Community University Research Exchange (CURE) 2013

March 22, 2013 Agenda

9:30am – 10:00am  Registration in Markin Hall Atrium
                   Refreshments to be served

10:00am – 11:45am  Welcome and Keynote Speakers in Markin Hall Theatre
                   Dr. Greg Pyle, Department of Biological Sciences
                   Dr. Judith Kulig, Faculty of Health Sciences
                   Dr. Kevin McGeough, Department of Geography
                   Dr. Robbin Gibb, Department of Neuroscience

12:00pm-1:00pm    Lunch in Student Union Ballroom

1:00pm – 2:00pm    Guided Poster Session in Markin Hall Atrium

2:00pm – 3:00pm    Short Presentations in Markin Hall Theatre

3:00pm – 4:00pm    Reception in Markin Hall Atrium
Office of the Vice President Research

What We Do
The Office of the Vice-President Research and its reporting units foster an environment in which research, creative and service activities flourish. We develop and maintain organizational arrangements and sound policies which fulfill the needs of the University of Lethbridge research community, partners, and sponsors while meeting the requirements of research funding sponsors and supporting the University's Strategic Plan.

Who We Are

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Office of Research and Innovation Services

What We Do

Research Services provides assistance and advice on sponsored research, research contracts and other research activities. Research Services also works closely with government agencies and private sector industries to further advance research activities on campus.

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University-Industry Liaison Office

What We Do
The University-Industry Liaison Office (UILO) facilitates engagement between agencies and researchers at the University of Lethbridge. The UILO aims to encourage and promote the dissemination of Intellectual Property (IP) and commercialize research endeavours. The facilitation between university and industry agencies can take place in different forms, such as research collaborations in areas of mutual interest, licensing of discoveries, and the creation of spin off companies based on the innovations of the university's researchers.

Who We Are

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Pejman Ghanipour, Manager
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### Keynote Speakers

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<td><strong>Dr. Greg Pyle</strong></td>
<td><strong>Biological Sciences</strong></td>
<td>Campus Alberta Innovation Program Chair in Aquatic Health</td>
<td>403-332-4048</td>
<td><a href="mailto:gregory.pyle@uleth.ca">gregory.pyle@uleth.ca</a></td>
<td>Greg studies the effects of environmental contaminants on the chemical communication systems in aquatic animals. He is able to study several aquatic species, including both vertebrate and invertebrate animals, representing different positions within a typical freshwater food web and thereby better understanding the subtle effects of environmental contamination.</td>
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<tr>
<td><strong>Dr. Judith Kulig</strong></td>
<td><strong>Health Sciences</strong></td>
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<td>403-382-7119</td>
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<td>Judith’s research focuses on the health of rural communities. She studies: 1. the community resiliency of rural communities which refers to a community's ability to address adversity and in so doing reach higher levels of functioning (e.g., natural resource communities; human dimensions of wildfire), 2. Unique populations living in rural areas (e.g., Low German Speaking (LGS) Mennonites; rural youth), and 3. Rural professional practice (e.g., the nature of rural nursing practice in Canada).</td>
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<td><strong>Dr. Kevin McGough</strong></td>
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<td>Kevin studies the history, languages, and cultures of the civilizations of the Ancient NearEast and Eastern Mediterranean. He is particularly interested in the problems of integrating archaeological and historical evidence in the reconstruction of the past.</td>
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<tr>
<td><strong>Dr. Robbin Gibb</strong></td>
<td><strong>Neuroscience</strong></td>
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<td>The focus of Robbin’s research is to determine how early experience influences brain development and overall anatomical and behavioural outcomes and in particular, how parents modulate brain plasticity and behaviour. Robbin is very active in public outreach and has made several presentations to parent education groups and Judicial Organizations (National Judicial Institute, British Columbia Supreme Court and Nova Scotia Supreme Court, World Congress on Family Law) on brain development in children.</td>
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Poster Presentations – List of Participants

Dr. John Bain, Biological Sciences, “Citizen Science at the U. of Lethbridge Herbarium”
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Email: bain@uleth.ca

