



Inquiry@Queen's

8th

Annual Undergraduate Research Conference

Program

March 6 & 7, 2014
Queen's Learning Commons
Stauffer Library

iatq.ca

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March 2014

Welcome to the 8th Annual Inquiry@Queen's Undergraduate Research Conference where we will celebrate the discoveries of a new generation of scholars. We have two full days to share, discuss, think, learn and feel excited about the research of our undergraduate students. The work they will present comes from many avenues - course work, theses, design projects and summer research opportunities; some came simply from an interest in a topic, and a desire to know more and think more.

Inquiry@Queen's is more than a conference; it is an approach to learning where the teacher and the learner reside in the same person. It is a natural extension of a university that prides itself on the quality of undergraduate education and its scholarship and research.

We invite you to attend the oral presentations, to view the posters and talk to the presenters, to ask questions, to attend the opening ceremonies and the special events, but most certainly to enjoy the breadth of undergraduate student scholarship. Drop by for an hour, an afternoon, a day or two days!

Congratulations to all participants!

On behalf of the Inquiry@Queen's Steering Committee,

Co-Chair, Jackie Druery
Acting Head, Engineering and Science
Douglas Library

Co-Chair, Vicki Remenda
Queen's Chair in Teaching and
Learning, 2006-09
and Geological Sciences and
Geological Engineering

Coordinator, Nathalie Soini
Acting Head, Learning and Research
Services and
Learning Commons Coordinator
Stauffer Library

Coordinator, Patrick Patterson
Reference and Learning Commons
Assistant
Stauffer Library

CONFERENCE AGENDA

Thursday, March 6, 2014

- 8:00 Coffee at Speaker's Corner, Stauffer Library
- 8:30 Session I: Contested History, Contested Truth (Speaker's Corner)
- 8:30 Session II: Identity (Seminar Room)
- 10:00 Opening Remarks and Keynote Speaker (Speaker's Corner)
- Dr. Jill Scott, Vice Principal (Teaching and Learning)
Fielding Questions: Undergraduate research and the question of discipline.
- Queen's Engineers Without Borders (EWB) Research and Development (R&D): A case study in local innovation
- 11:00 Session III: Restoration, Revolution, and Revision (Speaker's Corner)
- 11:00 Session IV: Technology (Seminar Room)
- 12:30 Lunch
- 1:00 Session V: Species and Mutations (Speaker's Corner)
- 1:00 Session VI: La langue, la parole, et le film/Language, Word, and Film (Seminar Room)
- 2:45 Break
- 3:00 Session VII: Environmental Policy and Disruption (Speaker's Corner)
- 2:45 Session VIII: Activism and Off-campus Partnerships (Seminar Room)

CONFERENCE AGENDA

Friday, March 7, 2014

- 8:00 Coffee at Speaker's Corner, Stauffer Library
- 8:30 Session IX: Le film, la femme, et le rôle (Speaker's Corner) Note: all of the presentations are in French.
- 9:00 Session X: Education, Children, and Globalization (Seminar Room)
- 10:30 Break (Seminar Room)
- 10:45 Session XI: Sex part 1 (Seminar Room)
- 11:45 Session XII: Lunch with Poster Presenters (Seminar Room and Atrium), All Welcome!
- 1:15 Session XIII: Sex part 2 (Speaker's Corner)
- 1:15 Session XIV: Gender (Seminar Room)
- 2:15 Session XV: Economy and Development (Speaker's Corner)
- 4:00 Conference Wrap-up (Speaker's Corner)

ORAL PRESENTATIONS

Session I: Contested History, Contested Truth

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Thursday, March 6, 8:30-10:00

Moderator: Dr. George Bevan, Classics

The Coptic Church in Popular Fiction on the Eve of the Arab Spring: Youssef Ziedan's *Azazeel*

Presenter: Nichole Perera, Classics

Faculty Supporter: George Bevan

The 5th century CE was a period of intense theological controversy concerning the relationship between the human and divine in Christ. This dispute led to the permanent separation of the Egyptian Coptic church from Imperial Orthodoxy. The events of the 5th century, previously confined to academic scholarship, have recently become the subject of popularizing works like *Agora* (2009), *The Jesus Wars* (2010), and *428 AD* (2009). The Arabic novel *Azazeel* (2009), written by the Egyptian Islamic scholar Youssef Ziedan, is a significant addition to these other works. Like *The Da Vinci Code* in its use of "actual" historical evidence, *Azazeel* purports to be a compilation of newly discovered Syriac scrolls written by the Coptic monk Hypa, which detail his spiritual trials between 411 and 437 CE. The novel sparked great controversy in Egypt among Coptic Christians for creating a misleading picture of important figures and events in their early history. Copts felt that a Muslim scholar was appropriating the voice of a Coptic monk without clearly signalling it was a work of fiction in order to produce a false account of Coptic origins. Though published before the Arab Spring, it soon became further evidence of the oppressive intentions of the Muslim majority against a Coptic minority in Egypt. *Azazeel* is different from other similar works in English because the events of the 5th century are still part of the living identity of Copts.

Canada at Peace and Soldiers at War: Canadian U.N. Soldiers in Korea, Egypt, and Vietnam

Presenter: Bronwyn Jaques

In recent years, Canadian peacekeeping and UN involvement has assumed a place of high regard, reverence, and veneration, often at the expense of Canada's military past. While its glorification is in many ways justified, the mythology surrounding Canada's peacekeeping role has compelled many Canadians to view Canada solely as a peacekeeping nation. As a result, peacekeeping has become the "touchstone of our identity." This mythology distorts the reality of Canadian military action to the point where Canadian veterans of NATO conflicts are often forgotten and it ignores the fact that many of the first peacekeepers left Canada "virtually unnoticed," without the recognition and support of their nation. The mythology of peacekeeping misrepresents Canadian military conflicts and ignores that, in spite of the characterization of peacekeepers as nonviolent and unbiased actors, the majority of them were first and foremost Canadian soldiers, many of whom veterans of World War II. For the soldiers who came of age on the battlefields of Europe, the role of peacekeeping was a frustrating and politically charged experience, whereby they held no power and they felt they made very little positive impact. Despite the virtually universal glorification and celebration of peacekeepers in recent years, investigation of the "Cold War Home Front" demonstrates the difficulties faced by Canadian NATO soldiers, U.N. peacekeepers and their families in a society that wanted to move beyond the years of struggle, pain and sacrifice in war time and had little sympathy for the men and women who 'chose' to leave their families to serve in wars their nation was not fighting.

“The Huacas of the Spanish”: Expressions of Indigenous Religion in the Mythologies and Aesthetics of Colonial Andean Religious Sculpture

Presenter: Molly-Claire Gillett, Art History

Early scholarship on the colonial arts of the Andes assumed that the Spanish conquest and its accompanying missionary activity resulted in a complete destruction of Inca artistic tradition, and that the indigenous conception of art and representation had little to no effect on works produced during the colonial period. Since then, scholars have recognized a tremendous amount of indigenous influence on the stylistic, iconographic and representational aspects of colonial art forms. My paper examines the influence of two aspects of indigenous culture in particular, identified by the words *huaca* (sacred thing) and *qillca* (surface decoration), which were used by the Quechua, an Andean indigenous ethnic group, to describe religious objects in the pre-Hispanic era. They were then in turn appropriated and discouraged by colonial missionaries in an attempt to make their imported Catholicism more understandable to new converts. In examining the multiple, ambiguous meanings of these words in the minds of the Quechua people and colonial missionaries as evidenced in contemporary sermons and miracle tales, I will argue that they influenced the indigenous conception of colonial religious statuary. I will then conduct a visual analysis of ‘The Virgin of Cocharcas’, an 18th century Peruvian ‘statue painting’ (two dimensional depiction of a statue) to demonstrate how concepts of *huaca* and *qillca* influenced the aesthetics of colonial statuary.

The Influence of Dominic Mancini’s Sympathetic Chronicle in Shakespeare’s *Richard III*

Presenter: Maral Chouljian, English

Faculty Supporter: Gwynn Dujardin

My research looks at Shakespeare’s unsympathetic representation of King Richard III in *The Tragedy of Richard III*. Shakespeare was not the first to present Richard negatively: sixteenth-century chroniclers such as Robert Fabyan, Polydore Vergil, and especially Thomas More played a significant role in scripting the Tudor Myth that portrayed Richard as a corrupt, disfigured monarch. In my research I have located a chronicle written during Richard’s reign, Dominic Mancini’s 1484 chronicle *The Usurpation of King Richard III*, which reports favourably of the king. I will show that Shakespeare incorporates events from Mancini’s chronicle, though reshapes that material to support and advance the Tudor bias against the last Yorkist King. In Mancini’s chronicle, for instance, Elizabeth Woodville persuades her husband Edward IV to have his brother Clarence murdered in the Tower; in Act One of Shakespeare’s *Richard III*, Richard schemes his way to the crown by creating a false prophecy that Edward uses as grounds to murder Clarence. In Shakespeare’s *Richard III*, Richard uses his physical deformity and his inability to “prove a lover” (I.i.28) to justify his desire to “prove a villain” (I.i.30); Mancini records no evidence or testimony concerning Richard’s body, and the recent 2012 exhumation of Richard’s remains shows no sign of physical deformity other than a slight spinal curvature. Overall this presentation aims to reconstruct the way modern readers and audiences view Richard III, and to question the role that significant literary texts play in reshaping historical narratives.

Session II: Identity

Seminar Room, Stauffer Library

Thursday, March 6, 8:30-10:00

Moderator: Dr. Vicki Remenca, Geological Science and Geological Engineering

The Process of Finding Self and Root in a Society Controlled and Dominated by Whiteness Power

Presenter: Qian (Jane) Shui, Commerce

Faculty Supporter: Danyel Haughton

In an environment and faculty predominantly dominated by whiteness and capitalism, while being a member of the minority that differ from the accepted Western heterosexual norm, I would like to explore the journey of myself, as well as my colleagues, renegotiating with differences to establish ourselves, and re-claim power. Research is planned to be conducted through application of gender studies and feminist concepts to interviews of experiences of students who are racially diverse and different from the majority.

Exploring the Impact of Captions on the Construction and Presentation of Colonial Latin American Cultural Identities

Presenter: Camilo Montoya-Guevara, Art History

Spanish Colonialism in Latin America from the late sixteenth to the late eighteenth century constitutes a time period during which the interactions between numerous cultural groups, both indigenous and colonial, resulted in the creation of distinct regional, cultural, and individual identities and artistic practices. The proposed paper explores the role and importance of Spanish captions in paintings created in the colonial viceregal centers of New Spain (today Mexico) and Peru through a discussion of two maps from the *Relaciones Geográficas* (indigenous made maps), three colonial portraits, and two casta paintings (painted records of racial mixes). These paintings, spanning from the end of the sixteenth to the eighteenth century, all feature written segments directly on their surface to enable the effective communication and portrayal of the chosen colonial subject to the viewer. Being created in such a diverse and unstable cultural climates each paintings' capacity for success in communication and representation was ensured through the use of captions. Thus, the paper approaches the study of captions through a close consideration of the discussed captions' messages, their intended perception, and main audience. My paper will discuss the instrumental role of the Spanish captions when visualizing and creating distinct colonial identities. The caption served as a means of literally spelling out the importance of the colonial settings, their distinct social systems and identities reinforcing their validity vis-à-vis the imposed Euro-Spanish ideal.

Nordic or Not: Examining the Future of Canada's Prostitution Legislation

Presenter: Michelle Polster, Philosophy

Faculty Supporter: Dr. Jacqueline Davies

I will inquire into the future of prostitution legislation in Canada, given the recent Supreme Court decision to strike down the Criminal Code provisions restricting practices around the sale and purchase of sex. I will consider three models for Canada's new laws: criminalization, legalization/regulation and the "Nordic model". I will outline the features of each system, with a particular focus on the Nordic model which many have proposed as the best avenue for Canadian legislators to take. In both Canada and places where a Nordic Model has been implemented, I will account for the legal provisions regarding prostitution, associated laws related to labour, public health, zoning and public nuisance, political factors including the presence and strength of a social safety net and the sort of government that oversees the administration of said social safety net, and the sorts of people who practice prostitution. I will compare the social factors and demographic information from the Nordic states with the Canadian context, establishing similarities and differences between the situations. Ultimately, I will discuss the implications each system in the Canadian context, addressing the likelihood of each model's implementation, its efficacy at achieving its stated aims and what sorts of conditions it creates for people engaged in prostitution.

Perceptions of Masculinity among Male Varsity Rugby Players at Queen's

Presenter: Clare Sheasgreen, Health Studies

Faculty Supporter: Mary Louise Adams

Existing literature on the topic of sport and masculinity has suggested that male varsity athletes model more hegemonic masculine norms (Messner, 2002). In fact, athletic participation has been found to be a predictor of misogynistic and homophobic attitudes (Steinfeldt et al., 2011). It has been argued that these attitudes are further enforced by the fact that the social power possessed by male athletes receives institutional support, which can in turn influence the social and sexual cultures on university campuses (Sanday, 2007). Contact team sports have a reputation for reinforcing hegemonic masculinity more than other sports do (Messner, 2002). Rugby is a particularly aggressive and male-dominated sport (Maxwell & Visek, 2009), however the majority of studies on varsity athletics and masculinity use data from American colleges and focus on contact sports that are historically more prominent in North America such as football and hockey (Steinfeldt et al., 2011; Messner, 2002; Boeringer, 1996). I hope to add to the existing body of research by focusing exclusively on rugby at a Canadian University. To do so, I will conduct interviews with 5 men who are current players on the Queen's varsity rugby team. I will perform a content analysis on the transcripts of the interviews to assess how male varsity rugby players at Queen's University understand and express masculinity. I intend to distribute my findings to Queen's athletic administrators and rugby coaching staff. The findings may contribute to leadership training that addresses gender issues in athletics at Queen's.

