THE 2017 NATIONAL PSYCHOLOGY GRADUATE STUDENT CONFERENCE

Hosted by The National University of Singapore, Department of Psychology

10am–5pm Saturday August 5th, 2017

For more information and to register, please visit the conference website: https://blog.nus.edu.sg/npgsc2017/

Who should attend? Psychology graduate students, undergraduate students and faculty.

The 2017 National Psychology Graduate Student Conference will showcase honours undergraduate and graduate student work from Singapore's universities. The day will include talks, poster presentations and a keynote address.
<table>
<thead>
<tr>
<th>CONTENTS PAGE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference Schedule</td>
<td>3</td>
</tr>
<tr>
<td>Keynote Speaker</td>
<td>6</td>
</tr>
<tr>
<td>Abstracts</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation Session 1</td>
<td>7</td>
</tr>
<tr>
<td>Presentation Session 2</td>
<td>11</td>
</tr>
<tr>
<td>Poster Session</td>
<td>15</td>
</tr>
<tr>
<td>Getting to NPGSC 2017</td>
<td>29</td>
</tr>
<tr>
<td>Notes</td>
<td>31</td>
</tr>
<tr>
<td>Time</td>
<td>Presenter and Venue</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------</td>
</tr>
<tr>
<td>09:15</td>
<td>Registration</td>
</tr>
<tr>
<td></td>
<td><em>Outside LT9</em></td>
</tr>
</tbody>
</table>
|          |                     |          | 1.1 Thilanga Dilum Wewalaarachchi  
  *Sensitivity to Vowel, Consonant and Tone Variation: Evidence from English-Mandarin Bilinguals* |
|          |                     |          | 1.2 Charlene S. L. Fu  
  *The effects of language mixing on novel word learning among bilingual toddlers* |
|          |                     |          | 1.3 Elizabeth Teh  
  *Cognitive-processing and verbal expression of social and emotional information in children with autism spectrum disorders* |
|          |                     |          | 1.4 Yang Zheshuai  
  *Donate to Be a Hero: Social Power Facilitates Prosocial Donation* |
|          |                     |          | 1.5 Oindrila Dutta  
  *Parental Bereavement Experience of Child Loss due to Life-Limiting Illness: A Call for Attention to Researchers and Clinicians* |
|          |                     |          | 1.6 Ong Xiang Ling  
  *Change in reactive undercontrol and its association with daily stressful events from middle childhood to early adolescence* |
|          |                     |          | 1.7 Keong Yuhan Melissa  
  *Child Maltreatment in Singapore: An Analysis of Familial Factors* |
|          |                     |          | Presentations 2     |
|          |                     |          | AS1/0304            |
|          |                     |          | 2.1 See Cheng Hui Cassandra  
  *Effects of a Brief Mindfulness Induction on Moral Judgments and Emotions* |
|          |                     |          | 2.2 Charmaine Lee  
  *Effects of Brief Daily Mindfulness Training on Trait Mindfulness, Self-Compassion, and Affective Outcomes in an Analogue BPD Sample.* |
|          |                     |          | 2.3 Tan Hui Han  
  *Effects of brief mindfulness and loving-kindness meditation inductions on emotional and behavioral responses to social rejection among individuals with high BPD traits* |
|          |                     |          | 2.4 Ang Qiuluan  
  *Effects of a Brief Mindfulness Induction on Negative Affect, Body Dissatisfaction, and Disordered-Eating Urges in a College Sample at Risk for Developing Eating Disorders* |
|          |                     |          | 2.5 Goh Zhong Sheng Zack  
  *Effectiveness Study of a Psychology Training Clinic in Singapore* |
|          |                     |          | 2.6 Weiyen Chee  
  *Attentional processes adapt to dynamic updates of value* |
|          |                     |          | 2.7 Magdalene Choo  
  *Effects of Semantic Ambiguity on Explicit and Implicit Memory Tasks* |
<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00</td>
<td>LT9</td>
<td><strong>Welcome Address</strong>&lt;br&gt;Associate Professor Sim Tick Ngee&lt;br&gt;Head of Department, NUS Psychology</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Keynote Address</strong>&lt;br&gt;Associate Professor Annabel Chen&lt;br&gt;Nanyang Technological University&lt;br&gt;“A Visit to the Basement of the Brain”</td>
</tr>
<tr>
<td>13:30</td>
<td>LT9</td>
<td><strong>Lunch/Poster Session</strong>&lt;br&gt;Outside LT9&lt;br&gt;Outside LT9</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P1 Bu Chi</strong>&lt;br&gt;Message tailoring and post-message attitude certainty: The role of defensive confidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P2 Chai Jing Wen</strong>&lt;br&gt;Neither friends nor foe: No current evidence for acute stress on social decisions</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P3 Hoo Eleanore Joy</strong>&lt;br&gt;Remembering the Forgotten Child: The Psychological Adjustment among Siblings of Children with Cancer</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P4 Huang Yi</strong>&lt;br&gt;How gossip affects the preference for products – a behavioral study</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P5 Audrey Kum Rui Lin</strong>&lt;br&gt;The Influence of Prospective and Retrospective Mechanisms in Masked Morphological Priming</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P6 Lee Sze Chi</strong>&lt;br&gt;Spontaneous Thought: Its Role in Predicting Depression in the Context Of Self-disccrepancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P7 Lee Teck Hao Sean</strong>&lt;br&gt;Cross-Cultural Validation of the Positive Affect and Negative Affect Schedule (PANAS) with an American and an Asian Student Sample</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P8 Ruth Leong</strong>&lt;br&gt;Brain Structure and Cognitive Changes Over 8 Years: The Singapore-Longitudinal Aging Brain Study</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P9 Melissa Li</strong>&lt;br&gt;Pain sensation evoked by observing abdominal pain in others</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P10 Gwenisha Liaw</strong>&lt;br&gt;Shared and distinct information processing limitations across attentional forms and modalities</td>
</tr>
<tr>
<td>Page</td>
<td>Author</td>
<td>Title</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>P11</td>
<td>Aaron Lim</td>
<td>The Effect of Values on Attitudes towards Immigrants: The Mediating Role of Multiculturalism</td>
</tr>
<tr>
<td>P12</td>
<td>Lim Ai Zhen</td>
<td>The Broader Autism Phenotype and its Relationship to Internalizing and Externalizing Disorders – the mediating and moderating roles of Alexithymia, Emotion Dysregulation, and Acceptance</td>
</tr>
<tr>
<td>P13</td>
<td>Lim Jie Xin</td>
<td>Comparing the Sensitivity of Level-specific Fit Indices in Multilevel Structural Equation Modelling</td>
</tr>
<tr>
<td>P14</td>
<td>Lim Kim Loong</td>
<td>Energy Usage Behaviour: Optimizing Information Intervention Design</td>
</tr>
<tr>
<td>P15</td>
<td>Lim Wee Ping</td>
<td>Concreteness moderates effects of valence on word processing tasks</td>
</tr>
<tr>
<td>P16</td>
<td>Liu Cuizhen</td>
<td>Conscious awareness differentially shapes analgesic and hypergesic pain responses</td>
</tr>
<tr>
<td>P17</td>
<td>Victoria Long</td>
<td>Hot or Not: Effects of Stimuli Pattern and Duration on Offset Analgesia</td>
</tr>
<tr>
<td>P18</td>
<td>Oh Jing Jing</td>
<td>Pictures paint a thousand words?: Written Narratives of Children with ASD</td>
</tr>
<tr>
<td>P19</td>
<td>Claudia Ong Shi Yi</td>
<td>The Role of Familial Factors in the Relationship Between Autistic Traits, Emotion Dysregulation and Psychopathology</td>
</tr>
<tr>
<td>P20</td>
<td>Yia-Chin Tan</td>
<td>Which matters more: Number of countries or cultural differences? An investigation into the quantitative and qualitative indices of travelling on creativity.</td>
</tr>
<tr>
<td>P21</td>
<td>Cleo Tay</td>
<td>Does Attentional Capture Habituate?</td>
</tr>
<tr>
<td>P22</td>
<td>Yap Wei Jie</td>
<td>Cultural Attachment</td>
</tr>
<tr>
<td>P23</td>
<td>Gerard Yeo</td>
<td>Looming and Anxiety Symptoms: A Multivariate Meta-Analysis</td>
</tr>
<tr>
<td>P24</td>
<td>Russell Yoong Kuok Leong</td>
<td>Exploring Health Literacy in Dialysis Patients with Comorbid Diabetes</td>
</tr>
<tr>
<td>P25</td>
<td>Yu Zhaoliang</td>
<td>Gratitude impedes risk taking</td>
</tr>
<tr>
<td>P26</td>
<td>Zhen Shan Shan</td>
<td>The development of greed and fear in a social bargaining game</td>
</tr>
</tbody>
</table>
The cerebellum is no longer regarded only as a structure chiefly dedicated to motor control functions. Evidence from patient studies and functional neuroimaging investigations has revealed that the cerebellum is involved in higher cognition when motor functions have been accounted for. Recent meta-analyses of neuroimaging studies, as well as intrinsic connectivity studies have provided further support for the functional topography of the cerebellum in higher cognition. An overview of a systematic neuroimaging investigation of cerebellar involvement in working memory, through functional MRI, Diffusion MRI and using Transcranial Magnetic Stimulation (TMS) for verification will be presented. If time permits, neuroimaging studies using this model to investigate neuropsychiatric or neurodevelopmental conditions will be provided. The goal of this research is to apply this cerebro-cerebellar model to better understand the related clinical conditions and optimize interventions.

