

Brian Harder

Emerging from a small rural community and influenced by the Mennonite Brethren, Brian began his academic career at the University of Alberta in 1984. In his second year he majored in Drama, which likely reflected his continuing interest in creativity and creative expression. After his second year, Brian decided to travel for a year. He frequently sought out situations he knew would challenge his personal philosophies and resourcefulness; so he undertook the journey alone. He visited Europe and the Middle East and was particularly enamoured of Turkey.

In 1987 he entered the Psychology undergraduate honors program and graduated with first class standing in 1989. He married Joan Fitzpatrick in July of that year. He began his graduate studies at the University of Alberta in September 1989 and was studying dreams and the psychology of self with Professor Don Kuiken.

Brian died in July 1990 of a brain aneurysm at the age of 28. Many were shocked at Brian's untimely death. However, Brian knew he was at risk; he had already survived one aneurysm a number of years earlier. But Brian chose to live life in a way that was most meaningful to him. He was a thoughtful and contemplative individual, as much a philosopher as a psychologist. He often chose to ask the most difficult questions both of himself and of others. As a consequence, he encouraged others to think deeply about those things that matter most.



Brian Harder Honours Day Conference

Friday, 12 April 2013

Keynote Address:

Dr Denise Larsen

Director of Research, Hope Foundation of Alberta
Professor, Educational Psychology
University of Alberta
Centennial Centre for Interdisciplinary Science, 1-160

Oral & Poster Presentations:

Psychology Honours Program

Biological Sciences Building, P-226

Oral Presentations

Abstracts

Jeff Keith

Performance Impact of Stop-lists and Morphological Decomposition on Corpus-based Semantic Space Models

Corpus-based semantic space models, which primarily rely upon lexical co-occurrence statistics, have proven effective in modeling and predicting human behaviour in a number of experimental paradigms that explore semantic memory representation. However, the most widely studied extant models are strongly influenced by orthographic word frequency. This has the implication that closed class words, or function words with very high orthographic frequency, can potentially bias co-occurrence statistics. As these closed class words are purported to carry primarily syntactic, rather than semantic, information, performance of corpus-based semantic space models may be improved by excluding closed class words from co-occurrence statistics, while retaining their syntactic information through other means (e.g. part of speech tagging and/or affixes from inflected word forms). Additionally, very little work has been done to explore the effect of employing morphological decomposition on inflected forms of words in corpora prior to compiling co-occurrence statistics, despite (controversial) evidence that humans perform early morphological decomposition in semantic processing. The proposed study will explore the impact of these two factors, along with interactive effects, on corpus-based semantic space models.

Breanna Steinke

Future-oriented Processing and Children's Understanding of Self-regulation Strategies

Children's ability to delay gratification is a strong predictor of many social and cognitive competencies later in life (Mischel, Shoda & Peake, 1988). By age 6 children can effectively improve their delay of gratification by utilizing strategies suggested by others (Mischel & Mischel, 1983), however very little is known about children's ability to spontaneously employ self-generated strategies. Between 3 and 5 years children significantly improve in the ability to both consider and discuss their own future physiological states (Atance, 2005), and a similar developmental progression might apply in the context of children's understanding and spontaneous utilization of self-control strategies. The present study will explore this phenomenon in 4, 5, and 6-year old children. Participants will complete the Children's Gambling Task and a choice task, which requires them to select items that could reduce temptation and boredom while waiting for a treat, and explain each of their choices. I expect 6-year olds will be the most efficient in future-oriented decision-making, and will demonstrate the strongest tendency to explain their choices by referencing the future. This study will attempt to explain the complex thought processes that help children plan for the future, while exploring age differences in children's capacity for self-regulation without adult guidance.

Oral Presentations

Abstracts

Ty Montour-McKinney

The Effects of Protein Synthesis Inhibitor Anisomycin on Learning and Memory Explored using Neurophysiological and Behavioural Assays

While once established as sufficient and necessary, the role of protein synthesis in long term memory formation has recently been brought back into debate. Evidence demonstrating neural activity suppression following protein synthesis inhibition beckons further investigations into the relationship between de novo protein translation and brain activity in relation to learning and memory. Intracerebral Anisomycin and Teterodotoxin infusions in rats undergoing contextual fear conditioning will be explored. The morris water maze will be used to assess online hippocampal activity under the influence of these drugs while local field potentials will be recorded from the hippocampus of the rats to find correlations between behavioural and neurophysiological measures. The results hope to disambiguate years of memory research and demonstrate the interdependence of molecular, network and behavioural levels of learning processes.