Steven Beery, Graduate Student, Biological Sciences, “Behaviour, biomarker and induced sensitivity in larval dragonflies in Alberta’s oils and sands.”
Phone: 403-593-8451
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Dr. William Dew, Biological Sciences, “Scents and scentability: the effects of contaminants on the olfactory system of fish.”
Phone: 403-332-4048.
Email: bill.dew@uleth.ca

Dr. Jon Doan, Kinesiology, “Ice Skating with Parkinson’s Disease”
Phone: 403-332-5208
Email: jon.doan@uleth.ca

Dodolab, Andrew Hunter and Lisa Hirmer, “The Anatomy and Etiquette of Social Change”.
www.complexsocialchange.ca/anatomy_and_etiquette

Prof. Lisa Doolittle, Fine Arts & Dr. Jean Harrowing, Health Sciences, “Arts for Social Change”
Phone: 403-329-2792
Email: doolittle@uleth.ca

Dr. Robbin Gibb, Neuroscience, “Parental Effects on Brain Development & Recovery After Early Brain Injury”
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Email: gibb@uleth.ca

Dr. Roy Golsteyn, Biological Sciences, “The Prairie to Pharmacy Cancer Research Project”
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Dr. Claudia Gonzalez, Kinesiology, “The Brain in Action”
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William Hailey, Regional Innovation Network of Southern Alberta (RINSA)
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Email: bill.haley@albertainnovates.ca

Dr. Gordon Hunter, Management, Small Business Institute, “Indigenous Entrepreneurs
Phone: 403-329-2672
Email: ghunter@uleth.ca

Dr. Gordon Hunter, Management, Small Business Institute, “Raising Issues & Cultivating Success – Agricultural Management in Alberta”
Phone: 403-329-2672
Email: ghunter@uleth.ca

Dr. Josephine Mills, Art Gallery; Dr. Bruce MacKay, Liberal Education; Prof. Lisa Doolittle, Fine Arts; Dr. Tiffany Muller Myrdahl, Women & Gender Studies; Emily Luce; Dr. Louise Barrett, Psychology, “Complex Social Change: teaching, performing, exhibiting, designing, mapping”
Phone: 403-329-2690
Email: josephine.mills@uleth.ca

Dr. Carmen Mombourquette, Education, “Rural Development: Implications Arising from Internships”
Phone: 403-329-2018
Email: carmen.mombourquette@uleth.ca

Dr. Janay Nugent, History; Dr. Elizabeth Galway, English; Dr. Heidi MacDonald, History; Dr. Jan Newberry, Anthropology; Dr. Amy von Heyking, Education, Dr. Louise Barrett, Psychology, and Dr. Sergio Pellis, Neuroscience - “Institute for Child & Youth Studies: Risk & Resilience Project.”
Phone: 403-380-1822
Email: nugejb00@uleth.ca

Dr. Noella Piquette, Education, “Supporting early language and literacy activities: A community approach”
Phone: 403-394-3954
noella.piquette@uleth.ca

Dr. Nicole Rosen, Modern Lanugages; Dr. Ingee Genee, Modern Languages; Dr. Fangfang Li, Psychology; Dr. Robbin Gibb, Neuroscience; Dr. Claudia Gonzalez, Kinesiology; Dr. Noella Piquette, Education, “Language Development, Identity and Assessment: What Does it Mean to be a Sophisticated Language User”
Phone: 403-329-5122
Email: nicole.rosen@uleth.ca

Dr. Javid Sadr, Psychology, “Facial Perception”
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## Short Presentations

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Poster Descriptions

Dr. Jon Doan - Ice Skating With Parkinson’s Disease

For many, ice skating is an enjoyable form of exercise. For people living with Parkinson's disease, it could be much more. Specifically, ice skating is a complex motor skill that paradoxically persists among some people living with Parkinson's disease, and presents the possibility of providing Canadians living with Parkinson's disease in rural areas with a metabolically-efficient exercise intervention with strong potential for improving walking, reducing fatigue, and maintaining social connections with the active focal point of many Canadian communities, the arena. This project will deliver an effective evidence-based skating exercise program for mild to moderate Parkinson's disease patients. The proposed research will also develop the technology that brings the program to rural people living with Parkinson's disease, transfers those participants' progress to movement disorder specialists, and monitors and modifies their exercise progress.