**Dr. SH Annabel Chen** is a clinical neuropsychologist, and currently a Faculty member of Psychology at the School of Social Sciences, LKCMedicine and Deputy Director of the Centre of Research and Development in Learning (CRADLE), at the Nanyang Technological University. After obtaining her PhD in Clinical Rehabilitation Psychology from Purdue University and completing a Clinical Psychology Internship at West Virginia University School of Medicine, she continued with a post-doctoral residency in Clinical Neuropsychology at the Department of Neurology, Medical College of Wisconsin. Her research interests in clinical applications of advanced neuroimaging led her to further pursue post-doctoral research at the Department of Radiology at Stanford University School of Medicine. Back in Asia, she started the Clinical Brain Lab to apply neuropsychological principles to understand disturbance in brain and behavior using neuroimaging techniques, such as fMRI, diffusion MRI, Transcranial Magnetic Stimulation (TMS), and electroencephalography (EEG). Apart from focusing on cerebellar contribution in higher cognition and optimizing cognition in aging neuroscience, her most recent research development involves affective neuroscience in learning and translating neuroscience for education.
ABSTRACTS

Presentation Session 1

1.1 Thilanga Dilum Wewalaarachchi – National University of Singapore
Authors: Thilanga Dilum Wewalaarachchi, Winston Goh, Leher Singh
Sensitivity to Vowel, Consonant and Tone Variation: Evidence from English-Mandarin Bilinguals

The large majority of world languages, including Mandarin, employ vowel, consonant and tone variation in distinguishing meaning between words. However, most of the work on adult Mandarin spoken word recognition been done with native speakers who are either monolingual or dominant in Mandarin. It is an open question whether previously demonstrated patterns of Mandarin lexical processing are generalizable to all profiles of Mandarin native speakers. In study one, adult English-Mandarin bilinguals’ spoken word recognition abilities were investigated via an eye-tracking paradigm. Participants heard correct pronunciations of familiar words in the presence of visually presented targets, competitors and distractors. Competitors varied in their phonological relation to the target (e.g. mi3): vowel minimal pair (e.g. ma3), consonant minimal pair (e.g. bi3), or tone minimal pair (e.g. mi4). Distractors were unrelated to targets (e.g. fu1). Analyses of the time course of word recognition point to a divergence in the relative constraints that tones and segments play on word recognition. When processing target words, participants fixated on tone minimal pairs to a greater degree relative to vowel or consonant minimal pairs. These findings suggest dissociation between how tonal and segmental minimal pairs compete during lexical access in bilinguals adults. In order to determine the emergence of these lexical processing patterns during the period of early childhood, a follow-up investigation with bilingual kindergarteners (5.5-6.5 year-olds) is currently underway.

1.2 Charlene S. L. Fu – National University of Singapore
Authors: Charlene S. L. Fu, Leher Singh, Denis Burnham
The effects of language mixing on novel word learning among bilingual toddlers

Bilingualism presents unique challenges for the young language learner that are not faced by monolingual learners. In addition to simultaneously learning two separate language systems, bilinguals must also contend with language mixing, which refers to alternating between two languages within utterances. Arguably, mixing introduces a different dimension of complexity in the input to the child, and yet its effects on early language acquisition have rarely been studied. In the current studies, we investigated if language mixing impacted associative word learning among 17-18 month old English-Mandarin bilinguals. Using the Switch paradigm, infants were taught the label of a novel object. In the single-language condition, Mandarin phrases were used to introduce a Mandarin novel word (e.g. “ni3 kan4, zu3”). In the mixed condition, English phrases were used to introduce another Mandarin novel word (e.g. “look, that’s a he3”). To test their word knowledge, we measured infants’ responses to two Switch trials, consisting of a vowel change (e.g. zu3 to ze3) and a tone change (e.g. zu3 to zu1). Results revealed that infants were only sensitive to the vowel and tone switches in the single-language condition, but not in the mixed condition. The same results were replicated with monosyllabic (Study 1) and disyllabic (Study 2) novel words. These results indicate that children form a more detailed and specific representation of novel words which are presented within single-language sentence frames. Together, our findings provide first evidence that single-language input better supports associative word learning among young bilinguals than mixed input.
1.3 Elizabeth Teh – National University of Singapore
Authors: Elizabeth J. Teh, Melvin J. Yap, Susan J. Rickard Liow
*Cognitive-processing and verbal expression of social and emotional information in children with autism spectrum disorders*

Children with autism spectrum disorders (ASD) have been reported to show deficits in recognizing and reporting emotions in others, and may have difficulty deriving social meaning from contextual cues in given situations. However, researchers have often combined emotional and social stimuli in studies, making it difficult to separate deficits in the two domains. In this study, pictures were manipulated on emotional and social variables, to assess relative abilities associated with each type of processing in children with ASD. Picture description data was collected from 20 children with ASD, and 20 typically-developing children matched on age, gender and non-verbal IQ scores. Emotional and social terms produced by each group were compared using mixed-ANOVA analyses. Results showed that children with ASD were poorer than typically-developing children at using contextual cues to recognize emotions and social situations. In the ASD group, emotion terms produced were moderated by the degree of social information present, with interference being greatest in positively-valenced conditions. On the other hand, social terms were moderated by valence only in older children with ASD. In the control group, emotional production was enhanced in negatively-valenced conditions, while production of social terms was not significantly affected by valence. The results suggest that emotion deficits in ASD are moderated by social information, and emotional processing may interfere with social processing over time in ASD. Findings have implications for cognitive, social motivation and weak central coherence theories of ASD, as well as practical considerations for emotion research in future.