Rochelle Evans

Asymmetry of the Habenula and Coping Style in Sprague-Dawley Rats

An organism's fear can be measured on two dimensions: coping style, or proactiveness in response to fear; and stress reactivity, or threshold for reaction to fear. Our study investigates how an organism's coping style, which can be active or passive, relates to the asymmetry in the habenula, a nucleus in the epithalamus. The habenula regulates dopamine and serotonin pathways, pathways affecting adaptive behaviors, such as fear, and anxiety-based clinical disorders, such as depression. The habenula suppresses response to irrelevant stimuli that evoke negative emotional processing in subcortical structures, by conveying inhibitory signals to midbrain nuclei that result in motor suppression. The asymmetrical nature of the habenula implies lateralization of bilateral, inhibitory control over motor behaviors, including fear-induced reactions. We propose that greater habenular asymmetry correlates with an active coping style, because of the dominant, inhibitory effect of the larger habenula over the smaller habenula, while smaller habenular asymmetry correlates with a passive coping style, as a result of greater communication occurring between the two habenula. We will use a mammalian model, the Sprague-Dawley rat, and three tests – the elevated plus maze, the open field maze and the shock probe test – to investigate these correlations between coping style and habenular asymmetry. The relationship between coping style and habenular asymmetry has implications for mechanisms affecting fear behaviors and clinical anxiety-based disorders.

Brian Harder Day Conference Itinerary

11:00am- Noon

CCIS 1-160

Keynote Speaker, Dr Denise Larsen

Director of Research, Hope Foundation of Alberta
Professor, Educational Psychology
University of Alberta

Noon - 1:15pm

Biological Sciences, Psychology Atrium

Poster Presentations

Zoe Francis
Jeremy Viczko
Tom Vaughan-Johnston

Pizza lunch will be available to students, supervisors, and guests during the poster presentations.

1:30pm - 5:30pm

Biological Sciences, P-226

Oral Presentations

Amanda Fitzner
Alex Porthukaran
Nadia Keyes
Phillip Reimer
Tanya Pacholok
Megan England
Nicole Elder
Nadia Miller
Breanna Steinke
Jeff Keith
Jay Hennenfent
Ty Montour-McKinney
Rochelle Evans

Keynote Speaker **Dr Denise Larsen**

Director of Research, Hope Foundation of Alberta
Professor, Educational Psychology
University of Alberta
11:00 am, CCIS 1-160

The Role of Hope In Early Psychotherapy Sessions: Using Interpersonal Process Recall for In-session Research

Once considered unresearchable, hope now receives significant research attention as a factor important to client health and psychotherapeutic change. Major psychotherapeutic approaches, such as cognitive-behavioural therapy and emotion-focused psychotherapy, claim to foster hope, though none of these approaches specify just how hope is thought to be effectively fostered. During this talk I offer an overview of hope research specific to defining and understanding hope in psychotherapy. Interpersonal Process Recall (IPR), an elaborate qualitative interview method, has been used to elucidate how hope is offered by psychotherapists and experienced by clients during session. I describe our use of IPR and findings from our research about how therapists offer hope and how clients experience hope in-session.

Biography:

Denise J. Larsen, Ph.D., R. Psych. is a Professor of Counselling Psychology at the University of Alberta and Research Director of Hope Studies Central. Her research focuses on hope in counselling psychology process. As a former hospital and general psychology practitioner, she maintains a small private practice.

Oral Presentations

Abstracts

Nicole Elder

Effect of Body Part as Object and Path Movement Gestures on Novel Verb Generalizing in Three year old

Co-speech gestures can aid word understanding; in this study we examine if this is because of the ability of gestures to focus attention or provide cues to semantic meaning. Three year olds' fluent in English participated, with both genders being equally represented. Children were shown a novel verb accompanied by either a body part as object pantomime, a movement of path gesture, or no gesture. Participants were then asked to extend the novel verb to a new situation by choosing a scene with the same object and different action, or different object and same action. If more correct extensions are made by children viewing an accompanying body part as object pantomime, the semantic information conveyed by a gesture aids understanding, not the attention focusing aspect. These results may help the development of educational strategies for children and English as a Second Language learners in the acquisition and generalization of verbs.