Dr. Robbin Gibb - Parental Influences on Brain Development and Recovery from Early Brain Injury

Parental experiences, even during the preconception period, can have a profound effect on brain wiring. Dr. Robbin Gibb’s research investigates the behavioral, anatomical, and epigenetic aspects of perinatal experiences, both enriching and aversive, on the developing brain. Currently, the Gibb lab is focused on the lifelong effects of perinatal maternal and paternal stress, as well as, remediating strategies following early injury. Research is applied in a holistic manner, where all elements of family and environment are taken into account.

Dr. Carmen Mombourquette - Rural Development: Implications Arising from Internships

Rural communities have the responsibility to develop strategies that build healthy communities that engage all age groups and demographics. Not-for-Profit Voluntary Sector (NPVS) organizations in rural communities provide important services and programs and play a fundamental role in strengthening community and citizen engagement. The rural NPVS, in order to continue to act in this capacity, need to increase their ability to perform these roles by recruiting and retaining people to get the work done, tap into new ideas and energy, and demonstrate to the emerging workforce (post-secondary students) the value and impact of the sector. For the most part, the NPVS is forced to find solutions to these challenges without many resources or practical strategies. In Alberta, a volunteer recruitment program was put in place called “Serving Communities Internship Program (SCiP). In this program post secondary interns were recruited, placed in rural communities, and provided with a stipend at the end of the project. This research presentation will focus on an evaluation of the Internship program and provide a series of recommendations for its continued use.
Dr. John Bain - Citizen Science at the U. of Lethbridge Herbarium

The recent digitization of the U. of L. herbarium means that high resolution photos of over 20,000 plant specimens are now available for study through the Library’s website. In addition, metadata including location, ecological conditions, associated species and flowering time are recorded in a searchable database. This provides an important source of baseline data relating to the southern Alberta flora.

We are beginning a project that will allow the general public to contribute to updating this database in an important way, simply by taking photos with their smartphone the next time they are out walking and uploading them to the Herbarium’s iNaturalist project site. These photos are automatically geo-referenced and will provide important distributional and flowering data describing our local flora, as well as a searchable database of local flower photos that will help people get to know their flora.

Dr. William A. Dew and Dr. Greg G. Pyle - Scents and scentability: the effects of contaminants on the olfactory system of fish.

A fish’s sense of smell is essential for it to be able to thrive in an aquatic environment, allowing fish to detect odours in the water that allow a fish to find food, avoid predators, find spawning beds, or find an appropriate mate. In our lab we directly measure the sense of smell of fish, their response to different odours, and how different contaminants affect the sense of smell of fish. My work has demonstrated that different contaminants have different effects on what a fish can smell and what it reacts to. By understanding how different contaminants affect the sense of smell of fish, we can predict what type of behavioural deficits fish in contaminated water have, and protect the fish population for future generations.

Dr. Claudia L. R. Gonzalez - The Brain in Action Laboratory

In the Brain in Action laboratory we investigate how the human brain processes and integrates sensory and motor information. In particular how vision and hapsis (touch) guide our arm and hand movements for reaching and grasping. We are also interested in understanding the complex interactions of the motor system with cognitive processes such as language, memory and spatial abilities. We use human psychophysics, behavioural measures including eye and hand kinematics and cerebral blood flow to infer brain function. Our research includes children (1-8 yrs of age), healthy individuals, and neurological populations (e.g. patients with stroke, epilepsy, Parkinson’s disease). These are examples of the research subjects that we are currently investigating: 1) Hemispheric differences in the processing and integration of visuo-motor functions; 2) The relationship between the development of language and fine motor skills; and 3) The relationship between hand preference and spatial abilities. The laboratory is equipped with an eye-tracker (Eyelink II), a motion-tracking system (Optotrak Certus) and functional transcranial Doppler sonography for cerebral blood flow measurements.
Prof. Lisa Doolittle, Dr. Jean Harrowing - Arts for Social Change

Research focus

To engage with community groups using participatory theatre/dance methods to investigate an issue that is significant for a local community. In this approach, the process of making art is often more important than the art products themselves; it is theorized that, in the process of participation, the seeds of social change are sown.

