Appendix C

FACULTY RESEARCH INTERESTS AND THESIS TOPICS

Ben BAUER (OSHAWA)

My research interests fall under the rubric of Human Vision Science and its Applications. At the basic level, I study human vision and attention. The goal of this area of research is to identify properties of visual objects that allow them to be found efficiently (accurately and rapidly) in cluttered visual scenes. Using these properties I am validating a simple decision-rule model for visual detection. Practical applications of the model are location and tracking of symbology on visual displays, conspicuousness and camouflage for objects in various environments and image compression.

Relevant References:


Possible Thesis Topics:
Adaptive colour/spatial coding for visual displays.
Thresholds of acceptability for network based application components.
Visual properties supporting rapid detection and location.
Attentional modulation of cognition.

LIANA E. BROWN (LHS C116; 748-1011 x-7238)

Many everyday activities require that we interact skillfully with the environment. My research is focused on discovering how sensation, perception and movement performance work together as we perform both simple, everyday movements and more skilled, highly-practiced movements. I focus on four major questions: 1) Can we use our hands to improve vision and/or attention? 2) How do we keep track of where our limbs are in space? 3) How do our motor capabilities influence cognition? 4) How do we learn new motor skills and what distinguishes expertise from competence? The goal of this research program is to understand both what and how information is exchanged between the motor and sensory systems, and the neural bases of this exchange.

Relevant References:


Michael CHAN-REYNOLDS (LHS C119; 748-1011 x-7534)

I am currently interested in three topic areas (may be suitable for thesis):

1. **Transportation into Narratives**: How do people become transported into a story or movie?
2. **Bilingualism**: How do we keep multiple languages separate in our mind?
3. **Digital Technology**: Is technology making us dumber, smarter, more sophisticated, etc.?

**Relevant References:**


Rory COUGHLAN (DNA B105; 748-1011 x-7779) (on leave 2017-18)

My approach to social and health psychology is multi-disciplinary. I support social scientific attempts to preserve the inter-relationship of individual subjectivity with social processes and culture. I prefer to use qualitative investigative methodologies capable of assessing individual experiences as inter-penetrated by interaction, ideology and contextualized by societal institutions. My main area of specialty is the investigation of health experiences, interactional processes in health encounters and the development of health policy. I am also interested in understanding "personal agency" and the social and cultural factors that contribute to negotiations in everyday situations, particularly for those who experience oppression. Also, how power relations develop in social settings with a special interest in bullying in different institutional settings.

**Relevant References:**


**Possible Thesis Topics:**

Patient experiences with clinical practices & institutions. Cross-cultural topics, Personal agency, Pregnancy Interaction, power & bullying in different institutional settings,

Relevant courses for these thesis topics include PSYC 2700H(272H); 3750H(343H); 3590H(308H); 3740H(304H); Anth 348; 309; Soc 220; 345; 363;
Teresa L. DeCICCO (OSAWA)

My research covers 2 areas of study: 1. Sleep mentation (dreams and dreaming) and 2. Psychology of the Self. Research involves the theoretical underpinnings of these areas as well as their effectiveness in applied practice. For example, studies include decreasing nightmares and negative imagery related to severe illness; and examining the psychophysiological mechanisms of sleep mentation.

Relevant References:


Possible Thesis Topics
1. Investigating the effectiveness of dream therapy on a variety of samples (e.g. cancer patients, soldiers, pain patients)
2. How dream imagery is related to waking life in terms of anxiety, depression, trauma, relationships.

Neil M. FOURNIER (LHS C135, 748-1011 x-7339)

The primary focus of our research is to determine how adult hippocampal neurogenesis affects behavior. To address this, we are examining how the abnormal integration of new neurons after epileptic seizures influences cognitive and behavioral function. Specific Aims are: 1) to examine the consequences of chronic seizures on the learning-related functions of new neurons; 2) to map the anatomy and neurochemical profile of synaptic inputs onto newborn neurons after seizures; 3) to determine if mediators of beneficial neurogenesis (e.g., enriched environments, antidepressants) reverse seizure-induced behavioral impairment.

A secondary focus of our research is examining how animals distinguish safety from potentially threatening environments. Projects are: 1) exploring the neural circuitry involved in the processing of learned safety signals; 2) determining the impact that early life stress or exposure to drugs of abuse might have on the neural and behavioral mechanisms of safety learning.

