matching-to-Sample Task.

Hannah Phillips

Understanding the Lived Experience of Significant Weight loss in Women

Kimberley Norman

Cognitive Dissonance-like Behaviour in Dogs: Justification-of-Effort or Contrast Effects?

Patrick Neilands

**11:00 AM**

**MORNING TEA**

**11:15 AM**

**SESSION 5 (CHAIR: PATRICK NEILANDS)**

People's memories of recent traumatic events are just as coherent as their memories of recent positive events

Kayla Jordan

**Social Smile Stimuli Scoping Review Study**

Melanie Thacker

**Is it the person or the situation? Using information available in police reports to predict repeat family harm episodes**

Apriel Jolliffe Simpson

**Juror perceptions of child witness credibility interviews with talkative and untalkative children**

Helen Pierce

**12:30 PM**

**LUNCH**

**1:30 PM**

**WORKSHOP**

**2:30 PM**

**AFTERNOON TEA**

**2:45 PM**

**SESSION 6 (CHAIR: TBC)**

The space between us: Exploring defensive responses and state anxiety

Mark Colville

**Multiple measures show a negative relationship between schizotypy and creativity: exploring the mediating roles of associative processing and executive control**

Sophie Hedley

**Examining the role of cue switch costs in the relationship between working memory capacity and task switching**

Katie Knapp

**Testing the effects of mindfulness on the cognitive control of emotional distraction**

*Justin Murphy*

**4:00 PM**

**KIWICAM QUIZ**

**4:30 PM**

**PRIZE GIVING AND FAREWELL**

**5:15 PM**

**FAREWELL GET-TOGETHER (GOURMET IN THE GARDENS)**

# **POSTERS**

**Social anxiety apps: What does the evidence say**

Mohsen Alyami

**Children's ability to infer shared cultural knowledge**

Caitlin Heesterman

**Prototypes of gang members in New Zealand and the United States**

Callum Lawrie

**Do faces and bodies reach awareness faster upright than upside-down?**

Jaiden Cancian & Max McDonald

**Age differences in processing emotional information: An investigation into the underpinning mechanisms**

Neda Nasrollahi

**How does infant recognition of emotional congruency influence their physiological response?**

Ella Macaskill

**False memory susceptibility in adults with symptoms of Borderline Personality Disorder**

Fatemah Sajjadi

**Assessing for compensation in ToM through the use of time compression: A pilot proof of concept study**

Liam Allen

**Intergenerational transmission of narrative identity among three generations of women and men across cultures**

Tugce Bakir-Demir

# **KEYNOTE SPEAKERS**

## **SIGNS, LINES, & WINES**

**SAMUEL G. CHARLTON, PHD**

**UNIVERSITY OF WAIKATO**

In this presentation I will describe studies from our laboratory that demonstrate how findings from cognitive psychology research can be translated into tangible changes to our everyday lives, in this case the trips we take by automobile. For example, our research into attention and speed choice has identified which parts of the road environment drivers notice, and the parts they don't. We can use this information to design hazard warning signs that work without drivers consciously noticing them, and provide road markings that make it easier to drive at the correct speed. Our research on alcohol and driving has shown that the amount of alcohol consumed is only one aspect of how alcohol affects our performance, and that drivers' self-awareness of their own state of intoxication and performance is extremely poor.

## **MECHANISMS OF CONSCIOUS AND UNCONSCIOUS PERCEPTION**

**DAVID CARMEL, PHD**

**VICTORIA UNIVERSITY OF WELLINGTON**

Understanding consciousness is among the greatest challenges facing science. A promising approach to gaining insight into how our subjective experience of the world arises is to discern the mechanisms that generate perceptual awareness. What determines the contents of our consciousness? And can meaningful perceptual processing occur for sensory stimuli that do not reach awareness? In this talk I will describe recent work that used interocular rivalry and suppression to address these related issues. The first part of the talk will focus on psychophysiological and behavioural studies demonstrating what the visual system can do without awareness (e.g., flexible affective processing) and what it cannot (complex linguistic processing). The second part will go into an ongoing series of transcranial magnetic stimulation (TMS) studies establishing the importance and specific roles of non-visual, high-level regions of parietal cortex in selecting sensory stimuli for conscious representation.