1.4 Yang Zheshuai – NUS Business School
Authors: Zheshuai Yang, Yan Zhang, Yih Hwai Lee
*Donate to Be a Hero: Social Power Facilitates Prosocial Donation*

Many people believe that power corrupts, and absolute power corrupts absolutely. Consistent with this belief, power has been shown to lead to immoral behaviors in various social contexts. We hypothesized that when facing an opportunity to do good things, powerful people may engage in more prosocial behavior than powerless people. In particular, we predicted that a high level of experienced power facilitates donation behavior when donation is framed as an altruistic action that benefits others. Under such a situation, powerful people believe that they are capable of making bigger impacts on recipients, which consequently makes the powerful think positively about themselves. In various donation contexts that involve either real or hypothetical donations, powerful people consistently show a greater tendency to donate for altruistic appeals than powerless people do. This effect dissipates when a donation action is framed as something non-prosocial, and even reverses when the self-benefiting aspects of a donation action are highlighted.
1.5 Oindrila Dutta – Nanyang Technological University
Authors: Oindrila Dutta, Geraldine Tan-Ho, Ping Ying Choo, Andy Hau Yan Ho

Parental Bereavement Experience of Child Loss due to Life-Limiting Illness: A Call for Attention to Researchers and Clinicians

The objective of this qualitative systemic review was to gain a comprehensive and consolidated understanding of the lived experience of bereaved parents who have suffered and endured the death of their child due to a life-limiting illness. Adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, six major databases were searched including Medline (Ovid), PsychInfo, CINAHL, ERIC (Ebsco), ProQuest and Social Science Citation Index during the period between 2000 and 2016. 694 articles were identified and screened for appropriateness and relevancy, and 22 qualitative studies that fit under the sampling frame were selected for full text data analysis using Thematic Synthesis. A total of 13 themes emerged from the analysis and were further organised into a four-phase trajectory of parental bereavement experience of child loss, which include: (1) 'Liminal Margin', defined by the four themes of (i) emotional upheaval, (ii) family disarray, (iii) medical relationships, and (iv) death contemplation; (2) 'Holding Space', defined by the single theme of (v) nurturing the child's body; (3) 'Navigating Losses', defined by the five themes of (vi) anguish and responsibility, (vii) spousal collision, (viii) parenting guilt, (ix) social disconnection, (x) shared understanding; and (4) 'Reconstructing Lives', defined by the three themes of (xi) restorative actions, (xii) continuing bonds, and (xiv) meaning making. The findings are discussed in the light of existing literature with practical recommendations for enhancing parental bereavement support services.

1.6 Ong Xiang Ling – National University of Singapore
Authors: Ong Xiang Ling, Ryan Y. Hong, Fen-Fang Tsai, Seok Hui Tan

Change in reactive undercontrol and its association with daily stressful events from middle childhood to early adolescence

The period between middle childhood and early adolescence entails normative challenges that increase the need for self-controlled behavior. This study examines the development of reactive undercontrol, an impulsigenic process that undermines self-controlled behavior. A community sample of 302 children and their parents were recruited at age 7 and follow-up assessments were made at ages 8, 9, and 11. Latent growth analysis showed that reactive undercontrol increased over time, and this trajectory was associated with an increase in daily stressful events. Low effortful control (assessed at age 7) predicted an increase in reactive undercontrol, whereas low socio-economic status predicted higher initial levels of reactive undercontrol. These findings highlight the developmental pathways to reactive undercontrol during the transition to early adolescence.
Current literature on child maltreatment in Singapore has shown to be relatively limited. This study aims to contribute to our understanding of the associations between risk factors and child maltreatment outcomes locally. By utilising secondary retrospective data of 580 children who entered the child protection system in the Ministry of Social and Family Development (MSF), associations and predictive relationships between risk factors and maltreatment outcomes were analysed based on an ecological framework. Specifically, the study examined patterns of associations across four types of maltreatment: physical abuse, sexual abuse, emotional abuse, and neglect, and the outcomes of recurrence of maltreatment and re-entry in the child protection system. Results indicated that a higher proportion of caregiver factors had significant associations with the different types of maltreatment as compared to household and child factors. Additionally, caregiver factors such as the justification of maltreatment, mental health condition and excessive discipline, and the child factor of academic difficulties surfaced as significant predictors of recurrence of harm in the emotionally abused sub-sample. These results revealed the applicability of ecological models to Singapore, while results that differed from findings in Western literature highlighted the need for more locally-based research. The study's limitations and future recommendations are discussed.
Presentation Session 2

2.1 See Cheng Hui Cassandra – National University of Singapore
Authors: See Cheng Hui Cassandra, Nina Laurel Powell, Keng Shian-Ling
Effects of a Brief Mindfulness Induction on Moral Judgments and Emotions

Mindfulness practices effectively reduce the intensity of emotional responses or emotional reactivity in daily life. This research attempts to investigate whether a brief mindfulness induction can reduce emotional reactivity to moral situations, and in turn the harshness of moral judgments. In Study 1, participants read and judged two moral scenarios. The brief mindfulness induction reduced reported emotional intensity to one of the two scenarios. This result suggests that the brief mindfulness induction may only be effective for certain types of moral transgressions. In Study 2, participants read and judged either high or low severity transgressions. Although the brief mindfulness induction was associated with reduced emotional intensity for all moral scenarios, it only reduced the harshness of act-based judgments (i.e., how wrong the act is) for high but not low severity transgressions. The present research suggests that the brief mindfulness induction is effective in reducing the harshness of moral judgments and emotional reactivity to more severe moral transgressions. Future research should examine the effects of more extensive mindfulness practices on moral judgments and emotions and determine the exact characteristic(s) of high severity transgressions that made them more responsive to brief mindfulness inductions.

2.2 Charmaine Lee – National University of Singapore
Authors: Charmaine Lee Siew Ling, Shian-Ling Keng, Ho Bing Hui, Crystal Lee Yun See
Effects of Brief Daily Mindfulness Training on Trait Mindfulness, Self-Compassion, and Affective Outcomes in an Analogue BPD Sample

Borderline personality disorder (BPD) is a severe mental disorder characterized by dysregulation in behavioral, cognitive, affective, and interpersonal domains. Among various treatments for BPD, dialectical behavior therapy has received considerable empirical support. Although mindfulness is considered a core skill in DBT, little is known about the effects of brief mindfulness interventions on dysfunctions linked to BPD. The current study investigated the effects of brief mindfulness training on trait mindfulness, self-compassion, and several affective outcomes (shame, anger, and emotion regulation difficulties) related to BPD. Eighty-seven adult participants with elevated BPD traits were recruited and randomly assigned to 2 weeks of daily mindfulness practice (n=28) or relaxation practice (n=30), or a no-intervention control condition (n=29). Participants were assessed using self-report measures, with additional behavioral measures for emotion regulation, pre- and post-intervention. Analyses showed that mindfulness training led to significant increases in trait mindfulness and self-compassion, as well as reductions in self-reported emotion regulation difficulties and shame, when compared to the no-intervention condition. There was also a trend for mindfulness training to lead to greater improvements in anger control when compared to the no-intervention condition. The two conditions did not significantly differ on behavioral measures of emotion regulation, while the mindfulness and relaxation conditions did not differ significantly on any outcome variable. These findings suggest that a brief mindfulness intervention has some utility in improving selected affective outcomes related to BPD. The study also demonstrated that for a brief intervention, few differences exist between mindfulness and relaxation in alleviating particular BPD psychopathology.
2.3 Tan Hui Han – National University of Singapore
Authors: Tan Hui Han, Shian-Ling Keng, Teo Hong Kiat Andy

*Effects of brief mindfulness and loving-kindness meditation inductions on emotional and behavioral responses to social rejection among individuals with high BPD traits*

