

Canadian Association of Geographers Annual Meeting

L'Association Canadienne des Géographes Congrès Annuel

May 26 - 30, 2014

Brock University, St. Catharines, ON

Borders Without Boundaries ***Program / Programme***



Canadian Association of Geographers
Association Canadienne des Géographes

CARTOGRAPHICA

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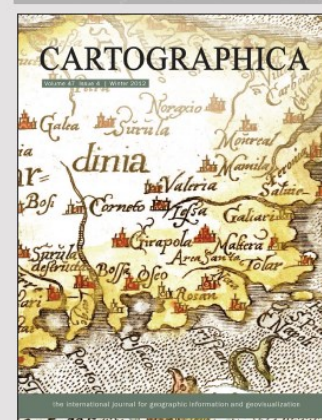
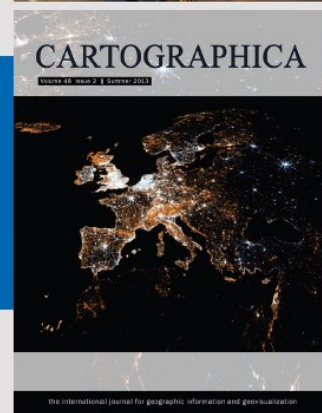
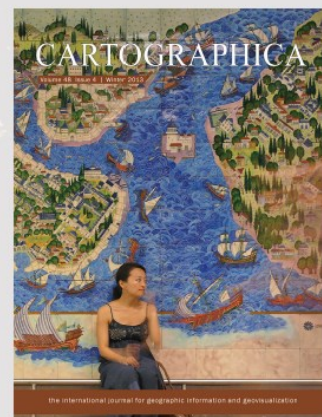
Cartographica provides a forum for the exchange of original perspectives and innovative findings in the production, design, use, cognitive understanding, and novel applications of maps in arts, computer science, economy, engineering, geography, history, medicine, health, and surveying.

Editors-in-Chief – Monica Wachowicz (University of New Brunswick) and Emmanuel Stefanakis (University of New Brunswick)

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Recent Special issues

The Challenges of Visualization: Selected Papers from the 26th International Cartographic Conference, Dresden, August 25–30, 2013 (48.2, Summer 2013)

Land Use and Land Change (47.4, Winter 2012)

Indigenous Cartographies and Counter-Mapping (47.2, Summer 2012)

Internet Mapping: Selected Papers from the 25th Conference of the International Cartographic Association, Paris, 3–8 July 2011 (46.2, Summer 2011)

Cognitive Issues in Geographic Information Visualization (44.3, Fall 2009)

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Social Media:

Follow us on Twitter @cagatbrock (please use #cagatbrock for conference tweets).

Use the QR code on the right to link to the CAG 2014 webpage where important information has been posted for your convenience.



Welcome message from Brock University/Message de bienvenue de l'Université Brock

A fond welcome to CAG 2014 from Brock University's Department of Geography! We are particularly pleased to share with colleagues from across the country our celebration of the 50th anniversary of the founding of the department. Although 1964 lies in a dimly lighted past, even for the present geography faculty, CAG members doubtless know the year: the federal government finally selected the design for the Canadian flag after months of acrimony, a national discussion now euphemistically remembered as "the Great Canadian Flag Debate." The new flag flew over a then much smaller Brock. Of the original cohort of geography faculty who saw it waving, and those hired in the early years, all have retired and some have passed on. Happily, their dedication to the profession and commitment to students still flourishes in the present generation of Brock geographers.

On behalf of Brock Geography, the CAG, Congress, and the University let me heartily thank, and acknowledge the considerable efforts of the CAG 2014 committee, primarily Dr. Marilyne Jollineau, its indefatigable chair, and Dr. David Butz. Such laborious organizing and preparation often feels thankless in its doing, but the committee has accomplished its work with aplomb – and at a difficult time in the history of universities in Canada. Without the commitment of those working the levers behind the screen of 2014's annual meeting, none of what is to follow would have been possible.

Enjoy your stay in Niagara!

Phil Mackintosh, Chair



Le Département de Géographie de l'Université Brock a l'immense plaisir de vous accueillir au congrès 2014 de l'ACG! Nous nous réjouissons tout particulièrement de pouvoir célébrer en compagnie de collègues provenant des quatre coins du pays le 50^e anniversaire de la fondation du Département. Bien que l'an 1964 soit un souvenir vague et lointain, même pour la cohorte actuelle de professeurs de géographie, les membres de l'ACG se rappelleront sûrement de cette année : des mois d'âpres discussions de niveau national, lesquelles relèvent aujourd'hui de l'euphémisme « le grand débat canadien sur le drapeau », ont été nécessaires pour que le gouvernement fédéral approuve finalement le motif conçu pour le drapeau canadien. On a ensuite hissé le drapeau flamboyant neuf sur le petit campus qu'était Brock à l'époque. De la cohorte initiale de professeurs de géographie qui l'ont vu flotter, et ceux qui ont été embauchés dans les premières années, tous ont pris leur retraite et certains ne sont plus parmi nous. Heureusement, leur dévouement à la profession et leur engagement envers les étudiants s'épanouissent encore parmi les géographes de Brock de la génération actuelle.

Au nom de la géographie de Brock, l'ACG, le Congrès et l'université, je tiens à remercier vivement et à exprimer ma profonde gratitude pour les efforts considérables déployés par le comité organisateur de l'ACG 2014, tout spécialement la très dynamique Dre Marilyne Jollineau qui l'a présidé et le Dr David Butz. La tâche d'organiser est ardue et celle de préparer est souvent pénible, mais le comité a tenu front et a accompli son travail et ce, malgré la période difficile que traversent les universités canadiennes aujourd'hui. Sans l'engagement de ceux qui ont dirigé les opérations dans les coulisses du Congrès annuel de 2014, rien de ce qui vous sera proposé n'aurait été possible.

Profitez de votre séjour à Niagara!

Phil Mackintosh, président

Welcome message from the CAG President

Dear CAG Members and Friends,

It is my pleasure to welcome you to the 2014 Canadian Association of Geographers' (CAG) Conference and Annual General Meeting. This year's gathering is being held with the Congress of the Humanities and Social Sciences, providing opportunities for Geographers to mingle with more than 5000 delegates from more than 70 scholarly groups and disciplines. The CAG meeting also has connections with other groups through joint sessions, co-sponsored events, and other types of partnerships. As we all know, this type of working across scholarship boundaries is essential to our individual and collective vibrancy.

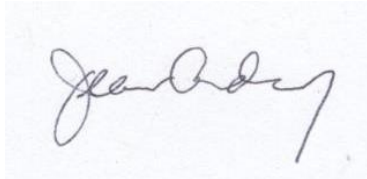
The conference also confronts the issue of boundaries with its focus on "Borders without Boundaries". Indeed, the Congress provides a number of plenary speakers under the umbrella of "Big Thinkers" that explore this theme by focusing on topics that range from immigration to inequalities to how blood divides or unites us.

In addition to the conference sessions and field trips, a good deal of Association business is always accomplished at these meetings. CAG's executive team, journal editor, and executive secretary work hard all year long to ensure that that Canadian Geographers' interests are represented at national and international forums, and that our various publications, events, and services operate smoothly. We also have been exploring ways to better connect and grow our membership and to support geographical interests more broadly. I hope that you will attend the Annual General Meeting to learn more about these activities, and I encourage you to engage with your colleagues in making our Geographic community stronger.

As a community of Geographers, we are grateful to the Department of Geography at Brock University for hosting our meeting—especially to those who have been instrumental in creating the program, arranging the logistics and field trips, helping to create excitement over this year's event, and arranging for the banquet to be held at one of Niagara's vineyards ☺. I would also like to extend congratulations to Brock University on this, its 50th anniversary, for its many accomplishments.

Best wishes for a good conference.

Yours in Geography,



Jean Andrey
President, Canadian Association of Geographers



Chers membres de l'ACG et chers amis,

Il me fait plaisir de vous accueillir à l'édition 2014 du Congrès et de l'Assemblée générale annuelle de l'Association canadienne des géographes (ACG). Cette année, la rencontre se déroule conjointement avec le Congrès des sciences humaines, et offre ainsi la chance aux géographes de côtoyer quelques 5 000 délégués provenant de plus de 70 groupes et disciplines scientifiques. Des ponts ont également été établis entre la réunion de l'ACG et divers groupes grâce aux sessions communes, événements coparrainés et autres formes de partenariats. Comme nous pouvons le constater, ces initiatives transdisciplinaires contribuent fondamentalement à notre dynamisme individuel et collectif.

Le Congrès des sciences humaines soulève aussi la question des frontières en se donnant pour thème « Les frontières sans limites ». En effet, il invite un nombre de « grands penseurs » à explorer ce thème en session plénière en abordant une série de sujets allant de l'immigration aux inégalités et à la façon dont le sang peut diviser ou lier.

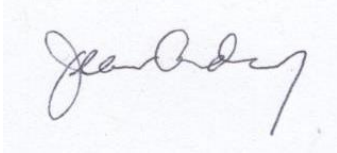
En plus des sessions de conférence et des excursions, l'Association parvient toujours à accomplir ses travaux administratifs lors des réunions. L'équipe de direction de l'ACG, la rédactrice en chef de la revue et la secrétaire de direction travaillent de pied ferme à l'année longue pour s'assurer que les intérêts des géographes canadiens soient pris en compte dans les instances nationales et internationales, et que nos multiples publications, événements et services fonctionnent sans à-coup. Nous avons également examiné des façons de

mieux renforcer les liens entre nos membres, d'en élargir le nombre et de soutenir les intérêts géographiques plus largement. J'espère que vous serez des nôtres à l'Assemblée générale annuelle pour en savoir plus sur ces activités, et je vous invite à interagir avec vos collègues afin de consolider notre communauté géographique.

En tant que communauté de géographes, nous sommes reconnaissants envers le Département de géographie de l'Université Brock de nous avoir accueillis dans le cadre de notre Congrès. Nous remercions surtout ceux et celles qui ont joué un rôle déterminant dans l'élaboration du programme, l'organisation de la logistique et des excursions, l'enthousiasme généré pour l'événement de cette année et l'organisation du banquet qui aura lieu dans un des vignobles de Niagara! Je tiens également à féliciter l'Université Brock qui fête son 50^e anniversaire d'existence et pour ses nombreuses réalisations.

Tous mes vœux de succès pour ce Congrès

À votre service pour la géographie,

A handwritten signature in dark ink, appearing to read 'Jean Andrey', on a light-colored background.

Jean Andrey
Présidente, Association canadienne des géographes

CAG 2014 Organizing Committee

| | |
|------------------------|--|
| CAG Chair: | Marilyne Jollineau |
| Special Sessions: | David Butz |
| Program: | David Butz and Marilyne Jollineau |
| Program Design: | Jayson Childs |
| Administration: | Virginia Wagg |
| Association Assistant: | Andrea Tirone |
| Registration: | Chris Fullerton |
| Field Trips: | Daryl Dagesse |
| Workshops: | Catherine Nash |
| Guest Speakers: | David Butz and Ebru Ustundag |
| Volunteers: | Michael Pisaric |
| Local Arrangements: | Marilyne Jollineau, Virginia Wagg, and Ebru Ustundag |
| Web Design: | Marilyne Jollineau, Dimitre Iankoulov, Jayson Childs, and Stella Han |
| Web Maintenance: | Marilyne Jollineau and Dimitre Iankoulov |
| Sponsorships: | Marilyne Jollineau and Hugh Gayler |
| Cartographer: | Loris Gasparotto |
| Translation: | Stefan Reyburn and Richard Ndayizigamiye |

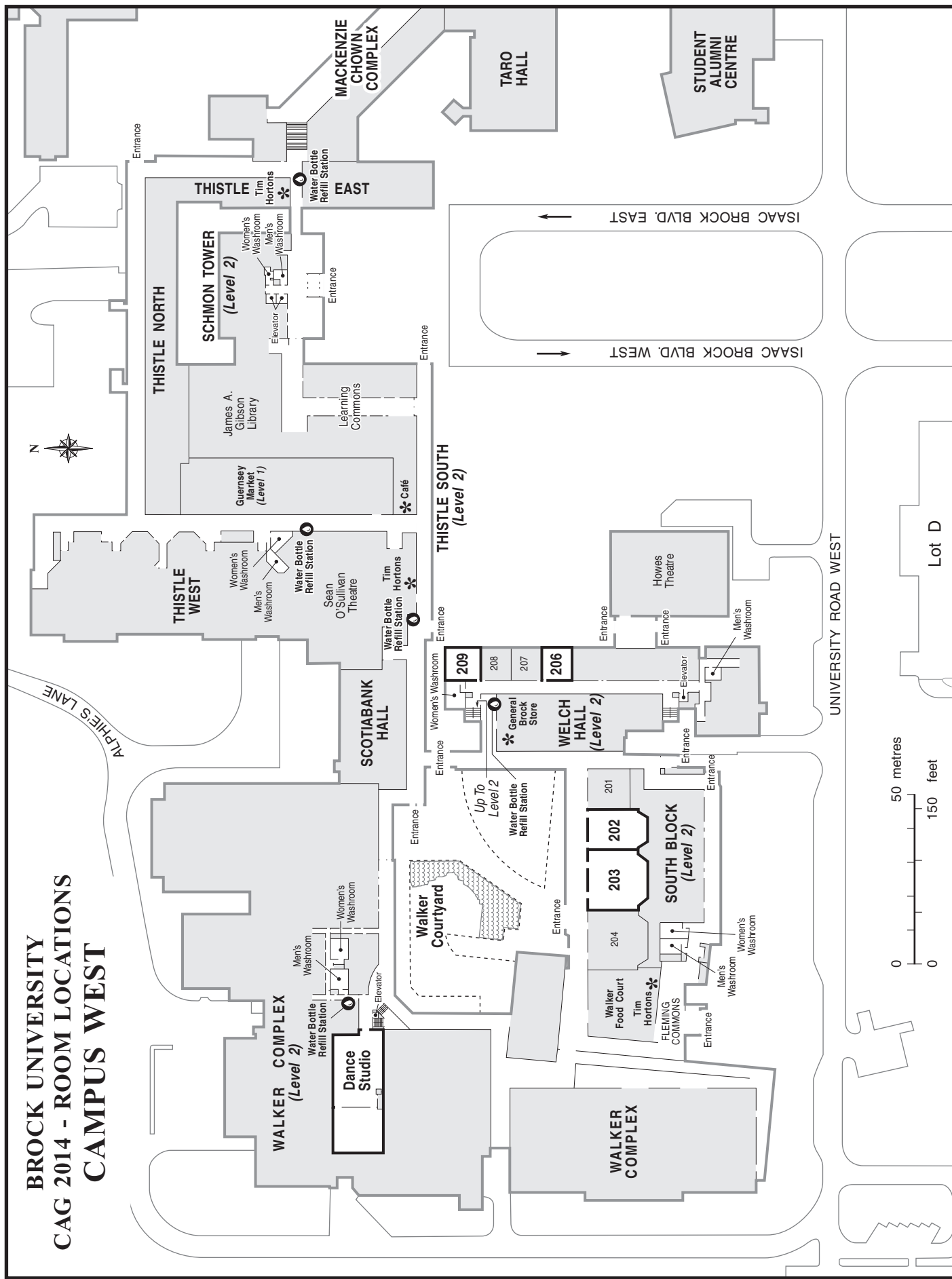
Other members and friends of the Department who made important contributions to the conference include Jean Andrey, Colleen Beard, Jeff Boggs, Bethany Coulthard, Amanda Hooykaas, Phillip Mackintosh, Darren Platakis, Sandra Potter, Michael Ripmeester, Tony Shaw, Valerie Shoffey, Dragos Simandan, Kevin Turner, and Heather Whipple.

Volunteers: Micheal Boetang, Victoria Fast, Pushpa Hamal, Meithili Mitchell, and Josh Valenti

ESAC Program Chair and Local Arrangements Coordinator: Ryan Plummer and Luaine Hathaway

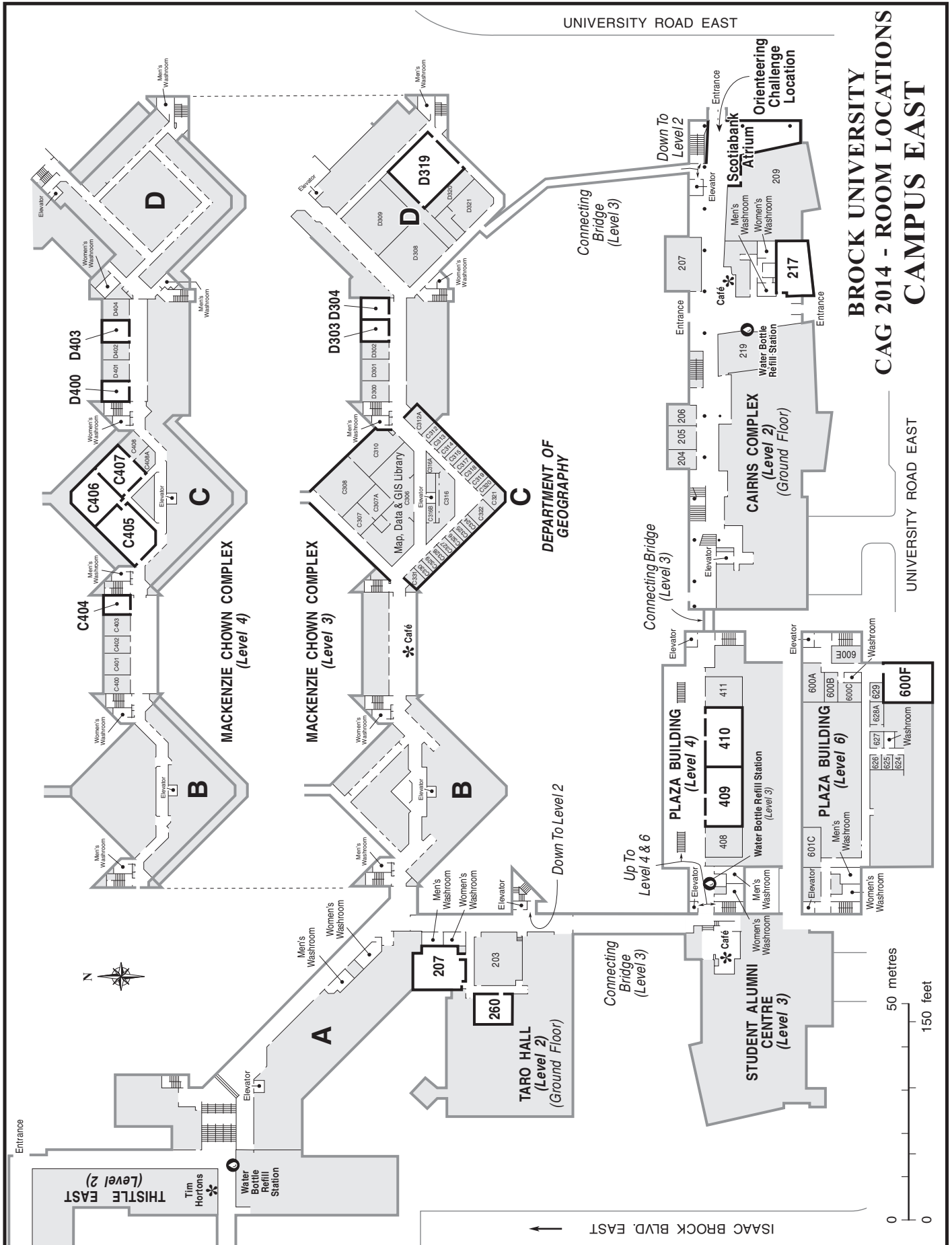
CCA Program Chair and Local Arrangements Coordinator: Christine Earl and Lori Martin

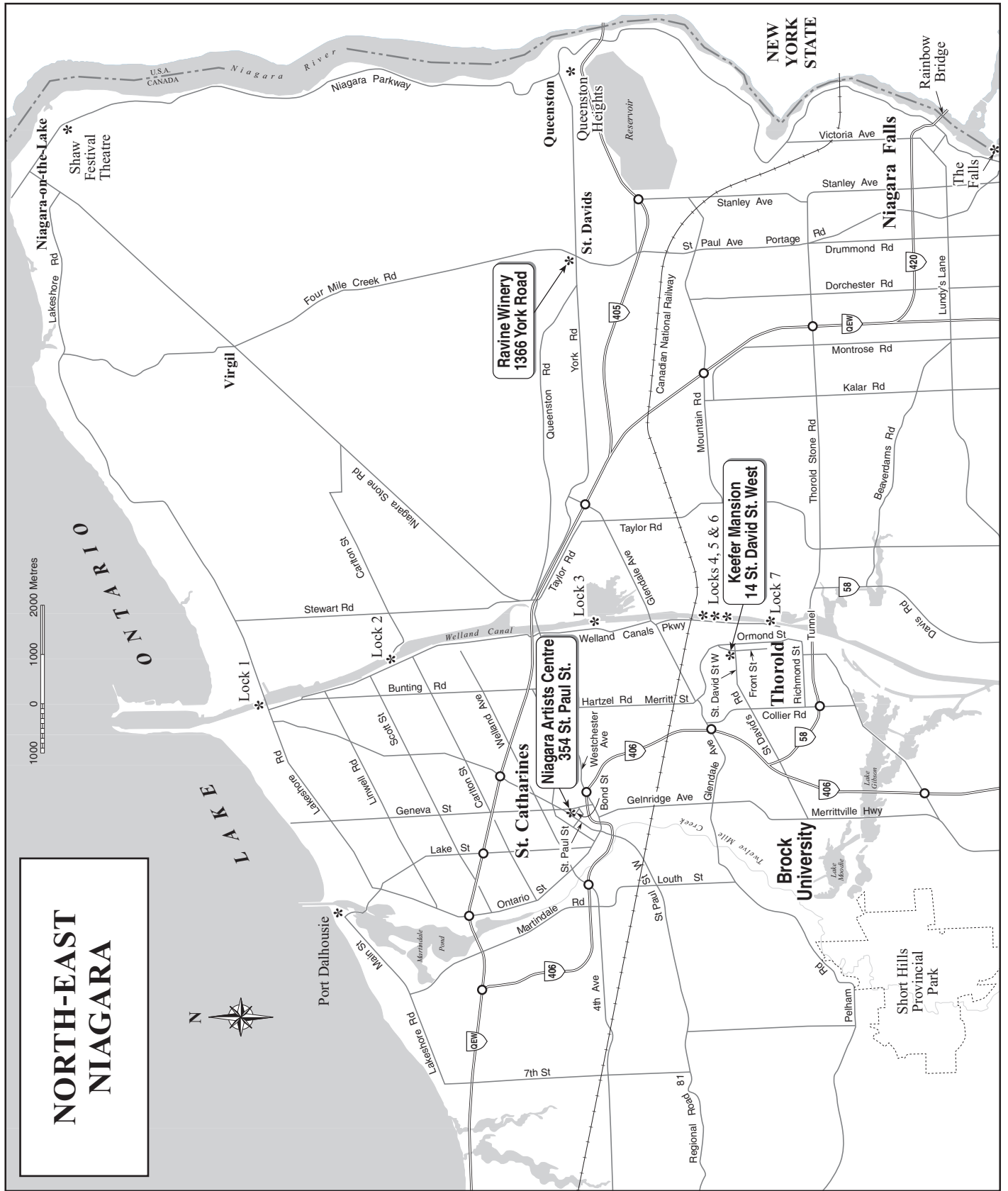
BROCK UNIVERSITY CAG 2014 - ROOM LOCATIONS CAMPUS WEST



BROCK UNIVERSITY
CAG 2014 - ROOM LOCATIONS
CAMPUS EAST

UNIVERSITY ROAD EAST





Remembering Alun Hughes (1943-2013)/ En souvenir d'Alun Hughes (1943-2013)

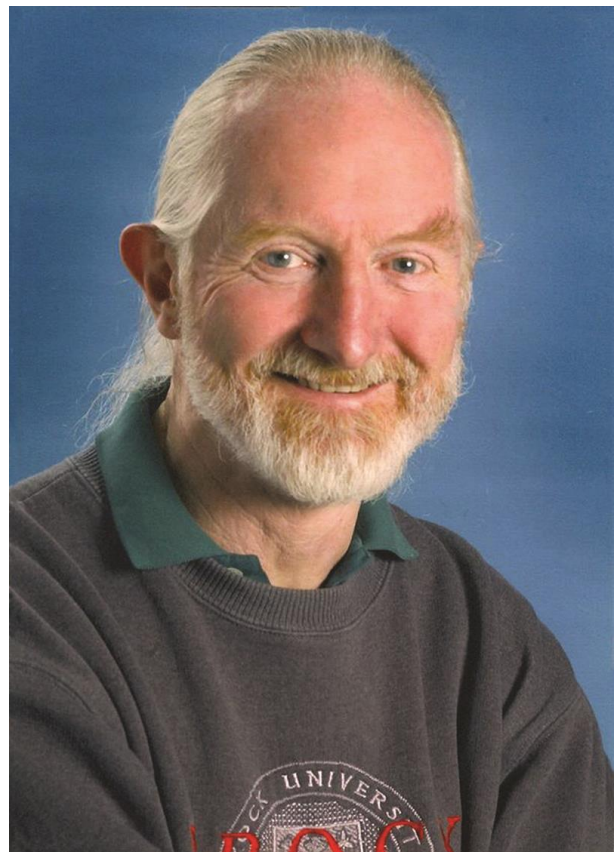
Alun Hughes was an Associate Professor of Geography at Brock University in St. Catharines, Ontario, and also a prominent local historian. Alun was born in Bridgend, Wales. Following his education, he worked in London as a cartographic editor. Alun joined Brock's Department of Geography in 1969, and also went on to coach Brock's rugby team. The courses he taught at Brock included cartography, surveying, geographic information systems and remote sensing. As his career progressed Alun became known throughout the Niagara community for his intensive research and knowledge of the unknown histories of the Region. He also actively contributed to various communities via articles, lectures, talks and tours, all of which earned Alun great respect for his ability to separate historical fact from fiction. Through his research about the War of 1812, for example, Alun was able to correct the historical details about events such as Laura Secord's famous journey through the Niagara wilderness to warn the British of a pending American attack and the death of Sir Isaac Brock, Brock University's namesake, during the Battle of Queenston Heights. Alun was regularly sought out by local media for his insights, and was also rewarded for his research efforts with a Queen Elizabeth Diamond Jubilee Medal in 2013. The City of Thorold also named Alun as its honorary civic historian that same year. Alun retired in 2012, after 42 years of service to Brock University and the broader Niagara community. He continued to engage in his historical research after he retired. Sadly, however, Alun passed away in May 2013.

During your time at Brock University, we invite you to view a special display in the Maps, Data and GIS Library (Mackenzie Chown Complex, C-block, Room 306) that showcases many of Alun's historical works. Beside the display you will also find an information sheet that provides instructions for downloading from the Department of Geography's website the full text of several articles written by Alun.

Alun Hughes était un professeur agrégé en géographie à l'Université Brock de Saint Catharines, Ontario, et aussi un historien local de renom. Alun est né à Bridgend au Pays de Galles. Après ses études, il a travaillé à Londres comme un éditeur de cartographie. Alun a joint les rangs du Département de géographie de Brock en 1969, et est devenu plus tard entraîneur de l'équipe de rugby de Brock. Les cours qu'il a donnés à l'Université Brock ont porté notamment sur la cartographie, l'arpentage, les systèmes d'information géographique et la télédétection. Alors que sa carrière avance, Alun s'est fait connaître dans la communauté de Niagara pour sa recherche intensive et sa connaissance de faits insolites de l'histoire de la région. Il a également apporté son concours à de nombreuses communautés par des articles, conférences, causeries et visites, qui ont permis à Alun de jouir d'une grande estime pour sa capacité à distinguer les faits historique de la fiction. Grâce à ses recherches sur la guerre de 1812, par exemple, Alun était en mesure de corriger les détails historiques sur les événements tels que le célèbre voyage de

Laura Secord à travers la région sauvage du Niagara pour avertir les Britanniques d'une attaque imminente des Américains et de la mort de Sir Isaac Brock, qui a donné son nom à l'Université, au cours de la bataille de Queenston Heights. Alun a été régulièrement sollicité par les médias locaux pour ses idées, et a également été récompensé pour ses efforts de recherche en recevant la Médaille du jubilé de diamant de la reine Elizabeth II en 2013. De plus, cette même année, Alun est nommé historien honoraire par la Ville de Thorold. Alun prend sa retraite en 2012, après 42 ans de services rendus à l'Université Brock et à la collectivité de Niagara. Il a poursuivi ses recherches historiques après son départ à la retraite. Malheureusement, Alun est décédé en mai 2013.

Pendant votre séjour parmi nous à l'Université Brock, vous pourrez visiter une exposition à la bibliothèque spécialisée dans les cartes, données et SIG (complexe Mackenzie Chown, bloc C, salle 306) qui présente un grand nombre des travaux historiques qu'Alun a réalisés. Vous trouverez également un feuillet dans lequel se retrouvent des directives de téléchargement à partir du site Web du Département de géographie des textes intégraux de plusieurs articles rédigés par Alun.



Congress Plus: Academic and Cultural Program

| Time/Location | Fri. May 23 | Sat. May 24 | Sun. May 25 | Mon. May 26 | Tue. May 27 | Wed. May 28 | Thur. May 29 | Fri. May 30 |
|---|--|--|---|--|--|---|--|--|
| Big Thinking: D. S. Howes 7:45 – 8:55 AM unless noted | | | | Big Thinking; Tim Cook | Big Thinking David Plotz | Thinkers Beyond Boundaries: Ryan Plummer Sankey Chambers | Big Thinking; Benjamin Barber | |
| | | | | | | | “If Mayors Ruled the World” Roundtable 10:00 – 11:30 AM D. S. Howes | |
| Big Thinking: D. S. Howes 12:15 - 1:20 PM unless noted | | Big Thinking; Lyse Doucet | Big Thinking; Cindy Blackstock | Big Thinking; Lise Bissonnette | Interdisciplinary Canada/US Panel; Cross Border Connections War of 1812 (WNED documentary) 12:00 – 1:30 PM Academic South, 204 | Big Thinking; Catherine Dauvergne | Big Thinking; Lawrence Hill Forum – “Blood: The Stuff of Life” 2:30 – 3:00 PM D. S. Howes | Momentum Choir 12:00 - 1:00 PM Sean O’Sullivan Theater |
| | | | Panel; Copyright and the Modern Academic Debate Series: 1:00 - 2:30 PM Sankey Chamber | Poetry Beyond Boundaries: Paul Savoie reads from ‘Bleu bémol’ 4:30 – 5:30 Location TBD | | Panel; Copyright and the Modern Academic Debate Series: Open Access and the Future of Academic Publishing 4:30 – 6:30 PM Location: TBC | Panel; Copyright and the Modern Academic Debate Series: Access Copyright: Friend or Foe? 2:00 – 3:30 PM Location TBC | |
| | | | | | | | Thinkers Beyond Boundaries: Lissa Paul 3:15 - 4:15 PM D. S. Howes | |
| Panels: Sankey Chamber 5:00 – 6:00 PM unless noted | | Interdisciplinary Canada/US Panel; Mobility of Global Talent & Networking | Poetry Beyond Boundaries: Adam Dickinson 4:30-5:30 PM | Thinkers Beyond Boundaries: Maureen Lux | Interdisciplinary Canada/US Panel; Comparisons on the Crisis of PhD Surplus, Cross Border Research and Talent Mobility | Sipping Ontario Wines with the Stars | Interdisciplinary Canada/US Panel; Cross Border Research Collaboration Roundtable | |
| Federation Receptions Beddis/Expo 4:00 – 5:00 PM President’s Receptions Beddis/Expo 5:00 – 7:00 PM | Opening Reception Rodman Hall Research & Creative Research in the Arts 7:00 -10:00 PM Brock Book Display | Sipping Ontario Wines with the Stars 6:00- 7:00 PM Sankey Chamber | Federation Reception President’s Reception | Federation Reception President’s Reception | Meet the Shaw Festival 6:00 – 7:00 PM Sankey Chamber | Federation Reception President’s Reception | Federation Reception President’s Reception | |

Schedule

(Week at a Glance)

CAG Executive Meeting #1

9:00 to 17:00

MC C407

Conference Registration

13:00 to 17:00

Department of Geography (Mackenzie Chown Complex, C-block)

Ice Breaker Reception and Awards Ceremony

18:30 to 20:30

The Keefer Mansion

14 St. David's Street West, Thorold, Ontario

(905) 680-9581

<http://www.keefermansion.com/>

Event description: Once a year Canadian geographers are invited to take stock and consider whose efforts deserve national recognition.