Opening Remarks and Keynote Speakers

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Opening Remarks: Dr. Jill Scott, Vice Principal (Teaching and Learning)

Fielding Questions: Undergraduate research and the question of discipline

Keynote Speakers: Queen's Engineers without Borders

Queen's EWB Research and Development (R&D): A case study in local innovation

Session III: Restoration, Revolution, Revision and Reflection

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Thursday, March 6, 11:00-12:30

Moderator: Dr. Shelley King, English

Acting Out: Exploring Applied Theatre Practices in Canadian Correctional Facilities

Presenter: Jacqueline Omstead, Drama

Faculty Supporter: Kim Renders

The colonization of Aboriginal peoples in North America involved systematic efforts to control and eradicate Indigenous knowledges and cultures. However, Aboriginal peoples have resisted colonization through creative expression; creating space for the exploration and critique of the myriad identities informed by this relationship. This study focuses on work by prominent American and Canadian authors Louise Erdrich, Tomson Highway, and Daniel David Moses. Erdrich, who self-identifies as Chippewa with mixed European ancestry, is best known for the interconnections of short narratives between and within her novels. Tomson Highway, a Cree novelist and playwright, is most famous for his cycles of "rez" plays detailing life on a fictional Ontario reserve. Daniel David Moses, member of the Delaware First Nation in Brantford, Ontario and acclaimed Canadian playwright, is best known for his parody of non-Aboriginal constructions of the "authentic Indian" in his work. These authors use political destruction of normative categories, particularly gender transgression, but also past and present, here and there, material reality and the spirit realm to create space for the playful exploration of Indigenous identities. I explore the ways in which gender transgression is nested in larger themes of playful category destruction and creative reconstruction to open up issues of political importance to these authors. By exploring these themes in conjunction with author biographies and interviews, I identify the political motives and implications of category transgression.

Politics are the Sport of the Student: How Social Media has Changed the Riot Dynamic

Presenter: Isabelle Duchaine, History

For engineering students in Colombia, law students in Mexico, and philosophy students in Brazil, scholarship took a backseat to political activism in the 1960s. This presentation examines why students were such a force within Latin American history during the period from 1958-1970. In 15 minutes, it provides an accessible, educational, and entertaining deconstruction of the origins of the Latin American student movement. I argue that this period represents the 'tipping point' of activism within Latin American Universities; one in which the sport of politics long practiced within institutions breached the walls of the ivory tower. In a quarter of an hour, the origins of this radicalism are presented:

- Demographics (higher enrolment figures, diversifying student experiences, broadening academic curriculum into the humanities and social sciences)
- Long-standing socio-cultural student respect (the position of students as 'agents of change', student co-governance of academic institutions)
- Idealism (rejection of typical political process, 'fetishization' of counter-cultural')

all set against the backdrop of Cold War tensions. Organized against perceptions of government corruption, neo-liberalization and American interventionism, students protested, joined guerrilla groups, forced strikes, and – in the case of Mexico – were eventually massacred by the state. Latin American students broadened the definition of a university from a house of scholarship to a training ground for citizenry, with a directive to "provide leaders for nation-building." The audience will be encouraged to ask questions and will leave with broader understandings of the role of students and universities in Latin America and beyond.

Amelia Alderson Opie (1769-1853): The Cromer Notebook and the Poetics of Revision

Presenter: Angela Du

Faculty Supporter: John B. Pierce

Amelia Opie's works were well-received by her contemporary audiences, yet few critical studies of her work exist. Shelley King and John B. Pierce's *The Collected Poems of Amelia Alderson Opie* is the first scholarly anthology of Opie's poems. King and Pierce draw upon a variety of sources—archival records, published texts, primary and secondary sources—to represent the cultural and commercial complexities of Opie's 60 years as a poet.

What King and Pierce did not have access to in assembling *The Collected Poems* is Opie's Cromer notebook. Housed in the Berg Collection of the New York Public Library, this document contains over 300 pages of dense composition and revision. Opie began the notebook during her stay in Cromer and likely kept it from 1791 to 1807. The notebook consists mainly of drafts of poems, many of which were published. These drafts are earlier, if not the earliest, versions of these poems.

Because the notebook spans a significant portion of Opie's career, it presents a unique opportunity to reconstruct Opie as a writer. Writing research, combining psychology, linguistics, and education, promotes great innovation in re-imagining the compositional processes of authors. I will use this research to help me to understand how Opie cognitively appraised and re-appraised her writing, producing a poetics of revision.

An Infrared Examination of Edward Hopper's *High Noon*

Presenter: Ian Longo, Classics

Faculty Supporter: George Bevan

An unprovenanced oil study, purportedly by the early American realist Edward Hopper (188* -1967), was purchased in 2007 on eBay by a pair of brothers from Ontario. It is a smaller, poorly-executed near-copy of Hopper's *High Noon* at the Dayton Art Institute. Given that detailed diary entries by Hopper's wife, Josephine, note only that four charcoal sketches preceded the final version of *High Noon*, and fail to mention an oil study, Gail Levin, the author of Hopper's catalogue raisonné, has conservatively concluded that it can at best be assigned to a dedicated follower. Can Infrared Reflectography of the two paintings shed light on the question of authenticity?

Many pigments used by Hopper become transparent in the Near Infrared spectrum, a fact verified by a test-panel. By using a DSLR camera, converted to detect IR, charcoal sketches on the primed canvas of the original were revealed. While IR Reflectography reveals earlier stages in the composition of the authentic *High Noon*, stages suggested by the charcoal sketches, IR does not provide positive proof for the authenticity of the oil sketch. The issue of authenticity became further complicated when the media, led by the *Globe and Mail*, took up the case of the owners and overstated the IR results. At present the IR investigation suggests only that the oil study was painted by a follower working from either Josephine's diary or, more intriguingly, from Hopper's own sketches, which are held in a private collection.

Session IV: Technology

Seminar Room, Stauffer Library

Thursday, March 6, 11:00-12:30

Moderator: Dr. Georgia Fotopoulos

Far from the Madding Cloud: How Social Media Has Changed the Riot Dynamic

Presenter: Sarah Bannister, Sociology

Faculty Supporter: Vincent Sacco

This paper aims to shed light on the motivations of the students involved in the 2008 Queen's Homecoming party riot by first reviewing relevant sociological literature, and in doing so defining the term "party riot", the paper will then analyze the news media coverage of the events, and in comparing the two discuss the factors that influenced these events. Factors explored include: tensions with the larger Kingston community, student unfamiliarity with and distrust of the police, police policies regarding crowd management and dispersal, alcohol consumption, geographical location, university administration policies, and the role of social media and communication technologies. The paper concludes with development of the implications on Homecoming events in the future.

A Distributed Computer System for Parallel Markov Chain Monte Carlo (MCMC)

Presenter: Michael Hynes, Engineering Physics

Faculty Supporter: Lawrence Widrow

A ubiquitous problem in physics is to determine expectation values of observables associated with a system. This problem is typically formulated as an integration of some likelihood over a multidimensional parameter space. In Bayesian analysis, numerical Markov Chain Monte Carlo (MCMC) algorithms are employed to solve such integrals using a fixed number of samples in the Markov Chain. In general, MCMC algorithms are computationally expensive for large datasets and have difficulties sampling from multimodal parameter spaces. An MCMC implementation that is robust and inexpensive for researchers is desired. Distributed computing systems have shown the potential to act as virtual supercomputers, such as in the SETI@home project in which millions of private computers participate. We propose that a clustered peer-to-peer (P2P) computer network serves as an ideal structure to run Markovian state exchange algorithms such as Parallel Tempering (PT). PT overcomes the difficulty in sampling from multimodal distributions by running multiple chains in parallel with different target distributions and exchanging their states in a Markovian manner. To demonstrate the feasibility of peer-to-peer Parallel Tempering (P2P PT), a simple two-dimensional dataset consisting of two Gaussian signals separated by a region of low probability was used in a Bayesian parameter fitting algorithm. A small connected peer-to-peer network was constructed using separate processes on a linux kernel, and P2P PT was applied to the dataset. These sampling results were compared with those obtained from sampling the parameter space with a single chain. It was found that the single chain was unable to sample both modes effectively, while the P2P PT method explored the target distribution well, visiting both modes approximately equally. Future work will involve scaling to many dimensions and large networks, and convergence conditions with highly heterogeneous computing capabilities of members within the network.

Investigating Digital (Re)Mediation in the Performing Arts

Presenter: Dylan On, Drama

Faculty Supporter: Jenn Stephenson

As digital technology progresses, it increasingly mediates human interaction. Simple discussion has shifted from occurring only in person to being mediated by telephone, texting, video calling, Twitter, Facebook and a myriad of other technologies and services. Likewise, theatre has been undergoing a similar shift from an art form that only occurs 'in person' to one in which technology often mediates presence. In his book *Liveness*, Philip Auslander traces the roots of digital mediation back to the advent of television and the resulting cycle of reinterpretation, or remediation as it is termed by Bolter and Grusin, of different art mediums within one another. Innovative Canadian artists Robert Lepage and Kim Collier are currently engaging in the remediation of traditional art mediums on the stage by taking a distinctly cinematic approach to theatre. This study intends to evaluate the remediation of these mediums both in the theatre and in live performances such as sporting events. It will then consider current trends in integrating interactive 'new' media into live and pre-recorded events, and how these 'new' media may already be manifesting themselves elsewhere via remediation. This discussion will give special consideration to immersive theatre, in which audiences are free to navigate theatrical space autonomously and observe as they wish. Key questions to be considered include: What are the tools of mediation, and what are their effects? How might digital (re)mediation be reinventing the way we tell and receive stories in the theatre? In what ways can the theatre further reinterpret 'new' interactive media?

Transhumanism as Lens for Economic and Social Development

Presenter: Callum Tomkins-Flanagan

Faculty Supporter: Jacqueline Davies

Abstract: Transhumanism is a philosophical worldview so driving that in some circles, it might almost be called a religion. Transhumanist belief holds that the rushing integration of humans and machines is inevitable and it moves to deeply alter the nature of human existence. Transhumanists believe that, properly harnessed, such integration can become a force of ultimate good. Reaching dominance in the technology sector, transhumanism's tenets and predictions have begun to drive the actions of multinational companies such as Google. If technology is left to take its current path, what are the plausible outcomes? How does the accelerating pace of technology stand to change the world's economy and the lives of average citizens? What risks (economic and ethical) are there to the fulfillment of transhumanist ideals by corporate powers, and how might they be mitigated? This dissertation makes no claim to a concrete solution, but raises the issues which are beginning to confront modern business and political leaders, and will only grow in the future. It implores such leaders to look further, and to make preparations to employ the advances to come to their best advantage, and to the best advantage of the world.

Session V: Species and Mutations

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Thursday, March 6, 1:00 -2:30

Moderator: Ms. Lauren Anstsey

The Effects of Plasticizers on Frog Malformation and the Hormone Axis

Presenters: Mason Lam

Faculty Supporter: Valérie Langlois

Frogs are particularly vulnerable to the effects of chemical pollutants due to their high sensitivity to the environment. One class of chemical that may endanger frogs are the phthalate esters, which are commonly used as plasticizers in plastic manufacturing to impart flexibility to vinyl products. Because of this, phthalates are widely produced and distributed. However, since they are not covalently bound to the plastic matrix, phthalates tend to leach into surrounding environments. Phthalate contamination has been ubiquitously detected in aquatic environments, so it is important to understand its effects. This study analysed the lethal and sub-lethal effects of diisooheptyl phthalate (DIHepP) and diisononyl phthalate (DINP), two phthalates that are currently under assessment by Environment Canada due to the lack of data on their effects. To test this, embryos of the frog *Silurana tropicalis* were exposed to varying concentrations of both phthalates during early embryonic development. Preliminary data suggests that neither DIHepP nor DINP affect embryo mortality at concentrations up to 30 ppm and 10 ppm, respectively. To investigate the effect of these phthalates on development, embryos have been scored for malformations. Sub-lethal effects have been determined by quantifying the expression of hormone axis genes in exposed embryos. Through these observations, both system-wide and cellular effects of these phthalates have been elucidated. Overall, this study provides valuable insight on the effects of DIHepP and DINP to aid in the assessment of the risk that these compounds may pose to frogs.

Why is that Plant Bald? A Study of *pAG51* mutant *Arabidopsis thaliana*

Presenter: Evelyn Popiel, Biology

Faculty Supporter: Sharon Regan

Trichomes, the unicellular hair-like projections found on the leaves of plants, present an ideal system for the study of cell fate and morphogenesis for biologists. They are easily accessible on the epidermis of plant leaves, they are good candidates for genetic manipulation, and they display easily identifiable mutant phenotypes. In addition to their utility as a model study system, trichomes have a variety of important functions in plants, including defence against insects and pathogens, reduction of water loss, and increased resistance to stress. This study will attempt to further characterize the trichome development pathway through the study of a mutant line of *Arabidopsis thaliana* that does not develop trichomes on its leaves. I hypothesize that one of the genes near the mutation site in *pAG51* has decreased expression, and that this is the cause of the mutant's trichome-less appearance. To test my hypothesis, I will first assess the transcript levels of the genes near the mutation site using a technique called Quantitative Polymerase Chain Reaction (QPCR). Once a gene has been identified, its function will be tested *in vivo*. The candidate gene will be knocked out in wild type *A. thaliana*, and if the progeny of this plant grow without trichomes, this will confirm the function of the candidate gene in trichome formation. Finally mutant *pAG51* will be bred with another line of mutant *A. thaliana*, and the progeny phenotypes will be observed to understand how the candidate gene interacts with other genes in the trichome initiation pathway.