# **PREVIOUS KIWICAM CONFERENCES**

<b><u>Chapter</u></b>	<b><u>Year</u></b>	<b><u>Host</u></b>	<b><u>Contacts</u></b>
<b>VII</b>	2018	University of Waikato	Maryanne Garry
<b>VI</b>	2017	Massey University	Michael Philipp & Lauren Hewitt
<b>V</b>	2016	University of Otago	Rachel Zajac
<b>IV</b>	2015	Victoria University of Wellington	Maryanne Garry & Gina Grimshaw
<b>III</b>	2014	University of Auckland	Donna Rose Addis
<b>II</b>	2013	University of Otago	Rachel Zajac
<b>I</b>	2012	Victoria University of Wellington	Maryanne Garry & Gina Grimshaw

# ABSTRACTS

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## TALKS

### **The colour of words: How dichromats construct a colour space**

Armin Saysani, University of Auckland, PhD

People with strong protanopia and deuteranopia – colloquially termed “red-green colour blindness” – are dichromatic and are unable to visually discriminate between colours corresponding to the long-wavelength end of the visible light spectrum. We used nonmetric multidimensional scaling to create colour spaces for a sample of protanopes and deuteranopes, and compared them to spaces derived from trichromats with normal colour vision. Colour spaces based on dissimilarity judgements between actual colours (hue-only condition) revealed the anticipated collapse of a dimension distinguishing long-wavelength colours. Judgements based on basic or descriptive colour terms (term-only conditions) produced two-dimensional configurations resembling those of trichromats. When hues and terms were presented together (hue + term condition), the dichromatic colour space was intermediate between the spaces derived from the hue-only and term-only conditions. The findings reveal that language can effectively substitute for an impoverished colour experience, and indicate a surprising element of “visual capture” in dichromatic observers.

### **Keeping up appearances: The effect of variability in appearance on face learning**

Morgan Reedy, Victoria University of Wellington, Honours

Learning new faces is difficult. Exposure to highly variable images of a person facilitates the learning of their stable facial features (e.g., eyes, nose). It may be that variations help develop an averaged representation to rely on across different viewing circumstances. Here, we tested the role of variability in appearance (e.g., hair, makeup, beard), and whether it encourages processing of stable inner features. After learning 6 highly variable and 6 less variable identities, participants were tested with a recognition and a matching task where only inner features were visible. High appearance variability helped encoding of inner features and improved recognition (but not matching). We also found that individuals differ in the way they exploit variability: good recognisers benefit from additional variability more than poor recognisers. Those that benefit from variability on one task also tend to do so on the other.

### **“Walk the plank!” Inducing fear through virtual reality**

Kealagh Robinson, Victoria University of Wellington, PhD

Emotions profoundly affect our cognitive, behavioural, and social lives. However, the scientific study of emotion is currently constrained by emotion induction methods which lack immersive qualities and ecological validity. Virtual reality may offer a solution. The current study explored how people subjectively and physiologically respond to a fearful stimulus presented within virtual reality. Wearing a virtual reality HTC Vive head-mounted display, 21 participants walked along a city street, before catching an elevator up a high-rise building and walking along a plank ostensibly suspended at great height. Relative to the street, participants reported greater fear and anxiety, as well as elevated heart rate and electrodermal response during the plank walk. The effect of the virtual plank walk on both subjective and physiological indices of fear was large, suggesting that virtual reality may be an effective tool for inducing intense emotional experiences.

### **The Dome of the Sky and the Moon Illusion**

Daniel Lett, University of Waikato, Honours

The moon appears larger on the horizon than at zenith despite its constant visual angle from the earth. There is disagreement as to why this is. One theory is that the moon illusion is a result of our perception of the sky as a flattened dome. We replicated this theory in virtual reality, controlling for the other popular theories, by measuring subjects perceived size change of the moon at three angles of elevation, and measuring subjects perceive angle change of the sky at three angles of elevation. We found that the moon illusion was successfully replicated in virtual reality, suggesting that the controlled for theories do not have a strong effect of the illusion. We also found that participants in virtual reality perceived the sky as a flattened dome, supporting the theory of flattened sky dome as the cause for the moon illusion.

