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 simple, everyday tasks. 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) Can we learn a new motor skill by watching others perform? 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:

Possible Thesis Topics (Prerequisites: Psyc 3220H (376H) and/or Psyc 3460H (366H)):
Hand placement and vision, changes in visual-spatial performance following motor learning, motor learning by observing (visual observation or hand-over-hand training), proprioception and reaching.
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 (LHS C137; 748-1011 x-7779)

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 (OSHAWA)

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 my research program 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 repeated 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 my 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 may 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
Terry P. HUMPHREYS (LHS C114; 748-1011 x-7773) (on leave winter 2016)

My research interests intersect human sexuality and social psychology. More specifically, current research focuses on: (1) sexual consent / negotiating sexual interactions (i.e., sexual (mis)communication and 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 adult couples

Nancie IM-BOLTER (OSHAWA) (on leave winter 2016)

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, reading disability, ADHD, autism). I am currently focused on: 1) the relation between language and numeracy in early childhood, 2) investigating the contribution of language to different aspects of social cognition, in particular theory of mind, in typical and atypical development, 3) the relation between language and reading, 4) measurement of executive function (i.e., inhibition, working memory, mental flexibility), and 5) higher order language skills in children and adolescents. Although most of my research involves children my interest in the relationship between language and cognition is across the life span. I also specialize in investigating and evaluating assessment techniques and tools for children, adolescents, and adults. Areas of focus include psychological, emotional, social, and executive function skills.

Relevant References:


Possible Thesis Topics:
Theory of mind and language, assessment of executive function in children and adolescents, language and literacy, language and numeracy, language and/or cognitive functioning in children or adolescents with atypical development, individual differences in acquisition of skills.

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Deborah J. KENNETT (LHS C132; 748-1011 x-7770)

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:
Acculturation and adaptation (relevant courses: PSYC 2500H(281H), 3610H(323H), 3560H(384H))

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

I have two general streams of research: 1) the impact that cross-cultural interactions have on human development; and, 2) the psychology of religion – specifically how religious orientation impacts motivation and behavior. Over the years I have had the opportunity to be involved in, and supervise students doing diverse research projects including: the exploration of cultural-bound mental health disorders within certain Canadian immigrant populations; the psychological and relational impact of cross-cultural relocation on individuals and families; the dynamics of parent-child bilateral influence; issues of prejudice and stereotype activation with dominant and immigrant populations; developing a psychological model of people’s construction of evil (specifically the concept of sacrilege); and, the psychosocial health issues surrounding weight-loss surgery. I have also conducted research exploring the impact of community-based recreation programs on health in 15 remote First Nations communities in Ontario. In my research, I often utilize a combination of quantitative and qualitative methodologies.

Relevant References:

Possible Thesis Topics:
· Religious orientation as a predictor for various behaviours/attitudes
· Parent/child dynamics – specifically looking at bidirectionality in socialization
· Transmission of cultural values and beliefs

Prerequisite: PSYC 2500H(281H) and either PSYC 3510H(381H) or 3560H(384H)
Elizabeth (Lisa) K. NISBET (LHS C128; 748-1011 x-7855)

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 behaviours).

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, citizen science).

Relevant courses for these research topics include PSYC 2310H, PSYC 2700H PSYC 3420H, PSYC 3750H or PSYC 3610H or PSYC 3770H.

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

My research interests lie in the domain of work and health and, more specifically factors influencing occupational adaptation following the onset of chronic illness. 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.

Relevant References:


Possible Thesis Topics:

Biomedical representations and recovery trajectories of chronic pain patients
Health behaviour trajectories in cardiac patients
The role of fear/avoidance behaviour and catastrophization in work adjustment following disabling cardiac illness
Occupational role adaptation in bariatric surgery patients
Psychosocial adaptation among weight loss surgery patients
Opioid use and pain rehabilitation
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 C115; 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)
Elaine SCHARFE (LHS C130; 748-1011 x-7354) (not available for thesis supervision 2015-16)

Research Interests: Influence of relationships on health emotional development across the lifespan.

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. Although attachment representations are proposed to be relatively stable, a key challenge to attachment researchers is to identify conditions under which attachment patterns are likely to change. I am currently exploring mechanisms of continuity and change of attachment in the context of life transitions (e.g., school transitions, transition to parenthood). In addition, I am 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. My current research focuses on how early caregiving relationships impacts on individuals' physical and psychological development.

Relevant References:


Possible Thesis Topics:
* status on accepting honours thesis students for the 2015-16 academic year TBA
Prerequisite: at least one of PSYC 3730H(300H), 3750H(343H) and/or 3560H(384)H.
(1) Influence of relationships on coping with chronic disease
(2) Health and wellness in the family

Brenda SMITH-CHANT (LHS C136; 748-1011 x-7780) (on leave 2015-16)

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. Accordingly, my research follows three main streams: 1) How children acquire basic math and literacy skills, particularly the influence that their preschool learning environment has on their performance; 2) How social programs influence cognition and behaviour; and 3) Community-based initiatives to support cognitive and behavioural change.

Currently, I am involved in three major research initiatives: "Count Me In!", examining long-term predictors of math performance in Canadian Children; the "Cuba/Canada Initiative", a cross-cultural exploration of the impact of preventative vs a traditional 'medical' model for health and social programs on children's development; and "An evaluation of the Aboriginal Community Activator Pilot Program", a evaluation of a community-based approach to developing social programs.

Relevant References:


Possible Thesis Topics:
Parent teaching and it's relation to the development of children's early math skills.

The impact of social programs (recreation, health, and service integration) on individual and community development.

Aboriginal and environmental perspectives on lifespan development, cognition and behaviour.
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) and3300H(341H).

Beth VISSER (OSHAWA)

I study personality and individual differences in general, but especially psychopathy and other “dark” personality traits. My research includes testing and measurement, human sexuality and self-sexualization, cognitive abilities, and antisocial and risk-taking behaviors.

Relevant References:


Possible Thesis Topics:
Does personality influence vulnerability to being sexually objectified?
Development of a psychopathy scale specific to female manifestations of psychopathy
Psychopathy-related sex differences in the expression and purpose of various sexual behaviours
Does Machiavellianism + impulsivity = sub-clinical psychopathy?