The Effect of Response Effort on Risk-Sensitive Decision Making in Pigeons (*Columbia livia*)

Presenter: Madelaine Baetz-Dougan, Biology

Faculty Supporter: Niko Troje

Foraging decisions are central to an organism's survival in the unpredictable natural world. Recently, decision-making theories related to foraging have shifted focus from classic optimal rate maximization to ones that recognize risk as a prime factor that governs choice. For example, animals have been shown to adopt either risk-prone or risk-averse strategies, depending on their preference for variable or constant alternatives. The effects of variability in time or amount of reward have been consistently validated in animal models, establishing two main factors that affect choice behaviour. In the current study, we investigated response effort as a potential third factor that could produce risk sensitivity. Using operant conditioning, pigeons were trained to perform a colour discrimination task under two conditions. In the first condition, pigeons were exposed to stimuli associated with variable or constant response effort. In the second condition, pigeons experienced a time-matched delay before reinforcement to control for the concurrent effects of time. Preference for variable stimuli was measured in each condition using a probe trials method. We found that pigeons' preference for a variable alternative in the response effort condition differed significantly from the time-matched control, such that time factors alone produced stronger risk-prone preferences over effort. These findings provide further evidence of the importance of assessing ecologically valid behaviour when using experimental methods. While incorporating foraging effort diminishes the effect of risk sensitivity, this may be more representative of the risk associated with delay that animals encounter in their natural environment.

Session VI: La langue, la parole, et le film/Language, Word, and Film

Seminar Room, Stauffer Library

Thursday, March 6, 1:00-2:45

Moderator: Dr. Catherine Dhavernas, French Studies

La condition humaine du scaphandre et du papillon

Presenter: Clara Dagenais, Commerce

Faculty Supporter: Annie Riel

Deux états existentiels s'entrelacent dans les mémoires de Jean-Dominique Bauby, intitulées *Le scaphandre et le papillon*. Mon analyse, dans le cadre du cours *Le cinéma aujourd'hui : Études thématiques (FREN 427)*, traite de la dualité de la condition humaine et de ses formes visuelles dans l'interprétation cinématographique des mémoires de Bauby. Les cinéphiles sont transportés dans un corps souffrant du syndrome locked-in. Je tiens à interpréter la manière dont l'âme de Bauby, séquestrée par son corps, contrôle le jeu de caméra tout au long du film. Lorsque Bauby est en état asthénique, le point de vue de la caméra est restreint à sa vision. En contraste, la caméra peut également s'envoler de cette limite corporelle à travers son imagination. De là naissent les métaphores du scaphandre et du papillon. En maîtrisant l'imagerie symbolique et le jeu de caméra, le film *Le scaphandre et le papillon* réussit à donner un sens visuel à la pesanteur et à la légèreté de la condition humaine.

La clé de l'incompréhensible

Presenter: Laura Stevenson

Faculty Supporter: Catherine Dhavernas

À une époque où les habiletés de communication font partie des compétences de base du XXI^e siècle, on se rend compte que l'obsession avec le langage dans les théories littéraires des années 50 et 60 est justifiée. La communication reste le rôle principal du langage, mais le contenu de cette communication a beaucoup changé. Presque chaque romancier appartenant au mouvement du nouveau roman utilise le langage de façon très différente de celle dont nous avons l'habitude en expérimentant avec le langage, en l'étirant de tous les côtés afin de lui donner une nouvelle dimension. Il ne s'agit plus de communiquer des idées et des sentiments, mais plutôt de se pencher sur le langage lui-même, de se réinventer pour que l'écrivain puisse mettre sur papier ce qu'il ressent : des sensations, des perceptions, des soupçons.

Nathalie Sarraute, par exemple, perçoit le langage dans le sens mallarméen du terme, c'est-à-dire, « essentiel », complexe et qui produit du sens. En dehors du langage elle affirme l'existence d'une substance non-verbale qu'elle appelle « l'innommé » ou le « non-nommé » et le langage sert justement de médiateur entre les sensations que l'écrivain veut exprimer et son lecteur.

Avec Robbe-Grillet, Claude Simon et Michel Butor, le langage dans le roman joue un rôle important car il force le lecteur à changer sa façon de lire afin de comprendre le roman. Les jeux de mots et l'insistance sur les descriptions des objets font penser le lecteur qu'il doit absolument trouver la clé afin de comprendre l'incompréhensible.

C'est quoi l'usage de la parole?

Presenter: Brynne Hayhurst-France

Faculty Supporter: Catherine Dhavernas

Cette présentation va considérer la conception du langage et sa fonction dans le contexte de la vie quotidienne. Ce sujet a été choisi parce que la langue est un aspect intégral des relations humaines dont la fonction et l'organisation sont beaucoup plus complexes que nous avons l'habitude de penser. Cette présentation va donc examiner certaines des utilisations et fonctions habituelles du langage quotidien pour ensuite les voir problématisées dans le contexte de textes de trois auteurs: Pour un nouveau roman d'Alain Robbe-Grillet, L'Usage de la parole de Nathalie Sarraute et Minima Moralia: Réflexions sur la vie mutilée de Theodor Adorno. À part de l'analyse de ces textes, cette étude constate que le langage peut-être aussi utilisé pour coincé une personne dans une convention de comportement particulière, réfléchir sur la construction du langage lui-même, et que cette réflexion peut même influencer comment nous communiquons avec les autres. Les conclusions que nous envisageons porterons sur le fait que nous sommes conditionnés et limités par un langage qui véhicule beaucoup plus de présupposés que nous avons tendance à croire. Une des conséquences de ceci est qu'il est difficile de prétendre à la spontanéité, à la singularité et à l'authenticité lorsque nous parlons dans le contexte du quotidien. Et ce que nous poussent à faire les oeuvres littéraires et philosophiques que nous allons aborder est de prendre conscience de ce fait pour ensuite prendre en compte cette situation.

Arabic Linguistic Identity and the Tribal Confederacy of the Ghassan on the Eve of the Islamic Conquests

Presenter: Reagan Patrick, Classics

Faculty Supporter: George Bevan

In 528/9 AD, al-Harith, the leader of a tribal confederation known as the Ghassan, was recognized as Rome's ally on the eastern frontier. This alliance established the Ghassan, despite following a heretical Christian sect, as the principal authority in what is modern-day Syria and Jordan. This alliance also secured the Ghassan's right to collect taxes independently and to mobilize against the Empire's enemies. Moreover, Ghassanid leaders received distinguished epithets which had previously been reserved largely for the Roman aristocracy. A recently discovered mosaic in northern Jordan suggests that these titles were being used by the Ghassan not in isolation but as stratified ranks for their ruling class. Furthermore, this mosaic, along with significant epigraphic evidence, suggests that the Ghassan spoke Arabic well before the Islamic conquests, despite many scholars' belief that the Ghassan spoke Christian Palestinian Aramaic. Although it is difficult to define an Arab identity prior to the Islamic conquests, the Arabs of South Arabia would have shared at least a common language with the Ghassan to the North. Additionally, it cannot be doubted that the Ghassan would have had direct contact with Muhammad's ancestors through trade routes such as Wadi Sirhan. Early adherents to Islam may have seen this Arab group in the North, which had been able to achieve a semi-autonomous existence on the Roman frontier, despite neither following the orthodox faith nor being native speakers of Greek or Latin, as a potential model for a new Arab polity.

Session VII: Environmental Policy and Disruption

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Thursday, March 6, 3:00-4:45

Moderator: Ms. Lauren Anstey

Land Use Change Effects on Soil Quality in Prince Edward County, ON

Presenter: Kelsey Watts, Geography

Faculty Supporter: Neal Scott

Soils play a critical role to society as a medium that facilitates crop production and also contributes to the energy and carbon balance of the Earth System. Land-use change and improper land-use is one of the dominant factors affecting soil erosion and nutrient loss in soils. We examined the effects of land-use change on an Elmbrook clay/clay-loam soil on a farm in Ameliasburg on the northern part of Prince Edward County. Three cover types were examined: a sod field (established for over 10 years), a wheat field (part of a wheat/corn/soybean rotation for 30 years) and an undisturbed deciduous forest. Under each land-use type, cores to a depth of 40 cm were collected along three random 30 m transects (at 8, 16 and 24 m), then divided them into 10 cm increments, combining all similar depth increments along one transect. Soil quality was assessed by analyzing various soil physical and chemical properties. Bulk density of the soil was much higher (1.55 vs. 0.95 g/cm³) in both agricultural ecosystems compared to the forest, but only in the 0-10 cm layer. Soil moisture at 60% water holding capacity was much greater for the forest than the sod and wheat soils. Soil pH was slightly lower in the forest compared to the sod and wheat fields. The sod and wheat fields showed losses of ~52% and ~53% organic matter, respectively, in contrast to the forested area. The greatest differences in organic matter and total carbon were found in the top 10 cm, likely due to the greater accumulation of litter at the ground surface in the forest compared to the agricultural sites. It appears that long-term (10 year) agricultural production has led to a decline in some, but not all, soil quality measures, particularly soil organic matter, bulk density and water holding capacity. These findings are consistent with much of the literature concerning the effects of land-use change on soil quality, and highlight the need to develop improved management systems to minimize losses in soil quality that can lead to declines in the productivity potential of soils over time.

Place Matters for Health

Presenter: Kyle Pakeman, Sociology

Health is often conceptualized as an individual endeavour. When we are ill, the sickness—as far as the biomedical community is concerned—is experienced on a somatic bodily level. However, this particular perspective on health is severely myopic as it ignores the social nature of health. As recent research by geographers, urban planners, sociologists, and epidemiologists has indicated, our health outcomes are not solely a product of our health 'consciousness' or biological/genetic variables, but are also a byproduct of where we reside and its immediate hinterlands—which include our neighbourhoods and the larger city. This presentation then looks to provide a brief synopsis of the research which speaks to how the morphology of our urban environment can influence our health outcomes. In particular, the presentation will focus on—what urban planners have coined—the 'walkability' of neighbourhoods and cities. It is found that residents living in areas that are rated as highly walkable often have lower prevalences of obesity and people that are overweight.

The Effects of Two Phthalate Esters on Toxicity and Gene Expression After an Acute Exposure of *Oryzias latipes*

Presenter: Kira MacDougall, Environmental Studies

Phthalates are industrial chemicals used primarily to increase flexibility of high molecular-weight polymers. These compounds are not covalently bound to the polymeric matrix and are easily able to leach out and contaminate the environment. It is important to learn more about how these toxicants are affecting the environment and vertebrate health. Diisooheptyl phthalate (DIHepP) and Diisononyl phthalate (DINP) are among the substances being assessed by Environment Canada's Chemical Management Plan, which assesses and manages chemicals that are used in commerce in Canada. This study examines the effect of DIHepP and DINP in the fish *Oryzias latipes*. At 1 day-post-hatching, fish were exposed to a range of environmentally relevant low concentrations of DIHepP (37-300 ppb) and DINP (12-100 ppb DINP). Fish were exposed to phthalates under semi-static conditions for 7 days. None of the treatments significantly induced mortality or malformation. Gene expression analysis was performed in order to assess possible endocrine disruption of these compounds in *O. latipes*. The transcripts of interest include thyroid hormone-related genes (deiodinases, thyroid receptors alpha and beta), and steroid-related genes (cholesterol transporter, 5-reductases, androgen receptor, aromatase, and estrogen receptor). Data on mortality, malformation, and gene expression will be presented.

A Regime Paralyzed: An Exploration of Current Climate Politics and the Urgent Need for Reform

Presenter: Brenna Owen, Political Studies

The science on climate change is in: legitimate scientists have been unable to provide serious scientific evidence that casts doubt on the fact that anthropogenic, that is, human-caused climate change is occurring. Less clear are the speed of climate change and the extent of damages to environmental and human health if emissions from fossil fuels continue unabated. The most recent international conference on the environment, namely the 2013 United Nations Framework Convention on Climate Change (UNFCCC) or Conference of the Parties (COP) 19, was characterized by bitter intergovernmental negotiations and non-committal by major emitters to watered-down agreements. COP 19 exemplifies the inadequacies inherent in the current international system, which render it incapable of effectively addressing climate change; in other words, the international community remains unable to come to an agreement or agreements that mitigate the effects of climate change now, while establishing adaptation mechanisms for the future as the effects of climate change become increasingly pronounced. The efficacy of the current regime is impeded not only by its singular, non-binding approach to emissions reduction, but also by the ability of a small number of major emitters' ability to hinder agreements. In order to make rising to the challenge of the global climate crisis politically feasible, the international climate regime must

abandon the current emissions cap approach and adopt an incremental approach to negotiations, crafting sector-specific agreements that aim to gradually reduce emissions in a viable and equitable manner.

Environmental Effects of Road Salting

Presenters: Natalie Beaton, Sam Hillman, and Werdah Iqbal, Biology

Faculty Supporter: Gabriela Iburguchi

Humans in contact with less-than-favourable environments are constantly exerting control over those natural realms to make them more hospitable and functional for our everyday life. A prime example of such an exertion, and the focus of this research, is that of salting our sidewalks and roads to make transit safer for both pedestrians and vehicles. However, as is common with many anthropogenic practices, when out of sight we often pay little thought to the consequences of this action, and the potential environmental harm is effectively out of mind. Accordingly, the objective of our research project is to observe how ecosystems are being affected by road salt and its effect on local flora and fauna. This is a local issue that could effectively be extrapolated to a more global scale.