Relevant References:


Possible Thesis Projects:
• How do seizures affect the recruitment of new neurons into memory-related circuits
• Can environmental enrichment reverse aberrant seizure-induced neurogenesis
• Identifying the neurobiological factors important in the encoding and/or retrieval of learned safety signals
• Elucidating neurocognitive factors associated with human creativity
My research interests intersect human sexuality and social psychology. More specifically, current research focusses on: (1) sexual consent / negotiating sexual interactions / sexual coercion; (2) cognitive and behavioural aspects of first sexual experiences; (3) sexuality and technology (e.g., Internet use, sexting); (4) sexual resourcefulness.

Relevant References:


Possible Thesis Topics:
Factors influencing sexual consent attitudes and behaviours.
Factors impacting first sexual experiences (i.e., personality, safer sex, relationship quality) Sexting behaviour in young adult populations
Sexual resourcefulness and related variables
Sexual communication in young adults (face-to-face and electronic means)

Nancie IM-BOLTER (OSHAWA)

My research focuses on language and cognition and involves a diverse population of children and adolescents, which includes both typical and atypical development (e.g., psychopathology, language impairment, autism spectrum disorder).

I am currently focused on: 1) social cognitive/theory of mind interventions in children with autism spectrum disorder, 2) the relation between language and theory of mind, 3) the relation between language and numeracy in early childhood, 4) the relation between language and reading, 5) higher order language (such as figurative language) in children and adolescents. Although most of my research involves children, my interest in the relation between language and cognition is across the lifespan.

Relevant References:


Possible Thesis Topics:
Language and Theory of Mind (or Social Cognition in general)
Language and Literacy
Language and Numeracy
Other topics in language, cognition, and/or psychopathology (e.g., French Immersion and bilingualism, mental health in adolescents)
Deborah J. KENNETT (LHS C132; 748-1011 x-7770) (on leave 2017-18)

My research interests focus on coping strategies, school and work transitions, and health promotion, with special emphasis on program development and on the personal and social factors promoting personal achievement. Research I have completed supports the view that variables such as stress appraisal, motivation, self-efficacy, situational factors, social factors, physiological factors and personal skills play a complex and interactive role in goal attainment.

Example References:

Example Thesis Topics:
Factors influencing lifestyle changes and outcomes
Self-compassion and dealing with academic failure
Goal setting and academic achievement

Hugo LEHMANN (LHS C117; 748-1011 x-7236)

The primary focus of my research program is to determine the contributions of different brain structures to learning, memory, and emotion. Specific aims are to: 1) understand the neural circuits involved in acquiring, storing, and retrieving memory; 2) delineate the mechanisms involved in long-term consolidation and temporally graded retrograde amnesia; and 3) determine how deficits in emotion may undermine mnemonic function. Related research projects normally involve assessing whether surgical lesions and pharmacological manipulations in rats cause anterograde and/or retrograde amnesia as well as changes in fear and anxiety in several types of behavioural paradigms.

A second focus of my research program is to examine the means to reverse or attenuate cognitive deficits, such as memory loss, by promoting regeneration of damaged brain circuitry. Projects examine the effects of promoting neurogenesis with different treatments (e.g., growth factor, enriched environment) on recovery of mnemonic function from a cellular to a behavioural level.

Relevant References:

Possible Thesis Projects:
- Memory reactivation and neural distribution of the engram
- Resistance of memory to brain damage
- The effects of slow progressive damage to the hippocampus on memory
- Strengthening memory with emotion
Mowei LIU (LHS C121; 748-1011 x-7472)

My general research interests are in social development from a cultural perspective. Specifically, I am interested in child and adolescent peer relationships, friendship networks, and parental socialization processes (e.g., belief systems, disciplinary styles) in children’s social and emotional development. Among various factors that may contribute to individual social development, I am particularly interested in parenting styles and parental socialization goal-oriented behaviors and their relations to children’s social, emotional and school adjustment in Chinese and Canadian children. Both within-culture and cross-culture approaches have been taken in my research to understand the impact of cultural context on human development.

Relevant References:


Possible Thesis Topics:
Parental achievement orientation and children’s learning behaviours in Canada and China (relevant courses: PSYC 2500H(281H), 3610H(323H), 3560H(384H))

Acculturation and adaptation (relevant courses: PSYC 2500H(281H), 4530H(430H))

Geoffrey S. NAVARA (LHS C129; 748-1011 x-7539)

Over the past several years my research has focused upon a variety of topics. While I am still very interested in family relations and the psychology of religion, my research has expanded to include: 1) the ways in which we psychologically understand ‘evil’ (e.g., behaviours and motivation of perpetrators of evil acts) and how individuals react to and attribute meaning to witnessing those acts; 2) media representations of a variety of issues (e.g., Aboriginal health, university student mental health, HIV) and the ways in which these messages influence the general public; 3) intimate relationships; 4) Inuit health; and, 5) issues of prejudice and stereotype activation with dominant and immigrant populations. I often adopt a community-based approach to research and utilize both quantitative and qualitative methodologies.