The CAG awards that will be presented at the Icebreaker Reception this year are:

- CAG Award for Scholarly Distinction in Geography
- CAG Award for Geography in the Service of Government or Business
- CAG Award for Service to the Profession of Geography
- CAG Award for Excellence in Teaching Geography
- The Julian M. Szeicz Award for Early Career Achievement
- The Starkey-Robinson Award for Graduate Research on Canada
- The Robin P. Armstrong Memorial Prize for Excellence in Native Studies

Daily Activities:

- Registration (8:00 to 17:00; Department of Geography, Mackenzie Chown Complex, C-block)
- Paper Sessions (all day)
- Poster Sessions (NOTE: Poster sessions are scheduled on Tuesday, Wednesday and Thursday, from 8:30 to 17:00 in Mackenzie Chown Complex, C-block, Room 407. Authors will be with their posters during morning and afternoon nutrition breaks for questions and consultation.)
- Nutrition breaks (10:00 to 10:30 and 15:00 to 15:30; Department of Geography, Mackenzie Chown Complex, C-block)
- Field Trips (12:30 to 17:30)

Chairpersons' Luncheon

12:00 to 13:30

The Keefer Mansion

14 St. David's Street West, Thorold, Ontario

(905) 680-9581

<http://www.keefermansion.com/>

Lunch Study Group Business Meetings

12:00 to 13:30

Environment and Resources Study Group (ERSG) Business Meeting

Chairs: Chui-Ling Tam and Scott Slocombe

Location: Plaza Building, Room 410

Geographic Education Study Group Business Meeting

Chair: Bob Sharpe

Location: Mackenzie Chown Complex, D-block, Room 400

Indigenous Peoples Working Group Business Meeting

Chair: Monica Mulrennan

Location: Mackenzie Chown Complex, C-block, Room 405

Public Policy Issues Study Group Business Meeting

Chair: Kevin Stolarick

Location: Mackenzie Chown Complex, D-block, Room 304

Study Group Chairs' Meeting

16:30 to 17:30

Mackenzie Chown Complex, C-block, Room 405

Suzanne Mackenzie Memorial Lecture and Reception

17:30 to 19:30

Lecture location: South Block, Room 203

Reception location: Walker Courtyard (outdoor location)
Walker Complex, Dance Studio (rain location)

Suzanne Mackenzie Memorial Lecture

Speaker: Dr. Linda Peake, Department of Geography, York University

"Rethinking Feminist Interventions into Geography"

Sponsored by the Canadian Women and Geography Study Group (CWAG) and the Council for Research in Social Sciences (CRISS) of the Faculty of Social Sciences

Biography

Linda Peake graduated from Reading University, UK, with an undergraduate degree and PhD in Geography. Since completing her

PhD in 1983 she has taught at universities in England, the United States, Guyana and Canada and conducted research in the fields of geography, urban studies, development studies and women's studies.

Since 1989 she has been working in the Department of Social Science at York University, Toronto, where she teaches in the Urban Studies Program. She is also a member of the Graduate Programmes in Geography, Development Studies and Gender, Feminist and Women's Studies and regularly supervises students in all three programmes. Most recently she has taken up the position of Director of the City Institute at York.

Her research interests focus on issues of feminist geographies of gender, race and sexuality, particularly as they pertain to the urban global south, and specifically Guyana. In addition to her work in Guyana she also has long standing interests in urban-based research on women in cities; on whiteness and on developing anti-racist practices in Geography; and feminist methodologies, particularly in terms of the work these do in transnational feminist praxis.

She has been conducting research in Guyana for nearly three decades, working with the Guyanese women's organisation Red Thread on topics ranging through the impact of structural adjustment on women and households, domestic violence, women's reproductive health, sex work, trafficking, young adults' sexualities, and most recently urban insecurities in Georgetown, the capital city. These research projects have resulted in a team of researchers within Red Thread who have used their skills to conduct their own research as well as to gain employment in research conducted by various agencies and individuals in the country.

She has sat on a number of editorial boards of academic journals including having been the Managing Editor of *Gender, Place and Culture: A Journal of Feminist Geography* (2002-2008), a founding editor of *Social and Cultural Geography* (1998-2002) and book review editor of *Antipode* (1992-1995). She currently serves on the editorial boards of the journals *Gender, Place and Culture*, *The Canadian Geographer*, and the *Journal of Latin American Geography and Gender*. Most recently she had joined the International Advisory Board of *Signs: Journal of Women in Culture and Society*.

Conférence commémorative Suzanne-Mackenzie

Conférencière : Dre Linda Peake, Département de géographie, Université York

« Repenser les interventions féministes au sein de la géographie »

Parrainé par le Conseil de recherche en sciences sociales (CRISS) de la Faculté des sciences sociales de l'Université Brock et le Groupe d'étude sur les femmes et la géographie de l'ACG (CWAG)

Notice biographique

Linda Peake est diplômée de l'Université Reading au Royaume-Uni, et détient un diplôme de premier cycle et un doctorat en géographie. Depuis qu'elle a obtenu son doctorat en 1983, elle a enseigné dans des universités en Angleterre, aux États-Unis, au Guyana et au Canada et a mené des recherches dans les domaines de la géographie, des études urbaines, des études sur le développement et des études féminines.

Depuis 1989, elle œuvre au sein du Département des Sciences sociales de l'Université York, à Toronto, où elle enseigne dans le programme en Études urbaines. Elle est également membre des programmes d'études supérieures en géographie, en études du développement et du genre, en études féministes et féminines, et elle dirige régulièrement des étudiants inscrits dans ces trois programmes. Plus récemment, elle occupe le poste de directrice de l'Institut de la ville à York.

Ses intérêts de recherche portent sur les questions entourant les géographies féministes reliées au genre, à l'origine ethnique et à la sexualité, en particulier en ce qui a trait aux régions urbaines de l'hémisphère sud, et spécifiquement celles du Guyana. En plus de son travail au Guyana, elle s'intéresse depuis longtemps aux recherches urbaines sur les femmes dans les villes, à la blancheur et au développement de pratiques contre le racisme en géographie, et aux méthodologies féministes qui contribuent notamment au rayonnement des approches féministes transnationales.

Elle a mené des recherches au Guyana depuis près de trois décennies en collaboration avec Red Thread, une organisation féminine du Guyana, sur des sujets allant des répercussions des programmes d'ajustements structurels sur les femmes et les ménages, la violence familiale, la santé reproductive des femmes, le commerce du sexe, la traite humaine, la sexualisation des jeunes adultes et plus récemment les formes d'insécurité urbaine dans la capitale Georgetown. Grâce à ces projets de recherche, une équipe de chercheurs travaillant à Red Thread a été mise sur pied. Les compétences acquises leur ont permis de mener leurs

propres recherches ainsi que d'obtenir un emploi en recherche pour le compte de divers organismes et individus œuvrant dans le pays.

Elle a fait partie de nombreux comités de rédaction de revues universitaires, y compris à titre de directrice de rédaction de la revue *Gender, Place and Culture: A Journal of Feminist Geography* (2002-2008), de rédactrice et fondatrice de *Social and Cultural Geography* (1998-2002) et de rédactrice de la critique des livres pour *Antipode* (1992-1995). Elle siège aujourd'hui sur les comités de rédaction des revues *Gender, Place and Culture*, *Le Géographe canadien* et le *Journal of Latin American Geography and Gender*. Tout récemment, elle a rejoint les rangs du conseil consultatif international de *Signs: Journal of Women in Culture and Society*.

Daily Activities:

- Registration (8:00 to 17:00; Department of Geography, Mackenzie Chown Complex, C-block)
- Paper Sessions (all day)
- Poster Sessions (Tuesday to Thursday, 8:30 to 17:00, Mackenzie Chown, C-block, Room 407)
- Nutrition breaks (10:00 to 10:30 and 15:00 to 15:30; Department of Geography, Mackenzie Chown Complex, C-block)
- Workshop #1 (12:00 to 13:30 in the Plaza Building, Room 409) and Workshop #2 (14:00 to 16:00 in the Cairns Building, Room 217)

Lunch Study Group Business Meetings

12:00 to 13:30

Canadian Women and Geography Study Group (CWAG)

Chair: Julia Christensen

Location: Mackenzie Chown Complex, D-block, Room 400

Diversity, Migration, Ethnicity and Race Study Group Business Meeting

Chair: Carlos Teixeira

Location: Mackenzie Chown Complex, D-block, Room 304

Geographic Information Science Study Group (GIS-SIG) Business Meeting

Chair: Tarmo Remmel

Location: Plaza Building, Room 410

Historical Geography Study Group

Chair: Arn Keeling

Location: Mackenzie Chown Complex, D-block, Room 303

Wiley Lecture and Reception

17:30 to 19:30

Lecture location: South Block, Room 203 (17:30 to 18:30)

Reception location: Walker Courtyard (outdoor location, 18:30 to 19:30)
Walker Complex, Dance Studio (rain location, 18:30 to 19:30)

Wiley Lecture

Speaker: Dr. Deborah Cowen, Department of Geography, University of Toronto (St. George)

"Blockade: Subversion, Supply Chains and the Social Factory"

Sponsored by John Wiley & Sons Canada Ltd.

WILEY

Biography

Deborah Cowen is an Associate Professor in the Department of Geography at the University of Toronto. Her research explores the role of organized violence in shaping intimacy, space, and citizenship. She is the author of the forthcoming book *The Deadly Life of Logistics: Mapping Violence in Global Trade* with the University of Minnesota Press, author of *Military Workfare: The Soldier and Social Citizenship in Canada*, and co-editor with Emily Gilbert, of *War, Citizenship, Territory*. Deborah has also been active in community-based research in Toronto addressing the racialization of suburban space and poverty. She is currently collaborating on a documentary and research project with the NFB's HIGHRISE team, exploring 'digital citizenship' in suburbs globally. Deborah is an editor of the *Geographies of Justice and Social Transformation* book series at UGA Press, and of the journal *Environment and Planning D: Society and Space*.

Conférence Wiley

Conférencière : Dre Deborah Cowen, Département de géographie, Université de Toronto (campus St-George)

« Blocus : Subversion, des chaîne d'approvisionnement et l'usine social »

Parrainé par John Wiley & Sons Canada Ltée

WILEY

Notice biographique

Deborah Cowen est professeure agrégée au Département de géographie de l'Université de Toronto. Ses travaux de recherche portent sur le rôle que joue la violence organisée dans la définition de l'intimité, de l'espace et de la citoyenneté. Elle est l'auteure de l'ouvrage à paraître *The Deadly Life of Logistics: Mapping Violence in Global Trade* publié aux presses de l'Université du Minnesota, l'auteure de *Military Workfare: The Soldier and Social Citizenship in Canada*, et elle a codirigé avec Emily Gilbert l'ouvrage *War, Citizenship, Territory*. Deborah est également engagée dans la recherche communautaire à Toronto qui traite des questions de la racialisation de l'espace de banlieue et de la pauvreté. Elle collabore présentement à un projet de recherche et de documentaire avec l'équipe HIGHRISE de l'ONF, en menant une étude sur la « citoyenneté numérique » dans les banlieues à l'échelle mondiale. Deborah agit à titre de rédactrice de la collection *Geographies of Justice and Social Transformation* publiée aux presses de l'Université de Géorgie et de la revue *Environment and Planning D: Society and Space*.

ACME Lecture and Reception

20:30 to 22:00

Location: Niagara Artists Centre (NAC), 85 Church Street, St. Catharines, Ontario

ACME Lecture

Speaker: Dr. Sarah Hunt, Department of Geography, Simon Fraser University

"Spaces of Resurgence: Rupturing the Colonialscape"

Sponsored by ACME: An International E-Journal for Critical Geographies; Council for Research in the Social Sciences (CRISS) Brock University; Social Justice Research Institute (SJRI) Brock University

Biography

Sarah Hunt is a writer, educator, and activist based in Lekwungen Territories (Victoria, BC), and a member of the Kwagiulth community of the Kwakwaka'wakw Nation. Building on her 15 years of community-based research on issues of violence, Sarah's SSHRC-funded doctoral research at SFU investigated the relationship between law and violence in ongoing neocolonial relations in British Columbia, asking how violence gains visibility through Indigenous and Canadian socio-legal discourse and action. Her research is particularly concerned with rethinking reserve geographies in relation to Indigenous geographies, and explores the ways Indigenous peoples' agency is being used to undermine the assumed violence of 'Indian space'.

Conférence ACME

Conférencière : Dre Sarah Hunt, Département de géographie, Université Simon Fraser

« Espaces de la résurgence : rompre avec le paysage colonial »

Parrainé par le Conseil de recherche en sciences sociales (CRISS) de la Faculté des sciences sociales de l'Université Brock et par l'Institut de recherche sur la justice sociale de l'Université Brock

Notice biographique

Sarah Hunt est écrivaine, éducatrice et militante dans les Territoires Lekwungen (Victoria, C.-B.) ainsi que membre de la communauté Kwagiulth de la nation Kwakwaka'wakw. S'appuyant sur ses 15 années de recherche communautaire sur les questions de violence, Sarah a obtenu une bourse du CRSH afin de mener des travaux de recherche doctorale à l'Université Simon-Fraser. Elle s'est intéressée au rapport entre le droit et la violence dans les relations néocoloniales en cours en Colombie-Britannique, en se demandant comment le discours socio-juridique autochtone et canadien attire l'attention sur la violence. Ses travaux de recherche la conduisent à repenser les géographies des réserves en fonction des géographies autochtones, et à

explorer les façons par lesquelles l'importance de la violence supposée de « l'espace indien » est minimisée par l'intermédiaire des peuples autochtones.

Orienteering Challenge 2014 (CCA)

17:30 to 19:30

Scotiabank Atrium (Cairns Complex, Level 2)

By tradition, the Canadian Cartographic Association (CCA) holds an orienteering event at their annual general meeting. This event is open to all Congress delegates and especially to CAG members who would like to train their map reading skills. It is timed to occur on Wednesday May 28, from 17:30 to 19:30 (meeting location is the east-facing entrance to the Cairns Complex). Loris Gasparotto, the Cartographer in the Department of Geography at Brock University, has created a map for the event. The map will be provided to you when you sign up for the event. Please sign up at the CCA registration desk (Plaza Building, Room 600F) no later than Wednesday May 28, at 17:00. There may be a minimal charge to participate in this event. In lieu of the usual post-event libations, we plan to head to the PechaKucha Night (PKN) which starts at 20:00 in Scotiabank Atrium (Cairns Complex, Level 2). There will be a standard cash bar and light snacks available at this event.

PechaKucha Night (PKN)

20:00 to 21:30

Scotiabank Atrium (Cairns Complex, Level 2)

The organizers of the CAG, CCA, and ESAC are co-hosting this evening event. Our goal is to provide a highly structured, yet immensely entertaining evening where students and others have six minutes and forty seconds to present information on an aspect of their academic career that is very important to them. A cash bar and light snacks will be available at this event.

Daily Activities:

- Registration (8:00 to 17:00; Department of Geography, Mackenzie Chown Complex, C-block)
- Paper Sessions (all day)
- Poster Sessions (Tuesday to Thursday, 8:30 to 17:00, Mackenzie Chown, C-block, Room 407)
- Nutrition breaks (10:00 to 10:30 and 15:00 to 15:30; Department of Geography, Mackenzie Chown Complex, C-block)
- Workshops #3 (12:00 to 13:30 in Welch Hall, Room 206) and Workshop #4 (12:00 to 13:30 in the Welch Hall, Room 209)

Lunch Study Group Business Meetings

12:00 to 13:30

Geography of Health and Health Care Study Group Business Meeting

Chair: Jeff Masuda

Location: Plaza Building, Room 410

Proposed Legal Geographies Working Group (LGWG) Organizational Meeting

Co-chairs: Vanessa Morgan and Laura Schaepli

Location: Mackenzie Chown Complex, D-block, Room 304

Tourism and Recreation Study Group Business Meeting

Acting Chair: Kim Lemky

Location: Mackenzie Chown Complex, C-block, Room 405

CAG Annual General Meeting (AGM)

15:00 to 17:00 (South Block, Room 202)

President's Reception

17:00 to 19:00 (Congress Centre, Walker Complex)

CAG Banquet

18:30 to 22:30

The banquet location is at Ravine Vineyard with our colleagues and friends from two cognate Associations (i.e., the Environmental Studies Association of Canada and the Canadian Cartographic Association). The cost per person is \$70 (including transportation). Buses will depart Brock University at approximately 18:15 that evening from the Chartered Bus Zone shown on the Brock University Campus Map located on the back cover of this program.

RAVINE VINEYARD
ESTATE WINERY

Daily Activities:

- Registration (8:00 to 12:00; Department of Geography, Mackenzie Chown Complex, C-block)
- Paper Sessions (all day)
- Nutrition breaks (10:00 to 10:30 and 15:00 to 15:30; Department of Geography, Mackenzie Chown Complex, C-block)

Lunch Study Group Business Meetings

12:00 to 13:30

Joint Business Meeting of the Geography of Asia Study Group and the Economic Geography Study Group (with guest speaker, Kasi Rao, from the Asia Pacific Foundation of Canada)

Chairs: David Edgington and Tim Reiffenstein

Location: Mackenzie Chown Complex, C-block, Room 405

CAG Executive Meeting #2

9:00 to 12:00

Mackenzie Chown, C-block, Room 404

Field Trips/ Les excursions

We are offering three different field trips at the CAG 2014 annual general meeting. Field trips are scheduled concurrently on Tuesday May 27 2014 from 12:30 to 17:30. Field trip fees include bus transportation to/from Brock University.

Nous organisons trois itinéraires d'excursion différents à l'occasion du congrès annuel général de l'ACG 2014. Les excursions sont proposées conjointement le mardi 27 mai 2014 et auront lieu entre 12 h 30 et 17 h 30. Les tarifs des excursions comprennent le transport aller-retour par autobus à partir de l'Université Brock.

Field Trip #1: Journey into the Niagara Gorge

Dr. Daryl Dagesse, Associate Professor
Department of Geography, Brock University
Brock University
St. Catharines, Ontario, Canada L2S 3A1
E-mail: ddagesse@brocku.ca

Date: Tuesday May 27 2014 (12:30 – 17:30)

Field Trip Cost: \$25 per person (cost includes bus transportation)

Bus departure time and location: 12:15 in the chartered bus zone (see the Brock University Campus Map located on the back cover of this program)

The Niagara Gorge represents a surprisingly common geomorphologic feature in the Niagara Peninsula – a gorge, headed by a waterfall, cut back into the Niagara Escarpment by stream action. What makes the Niagara Gorge unique is its size, and that it's headed by one of the Great Lakes (Lake Erie) rather than smaller enclosed drainage basins.

The Niagara Gorge and Falls have also been a source of considerable controversy through its use as a chronometer of earth history. The interruption of gorge formation by the repeated glaciations of North America led to many erroneous interpretations regarding both the rate of erosion and the age of the earth itself.

This trip will focus on the processes, both past and present, which have resulted in the landscape feature you see today. Included within this is the opportunity to walk on the former bed of the Niagara River when the Falls were in the vicinity of the Niagara Glen. It's an outstanding opportunity to see how observations made in the field are interpreted to form a chronology of the history of a particular landscape feature.

Excursion # 1 : Voyage dans les gorges du Niagara

Daryl Dagesse, professeur agrégé
Département de géographie, Université Brock
Université Brock
Saint Catharines (Ontario) Canada L2S 3A1
Courriel : ddagesse@brocku.ca

Date: le mardi 27 mai 2014 (de 12 h 30 à 17 h 30)

Tarif de l'excursion : 25 \$ par personne (comprend le transport en autobus)

Lieu de départ de l'autobus : 12:15 in the chartered bus zone (see the Brock University Campus Map located on the back cover of this program)

Les gorges du Niagara représentent un élément géomorphologique étonnamment ordinaire dans la péninsule du Niagara - une gorge, en amont de laquelle se trouve une chute d'eau, taillée dans l'escarpement du Niagara par l'action du courant. Les gorges du Niagara sont pourtant uniques en raison de leur taille et du fait qu'elles prennent leur source dans un des Grands Lacs (lac Érié) plutôt que des petits bassins hydrographiques fermés.

Les gorges du Niagara et les chutes ont également été suscité énormément de controverses par son utilisation comme chronomètre de l'histoire terrestre. Les glaciations qui se sont succédé en Amérique du Nord ont provoqué une interruption de la formation de gorges, ce qui a donné lieu à de nombreuses interprétations erronées concernant à la fois le taux d'érosion et même l'âge de la terre.

Au cours de ce voyage, une attention particulière sera portée aux processus anciens et actuels qui ont donné au paysage sa forme d'aujourd'hui. De plus, vous aurez la possibilité de marcher sur l'ancien lit de la rivière Niagara, lorsque les chutes étaient dans les environs de la Vallée du Niagara. Cette excursion exceptionnelle vous permettra de comprendre de quelle façon les observations réalisées sur le terrain sont interprétées pour établir une chronologie de l'histoire d'une forme particulière du paysage.

Field Trip #2: The Niagara Peninsula Wine Sub-Appellations: Climate Does Matter

Dr. Tony B. Shaw, Professor
Department of Geography and the Cool Climate Oenology and Viticulture Institute (CCOVI)
Brock University
St. Catharines, Ontario, Canada L2S 3A1
E-mail: tshaw@brocku.ca

Date: Tuesday May 27 2014 (12:30 – 17:30)

Field Trip Cost: \$35 per person (cost includes bus transportation, a cellar tour and a wine tasting at Cave Springs Winery)

Bus departure location: 12:15 in the chartered bus zone (see the Brock University Campus Map located on the back cover of this program)

In Canada, the Niagara Peninsula has the largest planted acreage covering over 13,600 acres under *Vitis vinifera* grapes. Situated at approximately 43°N latitude between Lake Erie to the south and Lake Ontario to the north, this region has a classic cool climate along with a rich range of fertile glacial soils and unique microclimates that provide the ideal growing conditions for producing quality wines expressive of the character of this picturesque landscape.

International cool-climate varieties such as Riesling, Chardonnay, Gamay Noir, Pinot Noir, and Cabernet Franc flourish across many diverse terroirs covering the ten approved sub-appellations. The area has more than 70 wineries that produce world-class VQA approved wines in all styles. Viticulture and wine making combine both old and new world practices, but many wineries are also employing sustainable methods in their vineyard and winery operations to ensure minimal impact on the environment.

On this tour, we will take you through the six sub-appellations, beginning with the Short Hills sub-appellation located to west of the City. We will wind our way through the vineyards along this route with the Short Hills Provincial Park to the south of us. Next, we climb the Niagara Escarpment and enter the rolling landscape of the Vinemount Ridge sub-appellation. We then descend to the famous Beamsville Bench sub-appellation along Victoria Avenue leading to the historic town of Vineland.

The last leg of our journey will take us through the scenic Cave Spring Estate Vineyard perched on the brow of the Beamsville Bench sub-appellation with a panoramic view of the Lincoln Lake Shore Sub-Appellation, the City of Toronto and the CN Tower in the distance. We will learn about sustainable management practices and the importance of terroir in achieving and maintaining quality wines along with canopy management and freeze protection methods.

We will end of tour in Jordan where Cave Spring Estate Winery and the famous Inn on the Twenty Restaurant along with several artisan shops and an nearby open air market are bustling with life in this historic village. An experienced Cave Spring staff will conduct us through the expansive underground cellars, discuss cellar techniques, and pour us four of their choice wines from previous vintages.

Excursion # 2 : Les sous-appellations viticoles de la péninsule du Niagara : l'importance du climat

Dr Tony B. Shaw, professeur
Département de géographie et l'Institut de l'Œnologie et de la Viticulture en climat froid
Université Brock
Saint Catharines (Ontario) Canada L2S 3A1
Courriel : tshaw@brocku.ca

Date: le mardi 27 mai 2014 (de 12 h 30 à 17 h 30)

Tarif de l'excursion : 35 \$ par personne (comprend le transport en autobus, la visite d'une cave et une dégustation de vins du domaine Cave Springs)

Lieu de départ de l'autobus : 12:15 in the chartered bus zone (see the Brock University Campus Map located on the back cover of this program)

La péninsule du Niagara possède la plus grande superficie plantée au Canada, avec plus de 13 600 acres de cépage *Vitis vinifera*. Située à environ la latitude 43°N entre le lac Érié au sud et le lac Ontario vers le nord, cette région se caractérise par un climat froid classique et par une riche étendue de sols glaciaires fertiles et des microclimats uniques qui offrent des conditions de culture idéales pour la production de vins de qualité exprimant la forme pittoresque de ce paysage.

Des variétés internationales de climat froid telles que Riesling, Chardonnay, Gamay Noir, Pinot Noir et Cabernet Franc peuvent s'épanouir dans de nombreux terroirs auxquels se réfèrent les dix sous-appellations approuvées. La région compte plus de 70 établissements viticoles qui produisent des vins portant la dénomination VQA de classe mondiale pour les différents styles. La viticulture et la vinification ont harmonisé des pratiques venues de l'ancien et du nouveau monde, mais de nombreux établissements viticoles appliquent également des méthodes durables dans leurs vignobles et dans leurs activités viticoles pour s'assurer que les répercussions sur l'environnement soient minimales.

Une visite de six sous-appellations est organisée, en commençant par la sous-appellation Short Hills située à l'ouest de la ville. Nous cheminons ensuite à travers les vignobles le long de cette route qui est bornée au sud par le parc provincial Short Hills. Puis, nous gravons l'escarpement du Niagara et entrons dans le paysage vallonné de la sous-appellation Vinemount Ridge. Enfin, nous redescendons à la célèbre sous-appellation Beamsville Bench et empruntons l'avenue Victoria qui mène à la ville historique de Vineland.

La dernière étape de notre voyage nous mène à travers le pittoresque vignoble du domaine Cave Spring juché sur le flanc de la sous-appellation Beamsville et jouissant d'une vue imprenable sur la sous-appellation Lincoln Lake Shore, la Ville de Toronto et la Tour du CN à l'horizon. Nous découvrons par la suite les pratiques de gestion durable et l'importance du terroir dans la réalisation et le maintien de vins de qualité ainsi que la gestion de l'effeuillage et l'éclaircissage et des méthodes de protection contre le gel.

Nous terminons la tournée dans le bouillonnant village historique de Jordan où se trouve le vignoble du domaine Cave Spring et le célèbre restaurant Inn on the Twenty ainsi que plusieurs boutiques d'artisanat et un marché en plein air à proximité. Le personnel expérimenté de Cave Spring nous propose une visite guidée des vastes caves, nous parle des techniques de vinification et nous fera goûter à quatre de leurs vins de choix de millésimes précédents.

Field Trip #3: Ontario's Greenbelt in Action: Land-use Stresses on the Rural-urban Fringe in Niagara's Wine Country

Dr. Hugh Gayler, Professor Emeritus
Department of Geography, Brock University
Brock University
St. Catharines, Ontario, Canada L2S 3A1
E-mail: hjgayler@brocku.ca

Date: Tuesday May 27 2014 (12:30 – 17:30)

Field Trip Cost: \$35 per person (cost includes bus transportation, a tour of the winery and a wine tasting at Jackson-Triggs)

Bus departure location: 12:15 in the chartered bus zone (see the Brock University Campus Map located on the back cover of this program)

The Greenbelt and Places to Grow Acts in 2005, and the advent of rigorous top-down planning in Ontario, were never more welcome than in Niagara where urban sprawl had been truly honed by rural landowners, the development industry and local politicians. The phenomenal growth of Niagara's wine industry after the 1980s, and its focus on the area between the Niagara Escarpment and Lake Ontario where sprawl had been greatest, contributed to this government legislation. This field excursion in St. Catharines and Niagara-on-the-Lake will examine the types of residential and commercial-industrial sprawl that occurred in the past, the freezing of urban boundaries against further outward development, the continuing urban-related land-use pressures in the rural area, the increase in grape growing and the emergence of agritourism and the wine destination.

The field trip will first traverse the Niagara Escarpment where Brock University is located, and where it possibly wouldn't have been had the Niagara Escarpment Commission existed in the 1960s! We will then journey the length of First Street Louth, just

outside the western urban-area boundary of St. Catharines, where the results of urban sprawl abound and the pressures to extend the boundary could heat up. We will cross the city to the Town of Niagara-on-the-Lake to look at 1) the new highway-oriented, non-community of Niagara-on-the-Green, 2) the Niagara District Airport where any further development is thwarted by the surrounding Greenbelt, and 3) the pressures brought about by the continuing expansion of small wineries (there are now over 100 across Niagara's Wine Country. The field trip will conclude with a tour and tasting at Jackson-Triggs winery on the edge of the Old Town.

Excursion # 3 : La Ceinture de verdure de l'Ontario en action : les tensions relatives à l'utilisation du sol dans la zone périurbaine au pays du vin de Niagara

Dr Hugh Gayler, professeur émérite
Département de géographie, Université Brock
Université Brock
Saint Catharines (Ontario) Canada L2S 3A1
Courriel : hjgayler@brocku.ca

Date : le mardi 27 mai 2014 (de 12 h 30 à 17 h 30)

Tarif de l'excursion : 35 \$ par personne (comprend le transport en autobus)

Lieu de départ de l'autobus : 12:15 in the chartered bus zone (see the Brock University Campus Map located on the back cover of this program)

Les lois de 2005 sur la ceinture de verdure et les zones de croissance, ainsi que l'avènement d'une rigoureuse planification descendante en Ontario, ont été chaleureusement accueillies à Niagara où l'étalement urbain a été stimulé par les propriétaires ruraux, le secteur du développement immobilier et des politiciens locaux. La croissance extraordinaire qu'a connu l'industrie viticole du Niagara après les années 1980 et sa concentration dans la zone la plus marquée par l'étalement, qui se situe entre l'escarpement du Niagara et le lac Ontario, ont favorisé la mise en œuvre de ces mesures gouvernementales. Cette excursion à Saint Catharines et Niagara-on-the-Lake sera l'occasion d'explorer les anciennes formes d'étalement de type résidentiel et commercial-industriel, l'imposition de périmètres d'urbanisation interdisant le développement périurbain, les pressions d'origine urbaine en matière d'utilisation du sol dans la zone rurale, l'augmentation de la culture de la vigne et l'émergence de l'agrotourisme et la destination viticole.

L'excursion débute par un parcours à travers l'escarpement du Niagara où se trouve l'Université Brock. (Elle aurait été probablement construite ailleurs si la Commission de l'escarpement du Niagara avait été établie dans les années 1960!). Nous allons ensuite emprunter le chemin First Street Louth qui forme la limite ouest de la zone urbaine de Saint Catharines, où les effets de l'étalement se font sentir et les pressions du développement au-delà de cette limite pourraient se faire de plus en plus fortes. Nous allons ensuite traverser la ville et se rendre à Niagara-on-the-Lake afin d'observer : 1) la nouvelle fausse communauté de Niagara-on-the-Green entièrement axée sur les voies rapides, 2) la zone aéroportuaire du district de Niagara bordée par la Ceinture de verdure qui écarte toute possibilité de développement, et 3) les pressions exercées par l'essor continu des petits établissements viticoles (on en retrouve aujourd'hui plus d'une centaine au pays du vin de Niagara). L'excursion se terminera par une visite et une dégustation au vignoble Jackson-Triggs à la limite de la vieille ville.

Workshops / Les ateliers

We are offering four different workshops at the CAG 2014 annual general meeting. Workshops are scheduled at different times throughout the week of the conference (May 26-30, 2014). There are **no fees** associated with workshops but you must register for Workshop #2 as space is limited to 22 participants.

Nous proposons quatre ateliers différents au cours du Congrès général annuel de l'ACG 2014. Les ateliers se tiendront à différents moments au cours de la semaine du congrès (du 26 au 30 mai 2014). L'entrée est libre et gratuite, sauf pour l'atelier n 2 auquel vous devez vous inscrire car le nombre de participants est limité à 22.

Workshop #1: The Academic Hiring Process

Workshop leader: Dr. Kevin Turner, Department of Geography, Brock University (e-mail: kturner2@brocku.ca)

Date: May 28 2014 (12:00 to 13:30)

Location: Plaza Building, Room 409

This workshop is about the academic hiring process. This will include parsing the job description, drafting a covering letter, preparing a *curriculum vitae*, developing a statement of teaching philosophy, and producing a research statement. We will also discuss the academic interview process from the perspective of both the hiring department and the applicant.

Atelier n 1 : Le processus de recrutement universitaire

Animateur de l'atelier : Dr Kevin Turner, Département de géographie, Université Brock (courriel : kturner2@brocku.ca)

Date : le 28 mai 2014 (midi à 13 h 30)

Lieu : Pavillon Plaza, niveau 4, salle 409

Cet atelier porte sur le processus de recrutement universitaire. Les sujets abordés seront entre autres l'analyse de la description du poste, la rédaction d'une lettre de motivation, la composition d'un curriculum vitae, l'élaboration d'un énoncé sur sa méthode d'enseignement et la formulation d'un énoncé de recherche. Nous aborderons aussi le processus entourant l'entrevue pour un poste universitaire autant du point de vue du département qui embauche que du postulant.

Workshop #2: Intro to ArcGIS!

Workshop leader: Colleen Beard, Map Librarian, James Gibson Library, Brock University (e-mail: maplib@brocku.ca)

Date: May 28 2014 (14:00 to 16:00)

Location: Cairns Complex, Room 217

Join us for this hands-on workshop that introduces basic concepts of ArcGIS. No previous ArcGIS experience is necessary. Participants will learn how to: navigate the ArcGIS 10.1 interface; add multiple map data layers; add tabular data; use basic GIS analysis in a problem solving application, such as querying, geocoding, and buffering; also includes best practices for map design and layout. The concepts learned can be applied to many research problems, visualizing research data, and preparing maps for publications.

Although there is no cost for this workshop, pre-registration is required as space is limited to 22 people. Please contact maplib@brocku.ca and use "CAG GIS workshop" in the subject line.

Atelier n 2 : Les bases d'ArcGIS !

Animatrice de l'atelier : Colleen Beard, bibliothécaire chargée de la cartothèque, Bibliothèque James Gibson, Université Brock (courriel : maplib@brocku.ca)

Date : le 28 mai 2014 (14 h à 16 h)

Lieu : Cairns Complex, Room 217

Venez participer à cet atelier pratique sur les principales notions du logiciel ArcGIS. Aucune expérience préalable avec ArcGIS n'est nécessaire. Les participants seront en mesure de naviguer sur la plate-forme ArcGIS 10.1; d'insérer de multiples couches de données cartographiques; d'insérer des données sous forme de tableau; d'utiliser des méthodes d'analyse de base en SIG dans la résolution de problèmes telles que soumettre une requête, effectuer un géocodage et mettre en mémoire-tampon; d'explorer également les pratiques exemplaires en matière de conception cartographique et de mise en page. Les notions que vous aurez

acquises aideront à aborder de nombreux problèmes de recherche, visualiser des données de recherche et concevoir des cartes aux fins de publication.

Bien que l'entrée soit libre, vous êtes priés de vous préenregistrer car nous pouvons accueillir un maximum de 22 participants. Veuillez contacter maplib@brocku.ca et écrire « ACG atelier SIG » dans la ligne objet.