Borderline personality disorder is characterized by an enduring pattern of instability across affective, behavioral, cognitive, and interpersonal domains. Individuals with borderline personality disorder display heightened negative affect and aggression in response to social rejection. This study investigated effects of brief mindfulness and loving-kindness inductions on emotional and behavioral responses to social rejection among individuals with high borderline personality traits. One hundred and eighteen participants were randomly assigned to receive 10 minutes of mindful breathing, loving-kindness meditation, or a no-instruction control condition. Participants then underwent a social rejection manipulation before rating their emotions and completing a competitive task, which provided a proxy measure of aggression. Analyses using mixed ANOVAs revealed that compared to the control group, the mindfulness group demonstrated quicker rates of emotional recovery after social rejection, both in terms of negative affect, $F(1.83, 193.16) = 5.51, p = .005$, and feelings of rejection, $F(1.65, 177.77) = 5.35, p = .006$. The mindfulness group also reported quicker reductions in negative affect over time, compared to the loving-kindness group, $F(2.02, 193.16) = 3.07, p = .049$. Participants in the loving-kindness condition did not differ from those in the control condition in their rates of emotional recovery. Groups also did not differ in their immediate emotional reactivity or aggressive behavior following social rejection. These findings suggest that mindfulness training may be promising in alleviating negative emotional effects of social rejection among individuals with high borderline personality traits. Implications are discussed in relation to differential mechanisms and effects of mindfulness and loving-kindness meditation.
2.4 Ang Qiuluan – National University of Singapore
Authors: Qiuluan Ang, Shian-Ling Keng, Wei Ling Teo

Effects of a Brief Mindfulness Induction on Negative Affect, Body Dissatisfaction, and Disordered-Eating Urges in a College Sample at Risk for Developing Eating Disorders

Eating disorders (ED) are debilitating mental illnesses characterised by disturbances in eating behaviours and weight regulation. Risk factors associated with disordered eating behaviours include negative affect and body dissatisfaction. Existing research showed that mindfulness-based interventions may be effective in treating symptoms associated with ED, but few studies have investigated the effects of brief mindfulness training on core features of ED. Using a laboratory experimental design, the present study aimed to investigate the effects of a brief mindfulness induction on negative mood, implicit and explicit body dissatisfaction, and disordered-eating urges among female college students at risk of developing ED. Eighty female students who met criteria for full- or sub-threshold diagnosis of Anorexia Nervosa, Bulimia Nervosa, or Binge Eating Disorder as assessed using the Eating Disorder Diagnostic Scale were recruited from a Singaporean university. Participants (mean age = 20.98; age range 18-33 years old) were randomly assigned to either a 10-minute mindful breathing exercise (n = 43) or a resting control condition (n = 37) following a negative mood induction procedure. Analyses using mixed-model ANOVA found that compared to the resting condition, participants in the mindfulness condition reported greater decreases in negative emotions $F(1.85, 97.79) = 3.98, p = .025$, and disordered-eating urges, $F(2.31, 113.20) = 3.19, p = .038$, from pre- to post-manipulation. The practice also lessened explicit body dissatisfaction, $F(3.95, 185.45) = 1.99, p = .098$, although the effect was marginally significant. There were no significant between-group differences on changes in implicit body dissatisfaction. Implications of the findings are discussed.

2.5 Goh Zhong Sheng Zack – National University of Singapore
Authors: Goh Zhong Sheng Zack

Effectiveness Study of a Psychology Training Clinic in Singapore

Psychology training centres (PTCs) provide quality and affordable intern-delivered psychological treatments. However, there exists a paucity of PTC outcome studies in Asia. This study aims to (1) evaluate clients’ outcomes from intern-delivered psychotherapies; and (2) examine factors predicting effective therapy outcomes in Asia. Archived anonymised data from a PTC in Singapore were used. Data from 369 clients (N=141; Mean age = 31.4) who have been treated for psychological difficulties between 2009 and 2016 were analysed. The main outcome measure was the pre- and post-therapy scores on the Depression, Anxiety, and Stress Scale (DASS). Therapy outcome was regressed on a range of predictors: age, gender, ethnicity, days lapsed between registration and intake, therapy completion status and pretherapy general distress scores. Findings suggest that patients’ self-reported symptoms decreased significantly after treatment. Specifically, younger clients, those who completed treatment, and those with higher pretherapy distress were predicted to achieve positive treatment outcome. In sum, intern-delivered therapies were found to improve clients’ symptoms. Further recommendations for the research of PTCs in Asia were discussed.
We are often exposed to a myriad of visual stimuli in our daily lives, but due to our attentional capacity limits, valuable stimuli have to be preferentially selected to maximize efficiency. Indeed, previous research has shown that other than the traditional dichotomy of selective attention being top-down (endogenous) or bottom-up (exogenous), the relative value of targets and distractors influences the deployment of attention as well (Awh, Belopolsky, & Theeuwes, 2012; Wolfe & Horowitz, 2017). Here we seek to investigate how our attentional processes adapt to dynamic updates of representations of value efficiently. Participants learned the values of six novel stimuli, two at a time, by responding on a keyboard while eyetracking was recorded. We simulated learned reward values of each stimuli from choices using a reinforcement learning model. Other than the learned reward values, relative value differences between the stimuli were able to predict various measures of attentional capture. We were able to demonstrate that selective attention processes were sensitive enough to adapt to trial-to-trial changes in value updates, thus revealing the efficiency of our attentional processes.

Effects of Semantic Ambiguity on Explicit and Implicit Memory Tasks

Semantically rich words usually facilitate performance on both lexical decision task (LDT) and semantic categorisation task (SCT). However, lexically ambiguous words only aid performance on LDT but not SCT. This effect has been explained via different levels of semantic access used in the two tasks: LDT relies on fluency while SCT requires elaborate processing. This account of processing in LDT-SCT mirrors the fluent data-driven versus elaborative conceptual processing account of implicit and explicit memory tasks. An experiment was conducted to examine the parallels between performance on LDT-SCT and implicit-explicit memory tasks. Specifically, the effects of different types of ambiguous words on implicit-explicit memory tasks performance was investigated. 54 participants engaged in either an implicit anagram solving task or an explicit recognition task that used homographs, polysemous words and unambiguous words. It was found that the performance on ambiguous words in implicit task is similar to the performance of these words in LDT but performance on the explicit recognition task is not similar to that in SCT. It was also found that the different types of ambiguous words had different effects in the implicit memory task. It is concluded that discussions in the explicit-implicit memory task literature may contribute to understanding some aspects of the differential performance of ambiguous words in LDT-SCT.
Poster Session

P1 Bu Chi – National University of Singapore
Authors: See Ya Hui Michelle, Bu Chi
Message tailoring and post-message attitude certainty: The role of defensive confidence

Research has shown that messages are more persuasive when messages’ affective-cognitive focus is tailored to the affective-cognitive properties of attitude objects in discussion. The present study aims to examine how such message tailoring may interact with defensive confidence to affect individuals’ attitude certainty. Participants’ defensive confidence was measured after reading either a cognitive/mismatched or an affective/matched counterattitudinal message about an affective attitude object, increase in tuition fees. Results showed that among low defensive confidence participants, attitude certainty of those who read the affective/matched message was higher than attitude certainty of those who read the cognitive/mismatched message. Among high defensive confidence participants, type of information did not have an effect on participants’ attitude certainty.

