Appendix C

FACULTY RESEARCH INTERESTS AND THESIS TOPICS

Anne ARCHER (on leave 2009-10)

I have four areas of research all related to the broader theme of education, language, and cognition in exceptional children. 1) The development of a criterion-referenced assessment measure for children with Down syndrome. A criterion-referenced measure would help teachers develop effective educational program plans for students with Down syndrome who are enrolled in inclusive and/or segregated classrooms. 2) The relationship between language and cognition in children with language and cognitive delays. In particular, I am interested in the impact of a language delay or disorder on other people’s perceptions of the child’s cognitive abilities. Conversely, I am also interested in the impact of a cognitive disorder on other people’s perceptions of a child’s language abilities and his or her treatment plan. My subject pool typically focuses on children with Down syndrome. 3) The coping styles of parents with children with Down syndrome. Some families appear to be more resilient and resourceful than others. These differences may result in different program placements and opportunities for their children. 4) Further, related to family resourcefulness, I am interested in the family dynamics associated with children who are adopted internationally and the developmental milestones achieved by adopted children.

Relevant References:


I have two areas of research focus. 1) I collaborate with Professors C.T. Smith and K.R. Peters on investigations of the relationship between sleep and memory. We are specifically interested in procedural memory. 2) Investigations of orientation in large-scale space (way-finding ability). My research with You-Are-Here (YAH) maps allows me to make inferences about the cognitive processing requirements of wayfinding. Observing how easily people can get lost in Trent University buildings is part of the research process! Not only is this research important for understanding spatial cognition, it has very relevant implications for the design and use of YAH maps in the real world.

Relevant References:


Possible Thesis Topics:

Does the pattern of how Stage 2 sleep influences consolidation of procedural memory hold for several different procedural tasks?

How do individual differences in strategies impact on wayfinding success? (Some people use a spatial mental representation; others develop a verbal route plan.)

Students should have taken PSYC 225H; sleep research requires PSYC 372H.
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.

The second area of work is the application of Human Factors principles to specification and design of telecommunication networks and devices. The goal here is to provide clear human-factors-based targets to designers so that the user-visible impacts of chaotic packet networks are minimized. The first task is to create a common language and understanding of the problem and the opportunities, followed by empirically validated guidelines. Students should have taken PSYC 225H and 366H. Suggested course for Human Factors focus: (Computer Science/Studies) COST 396.

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.
Fraser A. BLEASDALE (OC 232; 748-1011, x-7614)

My main research interests are in the area of cognition, and concern word and sentence comprehension, as well as recognition, memory and comprehension processes in both uni- and bilinguals. This research most often involves computer-based studies using lexical decision, naming, free association and free recall tasks. A second area of interest is in the interplay of cognition and emotion, including the appraisal, identification, and expression of emotion and its relationship to variables such as music training and bilingualism. Typically this work involves the administration of a battery of tests, followed by multivariate analyses.

Relevant References:


Possible Thesis Topics:

The recognition and mental representation of concrete and abstract words and sentences. (Pre- or Co-requisite: PSYC 315; Relevant courses: PSYC 202H, 225H, Psyc 307H, 352H, 376H)

Music training and emotional traits. (Pre- or Co-requisite: PSYC 315; Relevant courses: PSYC 240H, 303H, 337H, 341H)

Bilingualism and emotional traits. (Pre- or Co-requisite: PSYC 315; Relevant courses: PSYC 240H, 303H, 337H, 341H)
Liana E. BROWN (OC 146; 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 three major issues: 1) how hand position influences the assignment of attention to and perception of nearby space and objects, 2) how proprioception and vision are used to guide reaching movements, and 3) if and how learned information is shared by the motor and sensory systems. 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 (Additional Prerequisites: Psyc 222H; Psyc 366H)

Hand placement and vision.

Spatial adaptation following motor learning.

Motor learning by observing (visual observation or hand-over-hand training).

Proprioception and reaching.
Generally speaking, I am interested in how people utilize information in their environment during everyday situations. I examine this issue using three complementary approaches: (1) standard laboratory tasks and (2) observing and describing behaviours during everyday tasks for data collection and (3) computational modeling as a form of theory construction. I am presently conducting research in two different areas (1) how people read and (2) how things in our environment capture (or fail to capture) our attention.