The planned approach was to first do an exhaustive search for the current literature on this topic, diving into the primary literature, effectively bringing researchers up to speed on the science behind this issue. Next we wanted to contact local authorities, such as the City of Kingston to understand more about local salting initiatives. Finally based on what we know about both the local situation and potentially harmful effects that salting our roads may have on the environment, formulate a set of recommendations to improve both the salting and the surrounding natural environment.

Session VIII: Activism and Off-campus Partnerships

Seminar Room, Stauffer Library

Thursday, March 6, 2:45-3:45

Moderator: Dr. Jacqueline Davies, Philosophy

Scale Implications in Studies of Landcover Change

Presenters: Kristin Geissler, Emily McTaggart, and Sarah Rosenblatt, Geography

Faculty Supporter: Neal Scott

Historical land-cover patterns may have a significant impact on ecosystem function today. To make inferences about the impacts of past land-cover, it is necessary to reconstruct historical patterns visually using data sources ranging from archival information to satellite data. We are exploring different approaches to mapping historical land-cover patterns and their impact on thematic and spatial errors. Our research is focused on three areas in the Frontenac Arch Biosphere (FAB), where we can map land-cover patterns from colonial periods to the present using a variety of data sources. Due to the long temporal scale of our work, we are using data sources collected at different spatial and thematic scales. The data sources include: settlement survey data, census, archival, aerial photos, and satellite imagery. To create maps comparing land-use patterns across time, all of these data sources need to be converted to a common scale.

Settlement survey data were converted to maps by classifying colonial concession maps into different land-cover types based on surveyor notes. Air photos (1920, 1940, 1960, and 1980) were digitized at a scale of 1:5000 using the same land classes as were used for the colonial period mapping. Satellite data were used to map land-cover in 2008. We are quantifying errors associated with aggregating and disaggregating data in order to create maps at common spatial resolution.

Results from our work will provide estimates of land-cover change over a 200 year period and will include estimates or errors associated with changing the spatial scale of various land-cover sources.

Aristotelian Ethics and Veganism

Presenter: Samantha Gamero

Faculty Supporter: Jacqueline Davies

I argue that ethical veganism and animal rights activism is preferable to a moral relativist approach to vegetarianism and animal use, even in cases of activism labeled "extreme." The moral relativist says that being a vegetarian or a meat eater is a matter of personal choice. I argue that the strong commitments of ethical vegans and animal rights activists are admirable from a virtue ethics perspective; they are not extreme. On the contrary, they accord with the ideal that Aristotle called the "Golden Mean." Aristotle himself was not vegan. He viewed the universe in a fundamentally hierarchical way and would have had no objections to the human use of animals. However, he believed in the idea of a Natural Law, and this can be used to support contemporary ethical veganism and animal rights activism. If animals possess rights, then it is the moral duty (rather than personal choice) of every human to stop his or her consumption of animal products. From this perspective, the harms that may be caused by veganism (particularly economic harms) are of lesser significance than the value of veganism and animal rights activism. The moral relativist argument against the alleged extremism of ethical vegans is improper. The highly controversial tactics employed by some vegan and animal rights activists including the use of violence, harassment and property damage can be understood as reasonable and morally necessary from a virtue ethics perspective if we extend our concept of moral community to include all sentient beings.

Session IX: Le film, la femme et le rôle du spectateur (all of the presentations in this session are in French)

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Friday, March 7, 8:30 to 11:30

Moderator: Ms. Annie Riel, French Studies

La fonction et le rôle de la représentation physique dans *L'écume des jours* de Michel Gondry

Presenter: Kaitlin Lewis

Faculty Supporter: Annie Riel

Avec des images telles qu'une araignée comme sonnette et une souris arborant le visage d'un homme, le film *L'écume des jours* donne l'impression de se dérouler comme un rêve d'enfant. Boris Vian a écrit *L'écume des jours* dans les années 40, puis le film, adapté par Michel Gondry, le réalisateur d'*Eternal Sunshine of a Spotless Mind*, est sorti en 2013. Gondry est reconnu pour son style visuel inventif. Le monde qu'il crée dans ce film est un spectacle remarquable et charmant. *L'écume des jours* utilise le surréalisme pour exprimer une histoire d'amour classique de Colin (Romain Duris) et Chloé (Audrey Tatou). Mais leur monde parfait et leur maison changent peu de temps après le mariage quand ils découvrent qu'un nénuphar pousse dans le poumon de Chloé. Alors que l'état de Chloé s'aggrave rapidement, leur maison et les alentours se dégradent eux aussi. À travers le film, les sentiments et les émotions des personnages prennent forme dans le monde réel. Les images surréalistes dans l'œuvre soutiennent l'intrigue et l'ambiance en donnant une manifestation visuelle. Vian parle des contextes sociaux d'une manière controversée sous l'apparence des scènes pittoresque comme dans un conte des fées. Gondry fait contraster des images fantaisistes et légères avec des sentiments sombres et des critiques puissantes de la société. Dans *L'écume des jours*, la représentation physique est liée à l'espace que Gondry et Vian ont créé pour susciter une discussion.

La femme dans les films français *Dans la maison* et *Bleu*: Une régression

Presenter: Kelly Kovacs

Faculty Supporter: Annie Riel

Récemment, le rôle de la femme dans la société quotidienne a beaucoup évolué, spécifiquement en considérant leur lutte pour l'égalité sociale envers les hommes, pas seulement dans le domaine professionnel, mais surtout dans l'amélioration de leur représentation collective à l'échelle universelle. Malgré les nombreux avancements, les femmes sont fréquemment représentées dans les films français comme personnages secondaires, qui sont seulement présents pour développer l'intrigue centrale qui tourne autour des hommes. Le film « *Dans la maison* », réalisé par François Ozon, met en scène deux femmes très différentes, l'une qui représente le stéréotype de la femme au foyer, ayant seulement des intérêts superficiels, tandis que l'autre incarne la femme indépendante qui essaie de maintenir une carrière et une vie émancipée de son mari. Mais les deux femmes sont soumises aux hommes de plusieurs façons, notamment psychologiquement, socialement et même physiquement. Un autre film renommé, « *Bleu* », réalisé par Krzysztof Kieslowski, met en scène des personnages de femme d'une autre manière, mais qui mène à tirer la même conclusion. L'une de ces femmes tient clairement le rôle d'objet sexuel, cependant que l'autre est obsédée par le souvenir de son mari décédé et est incapable d'imaginer un futur indépendant sans lui. Dans ces deux films, toutes les représentations de la femme provoquent d'une façon ou d'une autre une image de la soumission féminine, un phénomène qui peut être préjudiciable pour les femmes lorsqu'elles continuent la quête pour l'égalité.

Le rôle des femmes selon la perspective des narrateurs peu fiables

Presenters: Jordan Ingola, Jessica Oh, and Rebecca Tumino, French Studies

Faculty Supporter: Annie Riel

Notre présentation examinera les rôles des personnages féminins dans les films *Dans la maison* et *Tous les matins du monde* en analysant la narration peu fiable des personnages principaux, Claude et Marin Marais. Chaque personnage manipule la réalité, ce qui les rend non fiables. Claude mélange la réalité et la fiction pour inspirer et développer son histoire, sous la forme d'expression de son écriture. De la même manière, Marin omet certains aspects de la réalité en racontant l'histoire de son apprentissage avec Sainte Colombe, mais d'une manière qui n'est pas délibérée. À cause de cette narration peu fiable, les narrateurs aussi omettent certains aspects de la vie des personnages féminins. Les deux narrateurs, Claude et Marin, ignorent Jeanne et Esther, ce qui, par conséquent, force ces femmes à affirmer leur propre rôle dans la narration. À cause de la narration peu fiable, les figures féminines dans les deux films sont presque indétectables (ce qui se détache de la réalité) jusqu'au point où elles interviennent dans l'histoire. Éventuellement, les narrateurs ne peuvent plus nier l'importance du rôle des femmes, ce qui les force à les inclure à la fin de leurs histoires respectives, et de rapporter une version de réalité qui est plus juste.

La relation entre professeur et étudiant dans les films *Dans la maison* et *Entre les murs* et l'éducation idéal

Presenters: Julie Kim, Joanna Shi, and Ashliegh Evelyn

Faculty Supporter: Annie Riel

Les films « *Dans la maison* » (2012) et « *Entre les murs* » (2008) se passent à l'école secondaire et posent la question de la relation entre enseignant et étudiant. Les deux personnages principaux, Germain et François, sont des professeurs de français qui essaient d'enseigner et d'encourager leurs étudiants. Dans le film « *Dans la maison* », Germain, professeur au lycée, se concentre sur un seul étudiant et l'encourage à développer son talent d'écriture, tandis que dans « *Entre les murs* », François, professeur au collège, concentre ses efforts à l'amélioration de toute la classe. La lutte entre les professeurs et les étudiants en rapport avec l'idéalisme et la réalité à propos du rapport entre le professeur et l'étudiant seront examinés. Les deux films montrent les attentes idéales des professeurs et des étudiants, mais il y a aussi une distinction évidente entre leurs opinions d'un système d'éducation convenable en comparaison au système de notre société d'aujourd'hui. En particulier, nous allons analyser les personnages du professeur, des étudiants, et les influences des rôles secondaires. Enfin, les éléments comme la perspective du système d'éducation en France, la cinématographie et les symboles vont nous permettre d'évaluer l'effet produit par ces deux films.

Étude sur le discours interculturel dans *L'auberge espagnole*

Presenters: Adrienne Carmichael, Tiara Dailleboust, and Sydney Dubas

Faculty Supporter: Annie Riel

Dans le film, *L'auberge espagnole* (2002) réalisé par Cédric Klapisch, le thème de la sensibilité à la diversité culturelle prédomine l'intrigue et particulièrement le développement des personnages. Plus précisément, le personnage principal, Xavier, joué par Romain Duris, est un étudiant français qui fait l'expérience d'un conflit interpersonnel résultant d'une année à l'étranger. Le réalisateur démontre, au moyen du programme d'ERASMUS, que le fait de faire de nouvelles expériences culturelles va de pair avec le bouleversement et la consolidation de l'identité. À travers le discours interculturel, l'expérience du protagoniste sera examinée à partir de trois exemples correspondant à des périodes significatives de son échange à Barcelone. Ces expériences vont jouer un rôle fondamental dans le développement de son identité et sa capacité à s'intégrer à un nouveau milieu appartenant à une autre culture.

Au début du film, lors de son arrivée en Espagne, Xavier s'associe principalement avec les autres Français et s'enferme dans sa propre culture, ce qui renforce son identité française en limitant son intégration à la culture barcelonaise.

À la prochaine étape du développement de son identité, le protagoniste s'adapte au nouvel environnement tel que nous le constatons par les démonstrations d'amitié et sa relation amoureuse non conventionnelle avec Anne-Sophie, une femme mariée. Ces événements le préparent à s'ouvrir à la culture.

Enfin, Xavier embrasse et s'adapte à la nouvelle culture. Son identité est profondément affectée par son expérience à Barcelone: il cesse d'être simplement « un homme français » par son identification aux autres cultures auxquelles il a été sensibilisé.

Est-ce que nous parlons trop? Une étude sur les niveaux de la communication dans le monde d'aujourd'hui et la communication dans *L'Artiste*

Presenters: Brittany Fox and Jillian Stroud

Faculty Supporter: Annie Riel

Dans un monde où la majorité de la population est obsédée par les communications au moyen des réseaux sociaux comme Facebook et Twitter, le film « *L'Artiste* » présente une réalité rafraîchissante au point que l'audience n'a pas d'autre choix que de regarder attentivement le film. Avec l'usage de la musique, la langue du corps et l'intuition de l'audience, « *L'Artiste* » a réussi à communiquer efficacement, sans conversations orales. Le film comprend quelques intertitres, mais seulement là où c'était nécessaire et ces occasions n'étaient pas très fréquentes.

Notre recherche inclura une analyse de la communication d'aujourd'hui, car ce film nous force à reconsidérer les niveaux de communication qu'on utilise dans notre vie quotidienne. Nous allons comparer les méthodes de communication qui sont utilisées dans le film, un film de 2011, mais qui se passe au début du 20^e siècle, avec les méthodes qu'on utilise et qu'on considère normales aujourd'hui. Nous allons examiner la décision faite par le metteur en scène de ne pas utiliser de couleur ni de conversations orales dans un film du 21^e siècle, une décision que l'on croit très courageuse. Une décision qui a aussi mené à la célébrité, car ce film a gagné 3 Golden Globes, 5 Oscars, et 6 Césars, ce film est maintenant le film français le plus célèbre de l'histoire.

En analysant l'usage de la communication dans le film « *L'Artiste* » et l'usage de la communication dans la vie quotidienne, nous allons examiner les changements et les liens de la communication dans les deux mondes et ce qu'ils représentent.