Workshop #3: Shifting Ground: Understanding Scholarly Communication in Geography

Workshop leader: Heather Whipple, Data/Liaison Librarian, James Gibson Library, Brock University (e-mail: hwhipple@brocku.ca)

Date: May 29 2014 (12:00 to 13:30)

Location: Welch Hall, Room 206

This workshop will provide a current legend and medium-scale map for finding your way through the changing landscape of academic journals in Geography: identifying and evaluating journals both as information sources and possible venues for your own publications. Considering tools like impact factor, H-index and altmetrics. Weighing the benefits of open access versus prestige. Avoiding predatory publishers. Bring your questions, your own publishing experiences and observations, and your willingness to benefit from the shared experience of your other graduate student and early-career colleagues.

Atelier n 3 : Changement de modèle : comprendre la communication savante en géographie

Animatrice de l'atelier : Heather Whipple, bibliothécaire de données/liaison, Bibliothèque James Gibson, Université Brock (courriel : hwhipple@brocku.ca)

Date : le 29 mai 2014 (midi à 13 h 30)

Lieu : Welch Hall, Room 206

Cet atelier a pour objet de vous présenter une légende à jour et une carte à échelle moyenne pour trouver votre chemin à travers le paysage changeant des revues universitaires en géographie : l'identification et l'évaluation des revues comme sources d'information ou moyens de publication. Il sera question lors de cet atelier d'examiner des outils comme le facteur d'impact, l'indice H et les indicateurs altméttriques, d'évaluer les avantages du libre accès comparativement à l'accès privilégié, et d'éviter les rédacteurs abusifs. Venez poser vos questions, partager vos propres expériences et observations en matière de publication et tirer parti de l'expérience commune de vos collègues des études supérieures et en début de carrière.

Workshop #4: Beyond Academia: Careers in Geography

Workshop leader: Amanda Leigh Hooykaas, University of Waterloo (e-mail: alhooyka@uwaterloo.ca)

Date: May 29 2014 (12:00 to 13:30)

Location: Welch Hall, Room 209

This brown-bag lunch workshop is for students who are graduating or have recently graduated and are considering entering industry (of various descriptions). Structured as a guided conversation led by experts from various fields, take this opportunity to network with peers, strategize on how to best market your skills as a geographer, and discover where coming from academia might lead you.

Atelier n 4 : Au-delà du monde universitaire : les carrières en géographie

Animatrice de l'atelier : Amanda Leigh Hooykaas, Université de Waterloo (courriel : alhooyka@uwaterloo.ca)

Date : le 29 mai 2014 (midi à 13 h 30)

Lieu : Welch Hall, Room 209

Cet atelier-midi est conçu pour les étudiants en fin de parcours universitaire ou les récents diplômés qui envisagent de poursuivre une carrière dans le secteur privé. Ce sera l'occasion pour vous de profiter d'une conversation dirigée et animée par des experts provenant de divers domaines et d'établir des contacts avec des pairs, d'élaborer des stratégies pour mieux faire valoir vos compétences en tant que géographe, et de découvrir où pourrait mener votre expérience universitaire.

Academic Sessions

CAG 2014 Tuesday May 27

Tuesday 08:30-10:00

TUE-08:30-1

Climate Change and Vulnerability – IDRC/Tri-Council Projects I: Assessing Climate Change Vulnerability of Small Coastal Communities in Atlantic Canada and the Caribbean (*Plaza Building 409*)

Special Session Organizer: Daniel Scott, University of Waterloo

Chairs: Daniel Scott, University of Waterloo; Murray Simpson, Caribsave

D. van Proosdij, St. Mary's University; K. MacDonald, University of Waterloo; S. Page, St. Mary's University; A. Fenech, University of Prince Edward Island; D. Scott, University of Waterloo; M. Wilson, University of West Indies

Coastal Vulnerability Assessment for Climate Change Adaptations: Lessons Learnt from Four Learning Sites in the Caribbean and Atlantic Canada

J. Wandel, University of Waterloo; D. Campbell, Caribsave and University of West Indies

Transferable insights from Community-Based Vulnerability Assessments (CBVAs): can we scale findings up and out?

D. Armitage, University of Waterloo; T. Charles, A. Khan, St. Mary's University

A multi-level perspective on governance for climate change adaptation in coastal settings: Insights from four learning sites in the Caribbean and Atlantic Canada

A Fenech, University of Prince Edward Island; P. Johnson, University of Waterloo; N. Hedley, Z. Chen, A. Doiron, University of Prince Edward Island

Strengthening Community-Based Climate Change Adaptation Geo-Visualization and Design Techniques

TUE-08:30-2

Curricula Without Boundaries I (*Plaza Building 410*)

Sponsorship: Geographic Education Study Group

Special Session Organizer: Bob Sharpe, Wilfrid Laurier University

Chair: Norm Catto, Memorial University of Newfoundland

Joseph Leydon, University of Toronto Mississauga

Facilitating Student Success through Experiential Learning and Professional Development

Robert Feagan, Wilfrid Laurier University – Brantford Campus

Global Community Engagement and Experiential Learning: A Case Study of Student Voluntourism in El Salvador

Bob Sharpe, Wilfrid Laurier University

Building the Community Engagement (CE) Option: Reflecting on a Collaborative Curriculum Initiative between Laurier and Kitchener's Working Centre

Amanda L. Hooykaas, University of Guelph

Team-Based Learning and Assessment in the Geography Classroom

TUE-08:30-3

Political Ecology (Mackenzie Chown Complex D303)

Chair: Matthew Schnurr, Dalhousie University

Julia Laforge, Colin Anderson, Stéphane McLachlan

Neoliberal food safety regulations and the challenges for direct marketers in North America

Carol Hunsberger, University of Western Ontario; Simon Bolwig, Technical University of Denmark; Esteve Corbera, Universitat Autònoma de Barcelona; Felix Creutzig, Mercator Research Institute on Global Commons and Climate Change

'Sustainability' and the governance of biofuels

Monica E. Mulrennan, Kanwaljeet Dewan, Concordia University; Katherine Scott, McGill University

On the line: Sustaining subsistence fishing in the Coastal Cree Community of Wemindji, northern Quebec

Matthew Schnurr, Lincoln Addison, Dalhousie University

Are Genetically Modified Crops Pro-Poor? The Case of Matooke Banana in Uganda

TUE-08:30-4

Trouble in the Fields: Rural Challenges in an Urban World (Mackenzie Chown Complex D304)

Chair: James Bornemann, Planning Services, NB Regional Service Commission 7

Chad Walker, Sarah Mason, Danny Bednar, Western University

Idyllic landscapes and invisible conflict in rural Ontario and Manitoba

Stewart Fast, Warren Mabee, Jean Blair, Queen's University

Valuing landscapes: the culture and economics of wind energy landscapes

Sarah A. Mason, Isaac Luginaah, University of Western Ontario

Urban biosolids as a waste or a resource in the rural landscape: A point of tension and heightened community conflict

Robert M. Bridi, York University

Migrant Workers in Ontario's Tobacco Belt: An Examination of Workplace Dynamics

James Bornemann, Planning Services, NB Regional Service Commission 7

Identification of Land Use Conflicts to Create Policy for Sustainable Development in Southeast New Brunswick

TUE-08:30-5

Tourism and Economic Development (Mackenzie Chown Complex D319)

Chair: Christopher Fullerton, Brock University

Daniel McRoberts, University of Waterloo

Sustaining livelihoods through fair trade tourism: Narratives from Nicaragua

Denyelle Huellemann, Brock University

Consuming Niagara's Agricultural Landscapes: A Regional Assessment of the Constraints and Opportunities for Developing a Sustainable Agritourism Destination

Yajuan Li, Sarah Turner, McGill University

Confrontation and Compromise over Livelihood Approaches in Miao and Dong communities in Southwest China

Kendra O'Neill, Clare Mitchell, University of Waterloo

The Future of Northern Ontario Minetown: the Role of Nature Based Tourism

TUE-08:30-6

Transportation (Mackenzie Chown Complex D400)

Chair: Christopher D. Higgins, McMaster University

Ren Thomas, Luca Bertolini, University of Amsterdam

Overcoming Barriers to Transit-Oriented Development (TOD) Implementation

Anastasia Lomakina, Russian Academy of Sciences

Transport-geographic continentality of Canada: from sea to sea

Charles Burke, Darren Scott

Identifying Partial Braess Paradoxes in the Toronto Road Network

Christopher D. Higgins, Matthias N. Sweet, Pavlos S. Kanaroglou, McMaster University

Do Canadians Enjoy Congested Travel? Measuring Commute Satisfaction and the Effects of Congestion in Canadian Cities

TUE-08:30-7

POSTER SESSION – Physical Geography, Environmental Geography, Climate Change
(Mackenzie Chown Complex C407)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Ryan Bullock, Julia Lawler, The University of Winnipeg
A Bibliometric Analysis of Canadian Community Forestry Research, 1935-2014

Norm Catto, Memorial University; Gail Catto, Catto Geographic
Coastal dynamics and erosion at Middle Cove and Outer Cove, Avalon Peninsula, NL: A comparative analysis

J. Childs, Brock University
A durable, low cost camera system for generating time lapse imagery in the coastal zone

Mallory Fitz-Ritson, John MacLachlan, Jason Brodeur, Carolyn Eyles, McMaster University
Determining the Quantity of Data Required to Effectively Model Hummock Terrain

K. Wayne Forsythe, Meghan McHenry, Stephen J. Swales, Joseph M. Aversa, Daniel J. Jakubek, Ryerson University
Bathymetric Visualization of Contaminated Sediments in Lake Ontario

Arn Keeling, John Sandlos, Memorial University
Toxic Legacies: Community Perspectives on Arsenic Pollution at Yellowknife's Giant Mine

Ahmed Khan, Saint Mary's University; Derek Armitage, University of Waterloo;
Anthony Charles, Saint Mary's University
Climate Change Adaptation: How Ready and Resilient are Our Coastal Communities?

John MacLachlan, Carolyn Eyles, McMaster University
Analysis of Drumlin Spatial Distribution in Select Southern Ontario Drumlin Fields

Reilly McIlhone, Ze'ev Gedalof, Mohammed Idris, Naresh Thevathasan, Andrew Gordon
*Assessing the dendroecology of black walnut (*Juglans nigra*) growing in natural and agroforestry conditions in Southwestern Ontario*

Johanne Sanschagrin, Office of the Auditor General of Canada
Environment and sustainable development: the Environmental Petitions Process in Canada

Tuesday 10:00-10:30

Nutrition Break, Department of Geography

TUE-10:30-1

Climate Change and Vulnerability – IDRC/Tri-Council Projects II: Opportunities and Barriers for Indigenous People’s Adaptation to Climate Change – Considering Institutional Arrangements at Different Scales (Plaza 409)

Special Session Organizers: Mya Sherman, James Ford, Lea Berrang Ford, McGill University
Chair: Shuaib Lwasa

Mya Sherman, James Ford, McGill University

Vulnerability and Adaptive Capacity of Community Food Systems in the Peruvian Amazon: A Case Study from Panaillo

Alejandra Bussaleu Cavero, Universidad Peruana Cayetano Heredia

The Use of Formal Healthcare in Remote Indigenous Communities: A Comparison of Two Indigenous Communities of the Peruvian Amazon

Jahir Anicama, Cayetano Heredia Foundation; Guillermo Donoso, Pontifical Catholic University of Chile;

Alejandro Llanos, Cayetano Heredia University; Johannes Glückler, Universität Heidelberg

Analysis of Collaborative Processes for Governance to Climate Change in the Ucayali Region, Peru

Michelle Maillet, James Ford, McGill University

Is the United Nations Framework Convention on Climate Change an effective (or appropriate) institution for supporting indigenous populations’ adaptation to climate change?

TUE-10:30-2

Curricula Without Boundaries II (Plaza 410)

Sponsorship: Geographic Education Study Group

Special Session Organizer: Bob Sharpe, Wilfrid Laurier University

Chair: Brent Hall, ESRI Canada

Kim Wallace, Canadian Geographic Education

Ontario's Revised Geography Curriculum: Concepts of Geographic Thinking and a Spatial Skills Continuum

Niem Tu Huynh, Association of American Geographers; Bob Sharpe, Wilfrid Laurier University

Geospatial Thinking Assessment Practices in Secondary Schools – A Global Survey

Zach Vanthournout, Anglophone School District East

Using Geography to Develop 21st Century Skills in Learners

Mary-Louise Byrne, Wilfrid Laurier University

Building a scaffold with technology to support engagement with Earth System Processes

TUE-10:30-3

Forest Ecosystems, Economies and Places (*Mackenzie Chown Complex D303*)

Sponsorship: Environmental Resource Study Group

Special Session Organizers: Ryan Bullock, University of Winnipeg; Sara Teitelbaum, Université de Montréal

Chairs: Ryan Bullock and Sara Teitelbaum

Sinead Earley, Queen's University

A Socio-Ecological History of a Forest in British Columbia, 1959 to Present

Brenda Murphy, Annette Chretien, Grant Morin, Wilfrid Laurier University

Maple Syrup Value Systems and Value Chains: Considering Aboriginal and Non-Aboriginal Perspectives

Anderson Assuah, University of Manitoba

Fostering Cross-cultural Collaboration through Community Forest Management: The Case of Wet'zinkwa Community Forest Corporation and the Wet'suwet'en First Nation of British Columbia

Sara Teitelbaum, Université de Montréal; Ryan Bullock, University of Winnipeg

Governance turmoil? Community forestry, organizational challenges and the merits of longitudinal analysis

TUE-10:30-4

Endogenous Development Paths in Rural Regions (*Mackenzie Chown Complex D304*)

Sponsorship: Tourism and Recreation Study Group

Special Session Organizers: Christopher Fullerton, Brock University; Patrick Brouder, Mid Sweden University

Chair: Christopher Fullerton, Brock University

Bill Hipwell, Carleton University

Move to High Ground: Mobilising Community Assets to Reterritorialise and Decolonise

Christopher Fullerton, Brock University

'We Need More of This': Benefits of a University-Community Rural Land Use Planning Partnership

Gina Sylvestre, University of Winnipeg

Mobility and Rural Aging: Enhancing Elder Engagement and Community Vibrancy Through Regional Transportation Networks

Patrick Brouder, Mid Sweden University; Christopher Fullerton, Brock university

Heterogeneous Tourism Development Paths in Niagara, Canada

TUE-10:30-5

New Directions in Feminist Geography I – Diverse Experiences of Precarity: Housing, Social Movements and the New Economy (*Mackenzie Chown Complex D319*)

Sponsorship: Canadian Women and Geography Specialty Group; Social Justice Research Institute (SJRI), Brock University

Special Session Organizers: Nancy Worth, Vera Chouinard, McMaster University

Chair: Gunjan Sondhi, University of Sussex

Damaris Rose, Université INRS; Lisa Dillon, Catherine Lord, Université de Montréal; Daniel Chen, Concordia University; Marianne Caron, Université de Montréal

Housing and home for single people in early-to-mid 20th century Canadian cities: the gendered qualities of boarding and lodging

Marion Werner, University at Buffalo

The everyday and the event of economic crisis: A feminist perspective

Nancy Worth, McMaster University

Flexible or Precarious?: Millennial Women and Work

Vera Chouinard, McMaster University

Lived Geographies of Occupy: On Emotion, Precarity, Diversity and Place

TUE-10:30-6

Healthcare Accessibility (*Mackenzie Chown Complex D400*)

Chair: Jenna Dixon, University of Waterloo

Seyedeh Negar Hosseinian, Binaloud University; Katayoon Alizadeh, Islamic Azad University

A GIS-Based Assessment for Redistribution of Infrastructures in order to Achieve Equality in Spatial Distribution of Health Services Case study: Mashhad, Iran

Paul Mkandawire, Carleton University

Late start of antenatal care in Malawi: Who is at risk?

Andrea Rishworth, Isaac Luginaah, Jenna Dixon, University of Western Ontario

Free Maternal Health Insurance in Ghana's Upper West Region: Is it Really Free? Exploring hidden determinants related to under utilization

Jenna Dixon, University of Waterloo; Isaac Luginaah, Chantelle Richmond, University of Western Ontario

"Us rural people are really suffering to enroll": Examining the National Health Insurance Scheme in the context of Ghana's Upper West Region

TUE-10:30-7

POSTER SESSION – Physical Geography, Environmental Geography, Climate Change *(Mackenzie Chown Complex C407)*

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session TUE-08:30-7 for a listing of poster titles and authors.

Tuesday 12:00-13:30 Lunch

TUE-12:00-1

Climate Change and Vulnerability – IDRC/Tri-Council Projects III: Vulnerability and Adaptation to Climate Extremes in the Americas (VACEA) (Plaza 409)

Special Session Organizer: David Sauchyn, University of Regina

Chair: David Sauchyn, University of Regina

David Sauchyn, University of Regina; Fernando Santibanez, Universidad de Chile
The VACEA Project: Goals and Progress

Margot A. Hurlbert, Harry Diaz, University of Regina; Erin Knuttila, Bruno Hernani
Community Vulnerability to Drought and Flood

Stefan W. Kienzle, University of Lethbridge; Elaine Wheaton, University of Saskatchewan, Saskatchewan Research Council
The VACEA Project: Modeling Climate Impacts on Agro-Ecosystems

Gregory P. Marchildon, Amber J. Fletcher, University of Regina
VACEA Project Integrated Vulnerability Assessment

Tuesday 13:30-15:00

TUE-13:30-1

Climate Change and Vulnerability – IDRC/Tri-Council Projects IV: Risk Management in the Context of Climate Change (Plaza 409)

Special Session Organizers: André St-Hilaire, Driss Ouazar, Philippe Gachon, Pierre Gosselin, Bernard Motulsky, Sandra Proulx-McInnis

Chair: André St-Hilaire, Canadian Rivers Institute

Pierre Gosselin, INSPQ & INRS-ETE; Odile Ouwe Missi Oukem, CERMES; AbdelAziz Barkia, Ministère de la santé du Maroc; Roland-Pierre Ngom, INRS-ETE

Reducing heat wave risks to human health in Canada and Africa through the use of warning/management tools

Deepti Joshi, Anik Daigle, INRS-ETE; Dae Il Jeong, UQAM; André St-Hilaire, INRS-ETE and Canadian Rivers Institute

Risk management in water resources: low flows, river water temperature and climatic changes in Québec

Philippe Gachon, Olivier Gagnon, Environment Canada; Pierre Gosselin, Institut National de la Santé Publique du Québec

Health risks associated with hydroclimatic hazards and extremes: the case of cold and warm spells across various Canadian areas

Driss Ouazar, UMOV, Agdal/EMI/LASH

Parameters of Regionalization Outputs to Decision Making for Sustainable Development under Climate Change Constraints: Morocco Case Study

TUE-13:30-2

Curricula Without Boundaries III (Plaza 410)

Sponsorship: Geographic Education Study Group

Special Session Organizer: Bob Sharpe, Wilfrid Laurier University

Chair: Bob Sharpe, Wilfrid Laurier University

John MacLachlan, Jason Brodeur, Catherine Chiappetta-Swanson, McMaster University; Michelle M. Vine, University of Waterloo; Julianne Bagg, University of Toronto

Teaching Geospatial Literacy to Large Classes: A Blended Learning Approach

Dylann M. McLean, York University

Creating Phase Spaces: Teaching Writing Using Concept Mapping and Geographic Understandings

James Nugent, University of Toronto

Critical Speaking: Preparing our students to change the world

Kim Naqvi, Tom Waldichuk, Thompson Rivers University

Benefits and Limitations of an Interdisciplinary Approach to Place in Place-Based Teaching

TUE-13:30-3

Alternative Geographies of Environmental and Resource Management I (*Mackenzie Chown Complex D303*)

Sponsorship: Environment and Resources Study Group; Canadian Women and Geography Study Group; Environmental Studies Association of Canada (ESAC)

Special Session Organizer: Chui-Ling Tam, University of Calgary

Chair: Chui-Ling Tam, University of Calgary

Alice Cohen, Acadia University

Obscuring Construction: Ecosystem Management and the Creation of New Spaces

Kathleen Groenewegen, Forest Management, Environment & Natural Resources, Government of the Northwest Territories

Managing Natural Resources in the Northwest Territories: Successes, Challenges, and Scale

Dawn Dietrich, University of Guelph

Turning Theory into Practice: Lessons Learned from an Alternative Geography of Forest Management in Ontario

Parastoo Emami, Wei Xu, Henning Bjornlund, University of Lethbridge

Procedural Justice in the Alberta Regional Plan

TUE-13:30-4

Examining the 'Green Economy' (*Mackenzie Chown Complex D304*)

Special Session Organizers: Maria Shallard, Alexandra Meeker, University of Guelph

Chairs: Alexandra Meeker, Maria Shallard, University of Guelph

Jennifer J. Silver, University of Guelph

A view from the tradeshow floor: on the spaces and social relations of sustainable seafood

Laurel Besco, University of Ottawa

Natural Resource Productivity and the Green Economy

Maria Shallard, University of Guelph

Herring and Heiltsuk Well-Being

Alexandra Meeker, University of Guelph

Volunteer Tourism as Neoliberal Conservation: A case study approach in Northern Belize

TUE-13:30-5

New Directions in Feminist Geography II – Being ‘Out of Place’: Representations of Gender and Sexuality in Mobilities and Development Research (*Mackenzie Chown Complex D319*)

Sponsorship: Canadian Women and Geography Specialty Group; Social Justice Research Institute (SJRI), Brock University

Special Session Organizers: Nancy Worth, Vera Chouinard, McMaster University

Chair: Vera Chouinard, McMaster University

Lidia V. Fourcans, University of Guelph

ESPOIR Ecuador: Representations Of Women And Reflections On North-South Connections

Kristina Welch, Simon Fraser University

Examining motivations of rural women entrepreneurs: gendered entrepreneurship theory in a rural BC context

Suzanne Mills, McMaster University; Nathaniel Lewis, University of Nottingham

Queering Labour Mobility

Gunjan Sondhi, York University

At the intersection of gender and class: spatialising production and performances of a transnational ‘middle-class’ identity

TUE-13:30-6

Geographies of Health and Wellbeing I (*Mackenzie Chown Complex D400*)

Chair: Gavin J. Andrews, McMaster University

Gavin J. Andrews, McMaster University

A Force from the Beginning: Wellbeing in the Affective Intensities of Pop Music

Boadi Agyekum

Exploring the Sense of Place and Mental Wellness of Minority Immigrants: A Comparative Case Study of Ghanaians and Somalis in Hamilton, Ontario

Eric Vaz, Ryerson University; Michael Cusimano, University of Toronto; Tony Hernandez, Ryerson University

Spatial heterogeneity of self-reported health in Toronto: Exploratory analysis of anthropogenic land use phenotypes

Susan J. Elliott, Elijah Bisung, Jenna Dixon, University of Waterloo

Measuring well-being on a global scale: taking well-being indices out of their comfort zone in order to measure the impact on well-being of targeted economic growth

TUE-13:30-7

POSTER SESSION – Physical Geography, Environmental Geography, Climate Change *(Mackenzie Chown Complex C407)*

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session TUE-08:30-7 for a listing of poster titles and authors.

Tuesday 15:00-15:30

Nutrition Break, Department of Geography

Tuesday 15:30-17:00

TUE-15:30-1

Climate Change and Vulnerability – IDRC/Tri-Council Projects V: Assessing the Vulnerability of Cities in a Changing Climate *(Plaza 409)*

Special Session Organizer: Gordon McBean, Western University

Chair: Gordon McBean, Western University

Idowu Ajibade, Gordon McBean, Western University

A discourse analysis of urban resilience and adaptation to storm surges: the example of Eko Atlantic City Project in Nigeria

Robert Lannigan, Amin Owringi, Slobodan Simonovic, Western University

Developing a Composite Human Health Impact map for a Metropolitan Area

Greg Oulahan, Western University; Linda Mortsch, Environment Canada and University of Waterloo; Kathy Tang, Western University; Deborah Harford, Simon Fraser University

Unequal vulnerability to flood hazards: “Ground truthing” a social vulnerability index of five municipalities in Metro Vancouver, Canada

Brennan Vogel, Western University

Adapting to risk: A conceptual framework and methodological approach for the comparative evaluation of municipal climate change adaptation

TUE-15:30-2**The St. John's Declaration: Recent Advances to Geographic Education in Canada** (*Plaza 410*)

Sponsorship: Geographic Education Study Group

Special Session Organizer: Bob Sharpe, Wilfrid Laurier University

Moderator: Bob Sharpe, Wilfrid Laurier University

Panelists:

Jean Andrey, University of Waterloo

James Boxall, Dalhousie University

Amanda L. Hooykaas, University of Guelph

Lynn Moorman, Mount Royal University

Mary Jane Starr, The Royal Canadian Geographical Society

TUE-15:30-3**Alternative Geographies of Environmental and Resource Management II** (*Mackenzie Chown Complex D303*)

Sponsorship: Environment and Resources Study Group; Canadian Women and Geography Study Group; Environmental Studies Association of Canada (ESAC)

Special Session Organizer: Chui-Ling Tam, University of Calgary

Chair: Chui-Ling Tam, University of Calgary

Anne-Laure Bouvier-De Candia, University of Toronto

Indigenous Involvement in Ontario Environmental Assessment Processes: Indigenous Geographies as a New Way Of Doing

Annie Lalancette, Concordia University

Conventional Management and Indigenous Fisheries: The Case of the Tropical Rock Lobster Fishery in Torres Strait, Australia

Natasha Cornea, René Véron, Anna Zimmer, University of Lausanne

Private-‘public’ ponds and public-‘private’ ponds – examining the governance of urban water bodies in a small Bengali town

Chui-Ling Tam, University of Calgary

Time, Communicative Justice and the Indonesian Littoral

TUE-15:30-4

Interrogating Impact: Road Construction in the Global South (*Mackenzie Chown Complex D304*)

Special Session Organizers: David Butz, Pushpa Hamal, Nancy Cook, Brock University

Chair: David Butz, Brock University

Barbara Bottini-Havrillay, Concordia University

Transnational Politics of Road Building in Cold War Guatemala

Pushpa Hamal, Brock University

Rural Road Construction in the Global South: How Does Process Shape Outcome?

David Sadoway, Govind Gopakumar, Concordia University

Assembling publics in motion: Visualizing the rolling out of Indian road infrastructures

David Butz, Nancy Cook, Brock University

A Political Ecology of Road Construction and Mobility in Shimshal, Gilgit-Baltistan, Pakistan

TUE-15:30-5

New Directions in Feminist Geography III – Crossing Borders: Gender, Power and Knowledge Claims (*Mackenzie Chown Complex D319*)

Sponsorship: Canadian Women and Geography Specialty Group; Social Justice Research Institute (SJRI), Brock University

Special Session Organizers: Nancy Worth, Vera Chouinard, McMaster University

Chair: Nancy Worth, McMaster University

Julie Le Gall, ENS de Lyon; Violaine Jolivet, University of Montreal

Methods, Practices and Tactics to Go beyond “Gender Borders” in Latinized Fieldworks: How We Will Be Made into Feminist Geographers?

Liam Riley, Belinda Dodson, The University of Western Ontario

Practicing ‘Gender’ in Urban Malawi: Untangling Gender and Development Discourses in Food Security Fieldwork

Sarah de Leeuw, University of Northern British Columbia

Small Grounds: Intimate Domestic Geographies and Colonialism in British Columbia

Sean Robertson, University of Alberta

“Thinking of the land ‘in that way’”: Feeling(s) in worldviews, knowing traditional ecological knowledge and the spatial politics of “attentiveness” in the protection of Skwelkwel’welt

TUE-15:30-6

Geographies of Health and Wellbeing II (*Mackenzie Chown Complex D400*)

Chair: Allison Williams, McMaster University

Peter Kedron, Rajiv Lalla, Adam McKay, Ryerson University

A Study of Within Group Inequality in the Geographic Distribution of HIV/AIDS in Thailand

Arianne Bohnert, Anna Labetski, Tyler Vaivada, Inthuja Selvaratnam, Eddie Farrell, Theresa Pinter, Antony Chum, Patricia O'Campo, St. Michael's Hospital; Kristian Larsen, University of Toronto

The influence of time spent at home on the association between residential food environment and fruit and vegetable intake

Wasan Nagib, Allison Williams, McMaster University

Toward a Therapeutic and Autism-friendly Home Environment

Matthew Leyenaar, Niko Yiannakoulis, McMaster University

A geo-spatial analysis of quality and safety of children's play-spaces in Hamilton, ON

TUE-15:30-7

POSTER SESSION – Physical Geography, Environmental Geography, Climate Change

(*Mackenzie Chown Complex C407*)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session TUE-08:30-7 for a listing of poster titles and authors.

Tuesday 17:30-19:30

TUE-17:30-1

Suzanne Mackenzie Memorial Lecture and Reception (*Lecture: South Block Room 203; Reception: Walker Courtyard/Walker Complex Dance Studio*)

Sponsorship: Canadian Women and Geography Study Group (CWAG); Council for Research in Social Sciences (CRISS), Brock University

Linda Peake, York University

Rethinking Feminist Interventions into Geography

CAG 2014 Wednesday May 28

Wednesday 08:30-10:00

WED-08:30-1

Applications and Development in GIScience I (Plaza 410)

Sponsorship: GIScience Study Group; ESRI Canada Education and Research Group

Special Session Organizer: Tarmo K. Remmel, York University

Chair: Tarmo K. Remmel, York University

James Boxall, Dalhousie University

Enhancing the profile of GIScience in Canada: opportunities and challenges

Yuestas David, Tarmo K. Remmel, André Robert, York University

Quantifying runoff at the sub-watershed level with a physically based model: field measurements and the SWAT hydrological model

Yikalo H. Araya, Tarmo K. Remmel, York University

An evaluation of the predictive performance of Random Forest model for residual patch existence in the Red Lake Fire, Ontario

Laura J. Brown, Wilfrid Laurier University

Climate change and future maple sap flow: working with NETCDF data and GIS

WED-08:30-2

The Geography of Health and Health Care I: Healthy People, Places, Mobilities (Plaza 409)

Sponsorship: Geography of Health and Health Care Study Group

Special Session Organizer: Jeff Masuda, University of Manitoba

Chair: Theresa Garvin, University of Alberta

Jia Li, University of Alberta

Transitions around Smoking: The Experiences of Chinese Migrants to Edmonton

Ebenezer Dassah, Michelle Driedger, University of Manitoba

A newspaper analysis of medical tourism for liberation therapy procedure by Canadian multiple sclerosis patients

Neil Hanlon, University of Northern British Columbia; Mark Skinner, Trent University; Alun Joseph, University of Guelph; Laura Ryser, Greg Halseth, University of Northern British Columbia

New Frontiers of Rural Ageing: Resource Hinterlands

Jenna Drabble, Jeff Masuda, University of Manitoba

The Right to Food and the Right to the City: An argument for 'scaled up' food activism in Vancouver's Downtown Eastside

Jessica Parish, York University

Gentrification, Alternative Medicine and the idea of "Great Places" to Live

WED-08:30-3

Prosperity, Urbanization, Creativity (Mackenzie Chown Complex D303)

Sponsorship: Public Policy Issues Study Group

Special Session Organizer: Kevin Stolarick, University of Toronto

Chair: Kevin Stolarick, University of Toronto

Kevin Stolarick, University of Toronto

Urbanization in India

Garrett Morgan, University of Toronto

Nashville Model of Economic Development

Tim Reiffenstein, Mount Allison University

Mobile external economies, fan seriality and the economic geographies of Phish tour

WED-08:30-4

Paleoenvironments I (Mackenzie Chown Complex D304)

Special Session Organizers: Bethany Coulthard, University of Victoria; Bryan S. R. Grimwood, University of Waterloo; Nancy C. Doubleday, McMaster University; Michael F.J. Pisaric, Brock University; Tatania Vaslova, Russian Academy of Sciences

Chair: Bethany Coulthard, University of Victoria

Jessica Vanstone, Dave Sauchyn, University of Regina; Ron Woodvine, Agriculture and Agri-Food Canada

Drought scenario development and regional synchrony for rivers on the Canadian Prairies

Michael Pisaric, Brock University; Emma L Davis, Carleton University; Colin Mustaphi, York University; Jesse Vermaire, Carleton University; Katrina Moser, University of Western Ontario

The late Holocene fire and vegetation history of Little Trefoil Lake, Jasper, Alberta

M. Drljepan, F.M.G. McCarthy, Brock University; J.B. Hubeny, Salem State University

Dinoflagellates and protozoans as proxies for anthropogenic impact: A study from Sluice Pond, MA

WED-08:30-5

Teaching Geography of Canada – Roundtable (*Mackenzie Chown Complex C405*)

Special Session Organizers: John Paul Catungal, University of British Columbia; Nicole Laliberte, University of Toronto

Moderator: Nicole Laliberte

Panelists:

Jean Andrey, University of Waterloo

Heather Castleden, Dalhousie University

John Paul Catungal, University of British Columbia

Susan Dupej, York University

Matt Dyce, University of Winnipeg

Arn Keeling, Memorial University of Newfoundland

Bernard Momer, University of British Columbia, Okanagan

Catherine J. Nash, Brock University

Sarah Paynter, Douglas College

WED-08:30-6

Tourism and Travel (*Mackenzie Chown Complex D400*)

Chair: Daniel H. Olsen, Brandon University

Atsuko Hashimoto, David Telfer, Brock University

Gunkanjima (Battleship) Island from Industrialisation to Decay: A Modern Industrial Heritage Tourism Site in Japan

Khaled Alshboul, Sanjay K Nepal, University of Waterloo

Improving local community involvement in tourism, the case of Jerash: The proposed World Heritage Site in Jordan

Kelley A. McClinchey, Wilfrid Laurier University

Stay Eat Love: A Hermeneutical Approach to Analyzing English Language Travel Narratives about Italy

Daniel H. Olsen, Brandon University

Religion on the Move: The Case of the Wayside Chapel in Brandon, Manitoba

WED-08:30-7**Critical Reflections on Mental Health and Wellness in the Canadian Academy I** (*Mackenzie Chown Complex D403*)

Sponsorship: Social Justice Research Institute (SJRI), Brock University

Special Session Organizer: Linda Peake, York University

Chair: Laurence Simard-Gagnon, Queen's University

Linda Peake, York University; Beverley Mullings, Queen's University,
Critical Reflections on Mental Health and Wellness in the Academy: (What have Geographers got to do with it?)