What?

As communities face complex and sometimes overwhelming local and global issues, there is an increased recognition of the need for fresh, out-of-the-box approaches to problem solving, with strategies that awaken the senses and engage the head, hands and heart. In Canada and around the world, specialized arts initiatives (for example, in creative writing, storytelling, dance, music, theatre, circus, visual and urban arts) are emerging as effective and innovative forms of social inquiry and action that are inclusive of and responsive to community concerns.

There are many definitions of “art for social change”. For the purposes of proposed community-university research partnerships “art for social change” is theorized as a multi-faceted constellation of actions using art and dialogic processes to create positive change as defined by the implicated individuals and communities. Art for social change (ASC) enables communities to collaboratively address pressing issues by engaging in creative processes.

In previous partnerships between community groups and the University of Lethbridge researchers have used specialized theatre/dance-based and group facilitation methods serving as a catalyst for creating ideas and actions for positive change. ASC creative processes foster dialogue through the creation of art in diverse forms and are used in a wide range of contexts: in education, industry, government and many other sectors of society and in a wide variety of disciplines crossing traditional boundaries to effect positive change. ASC processes are designed to create insight and new connections between individuals and whole communities as they exchange stories, perspectives, knowledge and understanding through the creation of theatre or dance. ASC nurtures collective engagement with social, environmental and economic issues and offers experiences that integrate and celebrate imaginative thinking.

This work has opened ways to explore creative forms of research that reflect richness and complexity, inviting multiple levels of engagement that are cognitive, sensory, emotional and aesthetic. The growing use of arts-based knowledge creation and dissemination strategies is driving an important shift in our understanding of what counts as evidence, and appreciation for the complexity and multidimensionality involved in creating new knowledge. Arts-based inquiry encourages the expression of multiple perspectives, and brings these together to uncover new meanings and raise further questions at the individual and communal level. Knowledge is treated as a dynamic, creative and continually evolving process rather than static. It is conceptualized in ways to make it more accessible to diverse stakeholders.

In short, ASC helps people to find innovative ways to see themselves, the contexts of their lives and how to take action in the world.
Who?

Lisa Doolittle is co-investigator on an interdisciplinary research project *Complex Social Change* (2012-2014), at the University of Lethbridge. Doolittle has worked in community-engaged theatre for more than a decade. In Lethbridge she has worked on theatre projects with Lethbridge Family Services, Immigrant Services, with Kainai elders about Blackfoot Dance, with Kainai high school youth using theatre to teach chemistry, and since 2008 using theatre in malaria and HIV/AIDS health promotion work with U of L students in rural schools in Malawi, Africa along with Jean Harrowin.

Dr. Harrowing is a Global Health researcher with specializations in HIV/AIDS, Cultural Safety and work with vulnerable populations. Most recently she was a co-investigator in an international program of research entitled *Strengthening Nurses’ Capacity in HIV Policy Development in Sub-Saharan Africa and the Caribbean*.

**Dr. Janay Nugent, Dr. Elizabeth Galway, Dr. Heidi MacDonald, Dr. Jan Newberry, Dr. Amy von Heyking, Dr. Louise Barrett and Dr. Sergio Pellis - Institute for Child & Youth Studies (I-CYS)**

I-CYS is a new Institute for Child and Youth Studies at the University of Lethbridge. This is a multidisciplinary institute devoted to supporting research in child and youth studies. Child and youth studies tend to be multidimensional and multidisciplinary, and I-CYS serves as a critical locus for these intersecting approaches (ranging from studies of childhood obesity, youth in sport, advertising, education, and brain development, to considerations of the historical and artistic representations of children). The Institute recognizes the untapped potential for research into what children and youth mean as social, demographic, artistic, legal and existential categories and enables innovative, cross-disciplinary research that contributes to scholarship and to questions of pressing social, political and human concern.