Relevant References:


Possible Thesis topics include:

Individual differences and reading performance.

The relationship between attention and reading.

Individual differences in organization, attention, and searching for missing objects.
My approach to social and health psychology is multi-disciplinary. As such I support social scientific attempts to preserve the inter-relationship of individual subjectivity with social processes and culture. In this endeavour I prefer to use investigative methodology that is capable of assessing individual experiences as inter-penetrated by interaction, ideology and contextualized by societal institutions. Typically this requires the utilization of qualitative research methods including interviews, observation, institutional ethnography, grounded theory, thematic analysis among others. I have three areas of interest. My main area of specialty is the investigation of health experiences of individuals, the interactional processes that mediate such individual patient or clinician perceptions within certain sub-cultures of health delivery systems and the development of health policy. In addition I am interested in understanding how individuals perceive “personal agency” and the social and cultural factors that contribute to negotiations in everyday situations. I am also interested in how power relations develop in social settings with a special interest in issues of bullying in institutional settings.

Relevant References


Coughlan, R. (2004). Stigma, shame and blame experiences by patients with lung cancer: Health promotion and support groups have a role. *British Medical Journal, 329, 402-3*


Possible Thesis Topics:

Patient experiences with clinical practices
Cross-cultural negotiations of patient agency during pregnancy
Experiences of parents concerning bullying in the public school system
Differing models of interaction in institutional settings

*Relevant courses for these thesis topics include PSYC 272H; 343H; 308H; 304H; Anth 348; 309; Soci 220; 345; 363*
Teresa L. DeCICCO (OSHAWA)

My research interests are in the areas of personality, abnormal psychology and health. My research falls into the following categories: 1) Personality, self-construal (identity) and adaptive coping. 2) The relationship between trait measures of anxiety and adaptive coping. 3) Identity (self-construal) and health (physical and emotional). 4) Dreams and health

Relevant References:


CD-Published


Possible Thesis Topics:

Investigating the relationship between identity (self-construal) and emotional well-being.

Personality and adaptive coping in university students.

Dreams as indicators of health and healing.
Terry P. HUMPHREYS (OC 141; 748-1011, x-7773)

My research interests intersect human sexuality and social psychology. More specifically, three main areas dominate my current research: (1) attitudes and beliefs about sexual consent and their influence on the negotiation of consent in sexual interactions. This area of research includes elements of sexual (mis)communication and sexual coercion; (2) how beliefs about first sexual experiences influence sexual behaviour and; (3) sexuality information and the use of the Internet (i.e., health, education, and entertainment). How do individuals assess information quality? Does personality influence information seeking behaviours? How is the information used in sexual interactions?

Relevant References:


Possible Thesis Topics:

Factors influencing sexual consent attitudes and behaviours.

Factors impacting first sexual experiences (i.e., personality, safer sex, quality)

Factors affecting the use of the Internet for seeking sexuality information.

Sexuality communication

Perceptions of sexual coercion and violence
Nancie IM-BOLTER (OSHAWA)

My research interests focus on language and its relationship with other domains of functioning in both normal and atypical development. This is a broad research area that includes different types of language (e.g., structural, pragmatic), cognitive (e.g., working memory, inhibition), and social cognitive (e.g., theory of mind) functions. My research involves a diverse population of children, including those with normal development as well as children with a range of disorders, including psychiatric disorders, learning disabilities, and language impairments. I am currently investigating the cognitive, social cognitive, and social emotional characteristics of children with language impairment in an attempt to determine the underlying mechanisms of this disorder. A second line of inquiry involves understanding how language is used as a tool for the representation/internalization of life experiences, and for affect regulation and adaptive functioning. Although most of my research involves children my interest in the relationship between language and cognition is across the life span of development.

Relevant References:


Deborah J. KENNETT (OC 224; 748-1011, x-7770)

I am interested in health promotion with special emphasis on program development and on the personal and social factors influencing lifestyle practices. 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.