Kate Parizeau, University of Guelph

Mental wellness in the university sector: Feminist geographers' perspectives

Bonnie Hallman, University of Manitoba

Building a Place of Wellness and Success: A Geographer's Perspective on Institutional Mental Health Strategies

WED-08:30-8**POSTER SESSION – Human Geography, Health Geography** (*Mackenzie Chown Complex C407*)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Kwadwo Afriyie, Sandra A. Kwarteng, KNUST; Micheal Boateng, Brock University

The North-South Migration of Females in Ghana and its Implication on Their Welfare: A Case Study of Female Head Porters in the Central Business District of Kumasi

Caroline Barakat-Haddad, University of Toronto; Ayesha Siddiqua, McMaster University

Profile of tobacco smoking among adolescents from the United Arab Emirates

Matthew Canaran, University of Waterloo

Dynamic Transit

Angelica de Jesus, Sai Paranjape, Sawanya Phakphian, University of Toronto

Conducting cross-cultural research: Three graduate research proposals

Eddie Farrell, Antony Chum, Patricia O'Campo, St. Michael's Hospital; Kelly Murphy, City of Toronto

Methods and Challenges of Generating Data for Urban HEART @Toronto: A WHO Tool to Identify Health Inequities and Plan City Actions

Michael Ferber, The King's University College

The Trashy Past of Edmonton's Parks: A Preliminary Module for the Ribbon of Green Digital Historical Atlas

Asli Mahdi, Carleton University

Therapeutic landscapes of South Asian women: a geography of traditional medicine use in Ottawa

Gregory Metcalfe, University of Waterloo

Modelling Regional Airport Success

Kim Naqvi, Thompson Rivers University

Contrasting Visions of Modernity: Landscapes of Albert Anker and Paul Klee

Joel Outtes, UFRGS- Universidade Federal do Rio Grande do Sul

From the Right to the City to the City of the Right? Recent Developments in Urban Social Movements in Brazil

Scott Rice-Snow, Ball State University

Landscape Expertise for Adventure Role-Playing Game Design

Lauren Van Patter, Alice Hovorka, University of Guelph

Feral Cats and the Nature of Belonging

Michelle M. Vine, Susan J. Elliott, University of Waterloo

Exploring Implementation of the Ontario School Food and Beverage Policy (PPM-150)

Wednesday 10:00-10:30

Nutrition Break, Department of Geography

Wednesday 10:30-12:00

WED-10:30-1

Applications and Development in GIScience II (Plaza 410)

Sponsorship: GIScience Study Group; ESRI Canada Education and Research Group

Special Session Organizer: Tarmo K. Remmel, York University

Chair: Tarmo K. Remmel, York University

Budhendra (Alex) Singh, Tarmo K. Remmel, York University

Effect of grain size on morphological pattern elements and land cover within boreal wildfire residual patches

Andrei Balulescu, Derek T. Robinson, M. Bogdan Caradima, University of Waterloo

Estimating market potential using census data

M. Bogdan Caradima, Derek T. Robinson, Andrei M. Balulescu, University of Waterloo,

Criteria development for a suitability analysis of retail development across Ontario, Canada

Shanqi (Ashley) Zhang, Robert Feick, University of Waterloo; Colin Robertson, Wilfrid Laurier University

An approach to collect public visions toward urban places from the Geoweb

WED-10:30-2

The Geography of Health and Health Care II: Geographies of Care (Plaza 409)

Sponsorship: Geography of Health and Health Care Study Group

Special Session Organizer: Jeff Masuda, University of Manitoba

Chair: Jeff Masuda, University of Manitoba

Caroline Barakat-Haddad, University of Toronto; Ayesha Siddiqua, McMaster University

Use of primary health care and health care accessibility among adolescents from the United Arab Emirates

Daniel Harrington, Mark Rosenberg, Queen's University

Unpacking Canada's access to specialist health care services: Evidence from four Canadian provinces

Joshua Evans, Athabasca University; Dyanne Semogas, Joshua Smalley, Lynne Lohfeld, McMaster University

Nurturing the 'will to live': Understanding harm reduction programs as life-affirming places

Ewa Dabrowska, Juanne Clarke, Wilfrid Laurier University

Keeping children's minds healthy – mapping the governance of childhood emotions and behaviours

Kathi Wilson, Michele Colley, University of Toronto Mississauga

Newcomers and Access to Health Care: Examining the Impact of Ontario's Three-Month Wait Policy

WED-10:30-3

Housing and Neighbourhood Change: Wealth, Poverty, and Social Implications (Mackenzie Chown Complex D303)

Sponsorship: Urban Geography Study Group

Special Session Organizers: David Ley, University of British Columbia; Alan Walks, University of Toronto

Chair: Richard Harris, McMaster University

Craig E. Jones, University of British Columbia

The Emerging Skytrain Poverty Corridor?

Martine August, University of Toronto

Redevelopment Gone Wrong: The Case of Toronto's Don Mount Court Mixed-Income Public Housing Revitalization

David Ley, University of British Columbia

'The world's favourite property market': Housing and austerity in London (UK)

Alan Walks, University of Toronto

Neighbourhood Segregation of Wealth, Housing, and Class in Canadian Cities

Discussant: Richard Harris, McMaster University

WED-10:30-4

Paleoenvironments II (Mackenzie Chown Complex D304)

Special Session Organizer: Bethany Coulthard, University of Victoria; Bryan S. R. Grimwood, University of Waterloo; Nancy C. Doubleday, McMaster University; Michael F.J. Pisaric, Brock University; Tatania Vaslova, Russian Academy of Sciences

Chair: Bethany Coulthard, University of Victoria

Vanessa Stretch, Ze'ev Gedalof, University of Guelph; Michael Pisaric, Brock University, Lori Daniels, University of British Columbia

Corroborating macroscopic sedimentary charcoal records with tree ring records in mixed-severity landscapes: A case study in the Rocky Mountain Foothills, Alberta, Canada

Matthew Vetta, Jaclyn Cockburn, University of Guelph; John Garver, Union College

A 200-year slope instability reconstruction based on tree-ring growth response along Schoharie Creek, NY

E.J. Hundey, S.D. Russell, F.J. Longstaffe, K.A. Moser, University of Western Ontario

Nitrate sources in alpine lakes determined from $\Delta^{17}\text{O}$, $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$

Shirley Ngai & Katrina Moser

Effects of Warming Temperature and Changing Precipitation on Alpine Lakes

WED-10:30-5

Perspectives from Emerging Activist Scholars (Mackenzie Chown Complex C405)

Sponsorship: Social Justice Research Institute, Brock University; Geography of Health and Health Care Study Group

Special Session Organizers: Rachel Hirsch, Brock University

Moderator: Rachel Hirsch, Brock University

Panelists:

Matt Feagan, IDRC, Ryerson University, York University

Vanessa Sloan Morgan, Dalhousie University, University of Northern British Columbia

Sara Edge, University of Waterloo

Discussant: Jamie Baxter, University of Western Ontario

WED-10:30-6

Selling the City (Mackenzie Chown Complex D400)

Chair: Phillip Gordon Mackintosh, Brock University

Nicholas Lynch, University of Victoria; Yolande Pottie-Sherman, University of British Columbia

Marketing palimpsests: Real estate advertising and the promotion of urban space in the Canadian city

Miranda Gagnon, Joseph Leydon, University of Toronto Mississauga
Lifestyle Centres in the Greater Toronto Area, Current Developments and Future Prospects

Paul Russumanno, Brock University
Art is the New Steel

Rongxu Qiu Wei Xu, University of Lethbridge
Simulating co-evolution of industrial spatial structure and urban land use growth: a case of Shanghai

WED-10:30-7

Critical Reflections on Mental Health and Wellness in the Canadian Academy II (Mackenzie Chown Complex D403)

Sponsorship: Social Justice Research Institute (SJRI), Brock University

Special Session Organizer: Linda Peake, York University

Chair: Kate Parizeau, University of Guelph

Laurence Simard-Gagnon, Queen's University
"Everyone is fed, bathed, asleep, and I have made it through another day": surviving academia through a feminist ethics of resistance

Sarah Mann, Brock University
Sexual Assault Services for Online Students and Related Job Strain Issues for Online Faculty and Staff

Eric Windhorst, McMaster University
Confronting the Crisis Organically: The Role of Nature in Promoting Student Well-Being

WED-10:30-8

POSTER SESSION – Human Geography, Health Geography (Mackenzie Chown Complex C407)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session WED-08:30-8 for a listing of poster titles and authors.

Wednesday 12:00-13:30 Lunch

WED-13:30-1

Applications in Geospatial Technologies (Plaza 410)

Special Session Organizers: Josh Valenti and Marilyne Jollineau, Brock University

Chair: Josh Valenti, Brock University

Jeff Pengelly, Kevin Turner, Brock University

Designing and Producing an Online Interactive Mapping Application for the Brock University Campus (St. Catharines, Ontario, Canada)

Nicholas Riddick, Josh Valenti, Brock University

Rainwater Harvest in the Niagara Region

Nick Savelli, Matt Norton, Josh Valenti, Shannen Worden, Brock University

A Comparative Analysis Using Change Detection to Monitor Urban Growth and its Influences on Public Transportation in St. Catharines and Thorold, Ontario (2000-2013)

Josh Valenti, Julia Baird, Marilyne Jollineau, Ryan Plummer, Brock University

Applying a Geospatial Social Network Analysis to Agricultural Advice Networks

WED-13:30-2

The Geography of Health and Health Care III: Geographies of Environmental Risk (Plaza 409)

Sponsorship: Geography of Health and Health Care Study Group

Special Session Organizer: Jeff Masuda, University of Manitoba

Chair: Heather Castleden, Dalhousie University

Jody F. Decker, Wilfrid Laurier University

The Need for Infection Control Plans within Universities to Mitigate Disease Transmission Risk

Elijah Bisung, Susan J. Elliott, University of Waterloo; Corinne J. Schuster-Wallace, United Nations University

Making water-health linkages visible: A photovoice exploration of local knowledge, attitudes and practices around water-health linkages in rural Kenya

Eric Crighton, Kathryn Laferriere, University of Ottawa; Erica Phipps, Canadian Partnership for Children's Health and Environment

Towards Improved Prenatal Environmental Health Education

WED-13:30-3

Critical Legal Geographies (*Mackenzie Chown Complex D303*)

Sponsorship: Indigenous Peoples Working Group; Historical Geography Study Group; Social Justice Research Institute (SJRI), Brock University

Special Session Organizers: Vanessa Sloan Morgan, Dalhousie University; Laura Schaepli, Queen's University

Chair: Vanessa Sloan Morgan, Dalhousie University

Valentina Capurri, Ryerson University

The Chester Case: the Canadian Immigration Act and the interconnections between law and spatiality in the lives of immigrant applicants with disabilities

Rebekah R. Ingram, Adrian John, Richard D. Quodomine, Jay Toth, Seneca Nation of Indians

Language Revitalization through Lexical Analysis of New York State Place Names

Laura Schaepli, Queen's University

Thinking geographically about law: A case study of the Jay Treaty and First Nations' border-crossing rights

WED-13:30-4

State – Phase – Becoming: Society, Energy and New Materialities I (*Mackenzie Chown Complex D304*)

Special Session Organizers: Aaron Franks, Jonathan Peyton, University of Manitoba

Chair: Jonathan Peyton, University of Manitoba

Kean Birch, Emily Simmonds, Vennila Rajaguru, York University

Transitioning from a fossil(-ized) economy to bio-based economy? Prospects and challenges for Canada

Doug Lionais, Cape Breton University

Labouring in carboniferous capitalism: Cape Breton and the Alberta Tar Sands

Jonathan Peyton, Aaron Franks, University of Manitoba

The Harper Government and the design of the new environmental subject

Kirby E. Calvert, The Pennsylvania State University

Theorizing energy transitions: a geographical perspective

WED-13:30-5**Possibilities and Limits of Scholarly Activism In and Outside of the Classroom I: How to Bring Activism to Academy** (*Mackenzie Chown Complex C405*)

Sponsorship: Social Justice Research Institute (SJRI), Brock University

Special Session Organizers: Ebru Ustundag, Brock University; Emily Eaton, University of Regina

Moderator: Emily Eaton, University of Regina

Panelists:

David Roberts, University of Toronto

Kelsey MacLeod Johansen, University of Otago

Camille Vergnaud, Université Paris Ouest-Nanterre La Défense

Ebru Ustundag, Brock University

WED-13:30-6**Regions, Regionalization and Regional Planning** (*Mackenzie Chown Complex D400*)

Chair: D. Scott Slocombe, Wilfrid Laurier University

Blair Cullen, Trent University

Adding a New Layer to the Regionalization Debate: A Case Study of Local Immigration Partnerships from Durham Region, Ontario

Sean Markey, Sarah Breen, Simon Fraser University; Kelly Vodden, Jen Daniels, Memorial University

Anecdotes vs. Evidence: The Role of Place-based Development in Becoming a Region in Rural Canada

Michal Semian, Zdenek Kucera, Charles University in Prague; Pavel Raska, J. E. Purkyne University in Usti nad Labem

Mediated Regional Images: the case of local postcards in NW Bohemia (Czechia)

D. Scott Slocombe, Wilfrid Laurier University

Exploring the Dimensions of Support for and Opposition to Regional Land-Use Planning in Western Canada

WED-13:30-7**Environmental Governance** (*Mackenzie Chown Complex D403*)

Chair: Cassandra Kuyvenhoven, Queen's University

Nicole Latulippe, University of Toronto

Knowledge as Relationship: Understanding 'Traditional Ecological Knowledge' as a Collaborative Concept for Transformative Environmental Governance in Canada

Harry Spaling, The King's University College; Henry Mwaka Komu, Jesse Theuri Njoka, University of Nairobi
Community Wildlife Conservancies in Kenya: Governance and Conservation Strategies

Cassandra Kuyvenhoven, Alex Zahara, Queen's University
Legislating Canadian Disposal at Sea: Implications for the Northwest Passage

WED-13:30-8

Special Panel on a Proposal for a Canadian Historical GIS Network (*Plaza Building 600F*)

Sponsorship: Canadian Cartographic Association

Special Session Organizers: Byron Moldofsky, University of Toronto; John Bonnett, Brock University

Moderator: Byron Moldofsky, University of Toronto

Panelists:

Byron Moldofsky, University of Toronto

Léon Robichaud, Université de Sherbrooke

Donald Lafreniere, University of Western Ontario

WED-13:30-9

POSTER SESSION – Human Geography, Health Geography (*Mackenzie Chown Complex C407*)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session WED-08:30-8 for a listing of poster titles and authors.

Wednesday 15:00-15:30

Nutrition Break, Department of Geography

Wednesday 15:30-17:00

WED-15:30-1

Developments in Volunteered Geographic Information, Web-based Mapping, and Remote Sensing (*Plaza 410*)

Chair: Alan G. Phipps, University of Windsor

Alan G. Phipps, University of Windsor
Three Applications of V.3 Google Maps

H. Lawrence, C. Robertson, Wilfrid Laurier University; R. Feick, University of Waterloo
Simulated Point Processes of VGI at Different Spatial Aggregation Units

Soheil Boroushaki, California State University Northridge
ParticipatoryGIS: A Collaborative GIS, Based on Open-Source Mapping Techniques

Su Ye, Dongmei Chen, Queen's University
Comparison of Automatic Threshold Selection Approaches for Change Detection from Remotely Sensed Images

Jonathan Gaudreau, Liliana Perez, University of Montreal
Understanding the factors determining the spatial distribution of boreal birds in Quebec: a multivariate approach

WED-15:30-2

The Geography of Health and Health Care IV: Innovations in Spatial Methods in Health Research and Planning (Plaza 409)

Sponsorship: Geography of Health and Health Care Study Group

Special Session Organizer: Jeff Masuda, University of Manitoba

Chair: Joshua Evans, Athabasca University

Niko Yiannakoulis, McMaster University
Is most environmental health research false?

Kristin Eccles, University of Calgary, Alberta Health Services; Stefania Bertazzon, University of Calgary; Sylvia Checkley, University of Calgary, Alberta Health Services; Jacqueline Davis, Alberta Health Services
Regression Modeling to Predict Drinking Water Well Vulnerability During a Flood in Southern Alberta

Antony Chum, St. Michael's Hospital
Spatial-temporal complexities in place effects on health research: challenges and solutions

Stefania Bertazzon, Kristin Eccles, University of Calgary; Markey Johnson, Health Canada; Olesya Barrett, University of Calgary; Jue Yi Zhang, Health Canada
Spatial Land Use Regression Models (SpLUR) of Pollutant Concentrations in Calgary

WED-15:30-3

Interrogating Toronto's Past (Mackenzie Chown Complex D303)

Special Session Organizer: Phillip Gordon Mackintosh, Brock University

Chair: Phillip Gordon Mackintosh, Brock University

Richard Anderson, York University
Towards a historical geography of Toronto's smog

Harvey Rainbow, Brock University
Place/People/Protest

Phillip Gordon Mackintosh, Brock University

"The City Council should pass a traffic law to keep the people moving on": Contesting Toronto's sidewalks, 1880s-1920s

WED-15:30-4

State – Phase – Becoming: Society, Energy and New Materialities II (*Mackenzie Chown Complex D304*)

Special Session Organizers: Aaron Franks, Jonathan Peyton, University of Manitoba

Chair: Aaron Franks, University of Manitoba

Ulrich Best, York University

The uses of metabolistic discourse: dependency and metabolism in the current Ukrainian crisis

Bradley Austin, Kent State University

Heat Sensitivities and Thermal Space

Eve Vogel, UMass Amherst; Brandon Taylor, Indiana University; Katie Ronan, Massachusetts Water Resource Authority

The confluence of, and conflict among, river management, electric markets, and climate mitigation: A case study of Connecticut River dam relicensing

Discussant: Susan Ruddick, University of Toronto

WED-15:30-5

Possibilities and Limits of Scholarly Activism In and Outside of the Classroom II: How to Bring Academy to Activism (*Mackenzie Chown Complex C405*)

Sponsorship: Social Justice Research Institute (SJRI), Brock University

Special Session Organizers: Ebru Ustundag, Brock University; Emily Eaton, University of Regina

Moderator: Ebru Ustundag, Brock University

Panelists:

Fran Klodawsky, Carleton University

Valentine Capurri, Ryerson University

Vanessa Sloan Morgan, Dalhousie University

Emily Eaton, University of Regina

WED-15:30-6

The Influence of “Place” on Individual Perceptions of Local Environmental Issues
(Mackenzie Chown Complex D400)

Sponsorship: Environment and Resources Study Group

Special Session Organizers: Melissa Gallina, Allison Williams, McMaster University

Chair: Allison Williams, McMaster University

Annika Airas, Simon Fraser University, University of Helsinki; Peter V. Hall, Simon Fraser University
Industrial waterfront redevelopment and the role of historical distinctiveness

Amber Silver, Jason Grek-Martin, University of Waterloo
“It still feels like Goderich to me, and I think that it will be beautiful again”: The positive and negative impacts of an F3 tornado on residents’ sense of place.

Michael Drescher, University of Waterloo
‘You do anything to protect the land’: Private landowners’ relationships with nature in a developing urban fringe of the Niagara Escarpment, Ontario.

Melissa Gallina, Allison Williams, McMaster University
Variations in Sense of Place across Immigrant Status and Gender: Relationship to Air Quality Perceptions amongst women in Hamilton, Ontario, Canada

WED-15:30-7

Capitalism's Crises and the Geographies of Environmental Governance in Latin America and the Caribbean (Mackenzie Chown Complex D403)

Sponsorship: Environment and Resources Study Group

Special Session Organizers: Chris Knudson, Adrienne Johnson, Clark University

Chair: Chris Knudson, Clark University

Chris Knudson, Clark University
Risk and Resource Extraction in St. Lucia

Sonja Killoran-McKibbin, York University
Between Neo-Extractivism and Mother Earth: Bolivia’s Process of Change

Adrienne Johnson, Clark University
Governing the Ungovernable? Pudrición del Cogollo disease and Roundtable Palm Oil Governance

WED-15:30-8**Evolving Models of Collaboration by Building Canadian Geospatial Relationships** (*Plaza Building 600F*)

Sponsorship: Canadian Cartographic Association

Special Session Organizers: Anna Jasiak, Natural Resources Canada; James Boxall, Dalhousie University

Chair and Facilitator: Anna Jasiak, Natural Resources Canada

Anna Jasiak, Natural Resources Canada

The Canadian Geomatics Round Table: Building a Pan-Canadian geomatics strategy I

James Boxall, Dalhousie University

The Canadian Geomatics Round Table: Building a Pan-Canadian geomatics strategy II

Paul Heersink, ESRI Canada

GeoFoundation Exchange (GFX): Progress and Future Directions

A structured panel discussion follows individual presentations

WED-15:30-9**POSTER SESSION – Human Geography, Health Geography**

(*Mackenzie Chown Complex C407*)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session WED-08:30-8 for a listing of poster titles and authors.

Wednesday 17:30-19:30**WED-17:30-1**

Wiley Lecture and Reception (*Lecture: South Block 203; Reception: Walker Courtyard/Walker Complex Dance Studio*)

Sponsorship: John Wiley & Sons Canada, Ltd.

Deborah Cowen, University of Toronto

Blockade: Subversion, Supply Chains and the Social Factory

Wednesday 20:00-21:30

WED-20:00-1

PechaKucha Night (PKN) Presentations (*Scotiabank Atrium, Cairns Complex*)

Sponsorship: Canadian Association of Geographers, Canadian Cartographic Association and the Environmental Studies Association of Canada

Aiswarya Baskaran, Kate Sherren, School for Resource and Environmental Studies, Dalhousie University
Using Map Elicitation Interviews to capture farmer perceptions of Ecosystem Services

Chris Brackley, AstheCrowFliesCartography
Near and Far: Exploring the small things hidden in big maps

Runa Das, Ryerson University
A framework of methodology for examining energy literacy

Michael L. Dorn, Stony Brook University
Alt-Transport Movements of the 1890s

Kristin Elton, University of Waterloo
Wildlife and Roads: Examining the Incorporation of Wildlife Management Strategies Into Our Road Infrastructure in Ontario

Roger Wheate, University of Northern British Columbia
The 9th ICA Mountain Cartography workshop, Banff, April 2014

Jeff Wielki, TERA Environmental Consultants
A Sea of Peaks

Wednesday 20:30-22:30

WED-20:30-1

ACME Lecture and Reception (*Niagara Artists Centre (NAC), 85 Church Street, St. Catharines*)

Sponsorship: *ACME: An International E-journal for Critical Geographies*; Social Justice Research Institute (SJRI), Brock University; Council for Research in the Social Sciences (CRISS), Brock University

Sarah Hunt, Independent Research Consultant
Spaces of Resurgence: Rupturing Colonialscales

CAG 2014 Thursday May 29

Thursday 08:30-10:00

THU-08:30-1

Living with Socio-Ecological Change: Experiences from Global South and North I (Plaza 409)

Sponsorship: Living with Climate Change Project (SSHRC)

Special Session Organizer: Prateep Kumar Nayak, University of Waterloo

Chair: Shandel Brown, University of Waterloo

Michaela Hynie, York University

Living with Climate Change: Mapping Experience and Adaptation in the Global South and North

Prateep Kumar Nayak, University of Waterloo

Abrupt Changes in Chilika Lagoon Social-Ecological System: An Historical Analysis

Sumit Vij, Institute of Rural Research & Development, Gurgaon, India

Adaptation Responses to Climate Induced Impacts with Reference to Two Semi-Arid Locales in India

Romila Verma, University of Toronto

Climate Change Adaptation to Water Scarcity in the Sahel Region of Africa

Discussant: Ellie Perkins, York University

THU-08:30-2

Chronic Disease and the Built Environment I (Plaza 410)

Sponsorship: Geography of Health and Healthcare Study Group

Special Session Organizers: Jennifer Dean, Michelle Vine, University of Waterloo

Chair: Francesca Cardwell, University of Waterloo

Michelle Vine, Jennifer Dean, University of Waterloo

Assessing ANGELO: Reflections on using an analytic tool for examining environments linked to obesity

Tarun Katapally, University of Saskatchewan; Daniel Rainham, Dalhousie University; Nazeem Muhajarine, University of Saskatchewan

Smart Cities Healthy Kids: The Need to Study Seasonality with Built Environment

Nairne Cameron, Algoma University

Retail Roadblocks: Barriers to Accessing Healthy Food in a Northern City

Francesca Cardwell, Susan Elliott, University of Waterloo

"They were dropping like flies": Exploring Environmental Health Risks in Youth Team Sport in Ontario

THU-08:30-3

The Political-Economic Geography of Cities: Local Economic Development, Neoliberalism, and the Entrepreneurial City I (Welch Hall 209)

Sponsorship: Urban Geography Study Group

Special Session Organizers: Evan Cleave, Godwin Arku, University of Western Ontario

Chair: Alan Walks, University of Toronto

Evan Cleave, Godwin Arku, University of Western Ontario

What are we selling? And are they buying it? Perspectives of local economic development practitioners and site selectors on the role of place branding in business attraction and enhancing competitiveness

Michael Ripmeester, Brock University

"All that matters is building mega projects for the one percenters": the entrepreneurial city and the spatial politics of citizenship

Roger M. Picton, Mark Skinner, Trent University

"Le social et le culturel est économique!": Community economic development and the rise of ethno-cultural entrepreneurialism in Francophone Manitoba

Sarah Moser, McGill University

King Abdullah Economic City, Saudi Arabia's Grand social Experiment

THU-08:30-4

Physical Geography (Welch Hall 206)

Chair: Dirk de Boer, University of Saskatchewan

Dirk de Boer, Amir Sadeghian, University of Saskatchewan

Sedimentation and Erosion in Lake Diefenbaker: A 45 Year Record

Kaleb Wagner, Department of Earth Sciences, Brock University

Ribbed moraine morphology and distribution in south-central Keewatin, Canada: Implications for bedforming processes beneath the central Laurentide Ice Sheet

Stewart J. Sweeney, J. Douglas Aspinall, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs

A century of soil mapping in the province of Ontario: looking back while moving forward

Scott Rice-Snow, Ball State University

Independence of Watershed Boundary Irregularity from Topographic Relief, Prince Edward Island, Canada

THU-08:30-5

Air Pollution: Distribution, Vulnerability, Monitoring (*Mackenzie Chown Complex D304*)

Chair: Matthew D. Adams, McMaster University

Zhiyong Hu, University of West Florida

Spatio-temporal variations of PM_{2.5} concentrations and their association with rapid changes in land use/cover, demographics, and economic development in major metropolitan areas in China

Mathieu Carrier, INRS; Philippe Apparicio, Anne-Marie Séguin, Dan Crouse

La distribution des polluants issus du transport routier sur l'île de Montréal: analyse de la situation pour les groupes de la population vulnérables: un cas d'équité environnementale

Matthew D. Adams, Pavlos S. Kanaroglou, McMaster University

Optimizing air pollution monitoring networks by balancing population across the concentration range

THU-08:30-6

Cartography I: Data and Applications (*Plaza Building 600F*)

Sponsorship: Canadian Cartographic Association

Chair: Christopher D. Storie, University of Winnipeg

Joni Storie, Christopher D. Storie, University of Winnipeg

Mapping Coastal Wetlands of North Carolina using L-Band SAR Images

Roger Wheate, University of Northern British Columbia

Mapping the last spike: integrating geomatics in Canada's 1:50,000 topographic map series

Cameron Wilson, Natural Resources Canada

Arctic Spatial Data Infrastructure – What, Who and How

Jeff Wielki, TERA Environmental Consultants

A foodshed for Calgary

THU-08:30-7

POSTER SESSION – Agriculture and Rural Landscapes (*Mackenzie Chown Complex C407*)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Syed M.S. Anwar, Stephanie Allison, Donovan E. Bangs, Julia Bertens, Michael D. Battenham, Scott Gardner, Dylan Hickson, Nisha Moran, Amanda O'Connor, Jennifer O'Driscoll, Lana Shapton, R. Keith Strachan, Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs
Mobile Mapping of Agricultural Crops in West Perth Township, Ontario: 180 Years After Settlement and Land Clearing Began

J. Douglas Aspinall, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs; Dylan Hickson, McMaster University; Scott N. Ertel, Zachary J. Steckley, University of Waterloo; Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
Vive le Terroir d'Ontario: Mobile mapping of the province's vineyard landscapes

Donovan E. Bangs, University of Waterloo; Stewart J. Sweeney, J. Douglas Aspinall, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
Exploring field-bounded remote sensing and agriculture: spatial discretization of Ontario farmland

Michael D. Battenham, Stewart J. Sweeney, J. Douglas Aspinall and Syed A. Anwar, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
A multi-temporal, high-resolution, digital agricultural landscape investigation of part of the Eramosa River watershed: tracking changes over six decades of farming

Scott N. Ertel, Stewart J. Sweeney, J. Douglas Aspinall and Zachary J. Steckley, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
Farming Flutes and Sands on the Grand-Speed Divide: Detailed Agricultural Landscape Mapping for 2010-2014

Tim Ferguson, Sarah Pettes, Dave Schofield, Sir Sandford Fleming College; Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs
Lindsay 360: a detailed agricultural landscape geography study of the central Kawartha Lakes watershed

Scott Gardner, Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
There once were apples on the shore: land management history on a shorefront Norfolk County farm in relation to soil erosion and runoff

Patrick Kirby, Scott Mitchell, Carleton University
Biodiversity model uncertainty analysis considering spatial and thematic uncertainty

Grant Morin, Brenda Murphy, Wilfrid Laurier University
Developing an Ontario Maple Syrup Sector Profile: A Value Chain Analysis

Emma R. Nussli, Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs

The Last Ontario Heinz Tomato Ketchup Crop: Field-by-field Mobile Mapping Results for Essex Region Tomato Fields in 2013

Neal Pilger, Pilger Geospatial Inc.

Utility of UAVs in viticulture health status and hydrologic mapping

Sarah E. Plant, Sir Sandford Fleming College; Peter A. Roberts, Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs

Agro-ecosystem enhancement on Ontario farms: Making a place for the province's pollinators

Zachary J. Steckley, Stewart J. Sweeney, J. Douglas Aspinall, Scott N. Ertel, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs

Agricultural landscapes of the Regional Municipality of Waterloo's historic Huron Road corridor: Multi-temporal, high-resolution geomatics information development

Thursday 10:00-10:30

Nutrition Break, Department of Geography

Thursday 10:30-12:00

THU-10:30-1

Living with Socio-Ecological Change: Experiences from Global South and North II (Plaza 409)

Sponsorship: Living with Climate Change Project (SSHRC)

Special Session Organizer: Prateep Kumar Nayak, University of Waterloo

Chair: Michaela Hynie, York University

Kim Reeder, St-Croix Estuary Project, Inc.; Nicole Klenk, University of Toronto Scarborough

Mobilizing local networks for climate change vulnerability assessments: Lessons learned from the St-Croix Estuary Project, New Brunswick

Million Aytenfisu Tadesse, University of Waterloo

The impact of urban drought on freshwater demand in Greater Vancouver Area, British Columbia

Mark Groulx, University of Waterloo; Christopher Lemieux, Wilfrid Laurier University; Jackie Dawson, University of Ottawa

A role for local values in climate change adaptation: Exploring opportunities for place-based adaptation in Churchill, Manitoba

Abdullah Al Mamun, Wilfrid Laurier University

Mechanisms of Enhancing Socio-Ecological Resilience in Human-Altered Wetlands through Comanagement

Discussant: Bradley May, University of Waterloo

THU-10:30-2

Chronic Disease and the Built Environment II (*Plaza 410*)

Sponsorship: Geography of Health and Healthcare Study Group

Special Session Organizers: Jennifer Dean, Michelle Vine, University of Waterloo

Chair: Tor H. Oiamo, Western University

Jennifer Dean, University of Waterloo

(Re)Emerging relationships between public health and planning professionals for improved population health

Patricia A. Collins, Queen's University

Commute Patterns for a Large Institutional Employer in an Automobile-Centric City: A Case Study of Employees at Queen's University in Kingston, Ontario

Tor H. Oiamo, Isaac N. Luginaah, Jamie Baxter, Western University

Effects of community versus individual soundscape contexts on traffic noise sensitivity

Louise Bouchard, University of Ottawa; Erik Bourdon, Independent Health Researcher

The Observatory of Minority Health: Web-Based GIS for Better Health Planning

James R. Dunn, McMaster University

Research, Policy & Politics in Healthier Built Environments Change for Ontario

THU-10:30-3

The Political-Economic Geography of Cities: Local Economic Development, Neoliberalism, and the Entrepreneurial City II (*Welch Hall 209*)

Sponsorship: Urban Geography Study Group

Special Session Organizers: Evan Cleave, Godwin Arku, University of Western Ontario

Chair: Alan Walks, University of Toronto

Rick Sadler, Evan Cleave, Godwin Arku, University of Western Ontario

A Comparison of Place Branding Strategies in Michigan and Ontario

Michael Carter, University of Toronto

The Privatization of Public Life: Private Security and New Urbanism

Dylan Simone, R. Alan Walks, University of Toronto

Predatory Finance in Canada? A View From the Marginalized

THU-10:30-4**Critical Physical Geography: Epistemology, Pedagogy and Research Practice I** (*Welch Hall 206*)

Special Session Organizers: Peter Ashmore and Belinda Dodson, University of Western Ontario

Chair: Belinda Dodson, University of Western Ontario

Marc Tadaki, University of British Columbia; Gary Brierley, Marc Dickson, Richard Le Heron, Jennifer Salmond, University of Auckland

Cultivating critical practices in physical geography

Peter Ashmore, University of Western Ontario

On the co-production of river morphology – crossing to the dark side of the river?