La représentation des femmes dans la forme littéraire et la transmission de *Tous les Matins du Monde*

Presenter: Alexandra Galanis, French Studies

Faculty Supporter: Annie Riel

Dans le film et le livre « *Tous les Matins du Monde* », la relation et instruction entre Marin Marais et Monsieur de Sainte-Colombe est suivi et souligné. L'histoire de ces deux artistes ayant vécu au 17^e siècle est riche, et leur développement personnel grâce à la musique en fait des individus à plusieurs dimensions. Malgré la duplicité de ces personnages, les femmes, qui souvent jouent un rôle crucial dans le développement des hommes, sont représentées comme faibles et plutôt unidimensionnelles. Parmi les œuvres, la seule instance où Madeleine, Toinette ou Madame de Sainte-Colombe jouent un rôle actif, c'est en rapport avec les hommes qui les entourent. Cependant que Marin Marais est devenu musicien à la cour, et Sainte Colombe reçoit du réconfort lors des apparitions de sa femme, ces trois femmes sont des héroïnes malheureuses, victimes du désir des hommes. En passant leur vie à servir les hommes, il semble qu'elles soient seulement vénérées dans la mort.

En examinant la représentation de Madeleine, Toinette, et Madame de Sainte-Colombe dans le film « *Tous les Matins du Monde* » ainsi que dans le roman, ma présentation va porter sur l'utilisation des femmes comme outils pour les personnages masculins, la différence entre leur représentation dans le film et dans le livre, et leur fonction dans l'histoire.

Une analyse du film *Aurore*

Presenters: Danielle Figov and Lauren Polan-Couillard

Faculty Supporter: Annie Riel

Le film « *Aurore* », réalisé en 2005 par Luc Dionne, raconte l'histoire vraie d'Aurore Gagnon qui vivait dans les années 1910 à Sainte-Philomène de Fortierville. Celle-ci vivait avec une mère magnifique ainsi qu'un père et une soeur affectueux. Malheureusement, tout a changé quand sa mère se est tombée malade de la tuberculose pendant qu'elle était enceinte d'un troisième enfant. Pendant que sa mère était à l'hôpital, son père est tombé amoureux avec sa cousine par alliance, Marie-Anne Houde. Marie-Anne et Téléspore se sont mariés peu de temps après les funérailles. La belle-mère d'Aurore commence ensuite à la terroriser, sous prétexte qu'elle était une enfant de la « luxure et du péché ». Tous les villageois étaient au courant des sévices infligés à Aurore, mais à l'époque, les gens pensaient que c'était déplacé de se mêler des affaires des autres. Le curé Leduc était également dépourvu face à la situation de la pauvre fille qui empirait. Aurore se mourait à l'intérieur. À la fin du film, quand le juge de paix a essayé de mettre fin à cette tragédie, il était déjà trop tard. Téléspore et Marie-Anne ont tous les deux été condamnés pour les crimes commis.

Cette communication explorera le rôle de la religion dans ce film. Elle révélera également le rôle de la musique et de la lumière dans le film, utilisées pour susciter l'émotion. On discutera des saisons qui changent tout au long du film et de la manière dont ceci accentue les changements et la progression de l'intrigue, ainsi que le développement des personnages. Il s'agira donc de présenter la manière dont la musique, la religion, la mise en scène et le temps nous démontre la cruauté de la maltraitance des enfants par rapport aux autres thèmes présents dans le film.

Le rôle du spectateur

Presenter: Sydney Erdelyi

Faculty Supporter: Annie Riel

Pour plusieurs années, le rôle du spectateur était limité à regarder un film pour être amusé et puis donner des opinions et critiques. Cependant, par la recherche faite sur le passé et le présent de l'industrie du cinéma et le spectateur, on peut commencer à voir que le rôle et l'influence du spectateur avaient augmenté. Essentiellement, le but de ma présentation est de démontrer comment le rôle du spectateur inclue beaucoup plus. Cette communication explorera le pouvoir du spectateur à cause de comment il influence l'industrie et sa direction. Il peut être un critique qui regarde « une œuvre d'art ». Il peut être un admirateur qui agit comme « un public régulière qui manifeste l'intérêt, le support, et l'enthousiasme, ou similaire » (www.dictionary.com). Il peut être le « témoin oculaire d'un événement; personne qui regarde ce qui passe sans y être mêlée » dans lequel il a une expérience avec l'histoire, son message sous-jacent, la musique, etc. (Le Petit Robert de la Langue française [en ligne] [http://pr.bvdep.com/version-1/login .asp](http://pr.bvdep.com/version-1/login.asp)). Et à travers de tout cela, il développe une relation avec le directeur par le film qui agissant comme sa « voix » et qui crée une dialogue entre les deux, les acteurs par les triomphes et les luttes de leurs personnages ou dehors le film, le compositeur/musicien par sa musique choisie pour le film, et avec le cinéma par être absorbé dans le monde créée par tous impliqués dans la production.

Analyse de la relation entre la mère et sa fille dans *L'Amant*

Presenters: Katie Edmonson, Caitlin Feller, and Alison Hock

Faculty Supporter: Annie Riel

L'Amant de Marguerite Duras est un roman dont Jean-Jacques Annaud s'est inspiré pour réaliser le film en 1992. En dépit du fait que le film est une œuvre de fiction, l'histoire contient plusieurs parallèles avec la vie difficile de Marguerite Duras pendant qu'elle habitait à Saïgon. Ce film explore les obstacles d'une jeune fille qui essaie de trouver sa propre identité. Il y a une relation douloureuse entre la mère et sa fille qui démontre une dichotomie entre l'amour et la haine.

Par la présente communication, nous allons proposer une réflexion sur la relation tumultueuse mère-fille. En reliant les théories féministes aux exemples du film, nous allons montrer que la relation mère-fille ne peut pas être réciproque à cause de leurs rôles traditionnels dans la société. Les rôles de l'amant et de la mère symbolisent l'intervention du patriarcat, ce qui cause une rupture dans la relation mère-fille. La mère, dominante, est une femme castratrice qui essaie d'exercer un pouvoir absolu sur le destin de sa fille. L'intrusion de l'amant renforce le déséquilibre entre la mère et sa fille en lui retirant son pouvoir et en encourageant la séparation entre les deux personnages. Ce film contient beaucoup d'exemples d'une condition opprimée, produite par l'homme, qui empoisonne la relation mère-fille dès la naissance et rejette la réciprocité de cette relation.

La musique et son rôle dans le film *Dans la maison*

Presenter: Brendan Crilly, French Studies

Faculty Supporter: Annie Riel

Dans la maison, réalisé par François Ozon, est un film très palpitant qui tourne autour d'un étudiant au lycée, Claude, et de son professeur de français, Germain. L'intrigue se déroule autour du récit que Claude écrit à propos de son intégration dans la famille de son camarade de classe, Rapha, la famille de la « classe moyenne ». Germain, retrouvant sa passion d'enseigner à travers Claude, agit comme défenseur en l'encourageant à développer son récit – les personnages, l'intrigue, etc. Cependant, les intentions de Claude deviennent rapidement apparentes alors que son désir pour la mère de Rapha, Esther, s'accroît. Rapidement, l'intrigue se complique. Germain, si absorbé par le récit, perd sa conception de la réalité et devient névrosé. Ce qui a commencé comme un récit captivant devient un piège, menant à la trahison et la séparation, laissant conséquemment le spectateur saisi par une série radicale d'événements.

Dans un film comme celui de *Dans la maison*, il y a plusieurs éléments, outre l'intrigue elle-même, qui le rendent si captivant. Spécifiquement, cette communication explorera la musique et son rôle dans ce film. Elle abordera des questions telles que : De quel type de musique s'agit-il ? À quels moments dans le film la musique intervient-elle ? Est-ce qu'il y a certaines musiques qui sont attribuées à certains personnages ou à des événements ou à des états particuliers ? Quelles réactions provoquent-elles chez le spectateur ? En fin de compte, il s'agira d'analyser l'élément musical du film à partir de ces questions.

Session X: Education, Children, and Globalization

Seminar Room, Stauffer Library

Friday, March 7, 9:00-10:30

Moderator: Dr. George Bevan, Classics

Long-Term Neurological Deficits in Child Survivors of *Plasmodium falciparum* Cerebral Malaria in Sub-Saharan Africa

Presenter: Kelly Leslie, Life Sciences

Faculty Supporter: Doug Muñoz

Cerebral malaria, characterized by multiple seizures, coma, and other neurological abnormalities, is a particularly devastating complication of *Plasmodium falciparum* malaria. Children in sub-Saharan Africa comprise the most susceptible group to cerebral malaria worldwide, with more than 575,000 cases each year. Long-term neurological deficits—including motor impairments, language regression, cognitive deficits, behavioural abnormalities, and epilepsy—occur in approximately 25% of child survivors of cerebral malaria, which is now recognized as the leading cause of childhood neurodisability in sub-Saharan Africa. These neurological sequelae generate a significant economic and social burden as child survivors' impaired intellectual function impacts their prospects for education and future employment. While current understanding of risk factors, disease mechanisms, and treatments for these neurological deficits is lacking, recent studies have shown great promise in revolutionizing the way that cerebral malaria is diagnosed and treated. It is speculated that during an acute attack of cerebral malaria, an inflammatory response to malarial antigens in neural blood vessels triggers a cascade of events that ultimately results in cerebral tissue damage and hemorrhaging into the brain, causing long-term brain damage. Potential risk factors for neurological deficits include the duration of coma, the occurrence of multiple seizures, and high fever. Malaria retinopathy and angiotensin are being investigated as potential biomarkers to improve the definitive diagnosis of cerebral malaria. New drug therapies to prevent long-term neurological deficits after cerebral malaria include erythropoietin and statins, and cognitive rehabilitation and speech therapy have been shown to be successful in rehabilitating survivors.

Professors without Borders: The Benefits of a Scholastic Mentoring Program

Presenter: Jennifer Maul

Faculty Supporter: Victoria Remenda

Universities in sub-Saharan Africa currently struggle to maintain adequate faculty and resources to take on Ph.D. candidates. Expanding enrolment in recent decades has not been met with improvements in university facilities, and neglect from development agencies has made it difficult for the higher education sector to meet the demands of the knowledge economy. As a result African graduate students have few opportunities to pursue postgraduate study in the region and sub-Saharan Africa's brain drain persists. In order to address the lack of opportunity for graduate study, the Professors without Borders program has been developed. Professors without Borders is a mentorship program, whereby graduate students in sub-Saharan Africa are partnered with professors and academics at universities in industrialized nations and the students are mentored during the course of their degree. The program aims to promote internationalization among universities as well as facilitate development. This report examines the motivation behind the program and its potential for success. The literature review on higher education in sub-Saharan Africa summarizes the problems facing the sector but indicates the potential for higher education to contribute to economic growth. In addition, the reception of the Professors without Borders idea among African universities indicates unanimously that such a mentorship program would be very much welcomed and beneficial to African Ph.D. students. The experience of a similar program known as BrainRetain by the Irish-Africa Partnership provides insight into the challenges and logistics of making such a mentorship program successful and sustainable.

Making the Case for Teaching Social Emotional Learning through Children's Literature

Presenter: Mahima Lamba, Concurrent Education

Faculty Supporter: Lesly Wade-Woolley

In this presentation I propose children's literature as an effective tool to teach social emotional learning in the classroom. Social emotional learning has increasingly become a focus in many Canadian schools. Social emotional learning has been defined in many ways but is usually accepted to be a combination of developing children's abilities to self-regulate their feelings, understand and display empathy and make responsible choices. These are skills that can benefit children in a variety of ways that includes increasing self-esteem, reducing conflicts with peers or family members and developing resiliency. Although social emotional skills like empathy are essential for the adequate moral development of children, there is little communication as to the ways qualities like empathy can become teachable skills. This poses a challenge to classroom teachers who are not receiving training or professional development from Social Emotional Learning organizations or research bodies but wish to incorporate elements of the theory into their existing practice and routines. Although some organizations offer scripted lessons and programming to be used in the classroom, programs alone may not be enough. Locally developed resources created for peer-to-peer sharing amongst teachers allow for greater integration and have the added benefit of being customized for each teacher's unique learning community. This presentation will focus on the integration of social emotional learning at the classroom level using a children's literature approach. I share some of the resources I have created for this purpose.

Investigating Benzene and Metabolite Mediated Alterations in Nrf2 Signaling in Murine Fetal Liver Cells

Presenter: Enoch Lam, Life Sciences

Faculty Supporter: Louise Winn

Leukemia is a cancer of the blood, where the body produces an overabundance of immature white blood cells. It is the most common childhood cancer and possibly originates from chemical exposure during fetal development. Understanding the molecular mechanism and causes of childhood leukemia will help the development of therapeutic and preventative strategies to reduce and treat occurrences of this cancer. Benzene is a non-polar aromatic ring that has been confirmed to cause leukemia in adults. Benzene metabolites can generate free radicals that could potentially be involved in the development of childhood leukemia through in utero exposures. It is found in tobacco smoke, gasoline, industrial solvents and many other substances. Pregnant mothers can be chronically exposed to these substances through daily activities. In order to help determine the mechanism of benzene toxicity, a study was performed to determine the presence of free radicals in the livers of fetal mice at gestation day 14. Fetal liver cell cultures were exposed to varying concentrations of benzene and additional cell cultures were exposed to various concentrations of a benzene metabolite mixture, composed of hydroquinone and benzoquinone. RNA was extracted from these cells and converted into complementary DNA. cDNA was then used in quantitative polymerase chain reactions to analyze a set of genes that are regulated by an antioxidant pathway. This pathway can be activated in response to oxidative stress, and a change in gene expression would indicate the presence of benzene or benzene metabolite toxicity in the liver at gestation day 14.