## **Isolating the time of choice challenges the postdictive paradigm**

Konstantina Vasileva, Victoria University of Wellington, PhD

Research on conscious choice repeatedly challenges the phenomenology of agency. Recently, Bear & Bloom (Psychological Science, 2015) demonstrated that when asked to choose between two options, participants were biased by a low-level perceptual cue appearing shortly after they should have completed their choice. The “postdictive effect” occurred when the cue circle appeared at a sufficiently short delay when unconscious visual processing and the subjective experience of conscious choice overlap. However, the original method failed to capture precisely the timing of choice as the cue circle appeared alongside the choice options within the same screen frame. After successfully replicating the original experiment, I attempted to isolate the timing of choice by separating the choice options from the cued stimulus into two consecutive frames. Contrary to Bear & Bloom, I found the cued item was more likely to be chosen in greater stimulus-cue onset differences, which directly challenges the postdictive model.

## **"Eye remember": False memories in therapy**

Olivia Sievwright, Massey University, Masters

Eye movement desensitisation and reprocessing therapy (EMDR) is a frontline treatment for posttraumatic stress disorder. While EMDR is well-evidenced to reduce the vividness and emotionality of traumatic memories, recent research by Houben, Otgaar, Roelofs, and Merkelbach (2018) suggests a potential drawback of EMDR may be that this reduction in memory vividness increases one’s susceptibility to the misinformation effect. Moreover, it is not clear how eye movements used in EMDR have an effect on memory, and whether eye movements are unique in their benefits. The aim of my study was to replicate the work of Houben et al. to test the robustness of this apparent effect of eye movements used in EMDR on false memories. In addition, I tested whether an alternative dual-task used in therapy might produce similar effects on memory as eye movements.

## **Do infants use common ground to resolve ambiguous requests in third-party communication?**

Mary Beth Neff, Victoria University of Wellington, Honours

Communication is an important means of transmitting information but it can be ambiguous. Infants can resolve ambiguous communication using common ground (i.e., shared knowledge) but how they establish common ground is relatively unexplored. Previous research suggests that engaging in social interactions may be required for infants to identify the common ground they have with others, but whether they can represent common ground in an interaction they are not a part of is less clear. We investigated whether 19-month-olds use common ground to resolve ambiguous communication between third parties and whether exposure to different social interactions affects their understanding of common ground. Infants watched one actor (Actor<sub>1</sub>) ask another actor (Actor<sub>2</sub>) for the ball – Actor<sub>1</sub> could only see one ball while Actor<sub>2</sub> and the infant could see two. Prior to Actor<sub>1</sub>’s request, infants either watched the actors jointly survey the scene or survey the scene independently. Preliminary results will be discussed.

## **Gaming & Working Together: Can video games increase real world cooperation?**

Shaun Garea, Massey University, Masters

There are approximately 2.6 billion people who play video games worldwide (ESA, 2018) but how much games affect behaviours remains unclear. The General Learning Model (GLM) posits that playing a prosocial video game will increase subsequent prosocial behaviours outside of the game (Buckley & Anderson, 2006). This study explored this proposition in relation to cooperation. Sixty adult participants played the puzzle game Portal<sub>2</sub> in one of two conditions; single player or cooperative. Participants were then given a behavioural measure of cooperation (the ‘give-some coin dilemma’) and a self-report measure (the Everyday Cooperation Scale; ECS; De Hooge, Zeelenberg and Breugelmans, 2007). It was predicted that participants who played Portal<sub>2</sub> cooperatively would give more coins in the give-some coin game and score higher on the ECS than participants who played alone. Data will be analysed according to a pre-registered protocol and discussed in relation to their implications for the GLM.

## **Does similarity to a communicative partner influence how children perspective-take?**

Laura Anderson, Victoria University of Wellington, PhD

Recent research has demonstrated that young children are able to view things from another person’s perspective, and that many variables can influence how perspective-taking functions. Closeness or similarity to a communicative partner has been shown to both help and hinder communication and perspective-taking in adult samples. Removing the social experience of adults by studying children may provide more insight as to how this difference develops. The current study used a communication task in which 4- and 6-year-old children received an ambiguous instruction from a similar and dissimilar partner and needed to perspective-take to interpret the communication. Children were also asked which partner they preferred. There were no differences in perspective-taking when playing with a similar or dissimilar partner, however children’s perspective-taking was significantly better when playing with the partner they least preferred. This finding may indicate a difference between similarity and preference, and subsequent effects on perspective-taking.