Matthew G. Hatvany, Université Laval

Growth and Erosion: Reflecting on the Dominant Paradigms of Salt Marsh Morphology

Jaclyn Cockburn, Paul Villard, University of Guelph

Urban Watersheds as Opportunities for Geography Students to Study Critical Physical Geography

THU-10:30-5**Critical Methodologies and Epistemologies I** (*Mackenzie Chown Complex D304*)

Chair: David Butz, Brock University

Vincent Andrisani, Simon Fraser University

Havana's Acoustic Geographies: overpopulation, housing, and the sounds of water

Sue Heffernan, Laurentian University

Visualizing the Cold War in a Northern Ontario Cree Community

Derek A. Smith, Carleton University

Mapping Indigenous Geographies: Investigating the Cultural Landscapes of the Yucatan Peninsula from a Mayan Perspective

Neera Singh, University of Toronto

Participatory Visual Ethnography to Study Affective Encounters of Socionatures

THU-10:30-6

Urban Inequalities in Canadian and US Cities – Exploring the Interconnections among Housing, Food Insecurity, and Environmental Justice I: Exploring the Links Between Housing and Food Security (*Mackenzie Chown Complex C405*)

Sponsorship: Social Justice Research Institute (SJRI), Brock University

Special Session Organizers: Sutama Ghosh, Peter Kedron, Ryerson University

Chair: Peter Kedron, Ryerson University

Valerie Tarasuk, University of Toronto

Is food insecurity a problem of unaffordable housing?

Carlos Teixeira, University of British Columbia

The Housing Experiences and Coping Strategies of Recent Immigrants in the Suburbs of Vancouver

Brian Ceh, Tony Hernandez, Ryerson University

Measuring food deserts and implications of local, independently-owned grocers on the food landscape: The case of Toronto, Ontario

Discussant: Sutama Ghosh, Ryerson University

THU-10:30-7

Cartography II: Visualization (*Plaza Building 600F*)

Sponsorship: Canadian Cartographic Association

Chair: Gerald Stark, Alberta Agriculture and Rural Development

Julia Siemer, University of Regina

Mapping the Arts Ecology of Saskatchewan

Menquiang Yang, Concordia University

Geodata From Social Media – A case study in set-jetting

Colleen Beard, Brock University

War of 1812 in Maps

Will Van Den Hoonaard, Saint Thomas University

Marie Tharp: Inveterate Discoverer of Continental Drift

THU-10:30-8

POSTER SESSION – Agriculture and Rural Landscapes (*Mackenzie Chown Complex C407*)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session THU-08:30-7 for a listing of poster titles and authors.

THUR-11:15-1

Globalization and Social Movements for Global Justice (*Lowenberger Dining Hall*)

An inter-disciplinary session sponsored by: Canadian Association for Studies in International Development (CASID); Canadian Sociological Association (CSA); Canadian Association of Geographers (CAG); Canadian Political Science Association (CPSA); Social Justice Research Institute (SJRI), Brock University

Panelists:

Dr. Manisha Desai, Professor of Women's, Gender and Sexuality Studies and Sociology, University of Connecticut;

Dr. Philip McMichael, Professor of Development Sociology, Cornell University

Dr. Janet Conway, Canada Research Chair in Social Justice, Brock University

Dr. Katharine Rankin, Professor of Geography, University of Toronto

This session addresses the phenomenon of growing interconnectivity across borders of nation states, but also across the North-South divide in global politics, and across linguistic, ethno-cultural, and class difference and inequality in social movements for global justice operating in different places and at various scales. Contemporary globalization has ushered in extraordinary possibilities for exchange and collaboration across historic divides while also creating new shared risks and intensifying inequality and conflict. The panel will address this contradictory global condition of borders without boundaries from the point of view of diverse social justice movements, rooted in particular contexts and concerns but actively building intelligibility and alliances across distance and difference.

Thursday 12:00-13:30 Lunch

THU-13:30-1

Community-Based Assessments: Understanding Adaptation in Coastal Communities (Plaza 409)

Special Session Organizer: Maliha Majeed, University of Waterloo

Chair: Donovan Campbell, CARIBSAVE Partnership

Amanda Palmer, University of Waterloo

Understanding Climate Change Vulnerability in the Context of Broader Socio-Economic and Environmental Change: Challenges and Opportunities for South-West Tobago's Artisanal Fishery

Shandel Brown, University of Waterloo

Sense of Place and Adaptive Capacity: Preparedness of Nova Scotian Fishing Communities to Deal with the Impacts of Climate Change

Saveena Patara, University of Waterloo

Examining Water Security in Nova Scotia's Rural Coastal Communities and the Role of Governance in Shaping Climate Change Adaptation Strategies

Maliha Majeed, University of Waterloo

Examining Elements of the Feedback Stages of Community Based Vulnerability Assessment: A Case Study of Negril, Jamaica

THU-13:30-2

Resources Development (Plaza 410)

Chair: Mike Ripmeester, Brock University

Isabella Sulpizio, University of Guelph

Representations of Consumer Demand in the North American Sustainable Seafood Movement

Karen Heisler, Sean Markey, Simon Fraser University

Navigating Jurisdiction: Local and Regional Strategies to Access Economic Benefits from Mineral Development

Konstantinos Karanasios, Paul Parker, University of Waterloo

A resource based view of First Nation economic development

Leslea Lotimer, Carolyn Eyles, McMaster University

The Nature of Till and Drumlins in Peterborough: Implications for Developing a Community Groundwater Supply

THU-13:30-3

Geographies of Economies (*Welch Hall 209*)

Chair: Jeff Boggs, Brock University

Lazar Ilic, Northeastern Illinois University

Analyzing Spatial Change in Ottawa through Income Polarization

Claire Major, York University

"TFWs offer stability" and "This is all for him": Experiences of labour outside the primary industry needs of Fort McMurray, Alberta

Ian MacLachlan, University of Lethbridge

Kwinana Industrial Area: Measuring Industrial Inertia, Agglomeration Economies, and Industrial Symbiosis on Western Australia's Cockburn Sound

Jeff Boggs, Stephanie Murray, Brock University

Benchmarking St. Catharines' position within Canada's interactive digital media industry: a case study

THU-13:30-4

Critical Physical Geography: Epistemology, Pedagogy and Research Practice II (*Welch Hall 206*)

Special Session Organizers: Peter Ashmore and Belinda Dodson, University of Western Ontario

Chair and Lead Discussant: Belinda Dodson, University of Western Ontario

Structured Panel Discussion

Discussants:

Marc Tadaki, University of British Columbia

Peter Ashmore, University of Western Ontario

Matthew G. Hatvany, Université Laval

Jaclyn Cockburn, University of Guelph

Paul Villard, University of Guelph

THU-13:30-5

Critical Methodologies and Epistemologies II (Mackenzie Chown Complex D304)

Chair: David Butz, Brock University

Sarah Koopman, Wilfrid Laurier University

Mona, mona, mona! Whiteness, tropicality, and the international peacebuilder in Colombia

May Chazan, Trent University

Desire, Resistance, and Solidarity across Borders: Older Women's Roles in Transnational Activism

Tamir Arviv, Mary-Kay Bachour, Madelaine Cahuas, Lauren Kepkiewicz, Erene Stergiopoulos, Minelle

Mahtani, University of Toronto

Reflexivity Still Isn't Enough: Examining the Hijacking of Race in the Autobiographical Turn in Geography

Aaron Franks, Jeff Masuda, University of Manitoba

Boundless creativity and a strategically 'bounded' community: exploring rights to (and in) place in Vancouver's Downtown Eastside using arts-based methods

THU-13:30-6

Urban Inequalities in Canadian and US Cities – Exploring the Interconnections among Housing, Food Insecurity, and Environmental Justice II: 'Mapping' Links Between Housing and Environmental Justice (Mackenzie Chown Complex C405)

Special Session Organizers: Sutama Ghosh, Peter Kedron, Ryerson University

Chair: Sutama Ghosh, Ryerson University

Victoria Fast, Ryerson University

Building collaboration into the Food Security Equation: Participatory Mapping of Local Food Systems using Volunteered Geographic Information (VGI)

Heather Hart, Peter Kedron, Ryerson University

Understanding the statistical bias of geographic scale in environmental inequity research

Cosmin Marmureanu, Ryerson University

Poverty, Housing, and Urban Forestry: Interrogating Intertwined Social and Environmental Justice in Toronto's Inner Suburbs

Discussant: Peter Kedron, Ryerson University

THU-13:30-7**POSTER SESSION – Agriculture and Rural Landscapes** (*Mackenzie Chown Complex C407*)

Posters will be displayed all day. Authors will be with their posters during morning and afternoon breaks for questions and consultation.

Please see Session THU-08:30-7 for a listing of poster titles and authors.

Thursday 15:00-17:00**THU-15:00-1****CAG Annual General Meeting (AGM) and Nutrition Break** (*South Block, Room 202*)

CAG 2014 Friday May 30

Friday 08:30-10:00

FRI-08:30-1

Climate Change and Modeling (*Mackenzie Chown Complex C407*)

Special Session Organizer: Tanzina Mohsin, University of Toronto Scarborough

Chair: Tanzina Mohsin, University of Toronto Scarborough

Peter Ng, University of Toronto; Adam Fenech, University of Prince Edward Island; William A. Gough, University of Toronto

A Validation of the Most Recent Global Climate Models of the IPCC AR5 with Canadian Observational Data

Athena Masson, University of Toronto Scarborough

Analysis of the Extratropical Transitions in the Atlantic Canada under a Changing Climate Condition

Jerry Y. Jien, William A. Gough, University of Toronto Scarborough

The Influence of El Niño-Southern Oscillation on Tropical Cyclone Activity in the Eastern North Pacific Basin

Micah J. Hewer, University of Toronto

Weather Sensitivity and Climate Change Impacts for Park Visitation in Ontario

FRI-08:30-2

Dendrochronology: Applications in Ecology, Climatology and the Environment I (*Plaza 409*)

Special Session Organizers: Sarah Quann, Carleton University; Michael Pisaric, Brock University

Chair: Sarah Quann, Carleton University

Dan Smith, Bethany Coulthard, Jess Craig, Bryan Mood, Sonya Larocque, University of Victoria

Dendroglaciological exposés in the Mt Waddington area, British Columbia Coast Mountains

Theresa Dinh, Ze'ev Gedalof, University of Guelph; Lori Daniels, University of British Columbia

Wildfire and Climate Variability in Jasper National Park, Alberta, Canada

V. Harrison, D.J. Sauchyn, University of Regina; M.A. Vetter, Luther University

*Methodological approach for dendrochronological analysis of *Juniperus communis* in Saskatchewan prairie*

Heather A. Haines, Jon Olley, Griffith University; Jonathan Palmer, University of New South Wales; Jacky Croke, Nina Saxton, Griffith University

Putting the 2011 “Big Flood” Into Context: Using tree rings to understand the patterns of floods and droughts in Southeast Queensland, Australia

FRI-08:30-3

Methodologies and Reflexive Knowledge Production in Tourism Geography I (Plaza 410)

Sponsorship: Tourism and Recreation Study Group

Special Session Organizer: Susan Dupej, York University

Chair: Susan Dupej, York University

Sanjay Nepal, University of Waterloo

Tourism and modernity in Mt. Everest Region: Reflecting on research participants’ reflections

Angela Brayham, University of Waterloo

Meet me on the Neutral Ground: When your party is OUR culture

Carrie S.S Zhou, University of Waterloo

Transformation Tourism – Using backpackers in Tibet as an example

Sayedali Mostolizadeh, Sanjay Nepal, University of Waterloo

Identity in a Suitcase: Transformations in identity through physical mobility

FRI-08:30-4

Environmental Change I (Taro Hall 207)

Chair: Dan Shrubsole, The University of Western Ontario

Zainab Moghal, University of Waterloo

Climate Change Vulnerability and Adaptive Capacity of Tourism Destination Communities: Comparing Indicator and Community-Based Approaches

Norm Catto, Memorial University of Newfoundland

Impacts of Climate and Weather Events on Coastal Tourism-related Infrastructure, Avalon Peninsula, Newfoundland

Yue Dou, Peter Deadman, University of Waterloo; Oriana Almeida, Sergio Rivero, Universidade Federal do Pará

Government cash transfer programs and their impact on households’ activities in the Brazilian Amazon

Dan Shrubsole, The University of Western Ontario

The Evolution of Flood Management Strategies in Canada

FRI-08:30-5

Living in the City I (*Taro Hall 260*)

Chair: Valerie Preston, York University

Heather Wilson, Joseph Leydon, University of Toronto Mississauga
Assessing the Liveability of Selected Mississauga Neighbourhoods

Janine Rose, York University
Identity, Place and Ethnic Associations: Jamaican Immigrants in the GTA

Valerie Preston, York University; Brian K. Ray, Jing Feng, University of Ottawa
Placing the Second Generation: A Case Study of Toronto

Saulius Svirplys, University of Ottawa
Creative Suburbs and Fifty Feet of Floor Plans: Using One to Understand the Other

FRI-8:30-6

Geographic Perspectives on Asian Migration to Canada I (*Mackenzie Chown Complex C405*)

Special Session Organizers: Reiko Obokata, Jing Feng, University of Ottawa

Chair: Reiko Obokata, University of Ottawa

Reiko Obokata, University of Ottawa
Environmental Factors and Transnational Migration: A Case Study of Filipino Newcomers in Ottawa, ON

Hyejin Yoon, Department of Geography, University of Wisconsin-Milwaukee
How has globalization affected migration? - Pull factors and push factors for South Korean migration to Winnipeg, Canada

Discussant: Philip Kelly, York University

Friday 10:00-10:30

Nutrition Break, Department of Geography

FRI-10:30-1

Northern Canada and Climate Change (*Mackenzie Chown Complex C407*)

Session Organizer: William Gough, University of Toronto Scarborough

Chair: William Gough, University of Toronto Scarborough

Andrew C.W. Leung, William A. Gough, Tanzina Mohsin, University of Toronto Scarborough

Hudson Bay: A source for moist polar air mass during ice-free periods

Yukari Hori, University of Toronto Scarborough; Benita Tam, University of Waterloo; Leonard J.S. Tsuji, William A. Gough, University of Toronto Scarborough

Trends in the Meteorological Conditions Associated with the Duration of Winter Road Seasons in the Western James Bay Region of Northern Ontario

Andrew Tam, William A. Gough, Changwei Xie, University of Toronto Scarborough

An Assessment of Potential Permafrost along a South-to-North Transect in Canada under Projected Climate Warming Scenarios from 2011 to 2100

William A. Gough, Nicole Spiegelhaar, Yukari Hori, Leonard Tsuji, University of Toronto Scarborough

Climatic potential for agriculture in Ontario's Far North

FRI-10:30-2

Dendrochronology: Applications in Ecology, Climatology and the Environment II (*Plaza 409*)

Special Session Organizers: Sarah Quann, Carleton University; Michael Pisaric, Brock University

Chair: Michael Pisaric, Brock University

Katherine Dearborn, Ryan Danby, Queen's University

*Landscape-scale variability in white spruce (*Picea glauca*) growth across alpine forest-tundra ecotones in southwest Yukon*

David Morimoto, Brian Luckman, Western University

20th Century Changes in Climate-Growth Responses of White Spruce in the Yukon Territory, Canada

Sarah Quann, Carleton University; Trevor Porter, University of Alberta; Dan Smith, University of Victoria; Michael Pisaric, Brock University

Assessing the potential of maximum density in developing divergence-free white spruce chronologies, Northwest Territories, Canada

Pascale Ropars, Université Laval; Esther Lévesque, UQTR; Stéphane Boudreau, Université Laval

*Climatic drivers of *Betula glandulosa* growth in subarctic Québec, Canada*

FRI-10:30-3**Methodologies and Reflexive Knowledge Production in Tourism Geography II (Plaza 410)**

Sponsorship: Tourism and Recreation Study Group

Special Session Organizers: Susan Dupej, York University

Chair: Susan Dupej, York University

Meghan Muldoon, Mahsa Rouzrokh, Pooneh Torabian, Heather Mair, University of Waterloo
Understandings of power and embodiment in the tourism experience: A memory-work project

Steven Tufts, York University

Working with unions as 'elite voice': labour geography, tourism research and methodological considerations

Susan Dupej, York University

Coffee and Conversation at the Kitchen Table: Diffusing the "Power Laden Nature" on Interviewing

FRI-10:30-4**Environmental Change II (Taro Hall 207)**

Chair: Erin Joakim, University of Waterloo

Catherine Phillips, University of Queensland

Managing Insects in Australia: biosecurity, boundaries, and belonging

Robyn Kenny, University of Guelph

Nature, development, consumption: Representations in conservation cause-related marketing campaigns

Erin Joakim, University of Waterloo; Robert S. White, University of Cambridge

Exploring the Impact of Religious Beliefs, Leadership and Networks on Response and Recovery of Disaster-Affected Populations: A Case Study from Indonesia

Oscar Kuffour, Brock University

Disaster risk reduction in the human security perspective: the case of urban Ghana

FRI-10:30-5**Living in the City II (Taro Hall 260)**

Chair: Jeff May, University of Toronto Mississauga

Jeff May, University of Toronto Mississauga

'Gone, leave, go, move, vanish': Race, Public Space and (In)Visibilities

Joel Outtes, Thiago Mauer, Universidade Federal do Rio Grande do Sul

From Garden-cities to the Preservation of Historical Centers: The Geography of the International Federation for Housing and Planning (1913-2000)

Yolande Pottie-Sherman, University of British Columbia

"It's like we are from Mars:" The labour market and pre-employment program experiences of immigrant young adults in Metro Vancouver

Paul Gris , University of Toronto

The (d)evolution of social housing in Canada: a comparative study of municipal and provincial governance in Toronto, ON and Vancouver, BC

FRI-10:30-6

Geographic Perspectives on Asian Migration to Canada II (Mackenzie Chown Complex C405)

Special Session Organizers: Reiko Obokata, Jing Feng, University of Ottawa

Chair: Reiko Obokata, University of Ottawa

Brian Ray, University of Ottawa

The social geography of Chinese immigrants in Ottawa-Gatineau: challenging a "self-evident" geography

Jing Feng, University of Ottawa

Geographic Effects of Home - Work Locations on Immigrants' Labour Market Outcomes: A case study of Chinese high-tech workers in Ottawa

Philip Kelly, York University

Intergenerational social mobility and Filipino youth outcomes in Canada

Qiqi Wang, University of Alberta

The Aging Experience of Elderly Chinese Immigrants in Edmonton

Friday 12:00-13:30 Lunch

FRI-12:00-1

Canada's Asia Strategy: the Regional Dimensions (Mackenzie Chown Complex C405)

Sponsorship: Geographies of Asia Study Group, Economic Geography Study Group

Special Session Organizers: David W. Edgington, University of British Columbia; Tim Reiffenstein, Mt. Allison University.

Chair: David W. Edgington, University of British Columbia

A lunchtime presentation by Kasi Rao, Vice President and Director Asia Pacific Foundation of Canada (Toronto Office), organized by the Geographies of Asia/Economic Geography Study Groups.

As Asia continues to rise in terms of global prominence, experience, expertise and education about the region is of critical importance to Canadians. But how is Asia viewed in the different provinces of Canada? In this lunchtime talk, Mr. Kasi Rao, Director of the Asia Pacific Foundation of Canada (Toronto Office)

examines the regional dimension of a national Asia Strategy within Canada, focusing on economic as well as people-to-people links with Asian countries. He will discuss Ontario's particular challenges and opportunities in forging Asia-Pacific relations, and draw on national opinion poll research conducted by the Foundation showing how Canadian attitudes towards Asia vary widely across the country.

Friday 13:30-15:00

FRI-13:30-1

Weather, Climate and Society (Mackenzie Chown Complex C407)

Special Session Organizer: Amber Silver, University of Waterloo

Chair: Amber Silver, University of Waterloo

Lindsay Matthews, Jean Andrey, Derrick Hambly, University of Waterloo; Brian Mills, Environment Canada
Development of a Flexible Winter Severity Index for Canadian Road Authorities

Sara Harrison, Amber Silver, and Brent Doberstein, University of Waterloo
Post-storm damage survey of tornadic events in Canada: Implications for disaster risk reduction and policy

Amel Badri, Jean Andrey, University of Waterloo
Canada's Transportation Sectors' Response to Climate Change

Sadia Afrin, Jean Andrey, University of Waterloo
Weather-related crash-risk analysis for the Southern Ontario

FRI-13:30-2

Dendrochronology: Applications in Ecology, Climatology and the Environment III (Plaza 409)

Special Session Organizers: Sarah Quann, Carleton University; Michael Pisaric, Brock University

Chair: Sarah Quann, Carleton University

Bethany Coulthard, Dan J. Smith, University of Victoria
Reconstructions of late-summer streamflow and low-flows for three drought-susceptible, unglaciated basins in south coastal BC

Emma Bocking, Jonathan Price, University of Waterloo; David Cooper, Colorado State University
Analyzing the growth response of black spruce to road construction in a boreal fen using tree-ring analysis

Laura Benakoun, Ze'ev Gedalof, University of Guelph
Evaluating the relationship between visual signs of tree health and actual annual growth: a study using Ontario's sugar maple populations

FRI-13:30-3**Researching Environmental Health in Canada – Is That the Death Knell I Hear or the Sound of Opportunity Knocking? I: The Death Knell Rings! (*Plaza 410*)**

Sponsorship: Geography of Health and Health Care Study Group

Special Session Organizers: Sara Edge, University of Waterloo; Jeff Masuda, University of Manitoba

Moderator: Jeff Masuda, University of Manitoba

Panelists:

Sarah Wakefield

Isac Luginaah

Theresa Garvin

Sara Edge

FRI-13:30-4**Environmental Change III (*Taro Hall 207*)**

Chair: Jeff Boggs, Brock University

Jude Herijadi Kurniawan, University of Waterloo

Weather Normalization of Household Energy Consumption in Ontario

Jennifer Taylor, University of Toronto

Toward a spatial understanding of Ontario's sustainable energy transition

Cristian Ches, University of Toronto

The role of cities in the Canadian climate change policy

FRI-13:30-5**Assessing the Impact of Emerging Tourism Initiatives (*Taro Hall 260*)**

Sponsorship: Tourism and Recreation Study Group

Special Session Organizer: Kim Lemky, University of New Brunswick

Chair: Kim Lemky, University of New Brunswick

Derrek Eberts, Brandon University

Impacts of New Tourism in Rural and Remote Communities in Jalisco State, Mexico

Austin Uzama, Tatiana International Research Co. Ltd.

Pro Poor Tourism & Urban Development; A walk through Vancouver's Downtown East Side – A Marketing Concept

Vincent Kusi-Kyei, Vancouver Island University

Exploring the role of community engagement in protected area management, a case study of the Gulf Islands National Park Reserve, BC. Canada

Kim Lemky, University of New Brunswick

Protected and Designated Area Tourism in the Bay of Fundy

FRI-13:30-6

Geographies of Asia (Mackenzie Chown Complex C405)

Sponsorship: Geographies of Asia Study Group

Special Session Organizer: David W. Edgington

Chair: David W. Edgington, University of British Columbia

David W. Edgington, University of British Columbia

Local Environmental Planning in a Japanese Industrial Cluster: the Case of Higashi Osaka

Tom Waldichuk, Thompson Rivers University

Reflections on Geography of Japan Field Trips: The Use of Field Journals and the Move to More Student-Centred Learning

Jean Michel Montsion, York University

Odours of resistance? Ethnic politics and Singapore's 'cook curry' movement

Garry Fehr, University of the Fraser Valley

Understanding Gendered Food Security in Peri-Urban Households of Punjab

Friday 15:00-15:30

Nutrition Break, Department of Geography

Friday 15:30-17:00

FRI-15:30-1

Food: Sovereignty and Security (Plaza 409)

Chair: Marylynn Steckley, Western University

Marylynn Steckley, Western University; Yasmine Shamsie, Wilfrid Laurier University

Manufacturing Corporate Landscapes: The case of agrarian displacement and food (in)security in Haiti

Vincent Zubedaar Kuuire, Godwin Arku, Western University; Emmanuel Sowatey, Aluizah Abdul-Yakeen Amasaba
Helping to feed people or a nuisance to a modernizing city? — Policy environment and the reality of urban agriculture in Accra Ghana

Michelle Daigle, University of Washington
Mino-bimaadiziwin: Re-placing food sovereignty for Anishinaabe people

Bryan Dale, University of Toronto
The Challenge of Food Sovereignty in Canada: Towards Counter-hegemony, Complementarity and Climate Justice

FRI-15:30-2

Thinking About Learning (Mackenzie Chown Complex C407)

Chair: Dragos Simandan, Brock University

Lisa Quinn, University of Manitoba; Joanne M. Moyer, University of Toronto; A. John Sinclair, University of Manitoba
Individual Learning and Action for Sustainability: Insights from Kenya and Canada

Rajiv Lalla, Ryerson University
Proximity to LGBT Social Resources as a proxy for defining Queer Communities in Ontario: A GIS Perspective

Connor Dingle, Brock University
Personal Technologies and Space in the Learning Commons

Dragos Simandan, Brock University
The breathing space between cultures: notes on wisdom as a visceral kind of learning

FRI-15:30-3

Researching Environmental Health in Canada – Is That the Death Knell I Hear or the Sound of Opportunity Knocking? II: Opportunity Knocks! (Plaza 410)

Sponsorship: Geography of Health and Health Care Study Group

Special Session Organizers: Sara Edge, University of Waterloo; Jeff Masuda, University of Manitoba

Moderator: Sara Edge, University of Waterloo

Panelists:

Jennifer Dean

Susan Elliott

Heather Castleden

Jeff Masuda

FRI-15:30-4

Three Cheers for (Neo)Liberalism: How Academic Geographers' Anti-Capitalist Mentality Obscures Our Understanding of the World (*Mackenzie Chown Complex C405*)

Special Session Organizers: Pierre Desrochers, University of Toronto; Victoria L. Henderson, Queen's University

Chair: Pierre Desrochers, University of Toronto

Victoria L. Henderson, Queen's University

I Set My Intellectual GPS to (Neo)Liberalism – You Won't Believe What Happened Next: Negotiating the Epistemic-Affective Boundaries of Academic Geography

Pierre Desrochers, University of Toronto

The (Classical) Liberal Case against Locavorism and Food Sovereignty: A (Re)Statement of Some Inconvenient Truths

Jing Wang, Lanzhou University, University of Toronto; Pierre Desrochers, University of Toronto

Two Views on the Profit Motive and Sustainable Development, and some Geographical Implications

Abstracts

Optimizing air pollution monitoring networks by balancing population across the concentration range

Matthew D. Adams, School of Geography and Earth Science, McMaster University
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Pavlos S. Kanaroglou, School of Geography and Earth Science, McMaster University (pavlos@mcmaster.ca)

An air pollution monitor location optimization approach is presented. This approach locates monitors to be appropriate for identifying air pollution health effects, by achieving a balanced population coverage across the spectrum of air pollution concentrations. To demonstrate the effectiveness of the approach, we define pseudo-study areas with specific air pollution characteristics. The optimization approach supplements existing monitoring networks with additional stations. Three different configurations of initial stations were tested, which included (1) monitors located near the pollution source(s), (2) monitors located far from the pollution source(s), and (3) monitors randomly distributed. Two pseudo-populations were generated including one population with random locations and another with people located in clusters.

The optimization approach first identifies and separates the air pollution spectrum (range of concentrations) into discrete bins. The optimal solution has an equal number of people assigned to each bin. The population for each bin is calculated by summing the weighted population for each monitor. The weighted population for each bin is determined using an inversely proportional weighting approach. We vary the number of additional stations to be. The results demonstrate the optimization approach leads to a monitoring network with a balanced coverage of the population along the entire air pollution spectrum.

Session: THU-08:30-5

Weather-related crash-risk analysis for the Southern Ontario

Sadia Afrin, Department of Geography and Environmental Management, University of Waterloo
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Jean Andrey, Department of Geography and Environmental Management, University of Waterloo

Inclement weather conditions in the winter elevate crash counts, resulting from daunting driving experiences for many Southern Ontarians. A large proportion of days with the highest crash counts coincide winter storms; and approximately one-third of winter crashes and casualties occur on these days. Instead of the earlier studies' emphasis on the event-based or the seasonal crash-risk analysis, the current study focuses on a daily crash-risk analysis model to advance our understanding of high-risk crash conditions and to demonstrate the influence of weather conditions on crash counts. The study developed a logistic regression model, considering traffic exposure, daily weather conditions, and precipitation timing. The study used both collision and weather data for the period 2003-2009 in four study areas: Toronto, London, and each of their surrounding areas. The results demonstrated that low temperatures, heavy snowfalls, high wind-speeds, high traffic volumes, seasonal timing, and precipitation timing significantly influenced the

odds of a high-crash day. The presentation ends with recommendations about measures to reduce exposure to high-risk situations, and some safety-interventions (in the pre-crash, the during-crash, and the post-crash periods) to promote safe winter travel in the Southern Ontario.

Session: FRI-13:30-1

The North-South Migration of Females in Ghana and its Implication on Their Welfare: A Case Study of Female Head Porters in the Central Business District of Kumasi

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A recent trend in internal migration in Ghana is the movement of females from northern countryside to southern cities of the country. To survive, girls work as head porters when they reach the cities. Away from support from their home communities and families, most of them end up living and working under very deprived conditions. This study examines the welfare of the female head porters who have migrated to the Central Business District of Kumasi. Ninety (90) female head porters from three communities namely Adum, Kejetia and Central Market were interviewed. The study revealed that the main reason female head porters migrate to the Central Business District is pecuniary. However, their aspirations and expectations of getting a good job and enough money are hardly realized. Worse yet, female head porter's face housing challenges and health-related risk in the Central Business District of Kumasi. In the short run, an introduction of livelihood programs for female migrants at the destination regions will improve their living conditions. However, developmental projects and female education in the northern parts of Ghana will in the long run abate the increasing North-South movement of female porters.

Session: WED-08:30-8 POSTER

Exploring the Sense of Place and Mental Wellness of Minority Immigrants: A Comparative Case Study of Ghanaians and Somalis in Hamilton, Ontario

Boadi Agyekum

While there has been increasing interests in migration and health, including mental health, similar attention has not been given to the relationship between immigrants' sense of place and mental wellness, particularly, the visible minorities in Canada. This research aims to contribute to an expanding body of research within Health Geography that focuses on the way sense of place shapes mental wellness. The meanings people attach to places and their relationships with mental wellness have culturally specific dimensions, nevertheless, this relationship has received little attention especially with respect to African immigrants (including refugees). Using a sequential mixed-method approach, this research seeks to explore and expand the concept of sense of place and its implications on mental wellness of Ghanaian and Somali immigrants in Hamilton, Ontario. In particular, the research is intended to explore the culturally specific dimensions in their everyday practices – focusing on the 'church' and the 'mosque' of Ghanaians and Somalis respectively. Specifically, the research uses the therapeutic landscape concept to explore how the 'church' and the 'mosque' offer opportunity structures, such as the social, economic, political, cultural and

spiritual through which individual's sense of place is nurtured. Descriptive and logistic regression analyses are employed to examine sense of place in relation to mental wellness. Sense of place will be measured via a validated 16-item scale (Williams and Kitchen, 2012). In addition, mental wellness will be examined using a standard survey employed by the Department of Health and Ageing, Canberra, 2003.

Session: TUE-13:30-6

Industrial waterfront redevelopment and the role of historical distinctiveness

Annika Airas, Urban Studies Program, Simon Fraser University, University of Helsinki

Peter V. Hall, Urban Studies Program, Simon Fraser University

Formerly industrial city waterfronts continue to be redeveloped worldwide. A common objective in such projects, expressed by multiple stakeholders, is a desire for historical distinctiveness while serving today's needs. This research examines waterfront redevelopment in a suburban context, namely the Queensborough neighborhood of New Westminster, British Columbia and makes comparisons to similar waterfront redevelopments elsewhere. It focuses on the role of historical distinctiveness in waterfront redevelopment processes by examining the current built environment and individual buildings, analyzing changes in land use and public amenities and examining the current building stock's relationship to waterfront history. Specific attention is paid to whether the stated planning aim of maintaining historical distinctiveness is reflected in the resulting built environment. Using a comparative iconographical framework, the study reveals that the objective of preserving historical distinctiveness may not be achieved. For example, the near-total demolition of the historic industrial buildings and sites has contributed to the loss of distinctive features related to the waterfront's usage and architecture. New industrial and commercial activities contribute to the transformation of the sense of place. The rapid redevelopment of old industrial waterfronts into residential areas has also led to the adoption of building styles and forms similar to those seen in other locations. This not only impedes the aim of distinctiveness, but also may affect the social and physical character of the entire city.

Session: WED-15:30-6

A discourse analysis of urban resilience and adaptation to storm surges: the example of Eko Atlantic City Project in Nigeria

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Gordon McBean, Department of Geography, Western University (gmcbear@uwo.ca)

While there is a strong consensus about the detrimental impacts of storm surges and potential sea level rise on the coast of Lagos, Nigeria, a clear lack of agreement exists on the preferred adaptation response. The Eko Atlantic City (EAC) project, an on-going modern city construction on the Atlantic Ocean, is presented by its promoters as a permanent solution to ocean intrusion into Victoria Island and a model of climate change adaptation, environmental sustainability and economic growth, suggesting that *'all good things go together'* even in a changing climate. Focusing on the representation of the EAC project in the Nigerian media, we explore the discursive processes and strategies employed by elite groups and institutions to legitimize, contest, and re-position the project as a positive-sum adaptation. We draw on a critical discourse

analysis of newspaper articles (n=100), in-depth interviews (n=20) and focus group discussions (n=2) to unravel the role of power, resources, and scientific knowledge in shaping adaptation and policy response to coastal hazards. Informed by a refined approach to resilience theory, this paper revealed that while the modern city on the sea might hold promises of short-term storm mitigation, in the long run, it will re-shape the physical, economic, political and socio-cultural landscape of Lagos with particular implications for marginalised communities and future generations.