Session XI: Sex Part 1

Seminar Room, Stauffer Library

Friday, March 7, 10:45-11:45

Moderator: Dr .Jill Atkinson, Pscychology

Openness to Sexuality as a Predictor of Gender Non-Specificity of Visual Sexual Interest in Heterosexual Women

Presenter: Nicole Persall

Faculty Supporter: Meredith Chivers and Samantha Dawson

Past research has indicated that there is a gender difference in regards to sexual arousal; such that heterosexual men typically show a pattern of gender-specificity, whereas women show a pattern of gender non-specificity. Although this is a robust finding, there is little research examining the predictors of this finding. The current study uses eye-tracking data (i.e., gaze time to male and female images) to examine the effect of openness to sexuality on visual sexual interest. Openness to sexuality is assessed using three factors: sexual attitudes, sexual desire, and sexual arousability. I predict that greater openness to sexuality (i.e., more positive sexual attitudes, greater sexual desire, and greater sexual arousability) is correlated with greater gender non-specificity of visual sexual interest.

Exploring the Sexual Culture at Queen's

Presenter: Andrea Gauthier, Health Studies

Faculty Supporter: Mary Louise Adams

Students on university campuses are having sexual experiences that seem to be different than sexual experiences of students of previous generations. Traditional "going steady", committed relationships are being challenged by a pervasive casual sex culture across university campuses (Allen, 2004). Among students and in the media, this culture of casual sex is often referred to as "hookup culture." Media commentary often presents hookup culture as a sign of negative moral change. I am interested in seeing if there is another side to this argument. I will use student perspective on this hookup culture to identify whether men and women understand this culture differently, and look at hooking up as a source of empowerment. To focus my study, I will look at the phenomenon colloquially know as the "walk of shame" as a way to represent the sexual hook up culture here at Queen's. I will conduct 2-3 focus groups with a total of 7-10 female and 2-5 male participants. The participants in this study will be self-identified heterosexual students who also identify themselves as participants in hookup culture, currently enrolled in undergraduate studies at Queen's University. Although literature has examined hookup culture among various populations, my research will examine how heterosexual students perceive the sexual culture here at Queen's. I expect these discussions to offer commentary on hookup culture from a first hand perspective. This study will contribute to the to Queen's students' existing knowledge about their own sexual culture, but also provide insight for non-student members of the Queen's community.

Equality: A Reasonable Limit for the Restriction of Pornography

Presenter: Galen Watts, Drama/Philosophy Medial

Faculty Supporter: Jacqueline Davies

This essay asserts that if we are to conceive of pornography as distinct from erotica, then there do exist liberal reasons for its restriction. By offering an immanent critique of Ronald Dworkin's defense of pornography, from a feminist perspective, this essay contends that in a progressive and democratic society, where there exists a history of social inequality, the right to equality trumps the right to free speech. State censorship of pornography is endorsed as a means of preventing the perpetuation of discriminatory social hierarchies, as well as the harm that comes to both men and women as a result of the viral influence pornography has on society. Although its primary concern is with the de-legitimization and oppression of women by men within society, resulting from heteronormative pornographies, this article addresses significant issues within the contemporary debate over pornography; specifically those raised by feminists in favour of pornography, and the emergence of gay, lesbian and queer pornographies

Session XII: Pizza with Posters, 11:45-1:15 – (abstracts pages 35-44)

Seminar Room and Atrium, Stauffer Library

Session XIII: Sex Part 2

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Friday, March 7, 1:15-2:15

Moderator: Ms. Nathalie Soini, Library and Learning Commons

Individual Differences in Masturbation and Erotica Consumption Predicting Levels of Sexual Concordance

Presenter: Graham Hutchings

Faculty Supporter: Meredith Chivers

Concordance is not the only aspect of sexuality where significant gender differences are observable: men masturbate significantly more than women (Oliver & Hyde, 1993; Petersen & Hyde, 2011). There are also large gender differences in pornography consumption and consumption patterns (Hald, 2006). The study of concordance is important as it could assist in the further development of models of sexual response, and potentially reveal the role of gender differences in those models. Evidence suggests that the cognitive system one uses to process stimuli can affect one's subjective sexual arousal (Dove & Wiederman, 2000). Greater erotica consumption habits could lead to a better familiarity with the erotic stimuli used during the testing protocol, and this decreased novelty could produce more accurate responses for subjective sexual arousal. Using a "bottom-up" cognitive model in which people use physical sensations to infer emotional states, it is likely that increased sexual experience will lead to higher levels of concordance.

Opposite-sex attracted participants (24 men and 25 women) will view a series of audiovisual stimuli depicting heterosexual sexual acts and neutral subjects. Participants will answer a series of questionnaires about their sexual history and attitudes, and will answer questions on their level of sexual arousal before and after each stimulus. Participants will continuously report their levels of subjective sexual arousal while simultaneously their genital responses, heart rate and skin conductance will be recorded.

It is important to further our understanding of how much impact a participant's previous exposure to erotica, and masturbation behaviours to that erotica, have on their concordance rates; given the increasing pervasiveness and accessibility of erotica, this may prove extremely relevant to future investigations.

Ready or Not: Exploring Sexual Arousal with Women who Report Sexual Arousal Difficulties

Presenters: Erin Zadorozny, Psychology

Faculty Supporter: Caroline Pukall

The purpose of this study is to examine possible differences in genital and subjective components of sexual arousal between women with and without sexual arousal/desire difficulties (SADD). Previous research has focused on physiological differences with women who have SADD, in particular, genital response to erotic stimuli. The pattern of results in the literature indicates that women with SADD exhibit similar genital responses to controls (Meston, Rellini, & McCall, 2010), yet women with SADD typically report a decrease in intensity of genital sensation in sexual situations (Laan, van Driel, & van Lunsen, 2008; Giraldi, Rellini, Pfau, & Laan, 2013), calling into question the method of measurement employed to assess genital response. In the current study, genital and subjective arousal, along with genital-subjective agreement (i.e., sexual concordance), will be investigated to determine if there is a difference between women with SADD and controls. Participants will include 30 self-identified heterosexual women who will complete a validated self-report measure of sexual function and a session in which they rate their subjective sexual arousal while their genital blood flow is measured in response to various films. Laser Doppler Imaging will be used to measure genital blood flow for the first time in this population. This study could lead to a better understanding of sexual arousal in women with SADD, which will assist with diagnosis, as well as identify areas to focus on when trying to develop treatments for sexual dysfunction.

Sexual Concordance and Orgasm Consistency in Women

Presenter: Michelle McCowan, Psychology

Faculty Supporter: Meredith Chivers

The agreement between psychological and physical sexual arousal is variable among women: some women show very high levels of *sexual concordance* while others demonstrate little or no agreement between the emotional and physiological components of arousal (Chivers, Seto, Lalumière, Laan, & Grimbos, 2010). This mind-body connection has been implicated in female sexual dysfunction, as women with sexual dysfunctions tend to show especially low levels of sexual concordance (e.g., Laan, van Driel, & van Lunsen, 2008). To date, there has been very little research on how concordance influences individual differences in sexual outcomes in women without sexual dysfunction. Initial evidence suggested a relationship between sexual concordance and orgasm consistency in healthy women (e.g., Adams, Haynes & Brayner, 1985); however, the few studies examining this relationship present mixed findings. The current study attempts to clarify the relationship between sexual concordance and orgasm consistency and examines sexual assertiveness as a mediator in the predicted concordance-orgasm consistency relationship.

Session XIV: Gender

Seminar Room, Stauffer Library

Friday, March 7, 1:15-2:15

Moderator: TBD

The Inability of the Victorian Gentleman to Reconcile Hedonism and Guilt in *The Picture of Dorian Gray*

Presenter: Tamarra Wallace, History/Religious Studies

The conflict between the rules of society and the rights of the individual can lead to a chaotic moral state. In Michael Brander's *The Victorian Gentleman*, Brander details how Victorian gentlemen are permitted freedom as long as they adhere to social norms in public. In Joris-Karl's Huysmans' *À Rebours*, Huysmans details how a member of the Decadent movement, Des Esseintes, prioritizes the fulfillment of his own desires over societal expectations. In Oscar Wilde's *The Picture of Dorian Gray*, Wilde demonstrates how the tension between the Victorian pressure to conform and the Decadent philosophy to seek pleasure leads to Dorian Gray's downfall. In his condemnation of the Victorians for their equation of appearance with morality, and the Decadents for their preference of sensation over morality in *The Picture of Dorian Gray*, Wilde endeavours to show the consequences of the suppression of guilt.

In *The Picture of Dorian Gray*, the tension between the Victorian notion of the appearance of morality and the Decadent tendency to subvert the significance of art to morality culminates in Dorian Gray's inability to accept that he possesses guilt. As his participation in the Decadent lifestyle leads to his indulgence and vice, and he cannot distinguish between his looks and his conscience, he experiences the loss of the primary component of morality: the soul.

Transvestite, Harlot, and Kingly Saints: Portraying Gender Ideals in Middle Byzantine and Anglo-Saxon Hagiography

Presenter: Colleen Maillet, History

Faculty Supporter: Richard Greenfield

The purpose of my study is to explore and analyze some didactic elements concerning gender ideals that are found in hagiographies in early medieval Christianity. By studying lives from two traditions that are widely separated in terms of region, Byzantine saints from the East and Anglo-Saxon saints from the West of the Medieval world, I have been able to distinguish elements that are specific to the particular society and reinforced through these stories. Focusing on the portrayal of gender ideals, I have been able to suggest how the authors have contrived to present, and encourage, specific notions of socially appropriate behaviors and attitudes. My study, dispelling a popular assumption that saints are mainly celibate martyrs, includes transvestite nuns, repentant harlots, military men, and pious kings. In each case, however, it shows that their veneration, and the creation of the written tradition supporting their cult, is clearly influenced by the desire to provide examples of gendered behavior that the church perceives as appropriate for the society.

Session XV: Economy and Development

Speaker's Corner, Queen's Learning Commons, Stauffer Library

Friday, March 7, 2:15-3:15

Moderator: Ms. Anne Johnson, Mining.

The Effect of Quantitative Easing on Investment in the US and UK:

An SVAR Approach

Presenter: Thomas Russell, Economics

Faculty Supporter: David Longworth

Following the collapse of Lehman Brothers in 2008, the Federal Reserve and the Bank of England implemented asset purchase programs to provide further liquidity to faltering markets, and to continue to place downward pressure on market interest rates. Later called Quantitative Easing, the higher asset prices and lower market yields induced by the purchases were expected to translate into lower market borrowing costs and increased investment. This project focused on estimating the effect of Quantitative Easing on real investment in the US and UK up to 2010. First, the historical relationship between bond yields and investment was estimated using a time series econometric model called a structural vector autoregression. Next, using the historical relationship between bond yields and investment, the impact of the asset purchases on investment was calculated using the bond yield changes induced by Quantitative Easing announcements. Deviations in bond yields on Quantitative Easing announcement dates suggested an impact on investment of 5.93% in the US, and an impact of 3.37% in the UK. Moreover, both the US and UK econometric results are statistically significant. Taking into account the econometric assumptions required to estimate the impact of Quantitative Easing on investment, the results in this project should be viewed with caution. However, the results will be useful in framing future thought on Quantitative Easing as a tool to provide macroeconomic stability.

A Different Kind of Subprime: Risk Management in Microcredit Lenders and their Implications on Debtors

Presenter: Graeme Mckinnon-Nestman

Microfinance is a movement which aims to promote financial inclusion and empower individuals through small loans (as well as other services) to finance business ventures in the developing world and beyond. Microfinance aims to meet the financial needs of individuals who are left out of the scope of more mainstream financial services, while avoiding the perceived shortfalls of traditional aid such as dependence. Along with the expansion of microfinancial institutions (MFIs) since the turn of the century and the proliferation of the internet, diligent and prudent management of these institutions has never been of greater importance. Though there is a lot of research on entrepreneurship, business, finance, and management concerning more mainstream practices, it is clear that microfinance is at a frontier of modern commerce. Risk is basic to all business (as well as life in general) and in order for the microfinance movement to maintain its growth, it must be self-sustaining while maintaining its ability to assist meaningful development. This presentation will compare the risk management practices standard to MFIs now, as well as look at how risk is fundamentally different to small entrepreneurship in developing regions in comparison to developed economies. In doing so, it should shed light on the financing needs and realities of target individuals and see how MFIs in the status quo are able to meet them. From this we should see where the shortfalls currently lie and where things may be improved.

Globalization Across the Disciplines: A Comparison of the Teaching of Globalization in Commerce and Global Development Studies at Queen's University

Presenter: Jennifer Langill

Faculty Supporter: Andrew Leger

It is often said that we are living in the "age of globalization." This research questions what is meant by this statement. The inquiry is divided into two areas of research. The first part is a review of the academic literature on globalization. Globalization was found to be a term used across a wide variety of disciplines. However, there is no consensus between the disciplines on what exactly the term encompasses. This led to the second area of research: Investigation of the teaching of globalization at Queen's University. For the scope of the research, undergraduate Commerce and Global Development Studies students were chosen. Students from either discipline filled out a survey on globalization and how it is taught at Queen's University. The results strongly indicated that the students in Commerce and Global Development Studies had very different conceptions of globalization and were taught about it very differently. The larger implications for what the research findings suggest are discussed University and beyond, while also acknowledging the limitations of the scale of the research. The inquiry concludes with suggestions for moving forward, including further research and alterations to the teaching of globalization at Queen's.