**Dr. Gordon Hunter - Indigenous Entrepreneurs**

The objective of my research project is to identify management issues faced by Indigenous Entrepreneurs in a post-colonial context. A major contribution to innovation and prosperity is made through the establishment and on-going viable operation of small business by Indigenous Entrepreneurs. The identification of management issues will serve to improve the performance of Indigenous Entrepreneurs regarding small business. A comparison of Indigenous Entrepreneurs in different contexts will provide further elucidation of management issues. For comparison purposes data will be gathered from Indigenous Entrepreneurs of First Nations in Canada and Maori in New Zealand. Both Canada and New Zealand were colonized by western culture, specifically Britain. The Indigenous groups of both countries signed treaties with Britain. In New Zealand the Maori signed the Treaty of Waitangi (1840). In Canada the Indian Act (1876) was enacted and treaties were signed within the context of the act.
Indigenous Entrepreneurs’ objectives relate to, “… creating and operating businesses that can compete profitably over the long run in the global economy to exercise control over activities on customary lands to achieve economic self-sufficiency” (Tapsell and Woods, 2008:194). While these circumstances are relatively similar there are differences from a cultural perspective between the two Indigenous groups. In Canada the Aboriginal entrepreneurial approach is collective and centred on the community (Anderson, 1999). In New Zealand the Maori approach to entrepreneurship is focused on kinship (Foley, 2008). Conducting research within this context will facilitate the identification of the variety in management issues for entrepreneurs. These findings will, in turn, aid in identifying responses to management issues in both the Aboriginal and Maori context.

My project will in effect compare two cultures which will aid in understanding these management issues. My past experience in conducting cross-cultural research will facilitate this project. I have conducted research in Australia, Canada, Germany, Honk Kong, Singapore, Taiwan, and USA.

Management issues will be identified in a number of small business functional areas. A series of human resource related management issues could be as follows. These management issues may relate to the near term operations of the small business such as the assignment of employee duties. Near term issues may be related to employee training. Longer term issues will involve a strategic approach to employee skills and compensation which relates to the mission of the small business.

The findings of this investigation will be of significant benefit to existing Indigenous Entrepreneurs. A compendium of identified management issues across a number of Indigenous Entrepreneurs will allow individuals to assess their own situation with the potential to improve the performance of their business. Also, the identified issues will be of benefit to nascent Indigenous Entrepreneurs indicating to them areas upon which they should focus to increase the probability of establishing a viable small business. Further, a comparison of Indigenous Entrepreneurs in Canada and New Zealand will provide further elucidation of relevant management issues.

**Raising Issues, Cultivating Success - Agricultural Management in Alberta**

This research will identify issues of agricultural management in Alberta. Data will be gathered regarding agricultural management approaches that have proven to be successful. There are internal issues (Business Model, Diversification, and Employees) that can be controlled and there are external aspects (Market, Banks, and Industry) that cannot be controlled. The success of the agricultural operation, whether farming or ranching is dependent upon how internal issues are managed and the response taken to external uncontrollable aspects. Confidential interviews will be conducted with family members who have experience with agricultural management in Alberta. A qualitative approach will be adopted, employing Narrative Inquiry to document participant interpretations. The structure of the interview will follow a protocol to ensure consistency across a number of interviews. The resulting interview transcripts will be analyzed to identify emerging themes.
The result of this research will be a more thorough understanding of the important aspects of agricultural management. This understanding will be employed to assist others involved in agricultural management as well as provide an enriched educational experience to those individuals who plan to become involved in the management of farming or ranching operations.

Small Business Institute

The Institute investigates issues related to small business. While the main focus is Lethbridge and southern Alberta investigations will incorporate the wider national and international community of small business and fellow researchers. These stakeholders will provide guidance and input regarding investigations. Findings will be disseminated through publications in academic and industry journals; and conferences and public presentations. Processes involving the transfer of knowledge from research into teaching and practice will be established to incorporate appropriate material into the development and delivery of small business university programs.

The following is a sample of output from the Small Business Institute.