Session: TUE-15:30-1

Improving local community involvement in tourism, the case of Jerash: The proposed World Heritage Site in Jordan

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The Arab Spring has had a significant impact on economic activities in Middle East Region. The three-year-old civil war has displaced millions of Syrians, more than 1.2 million refugees are living in Jordan. The difficult financial and economic situation facing Jordan's economy calls for a renewed interest that focuses on how best to provide social and economic initiatives and opportunities for local communities in Jordan. This research focuses on local communities' involvement in tourism development, with a focus on Jerash, a proposed World Heritage Site. To assess and improve the level of local community involvement and participation in tourism development in Jordan, this research uses a mixed method approach to 1) document the type and level of local residents' involvement (employment and ownership) in the tourism industry; 2) examine local residents' response to government-sponsored tourism development plans and projects; and 3) to assess if local residents are able to influence local level tourism planning processes. In order to have significant impacts on development, tourism initiatives need to (re)strategize to adequately involve local communities in the tourism development process.

Session: WED-08:30-6

Towards a historical geography of Toronto's smog

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The Toronto region experiences smog conditions quite often, mainly in the warmer months of the year. The Ontario Ministry of Environment (MOE) likes to tell us that things are getting better over time. Historical research shows that the region has been experiencing smog for at least 120 years. Over the years smog has changed in chemical character, in geography and seasonality. Before 1970 the city mainly experienced sulphurous smog derived from coal smoke, but from the 1940s onwards we can identify photochemical smog derived from petroleum. For a period both kinds of smog occurred. Smog was, and remains a major factor in environmental illness, and continues to kill people each year. Although effective instrumental monitoring of photochemical smog only began in 1988, Toronto's smog has a long, complex and significant history.

Session: WED-15:30-3

A Force from the Beginning: Wellbeing in the Affective Intensities of Pop Music

Gavin J. Andrews, Department of Health, Aging and Society, McMaster University (andrews@mcmaster.ca)

The relationship between music, health and wellbeing is an emerging interest of research that crosscuts health and social science disciplines. Although a range of subjects have been investigated to date, few studies have attempted to understand what it might be in the composition and 'taking place' of popular music that momentarily lifts people and helps them attain a sense of wellbeing. This paper proposes some basic ideas in this area. Specifically it uses Daft Punk's Get Lucky to explore how these intimacies might be facilitated from an artistic and production standpoint. The analysis positions features the song and its performance scenarios within processes related to Deleuzian ideas on affect. It is suggested that the physical characteristics of musical sound might contribute an important auditory ingredient to affective intensities; mobile energies emerging from force encounters within assemblages of humans and non-human things. These intensities might be experienced as 'feeling states'; somatically registered vibes and passions that build and recede through a song, environment and listener alike. Through the involvement of thoughts and the infusion of lyrical and other meanings, these feeling states might then slide into attitudes and emotions which are cognitively known and relational to the self and established social categories. 'Get Lucky', as with much popular music, feeds these stages that rapidly transition and re-circulate.

Session: TUE-13:30-6

Havana's Acoustic Geographies: overpopulation, housing, and the sounds of water

Vincent Andrisani, School of Communication, Simon Fraser University (vincent.andrisani@sfu.ca)

The economic crisis initiated by the collapse of Soviet communism brought to Havana vast numbers of residents from across the island seeking access to hard currency. Not only did this mass influx populate the city's living spaces beyond capacity, but in so doing, it accelerated the physical deterioration of the cityscape at large. Since then, rehabilitation efforts undertaken by government have been both meagre and inconsequential, prompting scholars to equate the growing volatility of Havana's built environment with the spatial and political disarticulation of the local population. The study of sound however offers a different perspective, and it does so by revealing new and uncharted encounters with the city's cultural geography. In this paper, I problematize an everyday, rather ordinary occurrence, by following the sound of water as it travels through a domestic space in the municipality of El Vedado. Here, the intermittent sounds of malfunctioning infrastructure mobilize a vibrant, participatory neighbourhood community that aims to circumvent the system's errant streams and flows. By listening to—and through—the physical limits of one's home, I argue that residents confront, rather than simply reflect, the social, spatial, and the political logic that prevails in present-day Havana.

Session: THU-10:30-5

Analysis of Collaborative Processes for Governance to Climate Change in the Ucayali Region, Peru

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At the regional level in Peru there is a Technical Group of Climate Change in each region, these groups have responsibilities to design, implement and evaluate policies in relation to climate change given opportunities, problems and socio-environmental conflicts. Governance is described by taking into account the interdependencies of public, private and semi-private actors with reference to the self-generation of networks for decision-making. The objective of this study is characterizing the processes of collaboration between organizational actors of the Regional Technical Group on Climate Change in the Ucayali region. The methodology consists of semi-structured interviews and review of secondary information. Our analysis focuses on five dimensions of collaborative processes: Government, Administration, Organizational Autonomy, Mutuality and Norms of Trust and Reciprocity. The results emphasize that social capital introduced for environmental management at the level of the Ucayali region could be much more efficient and effective if this work is taken into account. The dimensions of Government and Administration proved to be more influential in comparison to the other dimensions. It is important to encourage the other "bridging organizations" that are part of the Technical Group of Climate Change of Ucayali and to identify other organizations involved in environmental management areas.

Session: TUE-10:30-1

Mobile Mapping of Agricultural Crops in West Perth Township, Ontario: 180 Years After Settlement and Land Clearing Began

Syed M.S. Anwar, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Stephanie Allison, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Donovan E. Bangs, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

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Michael D. Battenham, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Scott Gardner, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Dylan Hickson, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Nisha Moran, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Amanda O'Connor, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Jennifer O'Driscoll, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Lana Shapton, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

R. Keith Strachan, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

The Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs (OMAF/MRA) is developing and testing mobile mapping protocols with GPS-enabled rugged tablet computers to facilitate agricultural landscape observation data collection in the province. A high-resolution, digital polygon framework, that partitions all agricultural and rural landscape features, underpins this Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) mapping effort. Its original nucleus was digitized in 2003 from Spring

2000 orthoimagery for Perth County. The agricultural fields of the Municipality of West Perth Township - a very productive farming area of about 580 km² in southwestern Ontario - were delineated. A field-by-field mobile mapping campaign, covering all of West Perth, was conducted by a student team in Summer 2013. The pathway towards this township's modern farm landscape began during 1832-1835 land surveys of the former Logan, Hibbert, and Fullarton townships for the Canada Company. It has been over 180 years since land clearing began for agriculture in West Perth Township. Corn, soybeans, varieties of edible beans, Winter wheat and forages are now common throughout its farm landscape. A detailed map of West Perth's farmland, derived from 2013 cropping season mobile mapping observations, is presented.

Session: THU-8:30-7 POSTER

An evaluation of the predictive performance of Random Forest model for residual patch existence in the Red Lake Fire, Ontario

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Tarmo K. Remmel, Department of Geography, York University

Wildfires are frequent boreal forest disturbances, and particularly in Ontario, emulating them with forest harvesting has emerged as a legislated forest management goal. Wildfires typically contain a considerable number of unburned residual patches and we present means for learning their characteristics to improve the subsequent emulation of wildfires. We present a method for developing probability maps for the existence of residual vegetation within burned landscapes. Using the Random Forest ensemble method, we develop a set of rules that explain residual patch occurrence based on selected predictor variables. We then implement the rules (akin to inverting the learning algorithm) to build maps of likely residual stand locations. Initially, satellite derived data from eleven fire events (from the same ecoregion) are partitioned into training and validation using a hold-out validation approach. The performance of the model is assessed in relation to two scenarios: 1) given the 11 fire events, the data records from an individual fire event is hold-out for testing while the records from the remaining 10 fire events are used for constructing and calibrating the model, and 2) using independent data (a fire not used in the training of the tool) as validation data, while records from the 11 fire events are used for developing the model. The predictive performance of the model ranges from good to excellent discrimination ability for most of the events within the same ecoregion. However, the predictive power of the model is low for the fire event in the second scenario.

Session: WED-08:30-1

A multi-level perspective on governance for climate change adaptation in coastal settings: Insights from four learning sites in the Caribbean and Atlantic Canada

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T. Charles, St. Mary's University

A. Khan, St. Mary's University

Adaptation is key to climate preparedness in coastal settings experiencing the effects of climate change (e.g., sea level rise, coral bleaching events, uncertainty associated with storm intensity). Despite the

difficult economic cost-benefit and technical constraints, adaptation is primarily a social and institutional problem. The social and institutional context associated with adaptation strategies and choices takes them into the realm of governance. Governance here includes the formal and informal rules, rule-making systems, and actor-networks at multiple levels set up to steer societies in the development and implementation of adaptation strategies in response to environmental change (Bierman et al. 2009). Drawing on the experiences in four learning sites in Atlantic Canada and the Caribbean, we outline key insights associated with governance for climate change adaptation with regard to: 1) understanding key institutional arrangements and governance processes in the study sites relevant for climate change adaptation, with a particular emphasis on fisheries and tourism sectors; 2) insights on novel modes of planning and decision making to respond to identified vulnerabilities and adaptation challenges; and 3) information on how institutional arrangements and governance mechanisms can build capacity to adapt to climate change impacts.

Session: TUE-08:30-1

Reflexivity Still Isn't Enough: Examining the Hijacking of Race in the Autobiographical Turn in Geography

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How has geographers' use of self-reflexivity erased organizational and structural factors that irredeemably shape complex processes of racialization? What does it mean to genuinely engage in self-reflexive research without emphasizing the self as a site of privileged racial knowledge? This presentation will critically interrogate the turn to autoethnography, portraiture, collective biography and autobiography in feminist geography which emerged most prominently in the late 2000s. This interrogation will draw on the discussions, emotions and questions that arose during a graduate seminar exploring the use of autobiography in geography. We argue that the turn to self-reflexivity has failed to critically engage with race in the context of knowledge production and in fully understanding the 'researcher/subject' relationship as located within a landscape of interlocking power hierarchies. We insist that the epistemological commitment necessitated through the employment of self-reflexive analyses conceals the ways white supremacist-capitalist-patriarchy operates across the research field. These approaches have been hijacked as a confessional tool that does little to imagine and construct new understandings of 'human' and 'selves' in what Andrea Smith calls 'radical relationality' to other beings.

Session: THU-13:30-5

On the co-production of river morphology – crossing to the dark side of the river?

Peter Ashmore, Department of Geography, University of Western Ontario (pashmore@uwo.ca)

Geomorphological explanations of river morphology and characteristics focus entirely on the analysis of physical mechanics of the system and its physical history. Quantitative predictions of river response to, for example, urbanization are theoretically possible given sufficient information on of the pre-urban conditions and on hydrological changes and other relevant physical variables. But this ‘physical-only’ explanation fails to reveal a complete understanding of why rivers have the form that they have in these environments. Admittance of the significant influence of, for example, historical, political and cultural contingencies, and understanding the processes and aspirations invested in river restoration and design, are necessary for a more complete understanding of fluvial morphology. This entails more engagement in critical analysis, recognition and analysis of the ‘co-production’ of river morphology in many circumstances.

Session: THU-10:30-4

Vive le Terroir d’Ontario: Mobile mapping of the province’s vineyard landscapes

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Scott N. Ertel, University of Waterloo and Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs,

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Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
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Amid Ontario’s fast-paced daily living, the idea and practice of local food sourcing has caught hold as both consumers and food retailers seek more connection to it. The French concept of “terroir” for wine and food products is permeating this province’s wine industry as each producer establishes a sense of place. Ontario grape growers have built the province’s wine industry through more than a century of experimentation. Vineyards have been established in different soil landscapes across the province. They have been resilient to diverse climatic conditions, urban encroachment and a wide range of production and marketing challenges. Their spatial distribution is being captured in the Ontario Agricultural Resource Inventory (AgRI) - an evolving research geomatics information resource that the Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs (OMAF/MRA) is developing. This “Ontario Terroir” project involved mobile mapping technology application to capture field observations throughout the 2013 mapping campaign. Vineyard locations were overlain on the province’s soil maps and crop heat unit (CHU) layers as well as digital elevation models (DEM’s) to develop a preliminary “Ontario Terroir” geospatial database. Example work-in-progress map products and some detailed three-dimensional vineyard soil landscape information renderings are presented.

Session: THU-8:30-7 POSTER

Fostering Cross-cultural Collaboration through Community Forest Management: The Case of Wetzinkwa Community Forest Corporation and the Wet'suwet'en First Nation of British Columbia

Anderson Assuah, Natural Resources Institute, University of Manitoba (deenvoy@gmail.com)

Community forest management is still a relatively new form of forest governance in Canada that has the potential to provide opportunities for First Nations and communities who have interests in the forest to collaborate in managing for its benefits. In Smithers, British Columbia, the Wetzinkwa Community Forest Corporation (WCFC) collaboratively manages a 32,000-ha community forest tenure jointly held by the town of Smithers and the village of Telkwa, with the Wet'suwet'en First Nation and other forest resource users. The purpose of this presentation is to share with you the on-going collaborative efforts between WCFC and the Wet'suwet'en in managing this community forest tenure. This study examined how collaboration and learning among forest stakeholders are helping in managing the community forest tenure sustainably. Thirty-five interviews were conducted, in addition to three forest field tours and participant observation of WCFC's activities. The qualitative data reveals that collaboration between WCFC and the Wet'suwet'en has resulted in information sharing and accommodation of the latter's views in forest planning; protection of Wet'suwet'en culture and values on the land base; relationship and capacity building; and equal treatment of, and benefits to, the Wet'suwet'en even though they are not currently shareholders of the tenure.

Session: TUE-10:30-3

Redevelopment Gone Wrong: The Case of Toronto's Don Mount Court Mixed-Income Public Housing

Martine August, University of Toronto (martine.august@utoronto.ca)

This paper examines the impacts of socially mixed public housing redevelopment in Toronto's Don Mount Court (now called "Rivertowne"). In 2002 the community was selected for the first mixed-income remake of public housing in Canada, and by 2011 the 232-unit community had been demolished and replaced with a re-designed urban landscape including re-built public housing (232 units) and 187 new condo townhouses. While mixed redevelopment is premised on the hope that tenants will benefit from improved design and mixed-income interactions, this research finds that residents were less satisfied with their housing and community post-redevelopment. Based on in-depth qualitative interviews and ethnographic participant observation, I found that tenants missed their older, more spacious homes in the former Don Mount, and were saddened by the loss of supportive community ties lost through redevelopment. In addition, the neo traditional re-design of the community led to paradoxical outcomes, including worsened perceived safety and sense of 'inclusivity' than in the former modernist project. These findings serve as a strong caution for cities and public housing authorities considering mixed-redevelopment, and calls into question the wisdom of funding welfare state provisions with profits from real estate development.

Session: WED-10:30-3

Heat Sensitivities and Thermal Space

Bradley Austin, Kent State University

The exchange of heat energy, between bodies and surroundings, creates a thermal ecology of movement that is productive of various thermal spaces. This exchange works to funnel energy flows and paths of movement through spaces of everyday life in ways that materially condition bodies. This conditioning is not only the effect of heat on/in bodies, but also of what those bodies mean. These material and discursive conditions are thus part of broader systems of transport that extend beyond the body into the seemingly uncontrollable. Such thermal ecologies are explored here as part of weather systems, particularly concerning the effects of heat on emotional and haptic feeling evident in textual social media data collected for six US cities during a 7-week period following the record-breaking July 2012 North American heat wave. Using scores for sentiment and expression of temperature alongside meteorological measurements of temperature, an open approach for mapping weather sensitivities is introduced. These sensitivities act in multiple phases throughout the study duration, though in different rhythmic figures between two geographic regions. As a heuristic device, the sensitivities analysis locates thermal perceptions within a space defined by emotional and sensory degrees of feeling. This sensitivities plane is left open as a sensitizing concept to invite cross-disciplinary multi-method explorations of the ways thermal space is constructed and lived.

Session: WED-15:30-4

Canada's Transportation Sectors' Response to Climate Change

Amel Badri, Department of Geography and Environmental Management, University of Waterloo
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Jean Andrey, Department of Geography and Environmental Management, University of Waterloo

This presentation outlines some of the risks, impacts, vulnerabilities and opportunities that climate change and extreme weather events present for the transportation sector in Canada; as well as adaptation strategies and options that are being incorporated into discussions and practices of transport authorities. The discussion is organized by region and mode, and highlights areas where notable research gaps exist. This is followed by more detailed examination of selected adaptation studies in the road sector.

Session: FRI-13:30-1

Estimating market potential using census data

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Derek T. Robinson, University of Waterloo

M. Bogdan Caradima, University of Waterloo

Understanding whether a consumer base is available for a retailer can make the difference between business success or failure. As described in literature, retailers often use 'rules of thumb' in making locational decisions for store expansion. Four methods are developed to estimate retail expenditures in

Ontario using census data, each systematically incorporating additional information. These are compared to provincial sales data for accuracy assessment. The methods are applied across three geographic census levels and the distribution, patterns, and casual effects of expenditure estimates are described. Regression and spatial statistics are used in a GIS environment to create spatial profiles of the consumer base. When applied across the landscape, prime regions for retail expansion are identified. Our results outline key variables underlying the location choices of retailers and describe the spatial pattern of expenditures across Ontario.

Session: WED-10:30-1

Exploring field-bounded remote sensing and agriculture: spatial discretization of Ontario farmland

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The Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs (OMAF/MRA) has developed an extensive field polygon dataset for the province's farm fields, the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013). As of March 2014, this comprises over 1.7 million hectares of agricultural land. Populated with multi-year field mapping, this dataset may be employed as a spatial bounding feature and discrete crop reference for remote sensing studies. The detailed nature of the AgRI polygon framework permits identification of suites of "pure" pixels across a range of spatial resolutions and satellite imagery. Applications that may be enhanced by its use include precise crop area estimation, phenological studies, and the development of field crop management histories. This poster presentation highlights current and planned research using this dataset. Exploratory graphics and summaries of MODIS and Landsat 8 applications are presented, detailing opportunities for agricultural studies.

Session: THU-8:30-7 POSTER

Profile of tobacco smoking among adolescents from the United Arab Emirates

Caroline Barakat-Haddad, Department of Anthropology, University of Toronto (cbarakat@utsc.utoronto.ca)

Ayesha Siddiqua, Department of Clinical Epidemiology and Biostatistics, McMaster University (ayesha.summer@gmail.com)

This study examines tobacco-use among adolescents in the United Arab Emirates (UAE). Using a cross-sectional study design, we collected data on the prevalence of tobacco smoking for a sample of 6,363 national and non-national adolescents - ages 13 to 20 years -, including current smoking of cigarettes, midwakh, shisha, and any other form of tobacco. We also collected demographic, behavioural, and residential data. Results indicate that in the past 30 days, 8.9% of participants smoked cigarettes, 6.3% smoked midwakh, 7.4% smoked shisha, and 6.4% smoked any other form of tobacco. Overall, 12.8% of adolescents were current smokers, defined as participants who reported occasional or daily use of at least

one form of tobacco in the past 30 days. For every age group and tobacco product, the prevalence of usage is higher among males than females. Among males, cigarette usage is the most popular. The highest proportion of current smokers for males is found in the age group 19 years or older (44.2%). Among females, shisha is the most smoked tobacco product. The highest proportion of female current smokers was among participants who are 18 years of age (7.4%). These findings highlight the need for continued efforts to discourage adolescents from using tobacco products.

Session: WED-08:30-8 POSTER

Use of primary health care and health care accessibility among adolescents from the United Arab Emirates

Caroline Barakat-Haddad, Department of Anthropology, University of Toronto (cbarakat@utsc.utoronto.ca)
Ayesha Siddiqua, Department of Clinical Epidemiology and Biostatistics, McMaster University
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This study examines primary health care use and accessibility among adolescents who reside in the United Arab Emirates (UAE). Using a cross-sectional study design, we collected primary health care use, demographic, socioeconomic, and residential data for a sample of 6,363 national and non-national adolescents, ages 13 to 20 years. Logistic regression modeling was used to examine predictors of primary health care use. Results indicate that the most consulted health care providers were dentists or orthodontists (20.6%), family doctors (13.6%), and eye specialists (12.0%). Most participants reported attending private clinics (49.6%), followed by public clinics (44.4%) when they need health care. Overall, 22.6% of participants did not receive health care when needed. Most common reasons for not receiving health care were lack of time (34.7%), long waiting times (15.5%), and financial costs (12.3%). Overall, 19.5% of participants did not have an annual routine physical check up without having a specific problem. Predictors of not receiving needed care include ethnicity, income, and location of residence. Predictors of having a routine physical check up include mother's education and car ownership. These results emphasize the importance of a reform of the health care sector and a countrywide compulsory health insurance scheme to improve accessibility to care.

Session: WED-10:30-2

Using Map Elicitation Interviews to capture farmer perceptions of Ecosystem Services

Aiswarya Baskaran, School for Resource and Environmental Studies, Dalhousie University
Kate Sherren, School for Resource and Environmental Studies, Dalhousie University

Agriculture is a resource based industry that is highly dependent on water availability. In turn, water resources and associated Ecosystem services can be impacted by agricultural activities. In recent years, there is considerable interest in understanding the spatial, temporal, and dynamic nature of Ecosystem Services. Moreover, there is considerable interest in understanding stakeholder perceptions of Ecosystem Service delivery. In this study, we particularly focus on farmer perceptions of Ecosystem Services and Dis-services. It is important to study farmer perceptions since, farmers are important beneficiaries of Ecosystem Services and have the capacity to impact ecosystems. We focus on a small farming community, the

Musquodoboit Valley located within Nova Scotia, Canada. Using map-based elicitation and semi-structured interviews, we captured farmer perceptions of the different services and dis-services offered by water bodies. Through preliminary analysis of our interview data, we have identified that farmers attributed “provisioning” services to the River, for it provides fertile soil to adjacent agricultural land. Further analysis aims to capture the Ecosystem service flows and the management practices that influence the delivery of these services. Findings from this research will help us understand how farmers perceive water bodies surrounding their farm and their willingness to conserve these water bodies.

Session: WED-20:00-1 PECHAKUCHA PRESENTATION

War of 1812 in Maps

Colleen Beard, Brock University

Come listen to a story ‘bout a man named Brock; Led his British troops then took a fatal shot; His men then charged and the yankees soon they fled; They heard his last command and this is what he said... “Push on Surgite!” Colleen will use a Google Earth application developed by the staff of the Map, Data & GIS Library to narrate the major events that took place in Niagara during 1812 – 1814. From the place that Brock fell to the trek of Laura Secord, these cartographic gems create a visual enhancement that are just simply lovely to look at.

Session: THU-10:30-7

Evaluating the relationship between visual signs of tree health and actual annual growth: a study using Ontario's sugar maple populations

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Forest management requires a clear understanding of tree stressors and health in order to effectively plan for future stresses under a changing climate. While visual canopy assessment is fast and non-invasive, there is limited knowledge on how well these assessments reflect the growth, health and stress of Ontario's forests. Using dendrochronological methods and 20 years of Ontario sugar maple (*Acer saccharum* Marsh.) canopy evaluations, this research explores the effectiveness of visual assessment in reflecting true tree growth or decline in Ontario's sugar maples. Specifically, I examine the relationship between annual growth, a standardized canopy assessment ranking, and climatic and biotic stressors. I also consider whether declining canopy conditions precede or follow radial growth decline. This assessment will both clarify the relationship between apparent and actual vigor as well as any additional factors that may alter the accuracy of the canopy/health assessments. Preliminary results suggest that tree growth vigor is not directly paralleled by a visual assessment score, but is influenced by both climatic conditions and biological perturbation. This improved understanding will allow forest managers to more effectively target their assessments by taking these additional factors into account, and will improve the accuracy of current and future forest health predictions.

Session: FRI-13:30-2

Spatial Land Use Regression Models (SpLUR) of Pollutant Concentrations in Calgary (AB)

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Air quality is one of Canadians' top environmental concerns. For example, traffic-related air pollution is associated with adverse health effects; particulate matter is associated with cardio-vascular and respiratory disease. Traditionally, pollutant concentration is recorded at sparse monitors, which often obscures local variation. Land use regression (LUR) modelling recently emerged as a potential response. Regressing pollutant concentrations against land-use characteristics of sampling locations, LUR can yield local-scale estimates of air pollution, suitable for exposure analysis and community health studies. Hence, a major strength of LUR is its ability to yield fine-resolution estimates of spatial processes; yet current LUR models do not apply spatial analytical techniques to deal with the variance inflation generally induced by the properties of spatial data. In collaboration with Health Canada, we apply spatial autoregression (SAR) and geographically weighted regression (GWR) to address spatial dependencies and non-stationarities observed in pollution data. Our spatial LUR (SpLUR) yields estimates that possess not only fine-resolution accuracy, but also minimum variance, or greater reliability. Our SpLUR models for nitrogen dioxide and particulate matter in Calgary are based on summer and winter monitoring campaigns. Results show that SpLUR identifies narrower sets of variables and models spatially diverse relationships, yielding reliable local coefficients.

Session: WED-15:30-2

Natural Resource Productivity and the Green Economy

Laurel Besco, University of Ottawa

The green economy is an idea which is increasingly gaining traction both within the Academy and beyond. While the aspirations of shifting to a green economy are laudable it is difficult to develop adequate and accurate policy responses until we are able to properly measure the impact our economic activities are currently having on the natural environment. Yet traditional economic measures and accounting practices often ignore the ways in which economic activity both benefits from, and harms, the natural environment. Green GDP and green national accounts two ways though which scholars have attempted to address this challenge. Green productivity is another tool which can help us understand how natural capital is (mis)used by economic production processes. This presentation will explore one type of green productivity measure – natural resource productivity. We will consider the importance of first, measuring natural resource productivity and second, of using the results from such studies to inform future policy decisions. Results can help indicate areas in need of intervention, differences in resource use across industries, and the best geographic scale at which legal instruments should be targeted.

The uses of metabolistic discourse: dependency and metabolism in the current Ukrainian crisis

Ulrich Best, York University, Geography

The current Ukrainian crisis has provoked a variety of different reactions in the European media. One of the emerging master narratives is centred on different versions of dependence - the dependence of Ukraine on Russian gas, the dependence of Western Europe on this exact same resource and the transit route through Ukraine, the dependence of Russia, in turn, on Western companies, investment and services, and many other such relations. A common theme is that these relations - in the media and political statements - are often represented as forms of metabolisms or in an organicist manner: flows of gas as life-supporting, the "toxic" nature of international discord. In this paper, I will focus on these representations and argue that they hide more than they reveal. This is particularly relevant as geography is also seeing increased references to metabolistic discourse, materialities, assemblages, etc. Do these concepts help analyse the current crisis, or does the current crisis rather highlight the shortcomings of some of these concepts?

Session: WED-15:30-4

Transitioning from a fossil(-ized) economy to bio-based economy? Prospects and challenges for Canada

Kean Birch, Department of Social Science, York University

Emily Simmonds, Science and Technology Studies Graduate Program, York University

Vennila Rajaguru, Science and Technology Studies Graduate Program, York University

Climate change means that countries like Canada need to find ways to transition from fossil-fuel dependence to renewable and sustainable sources of energy. Several socio-technical possibilities are available; one prominent one is the development of advanced biofuels. Advanced biofuels have been characterized as a win-win solution to our problems since they are (supposedly) both sustainable and will boost economic growth. Currently, scientists and businesses are developing advanced biofuels as 'drop-in' fuels that are compatible with existing energy and transport infrastructures so that there is no need to adapt or change these infrastructures. It is unclear, however, whether advanced biofuels will actually challenge dominant socio-technical energy systems or whether they will simply lock us further into our dependence on fossil fuels. This raises a series of questions including: who is promoting these biofuels, setting societal priorities and policies, and why; how are these priorities driving biofuels research and research funding agendas; in what ways are these research and research agendas reconfiguring biofuels value chains; do existing 'carbon infrastructures' shape these priorities, research agendas and value chains; and will the materiality (i.e. energetic and biophysical characteristics) of advanced biofuels disrupt their slotting into these carbon infrastructures. Altogether, such questions highlight the uncertainty underlying sustainable energy transitions in countries like Canada and the need to understand how this transition is currently imagined, driven and disrupted.

Session: WED-13:30-4

Making water-health linkages visible: A photovoice exploration of local knowledge, attitudes and practices around water-health linkages in rural Kenya

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The adverse health impacts of lack of access to safe water and adequate sanitation in many rural areas of low and middle income countries are wide-ranging and complex. As part of a broader knowledge, attitudes, practices and empowerment (KAPE) project implemented by the United Nations University Institute for Water, Environment and Health (UNU-INWEH) in the Lake Victoria Basin, this paper reports preliminary results from a photovoice study that explores local knowledge and practices around water-health linkages in Usoma, a lakeshore community in Western Kenya. Between June and August, 2013, eight (n=8) women were provided with disposable cameras to take pictures of what, for them, represent daily attitudes and practices around water and sanitation and how their local environment shapes these practices. Subsequent discussion of the photos revealed in-depth knowledge on local practices around open defecations, unsafe water sources and sanitation facilities, uses of contaminated lake water and their implications for health and wellbeing. This participatory study served to empower local participants in their discussion of how to address relevant water challenges.

Session: WED-13:30-2

Analyzing the growth response of black spruce to road construction in a boreal fen using tree-ring analysis

Emma Bocking, Department of Geography and Environmental Management, University of Waterloo (ecbockin@uwaterloo.ca)

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David Cooper, Department of Forest and Rangeland Stewardship, Colorado State University (david.cooper@colostate.edu)

Support infrastructure in the Athabasca oil sands region is impacting the hydrology of local boreal wetlands. These hydrological impacts were studied in a poor fen in northeastern Alberta, where a raised road was constructed across the northern fringe of the fen in the mid 1970s. Black spruce dieback on the up-gradient side of the road suggests a period of flooding that drowned the tree roots. To reconstruct these water level changes, the rate and spread of dieback was quantified by cross-dating the dead trees to find their year of death. Living spruce trees were sampled to build a master chronology for the site. The dead trees were cross-dated visually with the master chronology and verified with the statistical program COFECHA. The majority of the dieback occurred between 1988-1990, over a decade after road construction. Ring width patterns suggest conditions that initially favoured tree growth, followed by a period of flooding, represented by narrow rings followed by tree death. Trees on the down gradient side, where the road blocks groundwater flow and creates drier conditions, experienced a dramatic increase in growth soon after

construction. This research provides insight into the growth response of spruce to disturbance-induced water level changes in peatlands.

Session: FRI-13:30-2

Benchmarking St. Catharines' position within Canada's interactive digital media industry: a case study

Jeff Boggs, Department of Geography, Brock University (jeff.boggs@brocku.ca)

Stephanie Murray, Department of Geography, Brock University

Despite its position within the Greater Toronto Area's cultural rainshadow, we contend that St. Catharines, Ontario, has emerged as one of Canada's peripheral production sites in Canada's interactive digital media (IDM) industry. This industry turns out a range of products such as cell phone applications, video games, augmented reality hardware and the like. Drawing on government documents, industry websites, interviews and trade directories, we chart the evolution of St. Catharines as an IDM hub. A now defunct anchor firm, Silicon Knights, in conjunction with local public institutions, drew on public resources to create IDM industry-specific assets. These assets --- an IDM-specific firm incubator and a university program that funnels workers into the local IDM economy --- have provided a core around which other IDM assets accrete. Most notably, this accretion includes IDM investor-mentors as well as a college program in video game design. More generally, this case study provides the first of many longitudinal benchmarks to track the efficacy of local economic development policy in a local economy otherwise marked by high levels of manufacturing job loss and seasonal tourist employment.

Session: THU-13:30-3

The influence of time spent at home on the association between residential food environment and fruit and vegetable intake

Arianne Bohnert, Center for Research on Inner City Health, St. Michael's Hospital

Anna Labetski, Center for Research on Inner City Health, St. Michael's Hospital

Tyler Vaivada, Center for Research on Inner City Health, St. Michael's Hospital, Faculty of Health Science, McMaster University

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Antony Chum, Center for Research on Inner City Health, St. Michael's Hospital

Kristian Larsen, Department of Geography, University of Toronto

Patricia O'Campo, Center for Research on Inner City Health, St. Michael's Hospital

There is a growing body of research that investigates the residential neighbourhood context as it relates to food intake behaviour. However, most studies (especially multilevel studies) ignore exposure duration, which make the implicit assumption that the exposure duration across study participants are equivalent. A close examination of the time-use literature reveals that adult time spent at home can significantly vary. To better understand the role of exposure duration, we designed a study to examine how 'time spent at home' can change individual exposure to the local food environment. Based on a cross-sectional sample of 2411

participants drawn from 87 census tracts across the City of Toronto, we examine how ‘time spent at home’ can impact the association between the food environment and fruit and vegetable intake. The presentation will incorporate the discussion of study results with a focus on innovative strategies to address the complexities of contextual influences.

Session: TUE-15:30-6

Identification of Land Use Conflicts to Create Policy for Sustainable Development in Southeast New Brunswick

James Bornemann, Planning Services, NB Regional Service Commission 7 (james.bornemann@csrrsc7.ca)

A regional land use plan provides high-level policies that foster and coordinate sustainable development between communities. In the creation of the regional plan in southeast New Brunswick, Geographic Information System analysis is underway to understand the interaction between the social, environmental and economic factors in the region. Methods included the reduction in the number of selected planning indicators using factor analysis; the use of those indicators to locate land use conflicts using proximity and overlay analyses; and the identification of areas with similar land use opportunities or challenges using multi-criteria analysis. Interactions between indicators of urban sprawl, sea level rise flood risk and hydrological ecosystems describe the majority of land use conflicts in the region. Identification of these interactions allows for policies to be developed to guide the sustainable development of those areas. This research will aid land planners and those who analyse large datasets, or make decisions considering multi-disciplinary information.