Session XII: Poster session

Queen's Learning Commons, Stauffer Library Atrium

Presenters will be present at posters Friday, March 7, 11:45-1:15

Posters will be on view March 6 & 7

1. Targeting Slit2-Robo Signaling as a Novel Therapy for Diabetic Nephropathy

Presenter: Lauren Chan

Diabetes is a chronic disease that can lead to life-threatening complications such as diabetic nephropathy (DN). An early manifestation of DN is hyperfiltration, a predictor of poor renal outcomes. Hyperfiltration is partly driven by capillary growth (angiogenesis) within the glomeruli, the filtration units of the kidney. A major stimulus for diabetic glomerular angiogenesis is vascular endothelial growth factor (VEGF). VEGF neutralization blocks hyperfiltration in diabetes, but VEGF blockade itself can lead to renal injury. Endothelial cells express Robo1 and Robo4, which serve as receptors for the secreted ligand Slit2. Robo4 activation by Slit2 inhibits endothelial angiogenesis, whereas Slit2 activation of Robo1 promotes angiogenesis.

In search of novel therapies for diabetes-induced glomerular hyperfiltration, we hypothesized that diabetes affects the expression of Slit2 and/or its Robo receptors. We further tested whether Slit2 administration attenuates VEGF-driven diabetic capillary growth.

Diabetes was induced by injection of streptozocin (STZ) in male rats. Age- and gender-matched non-diabetic rats were followed as controls. 3 weeks later, kidneys were harvested from both groups, and the expression of Slit2, Robo1 and Robo4 analyzed. In parallel, male diabetic rats were randomized to receive Slit2 or saline injections every 3 days. After 3 weeks, kidney filtration and capillary growth were measured in both groups.

Diabetes was associated with a reduction in kidney Robo4 expression, whereas Slit2 and Robo1 mRNA levels were unchanged. Slit2 administration attenuated the diabetes-induced rise in kidney filtration and glomerular capillary growth. Our results suggest that targeting Slit2-Robo signalling may have therapeutic importance for early diabetic nephropathy.

2. Correlations between Urbanization and Reproductive Fitness in *Agelaius phoeniceus* (Red-Winged Blackbird)

Presenter: Sophie Gong, Biology

Faculty Supporter: Dr. Frances Bonier

Urbanization has complex and diverse effects on the environment. How do animals respond to such dramatic changes to their habitat? In this study, I investigated the relationship between the degree of habitat urbanization and reproductive success in Red-Winged Blackbirds. I located and sampled two populations of Red-Winged Blackbirds: one rural population located at the Queen's University Biological Station in Elgin, Ontario, and one urban population located at Belle Park in Kingston, Ontario. I mapped nesting territories from both populations and evaluated them for parameters such as water, marshland, and vegetation cover, as well as distance to roads, trails, and buildings. I also took physical measurements from adult birds, eggs, and nestlings of each territory to evaluate reproductive fitness. With this data, I will compare the degree of habitat urbanization with reproductive success. I hope to see meaningful relationships that might reveal how breeding Red-Winged Blackbirds respond to urbanized landscapes, and what key components of nesting territory might influence their reproductive success. With our society currently experiencing the largest wave of urban growth in history, it is crucial to understand the effects of this growth on other species and how we can most effectively preserve ecological value in urban landscapes.

3. The Inter-rater Variability and Reliability of the use of the Modified Ashworth Scale for the Upper Motor Neuron Syndrome

Presenter: Basia Gwardjan, Biology

This poster reports on the results of a quality improvement project. The objective was to determine the inter-rater variability and reliability of the Modified Ashworth Scale for assessing spasticity in people with traumatic brain injury.

Hamilton Health Sciences operates the comprehensive spasticity management program. In this regional program, the MAS is used by physical therapists, occupational therapists and physicians as a quantitative measure of spasticity. The MAS is used to make determinations related to treatment options as well as follow the efficacy of treatment.

The participants were 28 practitioners from the disciplines of medicine, physical therapy and occupational therapy. Each practitioner was provided an explicit set of written instructions and then asked to examine two patients with traumatic spinal cord injury. The MAS scores were reported anonymously. As well, the two patients were assigned MAS scores by two expert spasticity management clinicians.

There was substantial inter-rater variability with MAS scores. Fleiss' Generalized Kappa, which is chance-corrected measure of agreement among three or more raters, was 0.18. This is interpreted as poor agreement. Furthermore, only 46 percent of the participants agreed with the MAS scores assigned by the physician expert in the first subject and 50 percent of the participants agreed with the MAS scores assigned by the physician expert in the second subject.

Clinicians should be cognizant of the variability of the MAS when making determinations related to patient management.

4. "Fond of Flourishing Knives at Her": A History of Domestic Violence in Kingston

Presenter: Brynn Harlock, History

Faculty Supporter: Steven Maynard

This research examines cases of domestic violence in Kingston, Ontario at the turn of the 19th century. In doing so, I identify several strategies employed by Kingstonian women to ensure the well-being of themselves and their families, including presenting themselves as victims, advocating for their children's safety, threatening legal prosecution, and physical retaliation. The time period studied in this research includes the rise of Evangelicalism in North America, a high prevalence of temperance advocacy, and increasing public concern for previously private domestic violence. Focusing exclusively on data from 1890-1911, the research first draws upon cases of domestic battery and assault as recorded in historical Kingston police records housed at the Queen's University archives. Next, it analyzes court sentences and newspaper coverage of those cases to determine public response to domestic abuse. Upon examination of these sources it becomes apparent that legal authorities and society at large were more sympathetic to women who appeared meek and victimized, rather than those whose responses to violence challenged traditional understandings of femininity.

5. Beyond the 'Vestibule': Amelia Alderson Opie's Letters to Henry Perronet Briggs, R. A.

Presenter: Sarah Hobbs, English

Faculty Supporter: Dr. Shelley King

This past summer, under the supervision of Dr. Shelley King, I transcribed and annotated two hundred-odd letters written by the Romantic-Victorian writer, Amelia Alderson Opie, to her cousin and Royal Academy artist, Henry Perronet Briggs. Opie was a somewhat enigmatic character: to reduce her life to its broadest strokes, she transformed from a bubbling, republican member of London's literary scene into a conservative, demure Quaker lady. Her first biographer, C. L. Brightwell, claims that Opie escaped the "various dangerous and seductive influences" of her youth, preferring in time the company of those "cultivated minds" which "actuated by holy principle" encouraged her own "awakened spiritual interest" (36-38). But the correspondence between Amelia Opie and her cousin, artist Henry Perronet Briggs, complicates that narrative of radical change. Although a practicing Quaker when she penned these letters, Opie displays some distinctly un-Quaker-like tendencies. In a much earlier letter, Opie likened correspondents who did not reveal their "real feelings" to her to those who refused her entry into their houses ("11 Mar. 1820"). Henry Perronet Briggs is, therefore, someone who is permitted to see far beyond Opie's own public persona — beyond what Opie once likened to an individual's "vestibule" — for he is someone with whom she felt entirely at ease. This project thus sheds light not only on Opie's own character, but also points to the larger issues of identity and how they relate to the genre of biography itself.

6. The Effects of Involvement in Physical Activity and Organized Athletics on the Prevalence of Peer Victimization in Adolescents

Presenter: Janell Klassen, Psychology

Faculty Supporter: Dr. Wendy Craig

Physical activity is encouraged among adolescents to teach healthy living while also protecting youth by reducing the risk of many physical and mental health issues. Involvement in organized athletics, a common avenue for participation in physical activity among adolescents but may also inadvertently contribute to peer victimization. The goal of this paper was to assess if involvement in organized athletics moderates the relationship between physical activity and peer victimization. 21420 adolescent Canadian students completed the 2010 Health Behaviour Survey for School-aged Children, which included measures assessing physical activity, involvement in organized athletics, and involvement in bullying. Moderated regressions indicated that poor health, low physical activity, absence of involvement in organized athletics, lower grade, and gender were associated with increased peer victimization. These findings suggest that although involvement in organized athletics offers adolescents an opportunity to be physically active, it may come at cost due to an increased risk for peer victimization. This research has implications for both practice and policy.

7. Teenage Motherhood, Responsibility, and Docile Female

Presenter: Amanda Lam, Sociology

This research paper critiques the harmful dominant discourse in America which posits that teenage mothers are “unfit” parents because they bore a child outside the confines of heterosexuality, monogamy, marriage, and middle-class status. Based on secondary research, the paper uses a Foucauldian feminist perspective to argue that the negative discourse around teenage pregnancy and motherhood reified by America’s abstinence-only sex education curriculum and advice from sexual health experts seeks to produce docile female bodies. America’s abstinence-only sex education curriculum promotes gender differences in bodily movements whereby female sexual activity is demonized while male sexual activity is normalized. Sexual health experts also morally judge the teenage mother’s actions under the guise of professional knowledge, and fail to recognize the structural factors that may have contributed to teenage pregnancy as a means to produce docile female bodies. Additionally, both America’s abstinence-only sex education curriculum and sexual health experts absolve the teenage father of any responsibility. By challenging the sex education curriculum and sexual health experts, the power of language and discourse of authorities in framing what they consider to be a social problem will be brought to light.

8. Infrared Reflectography of Edward Hopper’s *High Noon*: Questions of Authentication

Presenter: Ian E. Longo

Faculty Supporter: Professor George Bevan

An unprovenanced oil study, purportedly by the early American realist Edward Hopper (188* -1967), was purchased in 2007 on eBay by a pair of brothers from Ontario. It is a smaller, poorly-executed near-copy of Hopper’s *High Noon* at the Dayton Art Institute. Given that detailed diary entries by Hopper’s wife, Josephine, note only that four charcoal sketches preceded the final version of *High Noon*, and fail to mention an oil study, Gail Levin, the author of Hopper’s *catalogue raisonné*, has conservatively concluded that it can at best be assigned to a dedicated follower. Can Infrared Reflectography of the two paintings shed light on the question of authenticity?

Many pigments used by Hopper become transparent in the Near Infrared spectrum, a fact verified by a test-panel. By using a DSLR camera, converted to detect IR, charcoal sketches on the primed canvas of the original were revealed. While IR Reflectography reveals earlier stages in the composition of the authentic *High Noon*, stages suggested by the charcoal sketches, IR does not provide positive proof for the authenticity of the oil sketch. The issue of authenticity became further complicated when the media, led by the Globe and Mail, took up the case of the owners and overstated the IR results. At present the IR investigation suggests only that the oil study was painted by a follower working from either Josephine’s diary or, more intriguingly, from Hopper’s own sketches, which are held in a private collection.

9. Investigating the relationship between Fibrinogen deposition and myelomonocytic cell infiltration in EAE Spinal Cord

Presenter: Varoon Mathur, Biomedical and Molecular Sciences

Multiple sclerosis and its animal model, experimental autoimmune encephalitis (EAE), are primarily characterized by inflammatory degeneration. It has also been shown that deposition of fibrinogen from the blood in spinal cord tissue increased in MS and EAE. Fibrinogen is a substrate molecule found in the blood for a receptor called CD11 expressed on the surface of both brain and blood immune cells. Using a technique to light up specific tissue (called immunofluorescence), we demonstrate that there is a positive correlation between levels of fibrinogen deposition in spinal cord and the progression of clinical symptoms. Contrary to previous research, our past work indicated that brain immune cells play a limited role in disease progression, while immune cells in the blood are critical. Thus an alternative interpretation of these results may be that blocking fibrinogen deposition within the spinal cord during EAE reduces the infiltration of blood immune cells into the spinal cord. Investigating this experimentally, however, is complicated by the inability to distinguish blood and brain resident immune cells. To circumvent this, we use parabiosis-irradiation-separation models to investigate the replacement of circulating immune cells, which leads to the dynamic assessment of blood immune cell infiltration in spinal cord. We have used fibrinogen deposits during EAE, thereby successfully identifying a pathological component, and a immunofluorescence to visualize fluorescent blood cells within spinal cord and their relationship to therapeutic target for multiple sclerosis.

10. The influence Kingston feral cat populations have on local biodiversity

Presenters: Shelana Mutch, Jin-Zhi Pao, Rachel Selwyn, Krista Stares,
Andrew Wesley-James; Biology
Faculty Supporter: Gabriela Ibarguchi

Focus: Kingston Feral Cat (*Felis catus*) Population

Location: Greater Kingston Area

Issue: Released domesticated cats have established feral populations within the Kingston area. Predation by the feral cats has caused damage to the local bird and small mammal populations. The cats also displace other mammals that have previously occupied the same ecological niche. Furthermore, the increased cat population has led to an increase in the flea and disease count. Overall they decrease biodiversity in the Kingston area.

Objective: We aim to promote and inform the general public of this occurrence, so that the community can be involved with helping manage and decrease the damaging effects of the feral population.

Methods:

1. Survey a local colony of feral cats to further understand the extent of the problem.
2. Work with local conservation initiatives (ex. Kingston Spay and Neuter Initiative) to gain hands on experience in dealing with the feral cats.
3. To raise awareness by utilizing social media (creating images people want to share on Facebook, Twitter, Tumblr etc.)

Ultimate goal: With this project we hope to alter the problem of feral cats with a two-fold solution. By increasing public awareness we hope to decrease the release of domesticated cats into the wild, promote owners spaying and neutering their pets and encourage others to perform further work. We hope to utilize our own skills and gain experience by working on the ground with local initiatives to learn the best methods to tackle this issue.