Relevant References:


Possible Thesis Topics
- Transmission of cultural values and beliefs in families
- Underlying psychological mechanisms to understanding ‘evil’
- Media representations of psychological/social issues
Elizabeth (Lisa) K. NISBET (LHS C128; 748-1011 x-7855)

My research focuses on individual differences in subjective connectedness with nature (nature relatedness) and the links with health, well-being (happiness), and environmental sustainability (attitudes, values, concerns, behaviour).

Relevant References:


Possible Thesis Topics:
- The psychological health effects of nature contact and exposure to nature images (e.g., well-being, happiness, stress and coping, affective forecasting).
- Connection/disconnection from nature and environmental decision-making (sustainable behaviour).
- Personality correlates (e.g., materialism, Big 5, self-concept/identity) and antecedents of nature relatedness (e.g., growing up in urban/rural environments).
- Interventions that influence nature relatedness (e.g., environmental education, nature experiences, virtual immersion, wildlife viewing, citizen science).

Prerequisites: preferably PSYC 2310H, PSYC 3420H, and 3770H (or ERSC 3710H)

Fergal O’HAGAN (LHS C134; 748-1011 x-7086)

My research program focuses on three areas: 1. Psychosocial determinants of work disability and factors that enable (or impede) disabled workers from reintegrating to the workplace. Some of my present projects include the role of illness representations in recovery from occupational injury, health trajectories and coping in injured workers with permanent impairments, the role of acceptance and resourcefulness in occupational adaptation following disabling injury. 2. Concussion risk perceptions and their relationship to protective behaviours in sports community stakeholders. 3. Effective methods for teaching undergraduate statistics.

Relevant References:


Possible Thesis Topics:
- Evaluation of program-based care delivered by Family Health Team allied professionals
- Examining the role of resourcefulness and illness perceptions on return to work
- Experiences of mental health professionals in work disability and return to work
- Concussion risk perceptions and protective behaviours among sporting communities
- Illness representations and recovery trajectories of patients with chronic illness
- Evaluating the effectiveness of a flipped classroom design for teaching undergraduate statistics.

Helpful prerequisites:
PSYC 3610H, PSYC 3750H

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James D. A. PARKER (LHS C249; 748-1011 x-7935)

I have been involved in a number of research projects on personality and affect regulation. During the past 2 decades research from a variety of fields has generated growing interest in the development of affect regulation and in the consequences for personality development, psychopathology and wellness when there are deficits in these abilities. I am particularly interested in studying the relationship between constructs like alexithymia and emotional intelligence and various outcome variables (particularly academic achievement, leadership, and various mental and physical health problems). Another longstanding research interest involves work on psychometric tools for assessing constructs like alexithymia and emotional intelligence.

Relevant References:


Possible Thesis Topics:
How long-lasting are emotional intelligence’s effects on educational attainment and vocational outcomes?
What are the links among addiction-related behaviours (specifically problem gambling, internet misuse, and problematic video/computer game addiction) and dimensions of emotional and social competency in adolescents and adults?

What is the relationship between parent and child levels of emotional intelligence?

Relevant courses for these research topics include PSYC 2310H(236H) and 337H and PSYC 2300H(240H) and 3300H(341H).

Kevin PETERS (LHS C137; 748-1011 x-7795)

My current research interests cover two main areas:
1. Neuroethics of Cognitive Enhancement: I have recently become interested in how people define cognitive enhancement and what factors are related to one’s willingness to use pharmaceuticals to enhance their cognitive performance and other aspects of psychological functioning.
2. Perceptions and Realities of Mild Cognitive Impairment and Dementia: I am interested in the critical examination of how well we can reliably and validly predict the onset of dementia (e.g., Alzheimer disease or AD). I am also interested in what the members of the public think about the risk for developing AD and their views on how effective the current treatments are for AD.

Relevant References:


Possible Thesis Topics:
An examination of how students define "cognitive enhancement" and/or an investigation into the factors that are associated with one’s willingness to use a drug to enhance different psychological traits/abilities (Prerequisites: preferably PSYC 2010H, 2200H, 2400H)

An examination of the information that is currently available online about different cognitive enhancing drugs (Prerequisites: preferably PSYC 2010H, 2200H, 2400H)
Elizabeth RUSSELL (LHS C115; 748-1011 x-7867)

From a research perspective, I am broadly interested in the experiences of aging in small towns and rural communities, and the influences of factors such as population decline and community capacity on seniors’ health and well-being in these types of geographies. Further, I am interested in the impacts of age-friendly community development, and how best to implement sustainable community-based programming.