Nadia Miller

How Bilingual Children Gesture in French and English

Languages differ in how they encode motion, with some languages focusing more on manner of movement and some on path. By age 3 children talk about motion using the dominant patterns in their language, however their gestures don't show age specificity until age 9. We hope to determine the developmental age at which children predominantly gesture in typologically congruent ways by testing children between ages 5 and 10. Secondly, we hope to determine whether the increased gesture rates seen in bilinguals are due to residual effects of their first language typology.

Oral Presentations

Abstracts

Tanya Pacholok

The Language of Self Positioning and Eating

Problematic eating patterns have become a prevalent concern in society today and restrictive dieting continues to be the dominant approach to controlling one's weight. Excessive food restriction can actually be counterproductive, often resulting in problematic relationships with food, chronic dieting, and unhealthy cycles of weight loss and weight gain. Under the assumption that people display dynamic positioning styles, we will examine how individuals understand and account for their eating behaviors. We will conduct semi-structured interviews with undergraduate students in order to elicit everyday talk about their experiences of food and eating. Using the theoretical framework of positioning theory, we will explore how participants use language to actively position themselves, negotiate new meanings and resolve conflicts in regards to pleasure, convenience and health in eating.

Megan England

Object Familiarity and Gesture Use

Past research suggests that the use of body-part as object (BPO) pantomimes relates to how people conceptually understand objects. Conceptual understanding is knowledge of an objects function and how it is used, independent of its context. Developmental literature shows children (3-5 years) produce more BPO's than imagined object (IO) representations. This demonstrates how children struggle to imagine objects outside of their context, until they can conceptually represent the object. Apraxics also use more BPO's than IO's when they pantomime; past research indicates this may be because of brain damage to a system that represents the function and manipulability of objects. Collectively, this evidence implies that manipulation of an object is imperative to conceptually understand the object. The present study examines the effect of manipulability on pantomime production for ten, likely unfamiliar objects. University students from the Psychology subject pool are used in this study. Participants are put in a manipulability or visual condition. In the manipulability condition, participants may garner more information to conceptually understand the object. Therefore, we predict that greater IO's will be produced in the manipulation vs. visual condition. If this evidence holds true, it may indicate the importance of item selection in future pantomime studies as past experience with objects could effect pantomime production.

Research and Interests:

Dr. Larsen's primary interest is in the study of hope especially as it relates to counselling and educational practices. Her research broadly focuses on how hope is experienced and constructed by both clients and helping professionals during care interactions. At present, she is especially interested how language is used during caregiving conversations to both explicitly and implicitly address hope. In related research, she is also a member of an interdisciplinary research team examining compassion fatigue across a variety of professions. Dr. Larsen's research is and has been funded by several sources including federal granting agencies (SSHRC) and local funders. She is involved in several international research collaborations related to hope. She also teaches a university credit course on hope, entitled, *Hope and the Helping Relationship*, at both the undergraduate and graduate student levels. Dr. Larsen maintains a limited counselling psychology practice through the Hope Foundation of Alberta.

For more information on Hope Studies Central, visit:

<http://www.ualberta.ca/HOPE/>

Poster Presentations

Noon to 1:15 pm
Biological Sciences, Psychology Atrium

Zoe Francis

Coping Style, Personality, and the Autism-Schizophrenia Spectrum
Supervised by Dr Peter Hurd

There are many different ways that people deal with stress, but they can be simply divided into active and passive coping styles. Active stress copers attempt to reduce the source of the stress by proactively dealing with their problems, while passive stress copers attempt to avoid their stress and negative emotions. In most situations, an active coping style is associated with better psychological and physical outcomes. Coping style has been previously associated with personality traits, but it is unclear how coping styles relate to other varying traits, such as the social brain. Autism and schizophrenia have been proposed as opposite disorders on the spectrum of the social brain – autism being a lack of social awareness, while schizophrenic symptoms may be the result of excessive social cues. With this in mind, we studied 457 subjects from a non-clinical student population to look for the relationships between stress coping style, schizotypy personality traits, and autistic traits, with the Big Five Personality measures as cofactors. Previously established relationships between both schizophrenia and autism, and the Big Five were largely replicated, with two particular exceptions: schizotypy was associated with more openness and autism was not associated with neuroticism. The relationship between stress coping styles and some personality traits were also confirmed. Importantly, we found a significant correlation between a non-self-reported measure of autism and passive stress coping. This is one of the first empirical studies looking at the relationship between autism and stress coping and will likely have future clinical implications.