P2 Chai Jing Wen – National University of Singapore
Authors: Jingwen Chai, Rongjun Yu
Neither friends nor foe: No current evidence for acute stress on social decisions

The effects of stress on human cognition and behavior are striking. Almost all of us experience behavioral perturbations due to stress from time to time. In decision-making, researchers debate the adaptive purpose of stress – i.e. tend-and-defend (self-serving perspective) versus tend-and-befriend (prosocial perspective), with literature lending support for each hypothesis. Yet, confirmation bias – pursuing information consistent with one’s hypothesis, and file drawer problem – favoritism for confirmatory findings in publication processes, hinders scientific inquiry. Studies often use a laboratory stressor, wait for the typical spike in cortisol responses post-stress and then examine what happens on the variable of interest. However, examining the stress effect on the HPA axis is in fact slow. Remarkably, twenty minutes is all it takes for an improvement versus impairment in game of dice (Pabst, Brand & Wolf, 2013). This is especially important in the context of social decision-making. A mere feeling of stress may trigger unexpected consequences on our interactions with others. Here, against studies examining a slower form of acute stress, I present findings examining the immediate effects of stress, interrogating the befriending versus defending hypotheses simultaneously in two economic games of altruistic behaviors and cooperation in group-driven interactions. Repeatedly across both games, we found no evidences of befriending nor defending, despite expected differences in ingroup versus outgroup and gender. The implications of these counterintuitive findings will be discussed in the context of a critical lack of published literature on the effects of stress on adaptive social behaviors amongst other decision-making processes.
P3  Hoo Eleanore Joy – National University of Singapore
Authors: Hoo Eleanore Joy, Clare Henn-Haase

*Remembering the Forgotten Child: The Psychological Adjustment among Siblings of Children with Cancer*

Research with healthy siblings of children with cancer is limited, especially in Singapore. This study aimed to bridge this gap by understanding the perceived burden and psychological adjustment among these siblings. The potential moderating factors of empathy and communication affecting siblings’ psychological adjustment was also examined. The total sample (N=54) consisted of 27 healthy siblings of children with cancer, compared to 27 healthy control siblings matched for age and gender. Utilizing a Quantitative research design, questionnaires were administered. The study explored the prevalence of Acute Stress Symptoms (ASD) among the target group, with 11 % meeting the required number of symptoms for a diagnosis of ASD and another 17% reporting subthreshold symptoms. Consistent with the hypothesis, findings indicated higher levels of depression and anxiety in target participants compared to control participants. Moreover, empathy and communication were significant moderators for target siblings’ reported ASD symptoms. These findings highlight the need for researchers and psychosocial providers to offer additional care for siblings of children with cancer, as they may be at risk for developing psychological maladjustment if their emotional and informational needs are not adequately met. Implications for caregivers and school personnel are discussed to improve support for these siblings.

P4  Huang Yi – National University of Singapore
Authors: Yi Huang, Xin Huang, Rongjun Yu

*How gossip affects the preference for products – a behavioral study*

Gossip is a way to learn positive and negative socially relevant information about other people’s character or personality without having to interact with them directly (Baumeister, Zhang, & Vohs, 2004). In the advertising industry, the sales of celebrity endorsement products are often affected by the gossip about the celebrity. In the current study, we have examined how gossip about a person affects the preference for the product that is associated with that person. In two experiments, neutral faces were associated with products, then the faces were paired with negative, positive, or neutral gossip. Participants were asked to rate how much they like each product before and after associations. The results revealed that compared with neutral products, participants increased their ratings for the products paired with positive gossip faces, and decreased their ratings for the products paired with negative gossip faces (Experiment 1). Moreover, participants liked the products more than before when the products were paired with negative gossip faces but confirmed later that the gossip was fabricated (Experiment 2). Our findings suggest that both negative and positive gossip can affect the preference for products and fabricated negative gossip has an opposite effect.
Masked morphological priming studies typically emphasize either a morpho-orthographic or morpho-semantic account of morphological decomposition. While these accounts are distinguished based on the influence of semantics during decomposition, masked morphological priming has thus far been assumed to be prospective in nature, involving processes engaged before target presentation. However, it is unclear whether retrospective processes initiated after target presentation are also involved. By comparing the priming effects of semantically transparent, opaque, and orthographic primes, this study investigated if morphological decomposition is characterized by a morpho-orthographic or morpho-semantic account. By examining the priming x stimulus quality interaction, this is also the first study in the field of masked morphological priming that has empirically tested for the possible presence of retrospective influences. Results of this study showed that (a) priming effects for transparent primes were greater than opaque and orthographic primes, and (b) the priming x stimulus quality interaction was not significant. These findings provide compelling additional evidence for the role of semantics in morphological decomposition, and suggest that masked morphological priming is mediated solely by a prospective mechanism, unlike masked semantic and repetition priming which also employ retrospective influences. Finally, limitations of studies supporting the morpho-orthographic view and possible reasons why the retrospective mechanism is not employed in masked morphological priming will be discussed.

Spontaneous Thought: Its Role in Predicting Depression in the Context of Self-discrepancy

When reality has fallen short of expectations, people often turn to rumination which may then aggravate depression symptoms. This process may be more pronounced among individuals high on trait neuroticism. Spontaneous thought (ST) is a related concept to rumination, but the role of ST in such situations remains largely unknown. The present study investigated whether, and to what extent, ST influence depressive symptoms amongst individuals with differing trait neuroticism under situations when self-discrepancies are made salient. In the first study, participants were randomly assigned to one of two groups: control and undesired self-discrepancy. Participants recalled personal events associated with their undesirable traits (undesired self-discrepancy group), or neutral past events (control group). Baseline measures of ST, rumination, neuroticism, and depressive symptoms were compared to the same post-manipulation measures 3 days later. No significant moderating effects of ST were found. Further investigations were carried out in a follow-up study incorporating a correlational cross sectional design. All participants experienced discrepancies of the self and ST, neuroticism, rumination, and depressive symptoms were measured. ST was found to mediate the effects of neuroticism on depression. The present findings discerned the relationship of the variables of interest and provided an empirical model to substantiate previous theoretical models. With possible implications for real-world prognosis and alleviation of depressive symptoms, it is hoped that there will be continued efforts towards investigating new laboratory and real-world clinical settings under which ST can be tapped to positively ameliorate depression.
P7  Lee Teck Hao Sean – Singapore Management University
Authors: Lee Teck Hao Sean

Cross-Cultural Validation of the Positive Affect and Negative Affect Schedule (PANAS) with an American and an Asian Student Sample

The positive affect and negative affect schedule (PANAS) is a commonly used scale to assess positive and negative affectivity. Developed and validated in the Western context, the 20-item scale has been administered on Eastern samples with the assumption of measurement invariance. Despite the presence of studies suggesting that differences in comprehension and construal of emotions exist across different cultures, studies administering PANAS on Eastern samples rarely (if ever) go beyond the reporting of Cronbach’s alpha and EFA results to support their use of the PANAS scale on their samples. This present study examines this assumption by conducting a measurement invariance test for the PANAS scale on an American and an Asian college sample. In general, while evidence of configural invariance was obtained, evidence of scalar and metric invariance was absent. This means that while the overall factor structure may have been similar for both groups, the item loadings and intercepts differed. Implications and nuances will be discussed further in the final poster/paper. Considering these findings, due caution should be exercised when administering PANAS on Asian samples.