Relevant References:


Kennett, D.J., & van Gulick, C. (2001). Dealing with academic stress and failure: the association between learned resourcefulness, explanatory style, reported grades and sharing experiences with academic self-control. In D.J. Kennett & A.M. Young (Eds.), *Notes on applied statistical methods in psychology integrating STATISTICA software* (pp. 324-355). Peterborough, ON: Trent University Press.


Possible Thesis Topics:

- Impact of family and personality factors on university adjustment and academic success
- Predicting exercise behaviour and the development of an exercise self-control scale
- Factors influencing lifestyle changes and their successful implementation
- Understanding the acquisition of sexual resourcefulness
- Acceptance and coping with chronic pain
Leslie KERR (DNA 108.2; 748-1011, x-7435)

My primary research interest examines how psychosocial factors may mediate physiological mechanisms underlying illness and disease. Specifically, I examine behavioural as well as physiological (e.g. endocrine, immune) and cellular (e.g. receptor or oncogene expression) mechanisms that may mediate the effects of early social environments and caregiving experiences on normal and malignant mammary gland growth in mice. In addition to my primary area of research, a colleague and collaborative partner in the Psychology Department, Dr. Elaine Scharfe, and I are examining a similar question in a human-based study. In this study, we are indirectly examining, via online questionnaires, the influences of different care-giving styles and infants’ psychological development and breast cancer risk and treatment outcomes. This avenue of research will aid in the development of models that identify individuals at risk based on family history, personality, and related health behaviours and will allow for the development of comprehensive health promotion practices aimed at increasing the likelihood of cancer prevention and early detection.

Relevant References


Possible Thesis Topics for 2009-20010

I am currently examining the influences of early-life environments, stress, and coping on anxiety - and depressive-like behaviours and mammary gland development using both human (via online surveys) and animal models. Thesis students will collaborate on projects exploring specific psychological or physiological factors that may play a role in increasing breast cancer risk and/or influencing treatment outcome.
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 tests.

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
- Resiliency of memory to brain damage
- The effects of slow progressive damage to the hippocampus on memory
- Memory loss following focal and global cerebral stroke
- Strengthening memory with emotion
Mowei LIU (OC 148; 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 281H, 323H, 384H)

Acculturation and adaptation (relevant courses: PSYC 281H, 430H)
Geoffrey S. NAVARA (OC 142; 748-1011, x-7539)

I have two general streams of research: 1) an examination of family dynamics, specifically the parent/child relationship, through a cultural and cross-cultural lens; and, 2) the psychology of religion – specifically issues of religious orientation as a predictor of behaviour. Currently, I am working on a project exploring the parent/child dynamic of Jamaican-Canadian immigrant families living in the Greater Toronto Area, specifically looking at issues of bidirectionality of influence, acculturation, and the transmission of cultural values and beliefs. Another research project is examining the possible connection between various religious orientations and ethnocentric attitudes, social desirability and comfort levels when interacting with other cultural groups. 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
Prerequisites: PSYC 281H and either PSYC 381H or 384H
I have been involved in a number of research projects on personality and affect regulation. During the past decade, 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 achievement 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 mental and physical health problems and/or academic achievement).

Relevant References:


Possible Thesis Topics:

Emotional intelligence and barriers to post-secondary education

Emotional intelligence across the life-span.

Relevant courses for these thesis topics include PSYC 236H, PSYC 337H, PSYC240H, or PSYC 341H.
Kevin PETERS (OC 149, 748-1011, x-7795)

My current research interests involve three main areas.

1) **Sleep states and the consolidation of emotional information (e.g., words, faces, or pictures).** I am interested in how being exposed to emotional stimuli affects subsequent sleep, rapid-eye-movement sleep in particular, and how these post-acquisition changes may or may not benefit memory consolidation for that information.

2) **Sleep states and motor learning.** Sleep has been shown to benefit motor learning. However, there is debate regarding which stages of sleep are the most important for different types of motor learning. My colleagues Drs. Carlyle Smith and Jocelyn Aubrey and I have developed a model to explain how Stage 2 sleep and REM might be related to motor learning. Although we do have some preliminary evidence for the model, we are interested in further testing of it. We are also interested in determining whether the relationship between sleep states and motor learning is different in young and elderly adults.