Session: TUE-08:30-4

A Collaborative GIS, based on Open-Source Mapping Technologies

Soheil Boroushaki, California State University Northridge

The current trend towards the democratization of spatial decision-making processes requires direct involvement of the general public who are affected by spatial decisions outcomes. It is in this context that local communities are increasingly seeking greater public participation in shaping spatial policy decisions. The concept of PGIS includes a variety of approaches, which aims at making GIS, relevant data and other spatial decision support tools available and accessible to all those with a stake in decision-making and planning. The rise of the Internet has stimulated the development of Web-based PGIS. This paper presents a framework for a collaborative Web-based mapping and GIS. It focuses on the underlying theories and techniques for designing and implementing the conceptual framework. The framework, called ParticipatoryGIS, has been implemented within an open-source JavaScript library for interactive mapping called Leaflet; it consists of a main component, based on the concept of Argumentation Maps, that facilitates and organizes the spatial deliberation. ParticipatoryGIS uses the server-side architecture approach to Web-based GIS. It employs HTML, CSS, and JavaScript on the client-side and a combination of PHP scripting language and a MySQL database on the ParticipatoryGIS server. The open-source Leaflet JavaScript provides the map and interactive mapping functionalities.

Transnational Politics of Road Building in Cold War Guatemala

Barbara Bottini-Havrillay, Department of Geography, Planning and Environment, Concordia University

In the 1960s, as part of the US government's Cold War strategy to fight communism in Latin America, the US and the Guatemalan militaries performed joint road development efforts to open Guatemala's frontier region of Petén for agriculture. Two decades later, the same militaries that managed these road projects committed genocide. Despite previous findings that new roads were a catalyst of military violence during the genocide, road building in Petén has yet to be studied comprehensively from this perspective. Drawing on oral history interviews with former US military advisors, photo albums, memoirs and newspaper articles collected at the Center for Mesoamerican Research in Guatemala, this study discusses how roads in Petén assisted in creating the preconditions for the 1980s violence. More precisely, this paper examines how road building improved the logistical capabilities of the genocidaries and reinforced eugenic ideologies about the "racial health" of the Guatemalan nation.

Session: TUE-15:30-4

The Observatory of Minority Health: Web-Based GIS for Better Health Planning

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Erik Bourdon, Independent Health Researcher (erik.bourdon.research@gmail.com)

Quality health information is essential for policy making and health policy planning; however, this information is missing or incomplete for some populations. Louise Bouchard is leading the efforts to create the Observatory of Minority Health which aims to fill these gaps and improve knowledge about health and access to health services for the Francophone minority population of Ontario. A central component of the Observatory is a web-based interactive mapping application. I will demonstrate the benefits of this innovative geographical information system (GIS) tool which makes it possible for users to explore population and health human resource data at the provincial, health region and dissemination area levels. This unique instrument, available to all, is important since health research has demonstrated the existence of significant variations between the health statuses of populations living in different environments.

Session: THU-10:30-2

Indigenous Involvement in Ontario Environmental Assessment Processes: Indigenous Geographies as a New Way Of Doing

Anne-Laure Bouvier-De Candia, Department of Geography and Program in Planning, University of Toronto
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As a new sub-genre of human geography, Indigenous geographies has claimed to be a unique tool to better understand natural resources management (Coombes et al., 2013). This work explores Indigenous involvement within Environmental Assessment processes in Ontario, and borrows from Indigenous geographies to analyze the relationship between Indigenous and non-Indigenous peoples in the context of a natural resource management tool: Environmental Impact Assessment. The Ontario Environmental Assessment process includes specific prescriptions for Aboriginal consultation, which may or may not be satisfactory for the actors within the processes whether they be regulators, administrators, indigenous or non-Indigenous peoples. Using Indigenous geographies as an analytical tool is a novel way to consider this situation and to propose solutions to potential difficulties.

Session: TUE-15:30-3

Enhancing the profile of GIScience in Canada: opportunities and challenges

James Boxall, Dalhousie University, Co-Chair of the Canadian Round Table on Geomatics
(james.boxall@dal.ca)

The strength of the GIScience Community in the United States is well known and documented. The development of the field, and the creation of the very concept of GIScience has a certain cache in some jurisdictions but not in others. Recent developments in Canada may provide an opportunity to both improve the profile of the field and the impact of research and development both inside the academe and beyond our borders. The continuation of SKI and other positive efforts may well be a starting point for something broader. This talk will look at the challenges and opportunities for GIScience in Canada with direct reference to related initiatives in education (the Declaration on Geography endorsed by CAG) and the Canadian Round Table on Geomatics National Strategy. This may also be a perfect time to look at more collaborations across the sector as it has been a number of years since the GIScience Group was formed at the CAG meeting at McGill in 2001.

Session: WED-08:30-1

The Canadian Geomatics Round Table: Building a Pan-Canadian geomatics strategy II

James Boxall, Dalhousie University, Co-Chair of the Canadian Round Table on Geomatics
(james.boxall@dal.ca)

A key component of the Strategy is leadership and governance. Traditionally, practitioners within wide range of disciplines that make up “geomatics” tended to organize around their specialties – for example cartography, surveying, remote sensing. This served the community well until ever more sophisticated software, computing power, and sensor technologies revolutionized practices and methodologies in the

“geo” fields and led to blurring of the lines between disciplines. Today, many ‘geo’ organizations find themselves challenged by:

- Defining themselves narrowly around single “issues/subjects/mandates”
- Limited connections and/ or communication with each other
- The demographic shift - memberships are declining and outreach to next generation is limited

Add to this that no one organization is viewed as the legitimate voice of the Geomatics Sector, and that the well-established, traditional network needs to broaden – new players such as developers of new applications, mobile mapping, 3-D visualization tools, etc. are not at the table.

This presentation will provide information on the Canadian Geomatics Community Round Table, insight into its goals and how realizing those goals will benefit the geomatics community in Canada. It will focus on leadership and governance, and seek to challenge the CCA, the CAG and the ESAC to participate in the Canadian Geomatics Community Round Table.

Session: WED-15:30-8

Near and Far: Exploring the small things hidden in big maps

Chris Brackley, AstheCrowFliesCartography

This presentation will showcase 10 maps, with two slides for each map. The first will be a detailed area highlighting an interesting nugget of information or a beautiful pattern. The second will be a view of the entire map, showing the context from which the detail came. I will focus on some of the large floor maps (11 x 8 m) I've produced for Canadian Geographic in the last few years, as well as poster maps and various 3D renderings.

Session: WED-20:00-1 PECHAKUCHA PRESENTATION

Meet me on the Neutral Ground: When your party is OUR culture

Angela Brayham, Department of Recreation & Leisure Studies, University of Waterloo
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Mardi Gras is marketed to tourists as ‘The Greatest Free Show on Earth.’ A 2011 report estimated the direct economic impact of Mardi Gras on the New Orleans economy as \$144 million (Weiss, 2011). The touristic image of New Orleans has become synonymous with Mardi Gras popularized by images of beads and uninhibited partying in the French Quarter. For New Orleanians, Mardi Gras is more than beads and partying on Bourbon Street and instead is focused around family, friends, and community all of which are played out on the sidewalks, streets and the neutral grounds along the parade routes.

Layering narrative, photographic imagery and music, this paper based on ethnographic fieldwork conducted in New Orleans during the 2013 and 2014 carnival seasons looks at the central role that Mardi Gras plays in the lives of many New Orleanians. Interviews conducted with members of the Krewe of Muses, an all-female parading organization found that Mardi Gras plays multiple roles in the lives of these women. While acknowledging that Mardi Gras is their culture and that it plays a vital role in creating and maintaining a

community, connectedness and a sense of place, they also appreciate that through their participation they become one of the human attractions that make New Orleans unique, vital and attractive to tourists.

Session: FRI-08:30-3

Migrant Workers in Ontario's Tobacco Belt: An Examination of Workplace Dynamics

Robert M. Bridi, York University

Recent critiques of the sub-discipline labour geography assert that there has been a lack of emphasis in this body of academic work on the relevance of the formal workplace for developing an understanding of the social relations between capital and labour. In this paper, I address these critiques through an empirical examination of workplace dynamics on two small-scale tobacco farms in Delhi, Ontario, Canada. My analysis draws upon original empirical evidence from interviews with three Mexican and nine Jamaican workers, two union representatives, and two farm owners. I argue that the farm is not simply a site for producing tobacco with economic efficiency, but an arena of struggle in which workers confront their employers, and a place of critical contests in the politics of production.

Session: TUE-08:30-4

Heterogeneous Tourism Development Paths in Niagara, Canada

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Tourism is often galvanised around a central theme based on a region's strengths in product supply and promotional opportunity, which usually results in an identifiable regional brand. However, this also hides the existing heterogeneous nature of tourism supply, especially in regions with an established brand. Securing long-term community economic development requires a broader focus since some unheralded tourism development paths may prove resilient over the long-term and ultimately contribute to community development. This paper investigates the less central stakeholders in the Niagara region of Canada and explores how future studies might integrate marginal tourism stakeholders in studies of the regional tourism economy. Through semi-structured interviews with regional tourism stakeholders, the analysis of the Niagara region, based on perspectives of co-evolution from Evolutionary Economic Geography (EEG), reveals a new perspective on tourism development by focussing on the place of marginal stakeholders in a region with a strong tourism brand. The region exhibits strong path dependence based on its industrial and agricultural legacy but long-term, organic, incremental processes of change within the region are creating new tourism development paths. These new paths co-evolve with the dominant tourism paths as well as other community development initiatives leading to positive change across the region.

Session: TUE-10:30-4

Climate change and future maple sap flow: working with NETCDF data and GIS

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Climatic change will affect forest ecosystems throughout the world but the impact of these effects will not be uniform and will vary by region. As such Geography Information Systems (GIS) are an important tool to project these impacts at a regional level. In this study regional climate change data (generated by the CanRCM4-AR5) are used to model the effect of changing spring temperature patterns on maple sap flow in Ontario. Maple trees are extremely vulnerable to mid-winter thaws and summer droughts and a successful maple syrup season is dependent upon the right combination of weather conditions for sap to run. Sap collection is limited to a few weeks each spring season when the night temperatures are approximately -5°C and day time temperatures are around 5°C. The focus of this presentation will be on the procedures and tools used to extract the spatial and temporal data relevant to this study from the NetCDF formatted CanRCM4 files, bringing these data into a GIS, and working with them to develop the sap flow model. The maps of the spatial and temporal future impacts of climate change on spring sap flow will be also be presented.

Session: WED-08:30-1

Sense of Place and Adaptive Capacity: Preparedness of Nova Scotian Fishing Communities to Deal with the Impacts of Climate Change

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Fishing communities in Nova Scotia are currently experiencing high levels of socio-economic, ecological, and political change—all of which impact the ability of a community to adapt to the effects of climate change. The research uses a Community-Based Vulnerability Assessment (CBVA) to understand perceptions of climate change vulnerability and adaptation in fifteen fishing harbours on the South Shore of Nova Scotia. Thirty-eight semi-structured interviews were conducted to assess: 1) perceptions of current and future vulnerabilities and adaptive strategies; 2) how sense of place might facilitate and/or inhibit adaptive capacity; and 3) insights for governance and adaptation planning. The assessment highlights the importance of sense of place to how individuals and communities cope with challenges to fishery-based livelihoods. Sense of place theory provides a lens to understand some of the social attributes of adaptation specific to coastal communities such as identity derived from family heritage, values-based challenges for group decision-making, and the importance of wharves for community cohesion.

Session: THU-13:30-1

A Bibliometric Analysis of Canadian Community Forestry Research, 1935-2014

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Community forestry offers potential for rethinking relationships among Canadian communities, governments, industries and forests towards a more sustainable future. Implementing community forestry can be complex, however, and research is currently being out-paced by practice and policy. This bibliometric study presents an analysis of community forestry research outputs in Canada to 1) better understand its status, trends, and impacts, 2) identify gaps in the research literature, and 3) provide baseline data to inform future research. We use a systematic and comprehensive approach to identify approximately 85 papers published in peer-reviewed journals between 1935 and 2014. Both qualitative and quantitative metrics were used. In particular, we analyzed temporal and spatial trends to detect periods of heightened activity and geographical focus. Analysis also revealed the disciplinary orientation relative to main thematic research areas. Preliminary findings reveal the journals most used by researchers and by extension the key outlets for community forestry research. Notably, scholarly output has increased significantly since the mid-1990s and there has been a strong focus British Columbia. About 38% of identified research articles appeared in *The Forestry Chronicle* journal. These findings come at a formative time in forest policy and management reform in Canada.

Session: TUE-08:30-7 POSTER

Identifying Partial Braess Paradoxes in the Toronto Road Network

Charles Burke
Darren Scott

A \$123 billion dollar maintenance spending gap has emerged in the spending necessary to adequately repair and maintain municipal road infrastructure. Municipalities would be best served if they could maintain (or improve) traffic flow while concurrently divesting infrastructure to lessen this growing fiscal strain. This counterintuitive practice is possible through the identification of Braess Paradox a situation where the addition of a link actually worsens traffic flow. To identify instances of Braess Paradox as the result of partial link removal we employ the Network Robustness Index (NRI) Calculator developed by Scott et al (2006). The NRI calculates the change in total travel time that results from re-routing traffic after a road link's capacity is reduced. This approach is repeated for each link, and Braess Paradoxes are identified for road links where travel time decreases following a capacity loss. The results show that more than 100 links on the Toronto road network may be targeted for a 25% reduction in capacity with no negative affect on traffic flow.

Session: TUE-08:30-6

The Use of Formal Healthcare in Remote Indigenous Communities: A Comparison of Two Indigenous Communities of the Peruvian Amazon

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In order to reduce current and future health risks, it is important to understand how the health system currently meets the needs of its most vulnerable populations. This study examines the use of traditional and western health systems in indigenous Amazonian communities in Peru. The Peruvian Ministry of Health has recently established several health facilities in remote communities to improve the health of rural and indigenous populations. It is assumed that increased access to formal health services will displace indigenous medical practices, and that residents from communities with better access to formal health facilities will consult physicians more compared to people from communities that lack access to formal healthcare. This study conducted open-ended interviews in two indigenous communities, one with a health facility and another without a health facility. The research found that study communities still strongly value traditional knowledge regarding medicinal practices and treatments. Regardless of the presence of a health facility, inhabitants of both study communities prefer, trust, and rely on traditional healers that live in their villages. The formal health system's lack of recognition of indigenous medical systems thus represents an important problem and it is crucial to address these barriers to health services in indigenous communities.

Session: TUE-10:30-1

A multi-temporal, high-resolution, digital agricultural landscape investigation of part of the Eramosa River watershed: tracking changes over six decades of farming

Michael D. Battenham, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
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The biogeography of Ontario's agricultural landscapes has not been extensively studied. An Eramosa River watershed sub-area was selected for detailed examination over the six decade timespan between 1955 and 2013. Field-specific farming activity maps for selected cropping seasons were crafted using the digitizing protocols for the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al. (2013)). Seamless digital polygon frameworks containing all agricultural and rural landscape features were developed for each of these cropping seasons. The Southwestern Ontario Orthophotography Project (SWOOP) 2010 orthoimagery product (at 20cm pixel resolution) was used for image registration and for crafting the initial set of AgRI feature polygons (2010-version) from which all other year-specific framework products were built. This approach retained polygon continuity as well as precision in all of the map products developed with the different "legacy" imagery sources. Crop and other farm management activity mapping results were compiled through retrospective information extraction from different geospatially-referenced sources. Cropping system results for both 2012 and 2013 were captured with mobile mapping technology through focused field observation campaigns. Over the past six decades, smaller fields with livestock have been replaced by larger field cash-cropping systems on several farms within this study area.

Session: THU-8:30-7 POSTER

A Political Ecology of Road Construction and Mobility in Shimshal, Gilgit-Baltistan, Pakistan

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Road construction has been – and continues to be – an important mechanism of social, economic and ecological change throughout the Pamirian region, not least in northern Pakistan, where the construction of the Karakoram Highway has received sustained scholarly attention. Our paper will contribute to that literature, by focusing closely on a narrow 50km tributary road, constructed between 1985 and 2003, that leads from the Karakoram Highway to the agricultural settlement of Shimshal. Drawing on extensive ethnographic research in the community and the conceptual lens of political ecology, we will analyse the role the road plays, through its association with other objects and technologies, in altering existing power relations, socioecological practices, and discourses in Shimshal.

Session: TUE-15:30-4

Building a scaffold with technology to support engagement with Earth System Processes

Mary-Louise Byrne, Geography and Environmental Studies, Wilfrid Laurier University

The highlights of using many aspects of our learning management system are used to engage students and improve their learning. The session will report on using My Learning Space to increase interaction with students in a first year, content heavy course (Introduction to Physical Geography, GG101). GG101 is a foundation course requiring majors to learn the basics of Earth's physical systems and is also a popular elective course for Arts students with typical enrollments of 250 or more students. Course requirements include lectures, examinations and laboratories. Budgetary considerations required Lab scheduling to be reduced (they were originally weekly, but became biweekly) resulting in diminished student contact with the course and lab instructor. Over the past several offerings, it was noted that students were becoming increasingly dis-engaged with the course material. In addition, students often commented and complained that the amount of reading that they had to do before examinations even though they had been encouraged to read throughout the term. To encourage students to engage with the textbook and other course materials, online quizzes were instituted. To encourage further engagement, "3-2-1" assignments were developed and the rubric function in My Learning Space was used to manage these. Finally, in-class bonus marks encourage students to attend lectures. The course now requires a broader suite of scaffolded evaluations, the students are more engaged in class, and the investigation is ongoing as to the results with respect to student evaluation. Preliminary analysis points to improved results in final grades.

Session: TUE-10:30-2

Theorizing energy transitions: a geographical perspective

Kirby E. Calvert, Geography, The Pennsylvania State University

The prevailing energy system is a coagulation of political-economic value systems and natural and built environments; a dynamic interplay that has co-evolved with the materialities of accessible energy resources. Using mixed-method research in the Canadian province of Ontario, I document how fundamental differences in the materialities of renewable energy (RE) resources relative to incumbent (fossil) energy resources re-configure socio-technical systems as well as the ways in which they are coupled to ecological systems. While the integration of RE resources is socially and technologically mediated, differences in the quality and spatial distribution of RE resources are necessarily disruptive to prevailing land-based economic activities and social interactions with land(scape), challenge conventional legal geographies, and restructure the way in which the general public interacts with energy infrastructure. These findings challenge conventional wisdom in the theory and practice of energy transition management that geographical settings represent a mere 'exogenous selection factor' for technology solutions. Energy systems are, in fact, entangled with their geographical settings and underpin the ways in which individuals and groups interact with their surroundings. Managing the transition toward RE requires a new geo-governance; one that goes beyond conventional practices related to designing territorially sensitive RE development roadmaps and restructuring the spatial pattern of electricity distribution systems. Integrated land-energy planning at regional scales is discussed as the basis of this new geo-governance of energy.

Session: WED-13:30-4

Retail Roadblocks: Barriers to Accessing Healthy Food in a Northern City

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This study examines legal barriers to accessing healthy retail food in the built environment. A focus is placed on detecting restrictive covenants which are anti-competitive agreements that prevent competitors from using former retail food sites. The research was conducted in Sault Ste. Marie in Northern Ontario which experiences elevated levels of chronic disease with higher than provincial average rates of cardiovascular disease, cancer, and obesity, combined with lower rates of fruit and vegetable consumption. A previous pilot study found lower levels of access to healthy food for vulnerable populations in two areas of the city. An archival directory search was undertaken 1970-2012 at three year intervals to establish food store openings and closings. Land titles of closed sites were then surveyed for the presence of legal barriers affecting food sale. Restrictive covenants were found to be present in the city. The sites with barriers are compared to the urban areas with previously identified gaps in healthy food access, then the potential effect of recent and upcoming changes in the retail and built environment are discussed. Finally, the relative impact of the restrictive covenants is compared between this medium-sized city and Edmonton, Alberta, a previously researched metropolitan area.

Session: THU-08:30-2

Dynamic Transit

Matthew Canaran, Department of Geography, University of Waterloo

In attempt to reduce short-distance automobile trips in suburban regions, this study proposes and measures the possible implications of a flexible and demand-responsive transportation service called Dynamic Transit (DT). Phase one of this study proposes DT, identifies a target market, and describes the spatial characteristics of areas where DT could succeed. The second phase explores the ways in which DT could serve the needs of commuters using GO Transit commuter trains in Burlington, Ontario. The approach taken is a GIS simulation of random samples of trips from commuters' homes to the Appleby GO station; the analysis focuses on service performance, DT shuttle requirements, and the time and distance metrics of shuttle routes. The analysis was done using the Vehicle Routing Problem tool in ArcMaps. Trip data was derived from the Transportation Tomorrow Survey on travel behavior in the Greater Toronto and Hamilton Area. Analysis reveals that low-capacity shuttles have the potential to displace a large share of short-distance automobile traffic without significantly increasing commute times. Although this study focuses on Burlington, the findings can be scaled across other suburban region with similar spatial characteristics.

Session: WED-08:30-8 POSTER

The Chester Case: the Canadian Immigration Act and the interconnections between law and spatiality in the lives of immigrant applicants with disabilities

Valentina Capurri, Department of Geography, Ryerson University (vcapurri@ryerson.ca)

In this presentation, I discuss the legal case of Angela Chester, a German citizen and wife of a Canadian national, who in 2001 unsuccessfully challenged as unconstitutional the rejection of her application for permanent residency on the basis that she had multiple sclerosis and was therefore inadmissible to Canada. I use this case as a launching pad into a broader investigation of the provision of medical inadmissibility contained in Canadian immigration law. My argument rests on the belief that the latter has been used and continues to be used to physically and socially exclude from the national body those who are perceived as "unworthy" and "unproductive" subjects, thus perpetuating the discrimination against persons with mental and/or physical disabilities. Law becomes therefore a producer of inequity rather than, as commonly assumed, its solution. At its core, the provision of inadmissibility legitimizes Canada's refusal to grant physical access into the country to certain groups, and this exclusion has both spatial and social implications for those who are located within Canada as well as those who are left outside the national boundaries.

Session: WED-13:30-3

Criteria development for a suitability analysis of retail development across Ontario, Canada

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As part of a study implementing a suitability analysis of retail development across the entire province of Ontario, Canada, criteria were selected and calculated using extensive script automation and large data sets. Suitability criteria at the site and situation level were generated as attributes for approximately 4.7 million parcels in Ontario, including topographic statistics, land cover proportions, and network distance from highway ramps. Across Ontario, parcel characteristics such as elevation, slope, and land cover will be used to determine parcel characteristics and development cost. Situation-level criteria such as the network distance from highway ramps provide representations of accessibility and visibility of a parcel to high-traffic intersections. Challenges in calculating criteria using large data sets with limited computational resources include data accuracy and completeness as well as the conceptual representations of generalized spatial data. The presentation will highlight some of the challenges in generating criteria for a province of over a million square kilometers and present some of the solutions used to overcome these challenges.

Session: WED-10:30-1

“They were dropping like flies”: Exploring Environmental Health Risks in Youth Team Sport in Ontario

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Susan Elliott, Faculty of Applied Health Sciences, University of Waterloo (elliotts@uwaterloo.ca)

In Canada, obesity and overweight are growing public health concerns among children and youth. Although associated factors are complex, health behaviours such as participation in physical activity are key to controlling weight and encouraging healthy lifestyles. Engaging children in team sport can affect positive physical and social development, however components of a changing environment will impact the youth sport landscape, and environmental health risks associated with participation are beginning to emerge. While coaches generally manage health risks to participants, many are volunteers with little training in child development or environmental health. In order to reduce environmental health risks to children and overcome barriers to youth sport participation, this research aims to explore the knowledge, attitudes and practices of youth sport users and providers related to the links between environmental change, sport, and health. This paper presents results from semi-structured in-depth interviews (conducted October 2013-April 2014) with youth sport providers and participants in Ontario. Preliminary results show that although coaches are able to identify basic health risks associated with environmental change, indirect impacts are frequently overlooked. Policy implications, such as the need for sport-specific coach education related to environment and health, will be discussed, to ensure positive physical activity engagement throughout the lifecycle.

Session: THU-08:30-2

La distribution des polluants issus du transport routier sur l'île de Montréal: analyse de la situation pour les groupes de la population vulnérables : un cas d'équité environnementale

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Philippe Apparicio

Anne-Marie Séguin

Dan Crouse

Les débits de circulation mesurés sur le réseau supérieur de l'île de Montréal sont constamment en hausse depuis une vingtaine d'années. Cette augmentation fait en sorte que la pollution de l'air demeure élevée, occasionnant diverses conséquences sur la santé. La littérature en équité environnementale a montré, d'une part, que les minorités visibles et les ménages à faible revenu tendent à résider dans les secteurs les plus pollués. D'autre part, les jeunes et les personnes âgées, de par leurs caractéristiques physiologiques, sont vulnérables aux effets de la pollution de l'air. L'objectif de cette présentation est de mesurer les différences entre divers indicateurs de polluants atmosphériques établis selon le niveau de défavorisation des enfants et des personnes âgées de 65 ans et plus. Ces indicateurs sont calculés à partir des écoles primaires, des résidences privées et des logements du parc social de l'île de Montréal. Les résultats des analyses statistiques révèlent que les environnements immédiats des écoles défavorisées et des logements du parc social se caractérisent par des niveaux plus élevés de polluants et par une présence plus marquée d'axes majeurs de circulation comparativement à l'île de Montréal. Cette situation souligne l'importance de mettre en place des normes d'urbanisme restrictives concernant la construction d'écoles et d'équipements sensibles près des axes majeurs de circulation.

Session: THU-08:30-5

The Privatization of Public Life: Private Security and New Urbanism

Michael Carter, Department of Geography, University of Toronto

This presentation discusses the results of a recent case study on urban governance in downtown Toronto, examining the role of security and surveillance practices in creating desirable sociospatial aesthetics and illustrating the central role of securitization in new urban governance.

Three methods of data collection were used: interviews with public and private actors responsible for urban governance; a material culture analysis of the physical landscape; and a discourse analysis of policy documents, statements from politicians, and news articles. The results show that new urban governance relies on private security forces to 'curate' urban space by marginalizing 'unsavoury' behaviours and people. The rise in privatization of urban security raises concerns given private security forces receive a fraction of the level of training and supervision provided to police officers; a level that has been deemed inadequate for preventing discriminatory policing practices in Toronto. Despite the minimal expectations for training and supervision Bill C26, which had the visible support of Prime Minister Stephen Harper, has expanded the arrest powers of private security forces. Building on the work of Lefebvre, Wacquant, and Harvey the paper concludes that neoliberal governance creates exclusionary urban spaces through privatization and securitization.

Session: THU-10:30-3

Impacts of Climate and Weather Events on Coastal Tourism-related Infrastructure, Avalon Peninsula, Newfoundland

Norm Catto, Department of Geography, Memorial University of Newfoundland (ncatto@mun.ca)

Tourism is a key component in sustainability of coastal communities. Lengthening of the tourist season, enhanced tourist use of natural areas, and geomorphic stresses in combination have affected sites throughout the Avalon Peninsula, and could have an impact on the long-term sustainability of both natural areas and tourism. Direct impacts include increased wave erosion by storm surges, enhanced wave impact seasons due to reduction of offshore ice buffers, focused erosion leading to narrowing and coarsening of beaches, and degradation of coastal dunes. Human pressure on bedrock-dominated coastlines has increased along Avalon Peninsula shorelines, leading to trail erosion and potentially compromising visitor safety. Trail design and maintenance impacted by erosion must be reconsidered in light of the shift in visitor demographics. Cessation or limitation of human use leads to relative geomorphic stability, even under ongoing climate variability and change. Less-direct impacts on tourism generally have not considered tourists as a separate population distinct from local residents. The emphasis has been on what climate or meteorological conditions tourists can expect, and what physical environment they will encounter on-site. The process of getting to the tourism destinations (as influenced by road and ferry infrastructure) and the impacts while on-site have received less attention.

Session: FRI-08:30-4

Coastal dynamics and erosion at Middle Cove and Outer Cove, Avalon Peninsula, NL: A comparative analysis

Norm Catto, Department of Geography, Memorial University (ncatto@mun.ca)

Gail Catto, Catto Geographic

Although Middle Cove and Outer Cove are separated by less than 1 km, there are significant differences in the dynamics and response of the beaches. Middle Cove is a reflective pebble generally moderate energy beach. Profiles are planar in the late spring and early summer, becoming slightly concave during late summer and autumn. Winters without ice foot development or significant snow cover induce concave profile development. Protective snow or ice foot development produces a convex profile near the waterline. Cusp morphology and dimensions reflect combinations of tourist pressure, storm activity, and sediment input. Northeasterly storm events increase sediment reworking and erosion. Outer Cove is more exposed to winds from the north, but is narrower, precluding any significant longshore transport. It receives far fewer human visits, but is adjacent to the well-travelled Marine Drive. Much of the beach is currently backed by concrete bridge abutments, a retaining wall, and coarse, angular artificial fill. Profiles tend to be gently to strongly concave. Gentle slopes result from periods when northerly winds are absent. Outer Cove is a reflective, strongly shore-normal, swash-aligned, moderate energy beach system. The artificial reinforcement has accentuated the reflective, shore-normal transport pattern.

Session: TUE-08:30-7 POSTER

Measuring food deserts and implications of local, independently-owned grocers on the food landscape: The case of Toronto, Ontario

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Food deserts are an inevitable part of the city landscape and often exist in inner-city locations where grocers are absent or where access to private or public transportation are limited. Research on food deserts typically incorporate the presence of national and regional grocery stores. This seems logical, particularly with respect to small and medium-sized cities that typically rely on these types of stores for foodstuff. However, larger cities, such as Toronto, frequently have small, independent grocers in neighborhoods such as Little Portugal or Bloor West Village that provide healthy foodstuff. This study explores the importance of these niche grocers within the food desert concept. More specifically, when local or neighborhood grocers are added to the formula of regional and national grocers do food deserts really exist in cities like Toronto? The findings show that the inclusion of local/neighborhood grocers mitigates the spatial extent of food deserts in Toronto. In other words, independent grocers in Toronto provide an important niche in providing healthy foodstuff to residents. Studying niche grocery providers and stores is important in defining the context and extent of food desert geographies.

Session: THU-10:30-6

Desire, Resistance, and Solidarity across Borders: Older Women's Roles in Transnational Activism

May Chazan, Gender and Women's Studies, Trent University

Older women's roles in building movements across borders have received limited attention in existing scholarship. Yet, in the context of global population aging that is unprecedented and feminized, these efforts provide critical perspectives into contemporary struggles for social change. Based on life histories and archival research carried out with the Canadian-based Grandmothers Advocacy Network (GRAN), this paper examines the motivations of older women activists in Canada who are building solidarity with, and advocating for, grandmothers affected by HIV/AIDS in sub-Saharan Africa – women who have lost their children and are raising their grandchildren. The paper asks: what has drawn the Canadian women into later-life activism and why they are committed to building this transnational network? Findings reveal how age and life course shape their engagement: older age means that they are no longer required to work in paid employment or care for children, and many have left previously restrictive marriages; many feel they finally have the time, space, and freedom to take social risks that is required to engage in activism. Many also note their longstanding social justice leanings and, in some cases, their early-life experiences with feminist activism; for them, older age brings an amplified desire to make a positive contribution and a strong resistance to being viewed as apolitical or invisible. In discussing their commitments to women across the globe, many describe a changing sense of borders; they reflect on the privilege bestowed on them as a result of birth place, their lifelong struggles for gender equality in Canada, and their growing sense of responsibility to work in solidarity with women in the Global South. This paper thus contributes new insights into why and how women are mobilizing across distance and difference, while challenging stereotypes about older women as marginalized and disengaged.

Session: THU-13:30-5

The role of cities in the Canadian climate change policy

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The role of cities in addressing climate change is particularly important, especially when observed in the larger national context, marked by a lack of leadership and significant action at the federal level, and by a very varied landscape in terms of provincial approaches. The lack of a coordinated national strategy may be partially explained by the different challenges and opportunities experienced at each level of government. Nevertheless, compared with the federal and provincial governments, some municipal governments have been particularly active and have shown more political willingness in addressing climate change, in terms of both mitigation and, more recently, adaptation. Cities have also seemed to display a better understanding of how climate change could impact them and what kind of action is required. Preliminary results suggest that, despite limited capacity and the need for more action, cities have made significant progress and have been innovative in pursuing climate policy plans, by taking advantage of existing incentives and programs, and by working with other cities and cities networks, external organizations and higher levels of government.

Session: FRI-13:30-4

A durable, low cost camera system for generating time lapse imagery in the coastal zone

J. Childs, Brock University

Camera systems have been used to monitor temporal and spatial change in the coastal zone for many years. The evolution of camera technology has resulted in a number of durable, small, low-cost systems that can efficiently record temporal and spatial physical activity. Traditional time lapse photography often required the photographer to remain at a fixed position for extended durations or make repeated, perhaps long distance field visits to collect imagery which was often fragmented which limited its application. New trail or game cameras now allow researchers to remotely collect still imagery or video of the physical processes. The new cameras are small so they can be positioned inconspicuously and when combined with small solar panels, can record for extended periods of time. Using an internal timer, the camera regularly collects images which are then stored on high capacity digital media for later retrieval by the researcher which saves time and money. The regular recording of data improves the understanding and interpretation of the physical processes. In this preliminary project, a time lapse video was generated from imagery captured by a camera system on the North shore of Lake Superior.