Hunter, M. Gordon and Dan Kazakoff. (2008). Little Empires: Multi-Generation Small Business in Southern Alberta, CANADA. Heidelberg Press, Melbourne, Australia. ISBN: 978-1-920889-30-2. This book is about multi-generation small businesses in Lethbridge, Alberta, CANADA. Those individuals who participated in the project generously allowed their names and the name of their business to be used. Indeed, in most cases the names of the family and the business are the same. This is to be expected in relatively small businesses – even more so in businesses that have existed for some time. The participants are rightfully proud of their name, family and business, and the success they have achieved throughout multiple generations of existence. Twenty individuals from eleven different businesses were interviewed. Their comments form the basis for their respective chapters and the subsequent analysis chapters.


ATB Speaker Series
The speaker series will help forge ties among the small business community, ATB Financial and the University of Lethbridge, resulting in strong partnerships that benefit southern Alberta business.

Dr. Josephine Mills, Dr. Bruce MacKay, Lisa Doolittle, Dr. Tiffany Muller Myrdahl, Emily Luce, and Dr. Louise Barrett - Complex Social Change: teaching, performing, exhibiting, designing, mapping

Complex Social Change: teaching, performing, exhibiting, designing, mapping is an interdisciplinary research program involving Josephine Mills (Principal Investigator, Art Gallery), Bruce MacKay (Liberal Education), Lisa Doolittle (Theatre & Drama), Tiffany Muller Myrdahl (Women & Gender Studies), Emily Luce, and Louise Barrett (Psychology). The project brings together scholars from different disciplinary backgrounds with a common interest—a fascination with the beautiful, challenging, confusing evolution of our society. We are a community of change-makers, investigating how change is made. Our goals are to contribute to a contemporary definition of liberal education and to better understand what is involved with creating participation and engagement in activist actions in the current social climate. In addition to research focused on theoretical positions and frameworks for effective activist engagement in relation to liberal education, the project also includes several public activities and activist events including: exhibitions, video screenings, and public-site projects with the Art Gallery; a community activist dance/theatre project; a web site and social media postings; two high profile speakers; a local speaker’s series, and a publication. The theoretical issues involved with liberal education, engaging audiences, and creating social change will be explored through these public events and projects which will address specific social issues, serve like case studies for exploration of the larger concepts involved, and ground the theoretical context in actual practice.

Steven Beery, Graduate Student - Behaviour, biomarker, and induced sensitivity measurements in larval dragonflies in Alberta’s oil sands

This poster outlines work to be done in Summer 2013 to compare induced sensitivity between different populations of larval dragonflies in the context of northern Alberta’s oil sands. We know oil sands operations increase environmental contaminant loading, but what effect does this have on aquatic animals, specifically, dragonfly nymphs?

Dr. Nicole Rosen, Modern Languges; Dr. Ingee Genee, Modern Languages; Dr. Fangfang Li, Psychology; Dr. Robbin Gibb, Neuroscience; Dr. Claudia Gonzalez, Kinesiology; Dr. Noella Piquette, Education - Language Development, Identity & Assessment: What does it mean to be a sophisticated language user?

Language is a defining aspect of the human experience, studied by different disciplines in different ways to different ends. This proposed research draws on expertise from the fields of Linguistics, Neuroscience, Psychology and Education, to further knowledge through the creation of a multidisciplinary network. Our researchers will collaborate under the umbrella of the study
of Language - its development, its relationship to identity, and its assessment. From the development of language we emerge with an identity, and that identity frames our further development. Our findings will lead to the creation of developmental and identity assessment tools for intervention purposes. This knowledge will facilitate social cohesion, inclusion and equality.

Project Goals: As individuals engaged in language research, we wish to implement an interdisciplinary approach to our project, which we see following the three interrelated themes of Language development, identity, and assessment. An example of how our group will study the development of language in an innovative way will be to investigate its relationship to motor development. The development of language and the development of fine motor skills appear to arise in a synergistic fashion such that if one is affected, the other is also altered. Prenatal exposure to nicotine for example, is associated with impairments in fine motor skills and a decrease in spoken language and verbal comprehension (Gusella & Fried, 1984). Early in life, children learn and refine a host of motor skills that will have a phenomenal impact on later language function. Abnormalities in the motor domain may be an important basis for detection of later specific language impairments (Hill, 2010). Our interdisciplinary group will examine the relationships between motor and language systems and how they are influenced by each other and by experience.