11. Substituting Biofuel for Coal: Determining the Optimal Perennial Grass Species and Nitrogen Fertilization Level for Bioenergy Production in Eastern Ontario

Presenter: Andrew Mendelson, Environmental Studies

Faculty Supporter: Dr. Neal Scott

Renewable energy production has become an increasingly important issue in recent years due to climate change and energy security issues, and bioenergy crops may be able to supply a large amount of the world's energy needs. Bioenergy is a carbon-neutral energy source, and perennial grasses are an ideal bioenergy crop due to their high growth rates and ability to grow under a range of conditions. To enhance grass productivity, nitrogen fertilization is often applied to this crop, but this can lead to increased emissions of nitrous oxide (N₂O), a potent greenhouse gas (GHG), from the soil. In collaboration with Lafarge Cement in Bath, Ontario, three perennial grass species (*Panicum virgatum*, *Schizachyrium scoparium* and *Andropogon gerardii*) are being grown in conjunction with three fertilization treatments (0, 50 and 150 lbs. per acre of nitrogen as urea) to explore the tradeoffs associated with using nitrogen fertilizer in these bioenergy systems. Soil N₂O emissions were measured weekly during the growing season following fertilizer application in May 2013. At the same time, various soil properties known to influence N₂O emissions (e.g. pH, soil nitrate, soil temperature, soil moisture) were measured. Crop productivity was measured at the end of the growing season to determine the species and fertilization level at which GHG emission benefits are maximized. The results of this study will demonstrate the viability of perennial grasses as a bioenergy crop for industrial purposes in Eastern Ontario by identifying the maximum GHG benefits that this bioenergy system can achieve in this region.

12. Black Bear Conservation efforts in Ontario

Presenters: Elizabeth Cummings, Erin Neville, Allison Slater, Nicci Zargarpour; Biology

Faculty Supporter: Gabriela Ibarguchi

Over the past 200 years, large carnivore range has been decreased due to an increase in human density and influence through agriculture and industrialization. The black bear (*Ursus americanus*) is a severely impacted species which has experienced nearly a 50% range loss and has been extirpated from parts of North America. Much public controversy surrounds this species, due to issues associated with hunting, human-bear interactions, and species management strategies. Increasing public awareness of black bear ecology, a charismatic megafauna, will spark positive and pro-conservation efforts across North America. Therefore, area and knowledge-specific education is important in engaging affected communities in black bear ecology and the importance of conservation. The Ministry of Natural Resources has made an effort in these areas by establishing the *Bear Wise Program*, however there is room within this program for expansion and development of their initiatives. Such expansions include improvement of public education, community outreach and youth awareness of black bears in a holistic ecosystem, versus case specific, approach. Identification of high-impact areas in Ontario would support the allocation of provincial resources to address these issues by implementing changes in local infrastructure, educational development and region-specific management. This project builds off of already established black bear management to increase region and province-wide conservation. The knowledge provided through this project will allow for future efforts across a wide geographical area and many taxa

13. Conservation Education in the Kingston Classroom

Presenters: Courtney Primeau, Drew Sauve, Hava Starkman, Vincent Zengus

Faculty Supporter: Gabriela Iburguchi

In order to sustain and improve global and local conservation efforts, each incoming generation must become informed and active within the conservation field. If education surrounding conservation can be improved and preserved, the importance of maintaining an intact natural world will be better understood and passed on.

We hope to address this issue through examination of the current state of subject material surrounding conservation biology in the Limestone District School Board (LDSB) in Kingston, Ontario. Material in each grade will be analyzed and a report on the current state of environmental and conservation education will be prepared.

We also hope to gather expert opinions on the questions relating to: what grade level conservation education will make the largest impact on and the current pressing issues in conservation biology. These expert opinions will be gathered from both researchers and educators here at Queens as well as teachers and administration in the school board. We hope to compile all information gathered, to then prepare five lessons for a conservation biology science unit. We hope to work in a classroom to teach one of these prepared unit lessons and get feedback on the lesson from both teachers and students.

From all the information gathered we hope to provide a plan for improvement on the overall conservation curriculum in addition to designing a specific unit of conservation biology for elementary school students. The report will also examine the process of implementing curriculum into a school system, providing a tool for other conservation biologists who are inclined to improve the education system.

14. Kehinde Wiley: An Alternate Reality

Presenter: Carling Spinney, History and Art History

Faculty Supporter: Julie Hollenach

Contemporary artist Kehinde Wiley depicts the dramatic friction between urban, black American culture in contrast to luxurious, baroque backdrops; making a bold commentary on art historical injustices. Why does this combination strike us as so surprising? Wiley's paintings explicitly stress an "alternate reality," one in which black presence is not eclipsed. Too often racialized persons and their respective cultures have been painted out or misconstrued in the canon of art history. The majority of Wiley's subjects are racialized men positioned in traditional art historical poses. These canonical references highlight a clash between not only old and new, but between the tradition of white privilege and the disadvantage experienced by racialized individuals. In his colossal paintings, Wiley quotes celebrated artists such as Titian, Ingres, van Dyck and Gericault; thus highlighting a past not realized. In art historical convention, racialized subjects have typically been either ignored, hypersexualized, demonized or exoticized. Such conventional discrimination is confronted in Wiley's impactful paintings. But do these paintings only encourage viewers to look up the canonical works Wiley references, thus solidifying the art historical tradition of white privilege and the "othering" of racialized persons? Do they simply highlight the "impersonation," and thus the impossibility, of black men in positions of power? Ultimately, this problematization is unfounded. Wiley utilizes art historical quotations and aesthetic discordance in order to illuminate a past in need of correction as well as a higher degree of consciousness.

15. What are we reading? —an investigation of the genres of texts being studied by the Queen's Undergraduate English Department"

Presenter: Jeanette Stock, English Language and Literature

Faculty Supporter: Andrew Leger

The 2006 report by Dr. Frances Henry entitled "Understanding the Experiences of Visible Minority and Aboriginal Faculty Members at Queen's University" stated that "Queen's, like most other North American universities, is still struggling to overcome deeply entrenched cultural beliefs, values, norms and structures that preserve the continued dominance of Whiteness and maleness" (Henry, 157), and called on all departments to diversify their curriculum. Today, the Queen's Academic plan expressly states that "Adequate representation of Indigenous issues in curricula across campus needs to be a major objective"(29). With the addition of Mohawk and Inuktitut classes and the Indigenous studies program, Queen's as a whole is taking action to meet this objective. As a student of English myself, I was interested in examining the state of the curriculum in Undergraduate English Department. In particular, I was interested in exploring whether texts by North American Indigenous authors are being included in the curriculum, and what space is created for these texts within the English Department. My research examined the 1,289 texts ordered for Undergraduate English classes between the Fall Semester of 2009 and the Winter Semester of 2013. These texts represent up an institution-specific canon, a snapshot of what the Queen's English Department—intentionally or unintentionally—have construed as important to the field. My goal was to determine whether the "Eurocentric curriculum" (146) that the Henry report underscored persists within the English department, or whether academic spaces are being created that include Indigenous Literature.

16. Physiological effects of IDH1 loss-of-function on Chondrocyte Differentiation through Hedgehog Pathway upregulation

Presenter: Cassie Tyson

Cartilage tumors are the most common and terminal primary neoplasms in bone. Physiologically, bones formed through endochondral ossification are regulated by the Hedgehog pathway and Parathyroid hormone-like hormone feedback loop. The upregulation of the infamous Hedgehog pathway has been demonstrated in several non-cartilaginous neoplasms. Recently, frequent mutational events of isocitrate dehydrogenase1 (*IDH1*) were identified in cartilage tumors. In other neoplasms, IDH mutations produces an oncometabolite that can promote HIF1a activation, contributing to tumorigenesis. Currently, the role of IDH1 mutations in cartilage tumors remain unknown. Investigating the physiological aspect of IDH1 proves useful in identifying novel therapeutic targets for cartilage tumors. IDH1 deficient and wild-type littermates, were harvested for forelimbs and hindlimbs at various developmental stages for phenotypic analysis via hematoxylin and eosin staining. Histological analysis demonstrated IDH1 homozygous deficient mice at embryonic stages exhibited dwarfism and an elongated layer of hypertrophic chondrocytes. This was verified via immunohistochemistry Type 10 Collagen staining and Quantitative PCR (qPCR) using the chondrocyte terminal differentiation marker *Col10a1*. Whole skeletons of IDH1 deficient mice were subjected to skeletal double staining which demonstrated delayed mineralization of underdeveloped IDH1 deficient mice contrasted with wild-type littermates. qPCR was performed to examine the status of chondrocyte differentiation through the Hedgehog pathway in cultured primary mouse growth plate chondrocytes. Interestingly, IDH1 deficient non-neoplastic cells revealed significant upregulation of Hedgehog target molecules in IDH1 deficient chondrocytes. As a result, the loss-of-function of IDH1 was identified as a potential impairment of chondrocyte differentiation and a factor towards chondrocyte tumorigenesis.

17. The Environmental Policy of Windmills on Amherst and Wolfe Island and Their Indirect Impact on the Environment

Presenters: Brittany Mardon, Jessica Stepic, Andrew Weatherhead, Michael Zhao;
Biology
Faculty Supporter: Gabriela Ibarguchi

The objective of our project is to look at the indirect effects of windmills on Wolfe and Amherst Island on native wildlife as well as a focus on the environmental policy around windmills. The indirect effects of windmills would include topics such as changed species behavior in response to windmills and potential changes in the ecosystem as a response to dead birds/bats (i.e. has there been a surge in mosquito population with less bats around). The policy section would include topics such as assessing windmill related mortalities in ways that underestimate the environmental impact or people assessing the potential environmental impacts of building windmills at times diversity/activity of the native ecosystem is not well represented. We will be in contact with people from the Amherst Island conservation group as a source of information and for potential volunteering opportunities. We will also be going to Wolfe/Amherst Island to talk to the people there about the windmills as well as observing the windmills up close. The goal of this study would be to inform people about the problem with the windmills as well as to identify some issues with how people are currently assessing the environmental impacts of windmills.

18. A Risk Assessment of Wind Farming On Amherst Island

Presenters: Fatma Abdullah, Vicki Cove, Amaechi Eneh, Anya Kochel, Rachel Wilson;
Biology
Faculty Supporter: Gabriela Ibarguchi

Amherst Island is an internationally renowned sanctuary for raptors and is home to 34 avian species at risk. In addition to providing critical habitat for migrating birds, Amherst Island also supports a variety of other taxa including reptiles, amphibians, bats, and butterflies, some of which are endangered. Located in eastern Ontario, the island has been ranked second in biodiversity significance by Islands of Life and has been internationally recognized as an Important Bird Area. Amherst Island gained attention in recent months following a proposal by Windlectric Inc. to install and operate up to 36 wind turbines on Amherst Island as part of the Government of Ontario's renewable energy initiatives. Despite clear energy and economic benefits, negative impacts of wind turbine installation have also been well documented. Risks associated with wind farming include habitat fragmentation and destruction, increased road traffic, and bird and bat strikes.

With the help of contacts at the Association to Protect Amherst Island, Kingston Field Naturalists, and Windlectric Inc., we plan to develop an unbiased risk assessment using data from primary literature and existing wind farms as case studies. We will place special focus on species of concern while weighing potential environmental disturbance against benefits of the green energy movement in Ontario. Our project is intended to act as a holistic, nonpartisan assessment of the benefits and potential concerns involved with the wind turbine project, and where appropriate, we hope to provide recommendations for mitigating damages associated with installation and operation.

19. The Experiences of Women in a Biochemistry Education and in Scientific Research Labs at Queen's University and Durham University

Presenter: Carly Winters, Biochemistry

Faculty Supporters: Andrew Leger and Victoria Remenda

This study aims to determine the involvement of women in biochemistry undergraduate, graduate, and professor positions within the biochemistry faculties at Queen's University, Canada, and Durham University, England. Additionally, the experiences of these women will be shared through their personal accounts of becoming involved in the sciences, their career plans, and whether or not they would recommend the biochemistry program to others and their reasoning for this decision. Most importantly, these students will share their opinions on the involvement of females working in scientific research labs, whether or not they would pursue a full-time position running a scientific research labs, and what barriers they think exist in achieving the full participation of women in biochemistry degrees and academic research jobs. Survey trends will be shared through participant narratives. Exposing the thoughts and perceived issues that these women face is the first step to improving the biochemistry educational system and the academic research workplaces.

20. The Description to Look Down on All Opposition": The Remains of HMS St. Lawrence

Presenter: Aaron Styba

Faculty Support: Dr. George Bevan

In one of the most ignominious wars in history, a combined force of British and Canadian soldiers, sailors and civilians constructed the largest wooden warship ever built in the western hemisphere. Engaged with the Americans in a desperate game of cat-and-mouse upon Lake Ontario, the massive warship HMS St. Lawrence swung the balance of power firmly in favour of the British and thereby hastened the signing of the Treaty of Ghent, bringing the War of 1812 to a sputtering halt.

This colossal warship, over 200 feet long, crewed by 700 and carrying 112 cannon, was completed at Kingston, Ontario in little over 9 months. Patrolling Lake Ontario, HMS St. Lawrence immediately caused the Americans to flee to their harbour. Astoundingly, and in a very Canadian fashion, she never fired a shot in combat.

After the war ended, years of disrepair and dereliction left HMS St. Lawrence as a hulk of her former self. Sold to a local entrepreneur for a measly £25, she found herself towed to a location near Queen's University. Mysteriously, she then disappeared from history. After the consideration of several theories, the hope is that this presentation, based upon the research conducted in a joint investigation by Parks Canada, the Marine Museum of the Great Lakes and Queen's University, will help determine the fate of this "nuclear bomb of her age."

This presentation will outline the fascinating origins of HMS St. Lawrence, how she was archaeological documented, what the investigation tells us, and why investigating naval heritage is a worthy undertaking.

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