## **Dissociation is more often a positive experience than a negative one**

Monique van Blerk, University of Waikato, Undergraduate

Have you ever driven into your garage and realized you had “zoned out” for much of the ride? Or become so engrossed in a book or movie that you did not hear another person talking to you? These experiences are common, harmless—or even pleasant—examples of dissociation. Yet there is a widespread assumption that dissociation is not simply negative, but is the consequence of negative experiences. How frequently, then, do people have pleasant and unpleasant dissociative experiences? We asked people a number of questions about their experiences of different types of dissociation, and to rate how often these experiences were positive, negative, or neutral. People reported their dissociative experiences were more frequently positive and neutral than negative. Therefore, not only can dissociation be a positive experience, but it is more often experienced as positive than it is negative. These findings turn the widespread assumption about dissociation on its head.

## **Do 15-Month-Olds Understand the Beliefs of Others?**

Michaela Dresel, Victoria University of Wellington, Undergraduate

As adults, we have the ability to understand the thoughts and beliefs of others, and how these can influence their actions. Study 1 aimed to extend previous research that suggested 15-month-olds also understand the beliefs of others. Infants were shown videos of an actor hiding a toy in a box, before leaving. The toy then moved to a second box, causing the actor to hold a false belief about its location. Infants either watched as the boxes opened to reveal the toy inside one of them ( $n=48$ ), or watched as the actor reached into one of them ( $n=48$ ). Results suggest that infants did not track the toy’s location, and also did not form expectations about where the actor should look for it. Study 2 followed up on these results by having the actor watch the toy move, therefore holding a true belief about its location. Results will be discussed.

## **Retracted Memories**

Jade Wright, University of Waikato, Undergraduate

People can come to “remember” experiences they never had, and these false memories—like memories for real experiences—can influence their thoughts and behaviour. Sometimes people realise a memory is false, and yet the memory continues to have many of the same characteristics as their real memories. To what extent, then, do these “retracted memories” continue to affect people’s thoughts and behaviour? We asked subjects to describe a retracted memory as well as a “real” memory from a similar time-period. Subjects then rated the extent to which each memory influences their thoughts and behaviour in helpful and harmful ways. Overall, we found that subjects’ retracted memories were only slightly less helpful than their real memories, and just as harmful. These results suggest that false memories can have persistent effects on people’s thinking and behaviour, even after they realise the event never happened.

## **Reward encourages a sustained proactive control strategy to ignore emotional distractors**

Anne Rijnink, Victoria University of Wellington, Undergraduate

Rewards for good performance improve control over emotional distractions. Improvement could arise through a dynamic upregulation of cognitive control when needed, or a sustained engagement of cognitive control across time. To distinguish between these explanations, we conducted a pre-registered experiment in which participants ( $N = 120$ ) were required to ignore erotic and neutral pictures while performing a perceptual task. In the control condition participants were much more distracted by erotic than by neutral images. In the reward condition, a cue indicated whether or not a reward was available on the upcoming trial. In this condition, participants were able to effectively ignore both erotic and neutral images, regardless of whether a reward was available or not. Findings suggest that rewards enhance control by encouraging the use of a sustained control strategy that is applied consistently from trial to trial, and not a dynamic shift in control as the need arises.

## **Few vs many functions**

Samuel Bell-Tyrer, University of Waikato, Undergraduate

Memories for our personal past serve a range of functions—we share these memories with other people, they inform our sense of self, and guide our thinking and behaviour. Much of what we know about these functions comes from self-report data, yet we know little about how people make judgements about which functions their memories serve. We hypothesise that people attribute different functions to their memories based on how easy it feels to bring to mind occasions when their memories served those functions. To test this hypothesis, we manipulated how easy it felt for subjects to recall occasions where their memories served functions. Then, we asked subjects to rate the extent to which their memories serve a range of functions. Our results have implications for understanding how people make judgements about their personal memories.

## **The Effect of Aniracetam on the Performance of Pigeons in the Delayed Matching-to-Sample Task.**

Hannah Phillips, Massey University, Masters

Cognitive enhancing drugs are an exciting area of research that is constantly developing. Much of the research, however, has focused on restoring memory following some sort of disruption. Aniracetam is a positive AMPA-receptor modulator that has shown a lot of promise for improving memory when there is some dysfunction, but its effectiveness in improving memory neurologically healthy subjects is questionable. The aim of the present study was to examine the effects of aniracetam on short-term memory in neurologically healthy pigeons. Pigeons were administered aniracetam via either IM injection or orally, either 30 or 60 minutes prior to testing on a delayed matching-to-sample task. Aniracetam had no effect on the pigeons' memory performance, nor did it affect response latency. These findings add to the growing evidence that, while effective at improving memory function in models of impaired memory, aniracetam does not improve memory in healthy individuals.