P8  Ruth Leong – National University of Singapore
Authors: Ruth L. F. Leong, June C. Lo, Sam K. Sim, Hui Zheng, Jessica Tandi, Juan Zhou, Michael Chee

Brain Structure and Cognitive Changes Over 8 Years: The Singapore-Longitudinal Aging Brain Study

Although East Asia harbors the largest number of aging adults in the world, there is currently little data clarifying the longitudinal brain-cognition relationships in this group. Here, we report structural MRI and neuropsychological findings from relatively healthy Chinese older adults of the Singapore-Longitudinal Aging Brain Study cohort over 8 years of follow up (n = 111, mean age = 67.1 years, range = 56.1–83.1 years at baseline). Aging-related change in structural volume was observed, with total cerebral atrophy at -0.56%/year, hippocampal atrophy at -0.94%/year and ventricular expansion at 3.56%/year. Only speed of processing showed an aging-related decline, while other cognitive domains were relatively maintained. Faster decline in global cognition was associated with total cerebral, hippocampal and gray matter volume losses over time. Faster total cerebral atrophy and white matter atrophy was associated with faster decline in verbal memory. Hippocampal atrophy and ventricular expansion were both associated with greater decline in verbal memory and executive function. These findings provide a benchmark for research on brain structural and cognitive changes with aging in East Asians.
P9  Melissa Li – National University of Singapore
Authors: Melissa Li, Stuart Derbyshire

Pain sensation evoked by observing abdominal pain in others

Some individuals experience pain when observing injury or others in pain. To understand vicarious pain better, we presented images of subjects in abdominal pain to healthy female individuals. Just over 16% of the 74 participants reported experiencing physical pain in the abdomen in response to one or more of the images (“responders”). These responders reported experiencing pain on more days during their menstruation, and at greater intensity, than non-responders. The responders also reported greater pain catastrophising. Six responders were matched for age and trait empathy ratings with six non-responders, and scanned with fMRI while viewing the same abdominal pain images for 3 or 6s. In contrast with images depicting subjects expressing negative emotions, the responders activated the anterior cingulate cortex, which is associated with pain processing, when images were presented for 3s. These results demonstrate that a subset of the healthy population experiences vicarious pain when viewing images depicting relatively mild pain and discomfort, without injury. The fMRI results demonstrate pain-related activation consistent with the responders’ pain reports but only when images were presented for 3s. The changes were not seen in the 6s presentations, which could be due to the pain experience dissipating after 3s.

P10  Gwenisha Liaw – Singapore Institute for Neurotechnology
Authors: Gwenisha J. Liaw, Takashi Obana, Tiffany T.Y. Chia, Christopher L. Asplund

Shared and distinct information processing limitations across attentional forms and modalities

Selective attention allows us to prioritize which sensory information reaches awareness. In both the visual and auditory domains, attention controlled voluntarily (goal-directed) or by external events (stimulus-driven) has a dark side: Unattended items are frequently missed. The extent to which these attentional limitations are due to common cognitive mechanisms, however, is not fully understood. In this study, we adopted an individual differences approach to investigate the relationships amongst temporal attentional capacity limitations. The Attentional Blink (AB) indexed goal-directed attentional limitations, whereas Surprise-induced Blindness (SiB) and its auditory analogue Surprise-induced Deafness (SiD; Obana & Asplund, in prep) indexed stimulus-driven ones. Each participant (n=75) was tested twice on each paradigm in each sensory modality, thereby allowing us to calculate cross-task correlations and test-retest reliability. Despite finding strong test-retest reliability and significant correlations between blink and surprise deficits within modalities, only SiB and SiD were related across modalities. In contrast, visual and auditory blink magnitudes were uncorrelated. We conclude that goal-directed and stimulus-driven attention may be contingent on partially shared capacity limits within modalities. Shared stimulus-driven deficits across modalities may be due to a central cross-modal alerting mechanism.
Immigration has long been a hot button topic in Singapore, fuelled by the nation-state’s pro-immigration policies in recent decades. A recent survey on attitudes towards immigrants highlighted that Singaporeans were less willing to work with or live next to an immigrant from People’s Republic of China (PRC) compared to a Singaporean Chinese. Research on the influence of individual values on attitudes towards others has shown that self-transcendence values has been positively linked to positive attitudes towards out-groups. Research has also found a positive link between support for multiculturalism ideology and positive attitudes towards different cultural groups. However, studies have yet to draw a link between values, multiculturalism, and their effects on attitudes. Hence the aim of this study was to: (1) replicate prior findings on the relationships between self-transcendence, multiculturalism, and attitudes; (2) examine if support for multiculturalism mediates the relationship between self-transcendence and attitudes. Positive attitude was operationalized as a willingness to interact (WTI) with PRC immigrants across various social situations. Singaporean participants (n=100) completed scales measuring individual values, support for multiculturalism, and WTI with PRC immigrants. Results replicated previous findings on the relationships between self-transcendence and multiculturalism on WTI with PRC immigrants. Importantly, the relationship between self-transcendence and willingness to interact with PRC immigrants was mediated by support for multiculturalism. The finding suggests that individuals who subscribe to self-transcendence values were more likely to support a multicultural ideology, which in turn increased their willingness to interact with PRC immigrants. Implications and directions for future research are discussed.
P12  Lim Ai Zhen – National University of Singapore
Authors: Lim Ai Zhen, Iliana Magiati
*The Broader Autism Phenotype and its Relationship to Internalizing and Externalizing Disorders – the mediating and moderating roles of Alexithymia, Emotion Dysregulation, and Acceptance*

Background: Individuals diagnosed with ASD are at heightened risk for developing co-morbid psychopathological disorders. While the positive association between autistic traits (ATs) /ASD and internalizing/ externalizing symptomatology is generally well-documented, studies investigating possible mediators and moderators are only just emerging. Aims and Methods: The current study explored a proposed mediation and moderation model consisting of alexithymia, emotion dysregulation (ED) and acceptance in accounting for the relationship between social/ behavioral ATs and internalizing and externalizing symptoms in an unselected sample of 268 undergraduates using self-report measures. Sequential mediation and simple moderation analyses were conducted using the bootstrapping method. Results: Social/ behavioral ATs were positively correlated with internalizing and externalizing symptoms with small to medium effect sizes, and with ED with a medium effect size. Alexithymia and ED fully mediated the relationship between social/ behavioral ATs and internalizing and externalizing symptoms, Additionally, acceptance moderated the relationship between alexithymia and ED. Discussion: The study’s findings, should they be replicated in clinical ASD samples, suggest that interventions could be piloted aiming to reduce alexithymia and ED while facilitating acceptance as a way to promote better outcomes in the ASD population. Strengths and limitations, possible implications and directions for future research are also examined.

P13  Lim Jie Xin – Nanyang Technological University
Authors: Lim, J. X., Ho, M. R.
*Comparing the Sensitivity of Level-specific Fit Indices in Multilevel Structural Equation Modelling*

Multilevel structural equation modelling (MSEM) combines the advantages of multilevel modeling and structural equation modelling and enables researchers to examine complex multivariate relationships between latent variables across different levels. However, assessing the fit of MSEM models remains a challenge. Researchers (e.g. Hsu et al., 2015; Ryu, 2014) have proposed the use of level-specific fit indices to assess the level-specific data-model fit of MSEM. The current study compared the sensitivity of these proposed fit indices (i.e. within- and between-level x^2, CFI, RMSEA, and SRMR) in the context of multilevel CFA model using a Monte Carlo Simulation study with varying cluster sizes, intra-class correlations (ICCs), and model misspecifications. 500 replications were simulated for each condition. Applying Hu and Bentler’s (1999) cutoff criteria, results showed that when cluster size is larger than 30, regardless of the ICCs considered in the study, all level-specific fit indices are sensitive to model misspecification; however, between-level CFI and RMSEA have the tendency to incorrectly suggest misspecification even when the model is correctly specified. Suggestions for applied researcher and limitations of the study were briefly discussed.
P14  Lim Kim Loong – Nanyang Technological University  
Authors: Kim Loong Lim, Georgios Christopoulos  
Energy Usage Behaviour: Optimizing Information Intervention Design  