As a second example, let us consider gender as a factor in language development and identity. Women and men talk differently for (at least) social and physiological reasons. It is furthermore well documented that young women are most often the leaders of linguistic change (Eckert 1989, 2000; Labov 1990; Wolfram & Schilling-Estes 1998). Linguists tend to rely on sociological explanations for this fact, but these explanations are not clear-cut, and not even always identical (Holmes 1999). Since linguistic change is often below the level of consciousness, it is likely that there are evolutionarily-driven neurological reasons for women to use language differently than men. These sorts of neurological explanations for an apparent sociological phenomenon have not previously been explored. Our interdisciplinary team will examine this identity phenomenon from a developmental perspective.

Thirdly, there is a body of literature that indicates that speakers of First Nations dialects of English are frequently incorrectly ‘diagnosed’ with delayed language development when features of their ethnolect are misinterpreted as errors (Ball & Bernhardt 2007, 2008; Peltier 2010, 2011). Often cited examples include the common failure of Cree or Blackfoot children to pluralize mass nouns, to have difficulty with the he/she distinction or the pronunciation of words like there with a d, so that it sounds like dere. In fact, there may be real language delay present, but currently there are no guidelines on how to determine an ethnolectal difference from a language delay; never mind how to tease the two apart. Most commonly used assessment instruments are from the US and are not normed for First Nations populations. Language assessors are in need of a better understanding of such variation. Our interdisciplinary team will examine the ethnolect from an identity perspective.

There is an urgent need to address issues related to the changing realities of language and literacy in society. In particular, there is a critical need to rethink and redefine multilingualism
and multi-literacies in more inclusive ways, in schools and in local and global contexts. This is particularly true for marginalized populations such as First Nations and linguistically and culturally mixed populations that exist in Canadian society. The proposed research will translate knowledge to educational curriculum, immigration policy, clinical practice in speech pathology and literacy programming. This knowledge translation will help marginalized Canadians and immigrants facilitating their participation in, and contribution to, Canadian society.

Dr. Javid Sadr – Visual & Social Perception

Our research -- past, present, and future -- is mainly centred on visual and social perception, including object perception and a special focus on person perception: how we see and evaluate people’s faces as well as their bodies in motion. For instance, our studies of face and person perception have covered questions that link to: child development, such as how adults seem to retain a rough-and-tough low-resolution system for face processing, just like infants seem to have with their poor eyesight; to patient populations, looking at what abilities are lost and what abilities remain in “face blindness” or prosopagnosia; to sex differences in body movement and how these are perceived visually, adapted to over time, and feed into how we judge people’s attractiveness; and to the funny interaction between our feelings (true or not) of familiarity, as when you see someone who looks familiar, and our related feelings of liking and attraction -- which works in a funny loop, where attractive people seem more likeable and more familiar to us (even though they might be strangers), and people we have seen before become visually familiar and, somehow as a result, also become more attractive and likeable to us over time.

There are some deep questions here that weave throughout Psychology and Neuroscience -- and our daily experiences -- quite broadly, looking at how certain qualities of the stimuli we come across in the world (e.g., how clear an image might be, how familiar, how similar to things we’ve seen before, etc) influence our mental processes (visual, social, etc) and the sorts of judgments we make (and how easily and quickly we make them). We're also interested in looking at real-time social perception and the visual cues people pick up, consciously or not, when observing and interacting with each other, and we've even had some media attention for our work on eyebrows -- it turns out that for recognizing faces, eyebrows might be even more important than what your eyes look like, which was a pretty unexpected finding.

Our work builds on foundations in Psychology, Neuroscience, Kinesiology, and Computational approaches, and has incorporated research, collaborations, and real-world applications extending to social, perceptual, and behavioural psychology; applied math, computer vision, and computational photography; developmental and clinical psychology; and even the aesthetics of facial reconstruction in the medical field.