Oral Presentations

Abstracts

Nadia Keyes

The Second Language Self and Learning and Community Engagement

Social psychological studies of second language learning have posited an important role for identity in motivational processes. Several researchers maintain that the more central the language is to one's sense of self and learning is self-determined, the more engaged one will be in the learning process and in the target language community. Most of these correlational studies, however, lack a temporal perspective on how the relations between the self and motivation develop over time. The proposed longitudinal study examines English second language students at the beginning, middle, and end of the course using a questionnaire that assesses the importance of the target language to their sense of self, their affective, cognitive and behavioral engagement in learning the language, and their willingness to communicate in the target language with native-English speakers, and the frequency and durations of these interactions. Analyses of variance will examine changes in the mean level of these variables over time, and cross-lagged panel analyses will examine the hypothesized causal links between the self and engagement.

Phillip Reimer

Metacognition and Autobiographical Memory

The proposed study will explore and compare characteristics between recent and non-recent memories. Recent theories regarding autobiographical memory emphasize self-relevance and goals as key elements differentiating between events remembered and concurrent events that are not. Other theories emphasize the importance of affective tone and distinctiveness. This study will examine the character of autobiographical memory, as well as the beliefs people hold about their memories. Participants will provide both recent and non-recent memories elicited by the Crovitz Word-Cue Task. They will then be re-presented with the memories and a short questionnaire addressing aspects of distinctiveness, emotional content, and self-relevance. Participants will then estimate the degree to which they believe they will recall the same event at particular points in the future. It is expected that distinctive and emotional memories will have a longer projected lifespan, and that recent memories will serve as a control group, likely recalled due to their recency as opposed to their character.

Oral Presentations

Abstracts

Amanda Fitzner

The Influence of Loss on Expressive Writing in Response to Literature

We build upon previous research that investigated how loss history facilitates expressive enactment while reading literature (Sikora, Kuiken & Miall, 2010). This reading mode is characterized by especially vivid narrative content, a resonance of vivid narrative content across thematically congruent passages, and a metaphorical identification with the text that enhances self-perception. We propose that writing expressively as opposed to writing discursively in response to a literary text will enhance the self-perceptual effects of expressive enactment in participants who have experienced a significant loss 2-4 years ago versus those who have experienced a loss more than 7 years ago. For loss experiences characterized by alexithymia (an inability to identify or describe emotions), changes in self-perception will be especially pronounced. The interaction between having certain feelings and the inability to identify them make alexithymic loss experiences conducive to the presence and absence characteristic of expressive enactment while reading, arousing feelings that can be explicated and expressed through expressive writing.

Alex Porthukaran

Influence of Carryover Effects and Loss or Trauma on Creativity

This research plans to assess how carryover effects from dreams affect creative processes. Past studies of these effects and creativity typically have focused on associative processes. We plan to look at both associative processes (being able to combine ideas or important aspects of ideas) and dissociative processes (being able to repress or look past dominant ideas). Mundane (or ordinary) dreams should have a less pronounced effect than impactful dreams on creativity. Loss and trauma (LT) have been shown to increase attention to the metaphoric character of dreams and so should also enhance creativity after dreams. The proposed study has a 2 by 3 factorial design, with LT and no LT conditions. The 3-condition factor consists of testing after a mundane dream, an impactful dream and not after a dream. Participants will be given 3 tasks: a dissociation task, an association task and a task that requires both together. A multiple regression model should show both processes and their interaction explaining some of the variance in overall creativity.