## **Understanding the Lived Experience of Significant Weight loss in Women**

Kimberley Norman, Massey University, Masters

With failing obesity health promotion efforts demonstrated through the rising obesity rates, further understanding of the weight loss journey is called for to provide adequate and effective healthcare for obesity. This qualitative research uses critical discourse analysis to analyse semi-structured interviews from 5 New Zealand Pakeha women, who have lost between 30kg-105kg of weight and kept it off >one year. Results indicate that there are psychological changes that occur throughout the weight loss process including social identity change, experiences of stigma, issues with disclosing an ex-obese identity. A psychological mind set change is described as an important factor for all of these weight loss stories. This research supports previous literature surrounding social identity change, and recognizes that psychological mind set was a significant part of these women's weight loss journeys. Potentially psychological changes could be an untapped aspect of significant of weight management that could assist with obesity reduction rates.

## **Cognitive Dissonance-like Behaviour in Dogs: Justification-of-Effort or Contrast Effects?**

Patrick Neilands, University of Auckland, PhD

Benjamin Franklin famously advised that asking a favour is a great way to make friends. This counter-intuitive advice depends on cognitive dissonance: our tendency to avoid conflict between our beliefs and actions. Helping someone seems inconsistent with disliking them. Another example of cognitive dissonance is the justification-of-effort effect- we prefer things that we worked harder to get. Did Franklin ever wonder if his advice might extend to dogs? We examined this by testing if dogs also show a preference for toys they worked harder to get. After playing with one of two toys, the dogs either had to obey four commands (high effort) or one command (low effort) before the experimenter squeaked the toy and called the dog. Our pilot data shows dogs pulled more towards the high-effort toy. If this trend holds, this would be the first evidence of the justification-of-effort effect and thus cognitive dissonance in non-primate animals.

## **People's memories of recent traumatic events are just as coherent as their memories of recent positive events**

Kayla Jordan, University of Waikato, Honours

In popular culture, clinical observations, and some theories of Post-Traumatic Stress Disorder, people's memories for traumatic events are portrayed as uniquely incoherent—lacking a storyline and missing pieces. But this portrayal is not supported by scientific studies. These studies, however, ask people for memories that are often many years old, leaving open the possibility that by the time people participate, their traumatic memories have increased in coherence. How coherent, then, are people's memories for recent traumatic and positive events? We randomly assigned subjects to watch a video of either a traumatic or positive event and asked them questions about their memory for that event 48 hours later. We found that people's memories for recent traumatic and positive events were not only fairly coherent, but similarly so. These findings provide further evidence against the widespread assumption that traumatic memories are uniquely incoherent and have implications for the treatment of PTSD.

## **Social Smile Stimuli Scoping Review Study**

Melanie Thacker, Massey University, Masters

The aim of this research was to conduct a Scoping Review Study to chart the trans-disciplinary literature that deals with peoples' ability to differentiate more and less authentic emotional expressions. The three key outcomes of this Scoping Review were to (1) identify disciplines (e.g., Business, Communication, Political Science) concerned with understanding perceivers' sensitivities to differences in expression authenticity; (2) chart how the spectrum of authentic emotion is described in these studies (e.g., deceptive smiles, polite smiles, posed smiles); and (3) identify the nature of the smile stimuli used in these studies (e.g., photographs of actors pretending to show fake and genuine smiles, computer animations of Duchenne and non-Duchenne smiles). Arksey and O'Malley's (2005) framework was used for conducting the Scoping Review.

## **Is it the person or the situation? Using information available in police reports to predict repeat family harm episodes**

Apriel Jolliffe Simpson, University of Waikato, Honours

Family harm, defined as the use of violence or abuse against a family member, is a significant social issue in New Zealand. While it is generally accepted that family violence is episodic in nature, research is yet to find whether situational characteristics can predict repeat occurrences. We constructed a dataset containing a variety of situational and personal characteristics for one month of police reports for family harm episodes in Hamilton City. We used this dataset to examine links between cases where a party present was involved in a subsequent family violence episode during the following twelve months versus those who were not. This project was exploratory, with the modest aim of investigating whether analyses from these data sources can produce meaningful results with potential relevance for police dealing with family harm.