Threats to energy systems, such as issues of energy resource scarcity and depletion, as well as the negative impacts of human energy activities on the environment have led to a surge in the level of attention and public awareness with regards to energy conservation. Cognizant of this looming problem, a large and burgeoning body of research seeks to address energy conservation. While advances in technology are intuitively integral, changes in behaviours towards more a sustainable direction is arguably just as necessary. To date, numerous factors, models, theories and intervention approaches across various disciplines have been identified, proposed and examined to influence energy consumption and conservation behaviours by the extant literature. Eminently, the use of information strategies is widely cited as a means to address these issues. However, despite numerous studies spanning several decades, existing issues within the literature (i.e. pertaining to methodology, implementation and scope) still persist, hampering efforts to understand and address the issue of energy behaviour conservation. This research aims to examine these identified issues within the context of an information-based behavioural intervention – a focus chosen primarily due to the widely used, but still poorly understood nature of this approach within literature. This research also aims to examine the effects of energy information feedback (i.e. utilities billing) on cognitive perception and subsequent energy consumption behaviour. To achieve our research aims, we aim to investigate the role and relationships of design aesthetics, socio- and psychological factors that are proposed to be influential on perception and behaviour.

P15  Lim Wee Ping – National University of Singapore  
Authors: Lim Wee Ping, Melvin J. Yap  
Concreteness moderates effects of valence on word processing tasks  

Emotion is an important aspect in language processing. However, the influence of emotional processing on word recognition is unclear, with various studies reporting that the effect of valence is linear, categorical, or quadratic with an inverted-U function. A novel proposition by Kousta, Vigliocco, Vinson, Andrews and Del Campo (2011) states that processing differences of affective information in concrete and abstract words may moderate valence effects in lexical processing. Converging results from the analyses of three different word recognition tasks provided evidence for the moderation of valence effects by word concreteness, where valence effects followed a linear form in concrete words, but an inverted-U quadratic form in abstract words. This research supports Kousta et al.’s (2011) theory of possible processing differences of affective information between concrete and abstract words, and demonstrates the importance of considering the moderating influence of concreteness in future studies of emotional valence effects on lexical processing.
When exposed to a clinical environment, patients may implicitly associate specific stimuli such as a smile or an odor with their symptom improvement or decline. Recent research has claimed that conscious awareness of conditioned stimuli is not required during either the acquisition (learning of an association between cue and stimulus) or the activation (cues triggering the association) phases. Our findings, however, demonstrated that analgesic and hyperagesic pain responses were differentially sensitive to conscious awareness. Here, we show that the hyperagesic response was not modulated by awareness in the conditioning phase, but by awareness in the activation phase. The analgesic response was only significant when stimuli were supraliminal in both phases. Our results indicate that whereas the hyperagesic pain response is more sensitive to conscious activation, the analgesic pain response requires both conscious conditioning and conscious activation. Our findings highlight the different role of consciousness in the analgesic and hyperagesic pain responses and raise issues concerning how to harness these two effects in clinical contexts.

Offset analgesia (OA) is the remarkably large reduction in pain when a noxious stimulus’ temperature is only slightly reduced (e.g. 1°C). Although numerous studies have investigated OA, including by using pharmacological interventions to understand its neural mechanisms, fundamental questions about inducing analgesia remain. This study investigated two such questions. First, we tested whether OA could be induced with different noxious stimulus durations (3s, 6s and 10s), in addition to the standard 5s stimulus in most studies. Second, we tested whether profound analgesia akin to OA could be induced instead by a staggered pattern of slowly increasing the temperature (2°C increase-1°C decrease). Our results showed that OA can be elicited with stimuli durations of 3s, 6s and 10s. We suggest that during the 1°C stimulus offset, a temporal sharpening mechanisms is activated that is largely independent on the stimulus duration. Our results also showed that staggered trials do not allow one to experience tissue-damaging temperatures without pain as previously reported (Grill & Coghill, 2002). Indeed, these staggered trials led to analgesia comparable to OA trials with the same stimulus durations. The 1°C stimulus offset (present in both OA and staggered trials) likely led to analgesic effects in both cases. Broadly, these results show that a wide range of dynamic changes in noxious stimulus intensity can allow one to experience analgesia, though the key inducer appears to be the slight drop in temperature.
Writing is an important skill for communication and academic success. However, writing as an area of research has been greatly neglected. In particular, few studies have investigated into the specific areas of deficits in writing for children with Autism Spectrum Disorder (ASD). The main goal of this study is to examine the written narrative performance of children with ASD as compared to their neurotypical peers using two ways of assessing writing, analytic and holistic measures. This study also makes an attempt to explore the question of “What makes a good writer?”, by examining a multitude of potential predictors- namely, theory of mind, social communication skills, verbal working memory, visuospatial working memory and oral language skills. In this study, eight primary school children with ASD were matched with eight neurotypical peers on gender, age and non-verbal intelligence. Overall, the results revealed that children with ASD struggled the most with production and organization of their content but appear to have comparatively normal performance for structural language, such as grammar. Verbal working memory and oral language skills were found to be significant predictors of written narrative performance for both groups of children. All in all, this research adds to the current body of research on language impairments in children with ASD, the theoretical understanding of the disorder, as well as practical implications for designing therapy and programs for children with ASD.

Background & Aims: Individuals with Autism Spectrum Disorder (ASD) often experience high rates of internalizing and externalizing problems, which may be explained by emotion dysregulation. However, little is known about the potential role of familial factors and its influence in this relationship. This study investigated the relationship between autistic traits, emotion dysregulation and internalizing and externalizing symptoms. It further explored the role of two proposed moderating familial factors (family expressiveness and parent socialization of coping) and their relationship with autistic traits, emotion dysregulation and internalizing and externalizing symptoms. Methods: 268 undergraduate Singaporean students completed a set of self-report measures. Mediation and moderated mediation analyses were conducted using the bootstrapping method. Results: Autistic traits were positively related to internalizing and externalizing symptoms and emotion dysregulation was a significant mediator. Family expressiveness and parent socialization of coping were significantly associated with autistic traits, emotion dysregulation and internalizing and externalizing symptoms, but did not moderate the strength of the mediation relationship. Discussion/Conclusion: The present findings suggest that emotion regulation may be a useful intervention target for internalizing and externalizing symptoms in individuals with high autistic traits and possibly for those with ASD, following replication with clinical samples. Limitations, implications and suggestions for future research on other family and parental factors as well as implications for emotion regulation targeted interventions are discussed.
Yia-Chin Tan – National University of Singapore
Authors: Yia-Chin Tan, Clarice Zhang, Lile Jia
Which matters more: Number of countries or cultural differences? An investigation into the quantitative and qualitative indices of travelling on creativity.

Past research demonstrated that living abroad enhance creativity. We found that mere traveling abroad does so too. Specifically, we found that the more countries a participant has traveled to, the higher s/he scored in both convergent (Study 2) and divergent (Studies 1 & 3) measurements of creativity. This quantity index of traveling abroad predicted creativity over and above participants’ individual differences (e.g., Gough personality score, Openness to experiences). Meanwhile, the qualitative indices of traveling experiences (i.e. mean and max cultural distance between countries visited versus participant’s home country) showed a less consistent relationship with participants’ creativity scores. Finally, mentally simulating the experiences of both living and traveling abroad improved one’s creativity (Study 4). Content analysis on participants’ simulation revealed that exposure and adaptation to new experiences mediated this relationship. Our findings indicate that the quantity (over quality) of novel cultural exposures, via traveling abroad, can improve one’s creativity.

Cleo Tay – National University of Singapore
Authors: Cleo Tay, Chua Fook Kee
Does Attentional Capture Habituate?