Lisa Hirmer and Andrew Hunter – DodoLab

DodoLab is an evolving collaborative program lead by artists Lisa Hirmer and Andrew Hunter engaged with provocative, experimental and creative approaches to research and community actions. Their work is critically playful and highly public, emphasizing open participation and exchange. The state of the natural world, adaptive challenges to communities and institutions,
the built environment and cities in transition are their primary areas of interest. They employ creative interventions, surprise encounters, innovative publishing and design, and genuine collaborations to enhance and encourage public conversations, dialogue and knowledge sharing within and across cultures, generations, disciplines (and sometimes species). They are partially supported in their work by the Musagetes Foundation with whom they share a commitment to art as social catalyst. Their work is further supported by commissioned collaborations with individuals and organizations in Canada and Internationally (including universities, municipalities, social service organizations and the arts).

DodoLab uses the archetypal extinct species in its name/logo as a reminder that we need to consider the risks of isolated and narrowly defined adaptive strategies (the Dodo could not survive outside of its predator free island environment). Are we “Dead as a Dodo” or potentially “Going the way of the Dodo” if we do not learn to adapt, change and work together? The dodo reminds us that a lack of resiliency and a solo existence is a precarious strategy for survival. For generations, the Dodo has also been understood to have been a slow, lazy, glutinous bird with limited intelligence. It is now believed that this large flightless bird may have actually been reasonably intelligent and active and that the unflattering characteristics usually associated with the bird may have been the result of encounters with overfed, captive species – basically, specimens living in an artificial, human designed environment of overabundance. This is a reminder that sometimes the stories we tell become barriers to understanding and resolving the issues we face.

The Anatomy and Etiquette of Social Change program will be launched at the University of Lethbridge in the spring of 2013 with the sharing of the dodo narrative. Told as a graphic/comic tale, this narrative will be presented on campus in various forms including an installation on the gallery’s new interactive wall, on line and in print. It will be the basis for a series of field research inquiries with students, staff and faculty, both in classes and informally around campus. Dodolab wants people to consider the risks their community or institution may face due to select adaptation strategies, moments of laying one’s eggs on the ground. Social and operational structures, planning and development methods, traditions and rituals, organizational arrangements and cultural attitudes, are some examples of adaptations. Over the coming months, the dodo narrative will evolve and be added to based on the feedback and so a unique dodo narrative will emerge that is specific to the University of Lethbridge. The goal is to document areas of concern within the institution and to highlight opportunities for considered change.

The Anatomy and Etiquette of Social Change is the second major project by DodoLab developed with the University of Lethbridge Art Gallery. It follows their Important Things To Know About Eating and Drinking (In Lethbridge) in 2011 and builds on their ongoing creative research work with institutions and communities across Canada and Internationally.
Dr. Roy Golsteyn – Cancer Cell Laboratory, Department of Biological Sciences, University of Lethbridge

In Canada, 1 person is diagnosed with cancer every 3 minutes. Although incremental gains in our knowledge about cancer have been made, the prognosis for new patients remains at a 50% chance for a successful treatment. We need new approaches to combat this disease that affects our families, our friends, and our community.

Dr Roy Golsteyn directs the Cancer Cell Laboratory at the University of Lethbridge. He examines how cancer cells respond to chemotherapy or radiation. Recently, Golsteyn discovered that some cancer cells will divide one more time after being treated with current cancer drugs. Very little is known about this special type of cell division, but it appears to be important in determining whether a cancer cell will live or die. In addition, they have found that cancer cells have greatly changed their genome, if they survive a treatment. In other words, cell division after treatment could be pivotal in the level of efficacy of treatment regimes.

The Cancer Cell Laboratory focuses on three major cancer projects:
- Understanding how chemotherapy induces changes in surviving cancer cells.
- Using technology based upon detection of stars in space to find cancer cells, in collaboration with the U. of L. physicist, Prof. David Naylor.
- Discovery of new cancer drugs based upon Aboriginal traditional knowledge.

Each of these projects use innovative experimental techniques developed in the Cancer Cell Laboratory. The laboratory has expertise in cultivating cancer cells, pharmacology, DNA and protein analysis, and imaging, such as video microscopy. Students have an important role in these projects as part of their training as the next generation of cancer scientists and doctors. Dr Golsteyn also collaborates with the pharmaceutical and biotechnology industry to speed the translation of basic research discoveries into new treatments that will help cancer patients.