## **Juror perceptions of child witness credibility interviews with talkative and untalkative children**

Helen Pierce, Victoria University of Wellington, Masters

Talkativeness is a noticeable behaviour of how testimony is given—but we know little about talkativeness in terms of its influence on child witness credibility. The present research investigated whether talkativeness of children in a memory interview influenced how credible they are perceived to be as a witness. 263 mock jurors each read and rated six transcripts on fourteen witness characteristic/credibility dimensions. Transcripts represented combinations of talkativeness (low or high) and age of child (5-, 8-, or 12- years). Preliminary analyses indicate that jurors are able to detect a difference between talkative and untalkative transcripts. When it comes to credibility ratings, talkativeness did not have a significant effect. However, talkativeness did have a significant effect on ratings of confidence—where transcripts from talkative children received higher ratings of confidence than untalkative transcripts. Talkativeness is implicated in evaluations of child witnesses and further investigation is required.

## **The space between us: Exploring defensive responses and state anxiety**

Mark Colville, Massey University, Masters

Personal Space is a complex field, including boundaries used in social interactions, navigation and defense. The Defensive Peripersonal Space (DPPS) is a close proximity personal space used for defense, thought to be located within reaching distance. The DPPS is measured in individuals by the Hand-Blink Reflex (HBR), a blink reflex triggered by electrical stimulation of the median nerve at the wrist. By triggering the HBR while varying the hands position in front of the face, an individual's DPPS can be approximated. The field of DPPS and HBR research is however new and the HBR method is highly complex. We replicated a HBR testing method, finding support for the presence of the DPPS, while finding the method extremely delicate, and in need of refinement and clarification. We anticipate this study will add help refine the HBR testing method, and be a useful addition to the field.

## **Multiple measures show a negative relationship between schizotypy and creativity: exploring the mediating roles of associative processing and executive control**

Sophie Hedley, Victoria University of Wellington, PhD

Positive schizotypal traits are often linked to creativity. This relationship is thought to reflect "loose" associative processing in schizotypy that facilitates creative thought. However, closer inspection reveals considerable heterogeneity in the effect ( $r = -.42$  to  $+.83$  Acar & Sen, 2013). To better understand the relationship between schizotypy and creativity, we conducted a large ( $N = 428$ ) pre-registered online study, using multiple measures of schizotypy and performance-based measures of creativity. Positive schizotypy correlated negatively with performance on both creativity tasks ( $r$ 's ranging from  $-.045$  to  $-.213$ ). We hypothesise that the relationship between schizotypy and creative thought is mediated by both associative processing and executive control, as suggested by contemporary theories of creativity. We test this hypothesis in a large lab-based study in which participants complete working memory and associative processing tasks alongside measures of schizotypy and creativity, providing insight on the factors that explain individual variability in creative thought.

## **Examining the role of cue switch costs in the relationship between working memory capacity and task switching**

Katie Knapp, Massey University, PhD

As working memory capacity (WMC) and task switching both measure executive attentional control, a relationship between performance on these tasks is expected. However, most studies have failed to find any relationship. One theory for these surprising findings suggests that the traditional switch task does not measure executive attention. This controversial claim suggests that the structure of the traditional task with one cue assigned to each task (e.g. colour task cued by 'Colour') confounds cue switching and task switching. Each time the task switches, the cue switches. Switch costs reflect both cue switch costs and task switch costs. In the present experiment, we had participants complete a WMC task and a switching task using two cues per task. This design allowed us to separate the cost of the cue switch from standard switch costs. The expected relationship between WMC and switching may emerge when cue switch costs are controlled for.

## **Testing the effects of mindfulness on the cognitive control of emotional distraction**

Justin Murphy, Victoria University of Wellington, PhD

Mindfulness practice has been claimed to heighten focus and reduce emotional reactivity by increasing cognitive control. However, evidence for these cognitive effects of mindfulness is rather weak. In recent years, our lab has used the emotional distraction paradigm to study emotional distraction. Participants perform a simple letter discrimination task, while ignoring distractor images (emotional or neutral) that sometimes appear. Participants are typically more distracted by emotional than neutral images; however, emotional distraction can be reduced by manipulations known to enhance cognitive control. In a pre-registered study, we tested whether mindfulness has similar effects. Participants listened to either a 10 minute guided meditation or a 10 minute talk about mindfulness. They completed 6 blocks of the emotional distractor paradigm before and after listening. If mindfulness improves the cognitive control of emotional distraction, then emotional distraction should be lower following the mindfulness intervention than in the control condition. Preliminary results are presented.