Poster Presentations

Noon to 1:15 pm

Biological Sciences, Psychology Atrium

Jeremy Viczko

No Nose in Cerebral Slows: No Evidence for a Respiratory Component in Neocortical and Hippocampal Slow-wave Activity

Supervised by Dr Clayton Dickson

Previous work has demonstrated a role of the respiratory cycle, specifically of rhythmic nasal inspiration, for the entrainment of slow oscillations in olfactory cortex during ketamine-xylazine anaesthesia. This respiratory entrainment has been suggested to occur more broadly during slow-wave states (including sleep) throughout the forebrain, in particular, in frontal neocortex and both para- and hippocampal cortices. Here we show, using multisite local field potential recording methods and spectral coherence analysis in the rat, that no such broad forebrain coupling takes place during slow wave activity patterns under either ketamine or urethane anaesthesia, and furthermore, that it also does not arise during natural slow-wave sleep. Thus, respiratory-related oscillatory neural activities are likely limited to primary olfactory structures during slow-wave forebrain states.

Thomas Vaughan-Johnston

The Role of Intrinsic Religiosity in Subliminal Priming: Increasing Cooperative Behaviour in the Two Studies of the Dictator Game

Supervised by Dr Peter Hurd

Giving and forgiveness have been frequently studied concepts in social psychology, particularly concerning the role of religious belief, and subconscious priming effects. In two studies, one focusing on giving and the other on forgiveness, primes relating to religious and non-religious sharing themes are used to influence behavior in a one-round, anonymous version of the Dictator Game (considered to be a relatively 'pure' measure of altruistic intention; Hoffman et al., 1994). Given the mixed results found by Shariff and Norenzayan (2007) regarding differential effects of religious priming considering participants' religious statuses, interaction effects are considered. Results were inconsistent concerning a possible positive correlation between intrinsic Christian religiosity and giving, and similarly mixed concerning the efficacy of priming: neither form of priming predicted giving for any religious background, but priming had a 'protective' effect against vindictive behavior in the forgiveness study.

Oral Presentations

1:30pm–5:30pm
P226 Biological Sciences Building

- 1:30-1:45 **Amanda Fitzner**
*The Influence of Loss on Expressive Writing
in Response to Literature*
Supervised by Dr Donald Kuiken
- 1:45-2:00 **Alex Porthukaran**
*Influence of Carryover Effects and Loss or
Trauma on Creativity*
Supervised by Dr Donald Kuiken
- 2:00-2:15 **Nadia Keyes**
*The Second Language Self and Learning
and Community Engagement*
Supervised by Dr Kimberly Noels
- 2:15-2:30 **Phillip Reimer**
*Metacognition and Autobiographical
Memory*
Supervised by Dr Norman Brown
- 2:30-2:45 **BREAK**
- 2:45-3:00 **Tanya Pacholok**
*The Language of Self Positioning and
Eating*
Supervised by Dr Cor Baerveldt
& Dr Elena Nicoladis
- 3:00-3:15 **Megan England**
Object Familiarity and Gesture Use
Supervised by Dr Elena Nicoladis
- 3:15-3:30 **Nicole Elder**
*Effect of Body Part as Object and Path
Movement Gestures on Novel Verb
Generalizing in three-year olds*
Supervised by Dr Elena Nicoladis

Oral Presentations

1:30pm–5:30pm
P226 Biological Sciences Building

- 3:30-3:45 **Nadia Miller**
*How Bilingual Children Gesture in French
and English*
Supervised by Dr Elena Nicoladis
- 3:45-4:00 **Breanna Steinke**
*Future-oriented Processing and Children's
Understanding of Self-regulation Strategies*
Supervised by Dr Sandra Wiebe
- 4:00-4:15 **BREAK**
- 4:15-4:30 **Jeff Keith**
*Performance Impact of Stop-lists and
Morphological Decomposition on Corpus-
based Semantic Space Models*
Supervised by Dr Chris Westbury
- 4:30-4:45 **Jay Hennenfent**
*Stress Coping Style and its Relation to
Memory*
Supervised by Dr Peter Hurd
- 4:45-5:00 **Ty Montour-McKinney**
*The Effects of Protein Synthesis Inhibitor
Anisomycin on Learning and Memory
Explored using Neurophysiological and
Behavioural Assays*
Supervised by Dr Clayton Dickson
- 5:00 –5:15 **Rochelle Evans**
*Asymmetry of the Hebenula and Coping
Style in Sprague-Dawley Rats*
Supervised by Dr Peter Hurd
- 5:15-5:30 **Closing Remarks**