Past research shows that the magnitude of the capture effect caused by an irrelevant stimulus diminishes with its repeated presentation. This contradicts prominent bottom-up and top-down models of attention, which suggest that attentional capture does not decrease over time. The present study sought to answer the main question of whether habituation is responsible for the diminishing of the capture effect. Using a spatial cueing task, the magnitude of the capture effect was examined across time when an irrelevant cue and target were either different colours or the same colour. Results revealed that when cue and target colours did not match, irrelevant cues captured attention and this capture effect was stable regardless of experience. Moreover, the capture effect was greater for cues that matched the target colour, though this difference decreased with time. Three theoretical implications for the conditions of involuntary orienting can be drawn from these results: (a) capture is salience-driven and does not habituate; (b) top-down factors (i.e. cue-target match) modulate the magnitude of the capture effect; (c) experience modulates the role of top-down factors.
Cultural Attachment

Cultural attachment (CA) suggests that cultural symbols can function as attachment figures, in a similar way to prototypical maternal attachment figures. In order to further understand the psychophysiological and neural mechanisms of CA, we examine whether cultural symbols regulate peripheral physiological indicators of arousal in response to symbolic threats. In Study 1, using the Affective priming paradigm, participants were shown threatening stimuli followed by the subliminal presentation of cultural images while their Skin Conductance Responses (SCR) are recorded. Threat increased SCR when the subliminal image was a control. However, the subliminal presence of a cultural symbol reduced this typically high SCR to threat, suggesting that the threat-related arousal was mitigated. Importantly, individual differences related to the way an individual interacts with their environment, i.e. the need for cognitive closure, affected physiological responses towards threat and cultural images. Study 2, using fMRI, examined brain activations during the task. Activations in different brain areas, such as mPFC and PCC, were found to relate to threat and cultural symbols. Overall, the present studies sets the basis for potential emotional mechanisms that could explain how cultural symbols can act as extensions of the prototypical attachment figures and confer the sense of security in the face of threat.

Looming and Anxiety Symptoms: A Multivariate Meta-Analysis

Looming Cognitive Style (LCS) posits that individuals generate mental representations of dynamically intensifying danger and this is argued as a vulnerability factor that is specific to anxiety. A handful of studies have been conducted over the past 2 decades and thus, a verification of the LCS model as a broad cognitive risk factor to anxiety is deemed to be appropriate. After searching online databases and contacting researchers, a total of 61 studies were coded for their effect sizes and study characteristics. By means of multivariate meta-analysis, LCS and its associations with depression and anxiety symptoms (general anxiety, social anxiety, OCD, fears and worry) were investigated. Results indicated that the relationship between LCS and the symptom measures were all significant. However, the effect sizes of anxiety symptoms (ranged from r = .33-.44) were greater than depression (r = .27). This suggests that LCS is a pan-anxiety risk factor that is specific to anxiety disorders and not depression, and is consistent with the existing literature that LCS is a broad cognitive vulnerability that is specific to anxiety. Moderation analyses with study characteristics were conducted, and recommendations for future research are discussed.
Patients with comorbid diabetes and end-stage renal disease (DM-ESRD) face considerable challenges to self-management. Health literacy (HL), conceptualised as the cognitive and social skills necessary to promote and manage health, is theoretically and empirically linked to improved patient outcomes. Unfortunately, prior research is largely focused on functional HL (i.e. basic literacy and numeracy). This exploratory, prospective study set out to more comprehensively profile different domains of HL among DM-ESRD patients and examine their associations with clinical endpoints. A sample of 221 patients (mean age=59.0; 60.6% male) completed the 9-domain Health Literacy Questionnaire (HLQ) along with measures of depression and anxiety, and were followed for an average of 21.8 months. Primary outcome measures were all-cause hospitalisations and mortality. HLQ scores were related to patients’ age, ethnicity, marital status and education, as well as self-reported anxiety and depression. Lower hospitalisation rates were independently associated with home-ownership (Incidence Rate Ratio (IRR)=0.639) and higher Actively Managing my Health HLQ subscale scores (IRR=0.674). Cumulative hospitalisation days were independently associated with patients’ Charlson Comorbidity Index (IRR=1.180), serum albumin (IRR = 0.914), HbA1c (IRR=1.190) and depression scores (IRR=1.061), but none of the HLQ scales. Mortality was also significantly associated with Actively Managing my Health (Hazard Ratio=0.382) after controlling for other variables. Results highlight areas of health management where DM-ESRD patients may require additional support, and underscore the importance of goal-setting behaviours. The findings also lend support for the use of motivational interviewing or patient empowerment interventions towards improving clinical outcomes.

Past research demonstrates that gratitude plays a unique role in fostering communal relationship. Based on empirical evidence indicating that gratitude serves a protective function in social lives (e.g., Ma, Kibler, & Sly, 2013), we propose that gratitude may impede risk taking by protecting grateful individuals from loss in economic decisions. Present research tested this hypothesis. The experiment consisted of an autobiographical recall task to induce the target emotion, followed by the Automatic Balloon Analogue Task (autoBART). Contrary to our predictions, the study yielded non-significant results. However, the hypothesis still carries potential for further research because the results obtained, though non-significant, nonetheless follow the trend predicted: grateful participants had lower risk-taking scores as compared to those in neutral condition. More participants will be needed in this study.
Cooperation is vital for survive in human societies. However, in many bargaining situations, choosing noncooperation maximize individuals’ gains at the cost of group utility. People may choose non-cooperation in social dilemmas either out of fear (if one expects that other player will be noncooperative there is fear of being exploited) or out of greed (if other player will be cooperative, a player can increase his/her own payoff by defecting). The developmental trajectories of these two fundamental social motives (fear and greed) remain unexplored. Two hundred and fifty-three school-aged children (7- to 11-year-old) were tested using an incentivized repeated one-shot Prisoner’s Dilemma Game to elicit choice behavior that resonates with greed (high vs. low) and fear (high vs. low) by manipulation of payoff parameters attached to each decision choice (cooperate or not-cooperate). This task allows us to examine greed and fear motives independently. Results showed that the greed effect had no significantly different impact on children’s non-cooperative decisions across middle childhood (7- to 11-year-old), while 11-year-old children had larger fear effect on their non-cooperative decisions than that on 7-year-olds. Our findings suggest that sensitivity to social threat is increasing with age across middle childhood and the greed motive remain steady in this period. Since emotion as a motivational force has an impact on children’s non-cooperative decisions, future research should focus on how to promote people’s prosocial behavior (e.g., cooperation) by regulating emotion of social fear and greed from childhood.
GETTING TO NPGSC 2017

A. MRT & Bus

From Kent Ridge MRT Station

Walk to Kent Ridge Bus Stop (Bus Stop No. 18331) from Kent Ridge MRT Station (Exit A). Board NUS Internal Bus Shuttle A1 or SBS Transit No. 95 at the bus stop directly in front of NUH (not opposite). Alight at AS8/Central Library. An usher will be stationed at the stop to provide directions to the conference venue.

For people who are not familiar with NUS, this is the best route if you’re taking public transport.
B. Motor Vehicles

Via Ayer Rajah Expressway towards Tuas

- Along AYE towards Tuas, exit at Exit 9
- Turn left on Clementi Road
- Turn left onto Kent Ridge Crescent

Parking is available at Carpark 15 (in front of Temasek and Eusoff Halls); it is marked by the red star below. The parking rate is $0.0214 per minute, with a maximum charge of $2.568 for vehicles entering during operating hours on Saturdays.

NPGSC 2017 Organising Committee:
Dr. Nina Powell, A/P Ryan Hong, A/P Melvin Yap, Choo Rui Qi