# **POSTERS**

## **Social anxiety apps: What does the evidence say**

Mohsen Alyami, University of Auckland, PhD

Objectives: The aim of this systematic review is twofold: (1) to characterise the purpose and description of available social anxiety apps and (2) to review the evidence on the effectiveness of social anxiety apps. Methods: A search was conducted on three major mobile platforms: Apple iTunes, Google Play and Windows Store. Apps were included if they addressed social anxiety and used an English language interface. A systematic review of the literature from MEDLINE, EMBASE, PsycINFO, Cochrane, Scopus and Web of Science to identify evidence-based evaluations of social anxiety apps was also undertaken. Findings: Of the 1154 apps identified, 38 apps met the inclusion criteria: iTunes (n=18), Google Play (n=16) and Windows Store (n=4). Over 60% of apps were exclusively focused on social anxiety, while the remainder targeted social anxiety and related conditions. Most developers did not provide information on their organisational affiliations or their content source. Most apps used multimedia while 17 apps used text only. Finally, although the systematic review of the literature identified 94 articles, none of which met inclusion criteria. Conclusions: Social anxiety apps have the potential to overcome barriers to accessing treatment; however, none of the apps identified have had studies on their effectiveness published. As the evidence base is lacking, it is therefore not currently possible to recommend their use.

## **Children's Ability to Infer Shared Cultural Knowledge**

Caitlin Heesterman, Victoria University of Wellington, Undergraduate

Estimating what someone does or does not know is a skill that adults use effortlessly. For instance, adults can infer that someone who lives overseas might not share their knowledge of something culturally specific like a local museum, but that someone living locally should. Adults also understand that some types of knowledge are not group specific, such as the colour of grass, and that everyone should have this knowledge. The present study investigates when this skill of estimating another person's cultural knowledge develops. Children aged 3-7 were shown photos of other children who could be similar or dissimilar to them in geographical location, knowledge of a TV show, or the type of sticker on their shirt. Participants were asked who was likely to know information that was either culturally specific or generic. Preliminary results indicate that children as young as 4 understand who is likely to share their cultural knowledge.

## **Prototypes of gang members in New Zealand and the United States**

Callum Lawrie, University of Waikato, Honours

Our mental representation of a group influences our behaviour and attitudes and are shaped by both external (such as the media) and internal sources (personal experience). We were interested in investigating how gang members are perceived in America and New Zealand as there is no established definition. To answer this question, we asked people to list the first five features that came to mind about gang members. A separate group of people then rated how typical the feature was. We then coded the features into positive and negative. We found that across both cultures, the features that came to mind were typically more negative. American gangs were more strongly associated with negative features and local gangs were more likely to have positive features associated with them. These findings suggest that personal experience may negate the influence media has on shaping perception.

## **Do faces and bodies reach awareness faster upright than upside-down?**

Jaiden Cancian & Max McDonald, Victoria University of Wellington, Undergraduate

Visual processing of faces and bodies is typically faster upright than upside-down, likely due to specialised perceptual mechanisms that are highly sensitive to the upright orientation. Do these perceptual mechanisms also govern access to visual awareness? In this work, we aim to replicate recent studies claiming that they do. We use continuous flash suppression, a variant of binocular rivalry that is commonly used to experimentally hide stimuli from awareness. We present upright and inverted faces and bodies at different locations relative to fixation, and we ask participants to report the location of the image as soon as they are able to detect it. Data collection is still ongoing, but preliminary analyses suggest that both faces and bodies reach awareness faster upright than upside-down. Our findings may tell us something important about how faces and bodies are processed in the human visual system.