Potential Honours students would be given the option to used mixed methods (surveys and focus groups/interviews) in a project broadly looking at the experiences of aging from a community health and wellness perspective. Participants would range from seniors to community leaders to health care practitioners to volunteers, depending on the particular project. Data may also include analysis of preexisting major data sets related to the above research topics, in particular the Canadian Community Health Survey (Statistics Canada).

Publications:
Philpott, E., Fowler, K., & Russell, E. (2016). Positive social interactions and community belongingness may protect older adults’ cognitive health. (draft submitted)
Russell, E. (2013). Evidence update: Examining options for dialysis services in rural and remote NL: Evidence in Context Publication. NL Centre for Applied Health Research, St. John’s, NL

Possible honours thesis topics:
- How does living in rural and remote communities influence the experience of aging?
- How can age-friendly communities programming become more sustainable?
- What is the impact of community-based intergenerational programming on seniors and children?
- Topics that are outside the realm of aging but within community health psychology more broadly will be considered
- Methodological approaches: Qualitative, or mixed method approaches will be used.
- Varied keywords: healthy aging, rural aging, age-friendly communities, health psychology, community health, rural communities.

Elaine SCHARFE (LHS C130; 748-1011 x-7354)

Research Interests: Adult Attachment relationships, Influence of relationships on health

John Bowlby (1969/1982) defined attachment as the instinct to form relational bonds with others and the development of strategies to seek and maintain proximity to these attachment figures when distressed, ill, or afraid. These strategies are internalized into representations or internal working models that help to guide interpretation of and reactions to social situations from infancy to old age. My research explores the influence of our adult attachment representations on our social world and the decisions and choices that we make – everything from your choice of friends and lovers, your evaluation of professors, and your health and wellness habits. I am particularly interested in the influence of attachment behaviours on ways of coping with stress during transitions, health outcomes during transitions, and cognitive reappraisals of attachment representations during transitions.

Relevant References:

Possible Thesis Topics: Currently not accepting new applications for honours thesis placements
Brenda SMITH-CHANT (LHS C136; 748-1011 x-7780)

I am interested in cognitive development from the perspective that the experience, education and social programs have a fundamental influence on how information is organized in memory and the resulting behaviour. In particular, I am interested in exploring the science of self-regulation (Shanker, 2016) and the application of this science to learning environments in communities and organizations to create positive learning environments. I am currently the Director of Research for the Self-Regulation Institute (SRI) and a member of The MEHRIT Centre (TMC: www.self-reg.ca). My research is open to undergraduates, graduate students, and professionals interested in evaluation.

I am currently working on multiple projects including how to assess learning environments to: identify self-regulation challenges and strengths, train parents and professionals to incorporate self-regulation principles into their daily practice, use exercise/activities to promote optimal learning environments, and incorporate cultural practices into learning environments for optimal self-regulation. In addition to the selections below, interested students can also review relevant publications at: http://www.self-reg.ca/shanker-self-reg/shanker-library/ and http://www.self-reg.ca/leaders/research-sri/.

Relevant References:
Gilmer, C., Buchen, J., Bennett, C., Letourneau, N., & Smith-Chant, B. (In press). Parent education interventions designed to support the transition to parenthood: A realist review. [copy available from Smith-Chant]

Possible Thesis Topics:
The science of self-regulation and the application to post-secondary learning.
The efficacy of professional learning in an on-line environment.
Creating parenting programs that engage parents.
Integrating exercise bikes into classrooms: The impact on academic performance.
Social policy as a mechanism to initiate cognitive change.

Laura SUMMERFELDT (LHS C120; 748-1011 x-7526)

I have several areas of research interest, bridged by the common theme of personality and psychopathology, with particular focus upon obsessive-compulsive conditions and social anxiety. These include the following: 1) Personality dimensions and psychopathology in clinical and nonclinical populations, 2) Points of continuity (e.g., cognition, emotion regulation and competencies) across clinical and subclinical anxiety conditions and their associations with adaptive behaviour, 3) Models of heterogeneity of obsessive-compulsive disorders, and 4) Diathesis stress models of cause and perpetuation. A specific focus for me has been upon a particular feature of obsessive compulsive experience - the feeling that things are “not just right” - and its links with other psychological variables (i.e., aesthetic preferences, cognition, personality).

Relevant References:

Possible Thesis Topics:

Social anxiety and social and emotional competencies: Etiology and functional implications.

Relevant courses for these research topics include PSYC 2310H(236H) and 337H and PSYC 2300H(240H) and 3300H(341H)