3) **The effect of sleep deprivation on stereotype accessibility.** My colleagues Drs. Geoff Navara, Terry Humphreys, and Michael Chan-Reynolds are interested in how sleep deprivation and sleep restriction affects an individual’s performance on various measures of racism, sexism, and ethnocentrism.

**Relevant References:**


**Possible Thesis Topics:**

The role of sleep states in procedural motor learning tasks (Prerequisites: PSYC 222H and preferably PSYC 372H).

The role of REM sleep in consolidating memories of emotional information (Prerequisites: PSYC 222H and preferably PSYC 372 H).

The effect of sleep deprivation and restriction on stereotype accessibility (Prerequisites: PSYC 225H and preferably PSYC 372H).
Elaine SCHARFE (OC 138; 748-1011, x-7354)

Research Interests: Influence of relationships on health, social and emotional development across the lifespan

parent-child relationships

family relationships

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 influence adult mental health, lifestyles choices, and physical health. Recently, attachment researchers have demonstrated that early parental neglect adversely impacts on individuals' physical and psychological development and I am studying this effect of attachment relationships in several different samples including families with young children, university students, children and adolescents with diabetes, and breast cancer survivors.

Relevant References


Possible Thesis Topics for 2009-10

(1) Influence of relationships on coping with chronic disease

(2) I am currently collecting data from a large sample of Peterborough families. Thesis students will collaborate on projects exploring health and wellness in the family using data from this longitudinal sample or collecting new data from the parents and/or children (who are now 5 or 6 years old). Example topics include (but are not limited to) exploring fathers' participation in the family, health and wellness in the family, factors influencing parents' healthy lifestyle choices, children's understanding of health and wellness.

Prerequisite: at least one of PSYC 300H, 343H and/or 384H.
Brenda SMITH-CHANT (OC 142; 748-1011, x-7780)

I am interested in cognitive development from the perspective that the experiences of children during the development and acquisition of basic cognitive skills, such as reading and arithmetic, has a fundamental influence on how information is organized in their memory as adults. 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 the performance of adults reflects strategies developed during the process of learning basic math and literacy skills in childhood; and 3) Individual differences and atypical development of math and literacy skills. My main project in this stream is based on a longitudinal study of children with Spina Bifida who are at elevated risk of developing a specific mathematics learning disability.

Relevant References:

Smith-Chant, B.L. & LeFevre, J.(in press). Doing as they are told and telling it like it is: Participant reactivity to self-report methodologies. Memory & Cognition.


Possible Thesis Topics:

Parent teaching and its relation to the development of children’s early math skills.

Dyscalculia (a developmentally based deficit in mathematics), or math-based learning disabilities.

The relation between basic arithmetic facts in different operations in memory.

Effect of anxiety (or other individual characteristics) on math performance.
Laura SUMMERFELDT

I have several areas of research interest, bridged by the common theme of personality and psychopathology. These include the following: 1) Personality dimensions and psychopathology in clinical and nonclinical populations, 2) Points of continuity among clinical and subclinical obsessive-compulsive phenomena and adaptive behaviour, 3) Models of heterogeneity of obsessive-compulsive disorders, 4) Cognitive characteristics of obsessive-compulsive disorders, and 5) Diathesis-stress models of clinical and nonclinical anxiety conditions. A specific focus for me in recent years has been upon a particular feature of obsessive-compulsive experience - the feeling that things are "not just right". A program of research examining this phenomenon and its links with other psychological variables (i.e., cognition, personality) is currently underway.

Relevant References:


Possible Thesis Topics:


Social anxiety, social and emotional competencies, and interpersonal behaviour.

Social anxiety, social and emotional competencies, and academic performance.

Information processing correlates of obsessive-compulsive-related subdimensions.

Precursors and vulnerabilities in the development of social anxiety.

*Relevant courses for these research topics include PSYC 236H and 337H and PSYC 240H and 341H.*