## **Age differences in processing emotional information: An investigation into the underpinning mechanisms**

Neda Nasrollahi, University of Otago, PhD

Research indicates that older adults show an increase in the experience of positive emotions, which is thought to reflect an underlying change in emotion regulation. The research proposed here aims to shed light on the mechanisms underpinning the age-related positivity effect. Toward this end, we will investigate age-related differences in processing of emotional information in healthy adults. An important question is whether older adults differentially process emotional stimuli with respect to early facilitatory and later inhibitory processing, and whether these age-related differences in emotional processing apply to both face and non-face stimuli. Once we have a clearer understanding of the nature of the age-related changes, the information can be used to guide future development of interventions targeted at older adults. This basic research will help us understand the mechanisms behind biases in emotional processing, and should lead to future improvements in intervention strategies that enhance emotional well-being in older adults, which should consequently improve their cognitive functioning.

## **How does infant recognition of emotional congruency influence their physiological response?**

Ella Macaskill, Victoria University of Wellington, Undergraduate

Knowing a smiling face conveys happiness may feel second nature, but can infants understand the meaning behind affective expressions? The age at which infants can successfully match emotions across modalities, for example recognising that a happy voice belongs with a happy face, varies around 3- to 7-months depending on procedural design and tested emotions. We aim to investigate whether infants' ability to recognise congruency in emotional expressions across auditory and visual modalities is associated with changes in physiological response. By measuring heart rate and electrodermal activity during the presentation of happy or angry faces and voices, we may be able to better pinpoint when infants can detect affective congruency. We will propose a method designed to further examine the development of infant cross-modal emotion recognition, while also exploring the possibility of an indirect physiological measure for infants' congruency understanding.

## **False Memory Susceptibility in Adults with Symptoms of Borderline Personality Disorder**

Fatemeh Sajjadi, University of Otago, PhD

Borderline personality disorder (BPD) is a severe psychiatric condition which involves impairment in multiple areas of functioning including disturbed cognition, impulsivity, and intense unstable relationships. Memory deficits are not recognised as a core symptom of BPD, but BPD patients have long been suspected to have inaccurate perceptions, disturbed memory processes, and an increased tendency to produce false memories. The overarching goal of the current experiment was to examine whether BPD is associated with greater false memory in the Deese-Roediger-McDermott (DRM) paradigm. University students (n = 200) were screened for BPD using the Structured Clinical Interview for DSM-IV Axis 1 Disorders-Personality Questionnaire (SCID-II) before being presented with trauma-related, negative, and positive DRM word lists. We predicted that participants who met the cut off for BPD would exhibit more false memories than would participants who did not meet the cut off. We also predicted that higher rates of false memory would be observed for the negative and trauma-related word-lists. Overall, higher numbers of BPD symptoms were associated with greater rates of false memories, and this association was strongest for the trauma-related critical lures. Our findings suggest that there is a greater susceptibility to false memories in borderline personality disorder.

## **Assessing for compensation in ToM through the use of time compression: A pilot proof of concept study**

Liam Allen, Massey University, Masters

One of the major problems faced by ToM assessments is compensation, which can cause individuals to appear and test as normal while still having severe and persistent underlying deficits. One possible solution may lie in the use of increased time constraints with existing ToM assessments. Higher ToM ability in compensating individuals theorised to come at the cost of increased processing time and lowered stressor resistance. To assess this theory an experiment centred around a newly created timed variation of the 'Reading the mind in the eyes' test was developed, with a Pilot study (N:13) being conducted to test the experiment's validity and viability. The Pilot study data upon analysis suggested that, despite some issues that need to be addressed, there is enough support for the theory to conduct a full-scale experiment around this design. Such an experiment could be of great interest for both ToM assessment and social cognition research purposes.

## **Intergenerational Transmission of Narrative Identity among Three Generations of Women and Men across Cultures**

Tugce Bakir-Demir, University of Otago, PhD

The aim of the study is to examine intrafamilial similarities among generations with regards to narrative identity across two different cultures: New Zealand European and Turkey. A total of 72 Turkish families will be recruited. Each family will include members of three generations of women (college student daughters-mothers-grandmothers) and men (college student sons-fathers-grandfathers). Data will also be collected from European New Zealanders. Hypotheses of the study can be described in three domains: a) intrafamilial similarities; b) gender differences, and c) cultural differences. Members of the same families are expected to be similar to each other regarding narrative identity, and regardless of cultural contexts. As another set of predictions, cultural and gender differences are expected in participants' family narratives. Findings of the current study should shed light onto both theoretical and practical implications of narrative identity across generations, cultures, and gender.