Session: TUE-08:30-7 POSTER

Lived Geographies of Occupy: On Emotion, Precarity, Diversity and Place

Vera Chouinard, School of Geography & Earth Sciences, McMaster University (chouinar@mcmaster.ca)

Social movements have arguably been a relatively neglected topic in feminist geographic research. And yet the study of such movements promises rich insights into socio-spatial conditions giving rise to protest and to how emotions, identities, diversity and place shape peoples' experiences of struggling for social change. In this article, I use an intersectional feminist geographic approach (see Valentine, 2007) to explore lived geographies of the Occupy movement—a movement that, by October 15, 2011, had emerged as a truly global phenomenon. On that day, protestors physically occupied urban places symbolic of the upper echelons of corporate capitalist power in over 1,000 cities in 80 countries (Flank, 2011, 7). Drawing on published oral histories of the Occupy movement, I argue that emphases on the commonalities between protestors in scholarly and popular sources has contributed to a tendency to neglect how emotional geographies of negotiating difference were also central to the dynamics of this struggle for social change and to how people experienced engagement in protest. The article concludes with reflections on how future feminist geographic research can advance our understanding of the lived geographies of social movements.

Session: TUE-10:30-5

Spatial-temporal complexities in place effects on health research: challenges and solutions

Antony Chum, Center for Research on Inner City Health, St Michael's Hospital (antony.chum@utoronto.ca)

While the use of spatial analysis to improve urban lives can be traced back to Dr. John Snow's notable analysis of the locations of cholera deaths that led to the shutdown of the Broad Street water pump in 1854 London, the spatial mobility of contemporary urban lives has dramatically increased since his time, and contextual influences can vary across space and time in a highly complex manner. Thus, it is a critical limitation that most studies of place effects on health (especially multilevel studies) do not take into account time and human mobility, which can significantly modify contextual influences. Drawing on a number of empirical examples, this presentation will introduce the audience to a range of state-of-the-art methods to better account for duration of exposure and influences of multiple activity spaces including time-weighted regression, testing time-place interaction effects, cross-classified multilevel modeling, space-time modeling, and dynamic agent-based simulations.

Session: WED-15:30-2

What are we selling? And are they buying it? Perspectives of local economic development practitioners and site selectors on the role of place branding in business attraction and enhancing competitiveness

Evan Cleave, Department of Geography, University of Western Ontario
Godwin Arku, Department of Geography, University of Western Ontario

As elsewhere in the advanced societies, the Canadian economy has faced a host of challenges over the past three decades due to the effects of globalization of world economy and loosening of regulations that

expose its towns, cities and regions to competing markets. In Ontario, tension stemming from a combination of neoliberal policymaking and restrictive provincial government political controls has placed stress on some municipalities. As a result, there has been a transition away from traditional managerial forms of governance to an entrepreneurial model that has privileged business-like practices, emphasis on investment generation, and place promoting in an effort to ward off terminal economic decline. Within this entrepreneurial mode of governance, the concept of place branding has emerged as a potential avenue to draw attention and investment into a municipality. While place branding has gained acceptance in Ontario as an approach of promoting locales, it remains unclear whether the strategies involved – and the way it is being used by municipalities – is effective. To investigate this issue, in-depth interviews with two groups – local economic development practitioners (n = 25) and site selectors (n = 10) – were conducted to examine what the perspective of place branding was at the municipal level and what it was by external audiences. Additionally, a comparison was undertaken to examine the strength of the alignment between the brand messages that the municipalities were projecting and what the site selectors considered important in their decision-making. Based on this analysis, it is evident that there is utility of place branding in the recruitment of business, as there are overlaps between what practitioners and site selectors privilege in business attraction. Most importantly, it appears that the fostering of, and access to, a dynamic talent-base is the primary issue for practitioners and site selectors.

Session: THU-08:30-3

Urban Watersheds as Opportunities for Geography Students to Study Critical Physical Geography

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Students (high school, college and university level) are forced to define their academic careers and by extension, their lives, into specific streams at an early age. In Ontario, this happens in grade 9, and for some students it happens again when they apply to college and university programs. When Geography instructors meet these students, they've organized their ideas over and over again into silos, so that when asked to consider the 'bigger' picture the typical responses '...but I am a physical geography student...' and '...but I am a human geography student...' so 'I shouldn't have to do this' are not surprising. This is an opportunity, rather than a challenge in the classroom. We propose that urban watersheds and urban watershed processes are an ideal starting point for introducing students to critical physical geography. Urban watersheds by their nature are natural and social systems. Using watershed restoration, management, and mitigation policies in regions of rapid development is a means to emphasize the integrative aspect of the co-production of understanding socio-biophysical systems. Without reinforcement and practice, students might forget that ultimately, they are responsible for seeing the big picture.

Session: THU-10:30-4

Obscuring Construction: Ecosystem Management and the Creation of New Spaces

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Environmental managers have long bemoaned the asymmetries between political spaces and processes, and ecological ones. Accordingly, environmental management has, in recent decades, sought to align environmental decision-making with ecological boundaries through a turn toward ecosystem management. In so doing, however, constructivist approaches to understanding space have often been obscured by a focus on aligning different sets of boundaries. That is, a focus on squaring political and ecological spaces has overshadowed the ontological question of how these spaces are produced. This paper thus explores the production of ecological space through rescaling processes brought about by the move towards ecosystem management. Drawing on Canadian case studies, the paper explores the ways in which the turn toward ecosystem management can create new objects of governance - such as watersheds or protected areas – and explores how these ‘new’ objects are framed in the environmental management literature. More specifically, by examining the discursive use of terms such as ‘local’, ‘transboundary’, ‘natural’, and ‘ecosystem’, the paper identifies ways in which constructivist perspectives are largely absent from the turn in toward ecosystem governance, and suggests how – and why – this can be addressed.

Session: TUE-13:30-3

Commute Patterns for a Large Institutional Employer in an Automobile-Centric City: A Case Study of Employees at Queen’s University in Kingston, Ontario

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Amidst rising obesity rates across Canada, public health practitioners and urban planners are increasingly looking to active commuting as a means of introducing regular physical activity into the daily routines of Canadians’ otherwise sedentary lives. Studies have shown that active commuting, which encompasses walking, cycling, and taking public transit to work, can make substantial contributions to recommended daily physical activity levels, and in turn, reduce the burden of chronic disease. Situated in downtown Kingston Ontario, Queen’s University is well within active commuting range of many of its employees. Through an online survey of Queen’s employees, this study analyzed commute pattern characteristics for this large institutional employer in Kingston. Walking and cycling to work ranged seasonally from 30% to 42%, and was highest among those within 3kms of campus, men, high-income earners, older cohorts, and those with flexible work hours. Transit ridership (5-9%) was higher among those without flexible hours, low-income earners, younger cohorts, and those residing near multiple bus stops. These findings highlight distinct characteristics of Queen’s employees that walk/cycle versus ride transit to work, and provide insights for local policy-makers on the socio-demographic gaps in active commuting among a large employee group in an automobile-dominated mid-sized Ontario city.

Sessions: THU-10:30-2

Private-‘public’ ponds and public-‘private’ ponds – examining the governance of urban water bodies in a small Bengali town

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Urban environmental governance in India is shaped by multiple motives, actors and technologies that reflect the rise of neoliberalism and decentralisation, as well as the influence of centralised urban renewal projects. Local histories, politics and culture further shape the manner(s) in which control over urban natural resources is exercised. This paper uses ponds as a heuristic through which to examine patterns of environmental governance in small towns in West Bengal. It demonstrates that the simplistic dichotomy of public versus private is an insufficient category to analysing complex governance regimes that control access to and responsibility for these urban natural resources. This paper engages with the approach of urban political ecology and emerges from primary qualitative research conducted from August 2013 to February 2014 in West Bengal, India.

Session: TUE-15:30-3

Reconstructions of late-summer streamflow and low-flows for three drought-susceptible, unglaciated basins in south coastal BC

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In unglaciated basins in south coastal British Columbia, rising winter air temperatures, snowpack declines, and warmer and drier summers have contributed to a regional pattern of worsened late-summer low-flow events. It is difficult to determine whether these earlier, longer, and/or lower low-flows are anomalous relative to historical streamflow patterns since gaged data represent only a ‘snapshot’ of the full range of historical flow variability. As a result, current and future water management and planning based on these records may not account for the full range of natural flow variability. We hypothesized that the annual radial growth of *Abies lasiocarpa*, *Abies amabilis*, and *Tsuga mertensiana* trees is driven by temperature and snowpack conditions that also govern streamflow in three unglaciated hydrological regimes in the study area, to the extent that we could use tree rings as a proxy for climate in reconstructed flow models for each system. We developed three multi-century streamflow reconstructions explaining 39%, 43%, and 59% of the actual flow variance by pre-screening predictors based on their relationships to streamflow and climate. We found that annual radial growth records that are sensitive to both late-summer temperature and winter-season precipitation-as-snow were particularly useful predictors of streamflow in a pluvial/nival hybrid regime that is influenced by a combination of these two climate parameters.

Session: FRI-13:30-2

Blockade: Subversion, Supply Chains, and the Social Factory

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Likely the most understudied revolution of the 20th century, the revolution in logistics has recast global trade and battle space. Since the 1960s, production has been systematized; broken down into component parts and distributed across complex spatial networks. The factory has been stretched across transnational infrastructures, territories, and labour forces. As the science that manages supply chains, logistics has arguably become the most powerful field of corporate and military management. Yet, despite its technocratic image, logistics is subject to profound contestation from radically diverse groups well beyond the formal bounds of 'production' or 'distribution'. From Occupy to Arab Spring, and from 'Somali pirates' to Idle No More, this lecture explores the questioning and contesting of what Tsing calls 'supply chain capitalism', not only by workers of the world but by a motley crew of old and new enemies of empire. This lecture tracks logistics' complex spatialities, which position an unlikely assemblage of groups in conflict with the violent materialities of empire. It looks specifically to the politics of disruption and the act of blockade to interrogate bio- and geopolitical economies of circulation in the global social factory.

Session: WED-17:30-1 WILEY LECTURE

Towards Improved Prenatal Environmental Health Education

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It is well established that low-level exposures during pregnancy to toxicants present in our day-to-day lives can negatively impact health and development of a fetus and have lifelong consequences. It is therefore important that prospective parents receive adequate education to make informed choices to minimise exposures. In the Canadian context little is known about the extent to which prospective parents are aware of prenatal environmental health issues or about the sources and nature of any education they may be receiving. To address this, a survey (n=606) and interviews (n=15) were conducted with new mothers in Ontario combined with a scan of educational programs and related resources. From the survey, we found low levels of concern and awareness, and that only 55% of new mothers reported to have received any information about environmental health risks since getting pregnant. Prenatal health care providers were reported to be the most trusted source of information, however less than 8% of those who received information, received it from this source. Our scan identified numerous educational initiatives outside of the health care system, but little within it. And while considerable information is available from web sites and other sources, relatively few appear to be seeking it out or to trust it. These findings will be discussed in the context of an evolving prenatal education initiative currently being developed.

Session: WED-13:30-2

Adding a New Layer to the Regionalization Debate: A Case Study of Local Immigration Partnerships from Durham Region, Ontario

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Regionalization, one of the most pronounced debates in Canadian immigration literature, has dampened recently. Devolutionist policies and a subsequent re-distribution of newcomers have made the debate less relevant at a national level. However, policy developments like Local Immigration Partnerships (LIPs), have given this debate new relevance at the local level. Through LIPs, the federal government has essentially regionalized settlement policy. Previously, suburban and rural areas were competing for immigrants, now, in many cases, they are collaborating on settlement policy. The recent wave of immigrants settling in the suburbs only exacerbates this division. Objectives were designed to examine regionalization in the context of Durham Region's LIP, based on interviews with 52 key informants within six sectors involved in local immigrant settlement. Findings demonstrate strong regional representation on Durham's LIP council but less effectiveness in terms of regional equity and participation. Great variability exists as far as interaction and benefits between suburban and rural parts of Durham. As Durham's LIP lacks authority to ensure participation, questions remain around whether it has the tools to facilitate regional participation. The research seeks to re-frame the regionalization debate, focusing at the local level, while contributing to a growing understanding of LIPs operating at different scales.

Session: WED-13:30-6

Mino-bimaadiziwin: Re-placing food sovereignty for Anishinaabe people

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Human geographers have turned their attention toward the international growth of food movements organized around themes of food sovereignty and food justice. Research within Canada and the U.S. has increasingly focused on low-income neighborhoods and racial minorities yet there remains a need to better understand the experiences of Indigenous communities. This research examines Anishinaabe people's experiences and knowledge of food sovereignty and how this contributes to the social, economic and political goals of self-determination as defined by Anishinaabe people themselves. Through in-depth qualitative interviews with Anishinaabe people of the treaty #3 territory in northwest Ontario and an auto-ethnography, this research creates an intervention in the sub-discipline of critical food studies by problematizing mainstream definitions of sovereignty and self-determination. The prioritization of Indigenous knowledge helps geographers better understand the cultural significance of Indigenous food practices, how they contribute to the (re)formation of Indigenous identities and, how this becomes a pathway towards self-determination. For Anishinaabe people, local food practices become part of the larger process of mino-bimaadiziwin that will be further explored in this presentation.

Session: FRI-15:30-1

The Challenge of Food Sovereignty in Canada: Towards Counter-hegemony, Complementarity and Climate Justice

Bryan Dale, Department of Geography, University of Toronto (bryan.dale@mail.utoronto.ca)

Since approximately 2007, the international movement of peasant and small-scale farmers, La Vía Campesina, has steadily taken up the concept of climate justice. Focusing on the fact that already marginalized people, and farmers in particular, are disproportionately facing the worst impacts of climate change, the movement is pushing for food sovereignty as an important part of the solution to this environmental crisis. As member organizations of La Vía Campesina, the National Farmers Union (NFU) and Quebec's Union Paysanne are two Canadian groups caught up in these struggles. Based on interviews done with farmers from around the world, I will situate the possibilities and challenges for Canadian food sovereignty within the context of the international movement for climate justice. How can farming organizations within Canada challenge the dominant hegemony that supports neoliberal trade regimes and industrial agriculture, while also advocating for solutions that will be complementary to other members of La Vía Campesina around the globe? I will outline several problems that demand further investigation while also establishing climate justice as an important concept that can help advance debates over the feasibility of food sovereignty in Canada.

Session: FRI-15:30-1

Sedimentation and Erosion in Lake Diefenbaker: A 45 Year Record

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Amir Sadeghian, Global Institute for Water Security, University of Saskatchewan

Lake Diefenbaker is a man-made reservoir formed by damming the South Saskatchewan River south of Saskatoon near the town of Outlook. Construction of the Gardiner Dam and the Qu'Appelle Dam started in 1959 and finished in 1967. Since that time, water levels in the lake have been managed for a combination of flood control, power generation, water supply, irrigation, recreation and ecological considerations. The objective of this study is to quantify changes in bathymetry of Lake Diefenbaker since its inception. This study is based on data extracted from the 1940s-1950s topographic maps, 1970s cross-sections, 1985 bathymetry, current topographic maps (1970 to present), and the current (2012-2013) bathymetry. Initial estimates indicate an average deposition rate for the whole lake of 20 Mt y^{-1} for the 1985 to 2012-13 period. Even though this estimate seems high compared to the estimated sediment flux near Lemsford of 6 Mt y^{-1} , previous shoreline erosion studies show high erosion rates, which is also evident in the field. Initial comparison of the available data indicates substantial deposition in the section of the lake upstream of Saskatchewan Landing. Further downstream towards the Gardiner Dam the local shoreline likely becomes more important as a sediment source.

Session: THU-08:30-4

Conducting cross-cultural research: Three graduate research proposals

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Engaging cross-cultural communities in research remains an important approach for producing, disseminating, and controlling knowledge about communities. Yet, studying cross-cultural communities is linked with dilemmas around ethics, politics, power relationships, and positionality between researchers and community participants. Which methods are appropriate for cross-cultural community research? Angelica de Jesus, Sai Paranjape, and Sawanya Phakphian – all graduate students at the University of Toronto: Geography & Planning – will showcase during the poster session three different proposals for cross-cultural, community-based research. The three graduate researchers will present and visually exhibit the purpose, methods, and dilemmas for carrying-out their individual research proposals—each focusing on different cultural groups in varied geographical settings. Angelica de Jesus will share theories and methods for researching climate change impacts on migrant communities living in informal settlements in Thailand. Sai Paranjape will demonstrate research methods for understanding experiences of social and cultural integration of Bhutanese child refugees in Toronto public schools. Sawanya Phakphian will share research methods for investigating the impacts of community-based planning on access to water and sanitation services in urban, low-income communities in Thailand.

Session: WED-08:30-8 POSTER

Small Grounds: Intimate Domestic Geographies and Colonialism in British Columbia

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Neo/colonialism in British Columbia, I argue in this paper, operates through the too frequently overlooked geographies of Indigenous homes and families, places often headed by single mothers and lived in by young children. Specifically, and drawing from more than ten years of qualitative research resulting in (amongst other data) expansive field notes and interviews with more than fifty people living and working the ‘front lines’ of child protection systems in Northern British Columbia, I argue that – contiguous with the violence of residential schooling and other micro-scale efforts to eliminate Indigenous peoples – colonial power asserts itself most profoundly through intervention into and disruption of intimate, ‘tender’ (Stoler – 2001; 2006), embodied, and ‘visceral’ (Hayes---Conroy 2010) geographies. Finally, drawing on feminist, anti-racist, and decolonizing theories, my arguments also respond to what I critique as dominant geographic discourses about colonialism in British Columbia being fundamentally tied to land, resources, and territory, discourses I critique both as profoundly masculinist in their erasure of Indigenous women’s and children’s ontologies and as problematically perpetuating Indigeneity as inherently tied to nature.

Session: TUE-15:30-5

Keeping children's minds healthy – mapping the governance of childhood emotions and behaviours

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Juanne Clarke, Wilfrid Laurier University

The objectives of this paper are to analyze the mass print media portrayal of various childhood mental health issues (CMHI) from 1980 to 2010. The magazines and newspapers selected for the review are from the highest circulating English language press available in Canada and the US. Through systematic searching and categorization, this study maps the dramatic changes in the medical conceptualization of mental health as found in the various subsequent editions of the DSM (Diagnostic and Statistical Manual of Mental Disorders), after the introduction of a new generation of highly popular pharmaceuticals for ADHD (attention deficit hyperactivity) and anti-depressants along with rapid increases in the diagnosis and treatment of childhood autism and other CMHIs. The theoretical and practical consequences of the findings are discussed.

Session: WED-10:30-2

A framework of methodology for examining energy literacy

Runa Das, Ryerson University

Canadian households rely on energy to heat, cool, light their homes, heat domestic water, and operate appliances. Although these needs are largely unavoidable, rising levels of greenhouse gas emissions makes energy conservation an integral part of our energy future. Increasing energy conservation at the household level by influencing occupant behaviour change is an ideal strategy: behaviours performed voluntarily are typically strong and the associated costs for behavioural programs are generally lower in comparison to other tools such as technology. In order to apply effective behavioural strategies more work on occupant level variables is needed. This research therefore seeks to address an under examined area of research with the following objectives: 1) establish criteria for measuring energy literacy; and 2) develop a valid and reliable quantitative instrument to measure energy literacy.

Energy literacy will be broadly defined and then, more specifically, using other literacy frameworks. These frameworks as well as expert consultation will help determine benchmarks and question development. The questionnaire will go through rounds of pilot testing. The first pilot will be an item pilot, which will help determine items for retention and examine the number of subscales that result after analysis. Both statistical and qualitative criteria will be used to determine item retention/rejection. Retained items will be administered to another sample in order to once again examine questionnaire items as well as instrument validity and reliability. Statistical methods associated with factor analysis will be used to dictate the development of this instrument.

Session: WED-20:00-1 PECHAKUCHA PRESENTATION

A newspaper analysis of medical tourism for liberation therapy procedure by Canadian multiple sclerosis patients

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Mobility which involves the movement is not a new phenomenon. Much focus on mobility studies within the social sciences has offered a new 'mobilities turn', which examines the large scale movement of people, objects, images, capital and information across different geographic regions. Despite a couple of exceptions, relatively little attention have been paid on the intersection between mobilities and health. Building on this new mobility turn, our study explores the concept of medical tourism (i.e. patients travelling across their geographical borders for health care). A patient cross border mobility framework was employed to specifically analyze the engagement of Canadian multiple sclerosis patients' engagement in medical tourism for Liberation Therapy procedure. A media dataset of Canadian national and regional newspaper stories were analyzed (n=272). Desperation, hope and rights were the dominant frames emphasized by the news media. News stories also captured patient push factors as they engaged in medical tourism to access a medically contested procedure. We conclude that patient mobility may result in the creation of structural classes as well as inequities in accessing health care in both Canada and destination countries.

Session: WED-08:30-2

Quantifying runoff at the sub-watershed level with a physically based model: field measurements and the SWAT hydrological model

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The SWAT hydrological model is a semi-distributed physically based model. As a physically based model, parameters are measurable in the field and can be implemented into the model. This study aims to evaluate the potential of integrating field data (hydraulic conductivity, bulk density, and leaf area index) into SWAT, and investigates its benefits for a Canadian watershed. Hydraulic conductivity was measured with the Tension Infiltrometer and Guelph Permeameter, while leaf area index was measured using LAI-2000 and digital hemispherical photographs. SWAT can run based on the empirically based Curve Number (CN) or the physically based Green & Ampt (GA) runoff method, both of which are evaluated with and without field data. Without calibration/validation, adding field data improved performance of the GA method for both the calibration and validation years, but the CN method only improved for the validation year. The CN calibrated or validated model did not benefit from field data, but the GA model significantly improved for the calibrated years. It is suggested that hydrological modeling should proceed with physically based models so that it reflects the physical basis of the landscape. Furthermore, implementation of field data has been found to be beneficial for these models.

(Re)Emerging relationships between public health and planning professionals for improved population health

Jennifer Dean, School of Planning, University of Waterloo (Jennifer.dean@uwaterloo.ca)

Over the past 30 years with the rise of WHO's Healthy Cities Program and the prominence of the field of health promotion, there has been a (re)emphasis on the importance of the built environment as a determinant of population health. Given the unprecedented rates of chronic diseases in Canada, understanding the mechanisms through which local environments influence health, and subsequently how to modify these environments to improve health is crucial. Public health interventions involving the built environment are complex, time-consuming, and require collaborative engagement from various sectors and diverse stakeholders including public health and urban planning professionals. This paper presents the results of a mixed-methods study of built and environment and health initiatives in Ontario, Canada. Specifically, the study involved a provincial scan and analysis of current health initiatives focusing on the built environment, as well as key informant interviews with planners, public health specialists and policy-makers in Ontario. Results focus on the current state of knowledge, process of creating supportive environments for health collaborative partnerships between public health and planning, and innovative approaches to designing healthy urban spaces. Future directions for research, collaboration and knowledge translation will also be discussed.

Session: THU-10:30-2

Landscape-scale variability in white spruce (*Picea glauca*) growth across alpine forest-tundra ecotones in southwest Yukon

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The productivity of woody species in many northern regions has been increasing in recent decades, likely in response to climate warming. Some of the greatest change has been observed across forest-tundra ecotones, but the growth response of trees to air temperature has varied from site to site, possibly due to local differences in environmental conditions between sites. To determine how and why the secondary growth of trees under similar climatic conditions varies at a landscape scale, we collected cores from a total of 87 white spruce trees across alpine forest-tundra ecotones on north and south-facing slopes in two different mountain ranges of southwest Yukon. Results to date indicate rings on south-facing slopes are approximately 50% wider than those on north-facing slopes, and rings at low elevations are wider than those at high elevations within the forest-tundra ecotone. Forthcoming analysis will examine differences in annual ring-width variation between samples to evaluate the extent to which secondary growth depends on elevation, aspect and site. The results could have implications for the emerging challenge of divergence and suggest that it is important to understand the drivers of landscape-scale variability in the growth of woody species before making regional-scale predictions about future productivity.

Session: FRI-10:30-2

The Need for Infection Control Plans within Universities to Mitigate Disease Transmission Risk

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Numerous studies have shown that post-secondary students carry a heavy burden from a variety of health challenges that strongly impact use of health services, absenteeism and lost productivity, as well as individual health and well-being. Influenza-like illnesses (ILIs) are a major contributor to this burden, yet the role students play as transmission risk groups within universities and their contiguous communities, has been understudied. One recent Canadian study emphasized young adults as potential drivers of epidemic waves of seasonal and the H1N1 pandemic influenza. Another recent Canadian study has shown how the research results of student behaviour, combined with microbial surface studies in university residences, identified numerous “hot-spots” for disease transmission. Cross-contamination (zig-zag transmission) potential is high in student populations due to place factors such as abundance of fomites, social network patterns, ‘splash-and-dash’ hand hygiene and gendered behaviour. This information has high utility for universities looking at establishing evidence-based infection disease control plans (ICPs). This paper presents evidence for use in universities of ICPs and their appropriate elements such as monitoring, self-assessment using social networks and education and training.

Session: WED-13:30-2

The (Classical) Liberal Case against Locavorism and Food Sovereignty: A (Re)Statement of Some Inconvenient Truths

Pierre Desrochers, University of Toronto

Promoters of the (re)localization of food production (locavorism) and food sovereignty conveniently fail to ask why the food supply chain became increasingly globalized over the last two centuries. This paper synthesizes the case made by nineteenth and early twentieth century classical liberal and other writers and analysts (including several geographers) on behalf of the economic, security and environmental benefits of long distance trade in foodstuff and long food supply chains. Like other local food advocates before them, by ignoring unavoidable constraints and significant benefits a large number of geographers are nowadays promoting production and distribution alternatives that contain the seeds of their own demise.

Session: FRI-15:30-4

Turning Theory into Practice: Lessons Learned from an Alternative Geography of Forest Management in Ontario

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In a world of complex human-environment relations, alternative geographies of resource and environmental management infuse the field with much needed insights. By engaging with an interdisciplinary feminist environmental history framework, that guides theoretical and methodological

approaches in the study of forest management shifts in Eastern Ontario, Canada, it is revealed how nature itself, hierarchies of power, gendered and capitalist relations interact and shape processes of environmental change. Poststructural analyses of resource management discourses demonstrate how shifting constructions of forest knowledge are defined through contested hierarchies of power, which in turn shape forest relations and conditions. Feminist theoretical approaches highlight the differential, gendered impacts of environmental change as well as how gender is constituted in particular ways, in relation to particular environments. Political ecological analyses demonstrate how capitalist and reductionist approaches attempt to control nature and often emphasise production at the expense of other processes. Posthumanist theoretical approaches reveal the forests as an important historical actor. And critical histories highlight the dynamic nature of these relations over time. Together, this hybrid, alternative geography of forest management shows that important lessons can be learned from turning complex theory into practice, and offers more equitable approaches to studying and resolving complex human-environment relations.

Session: TUE-13:30-3

Personal Technologies and Space in the Learning Commons

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This project is a critical ethnography of the Matheson Learning Commons at Brock University focussed on social-spatial relations with personal, mobile information communication technologies (ICTs). Due to digitization and the changing learning habits of young students, academic libraries across North America and Europe have been converting their functionality from book stacks to collaborative study space, called learning commons. As a newly constructed space, I will explore how ICTs are keyed to the development of its normative values. Geographers, who study ICTs, social practices and spatiality have theorised transformations to public urban space, but few studies have been situated in institutional settings, fewer still in library environments. It is generally agreed upon that the introduction of ICTs into the social fabric of everyday life represents a transformation in how normative practices in everyday spaces are understood. I will be observing the learning commons and also interviewing undergraduate students who frequently make use of the commons to better understand the values they place on personal ICTs in relation to the socio-spatial. These findings will be situated in theories of personal mobile ICTs and the mediation of everyday life, specifically through theories of embodied technology usage along with conceptualizing the role of 'cyberspace'.

Session: FRI-15:30-2

Wildfire and Climate Variability in Jasper National Park, Alberta, Canada

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Wildfire is a fundamental, yet complex and poorly understood natural disturbance process. Fire is the primary driver of vegetation structure and dynamics in the forests in the lower montane area of the Rocky Mountains. In this study, a fire-scar based dendroecological approach was used to reconstruct the wildfire history and detect the influence of climatic variability and land use change on wildfire dynamics in the lodgepole pine (*Pinus contorta*) - Douglas-fir (*Pseudotsuga menziesii*) forests of Jasper National Park, Canada. Using improved technology and contemporary analytical methods, 250 cross-section samples, collected by Gerald Tande in the 1970s from around the Jasper, Alberta, townsite, were re-surfaced, cross-dated, and re-measured. Fire scars were then evaluated to ensure annually, and where possible seasonally, resolved fire dates. This fire record allowed for robust inferences about the controls on wildfire dynamics at a range of temporal and spatial scales, which were not previously possible. In particular, we can evaluate the historical role of climatic variability on wildfire dynamics (e.g., climatic influences on fire occurrence and severity) that can help inform sustainable land management practices and help Parks Canada adapt to global environmental change.

Session: FRI-08:30-2

“Us rural people are really suffering to enroll”: Examining the National Health Insurance Scheme in the context of Ghana’s Upper West Region

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Despite its ideals to be a mechanism to create health care access for the poor and marginalized, studies have found Ghana’s National Health Insurance Scheme (NHIS) to be inequitable, especially in the historically neglected Upper West Region (UWR) of the country. Using qualitative methods this paper explores the interrelationship between the political ecology of health of the UWR, public perceptions, and challenges in enrolment in the NHIS. Findings reveal that inequality is not just about poverty, but a reflection of rural livelihoods and historic structural factors which clash with the rigid policy design of the NHIS. In order to optimize health insurance for all, we argue that this policy needs to be better tailored for the rural and deprived context of Ghana.

Session: TUE-10:30-6

Alt-Transport Movements of the 1890s

Michael L. Dorn, Stony Brook University

Tim Cresswell (*On the Move*), and Glen Norcliffe (*Ride to Modernity*) have directed the attention of mobilities researchers to social movements on behalf of non-dominant transit and transportation modalities. A cultural geographer by training, at the CCA- and ESAC-sponsored *pecha kucha* evening I propose to highlight early initiatives to improve travel and trade in Great Lakes region of Canada and the United States. Towards the end of the nineteenth century, wheelmen (and wheelwomen) on both sides of the border allied with canal interests to improve local and regional travel. Images to be featured in the talk include a tourists' guidebook published by the Niagara Falls Advertiser in 1899, and a "side path map" published by the New York State Division of the League of American Wheelmen a year later.

Session: WED-20:00-1 PECHAKUCHA PRESENTATION

Government cash transfer programs and their impact on households' activities in the Brazilian Amazon

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Governments can play a crucial role to support the adaptation of coupled social-ecological systems to climate change. However, little attention has been paid to government cash transfer programs and their impacts on households and communities. Direct transfers to households can deliver measurable positive impacts and effectively reduce poverty. However, it is not clear whether cash transfers can promote households adaptive capacity to climate change over longer time scales. Several cash transfer programs have been applied in the Brazilian Amazon, including an old age pension, a child subsidy, and non-fishing subsidies. In some cases, these transfers can account for half of a households' total income. In order to analyze the impact of these cash transfer programs on household activities and community livelihood, a survey that covered 635 households from 49 communities was conducted in Abaetetuba, Pará, Brazil in 2012. Six household types were determined by conducting cluster analysis based on income source. Preliminary analysis suggests that the relationship between cash transfers and other sources of household income varies across different household types. The impact of these transfers on household activities and community livelihood is discussed in relation to the potential impacts of climate change in the estuary region.

Session: FRI-08:30-4

The Right to Food and the Right to the City: An argument for ‘scaled up’ food activism in Vancouver’s Downtown Eastside

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As food insecurity increases among socio-economically marginalized populations, community-based efforts to address its structural determinants have received particular research attention for their potential to promote justice in food systems. This paper presents a case-study analysis of a nascent Right to Food movement in Vancouver’s Downtown Eastside (DTES), a community where decades of failed government policies and economic disinvestment have produced high levels of poverty and concomitant food insecurity as well as organized resistance and activism. I explored this movement through key stakeholder interviews (n=17) and 10 months of participation at a community-based organization. My findings suggest that local efforts to organize around a Right to Food philosophy may have had some success in challenging dominant discourses and practices of the entrenched charitable food model that dictates the food geographies of many DTES inhabitants. However, these efforts are limited in their ability to ‘scale up’ the Right to Food in ways that might confront those structures that produce uneven urban food geographies in the city. I argue that the barriers to healthful and dignified food access in the DTES are inextricably tied to broader historical contestations over urban space produced by processes of capitalist urbanization. Drawing on Lefebvre, I suggest how the local Right to Food activism could benefit from linking more explicitly to broader collective struggles to reclaim the city.

Session: WED-08:30-2

‘You do anything to protect the land’: Private landowners’ relationships with nature in a developing urban fringe of the Niagara Escarpment, Ontario.

Michael Drescher, School of Planning, Faculty of Environment, University of Waterloo

Land conversion for residential development is among the leading causes of environmental degradation in urban fringes. Policies for public lands are ineffective in these areas because of the high proportion of private land. Therefore, private land stewardship is increasingly essential for reaching environmental goals in these areas. However, little is known about the relationships of private landowners in the urban fringe with their land and its environment. To close this knowledge gap, we inquired into the relationships of private landowners with their land and its environment. Using a phenomenological approach, this inquiry was based on in-depth interviews with private landowners in a developing urban fringe of the Niagara Escarpment, Ontario. The results suggest that private landowners can have deep relationships with their land that are associated with joyful childhood histories of rural living. Environmental activism and pro-environmental attitudes in adult life are often associated with previous encounters of environmental degradation. An interest in nature becomes part of the personal identity and a feeling of belonging to the land leads to the experience of a shared human-natural space. The connection with the land often is a reason for gratitude and pride, leading to the desire to protect the land from harm.

Session: WED-15:30-6

Dinoflagellates and protozoans as proxies for anthropogenic impact: A study from Sluice Pond, MA

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Sluice Pond is a small (18 ha) and deep (zmax 19.8 m) urban pond in Lynn, Massachusetts impacted by the leather tanning/shoe industry and urbanization. Pollen assemblages confirm that a complete late-glacial to recent record is preserved in the deep basin. Three cores were analyzed for microfossils: two Rawley-Dahl cores, SP Core 2 and SP Core 3 from the basin margin (water depth of 4m) and one piston core, Chem-Core from the deep basin (water depth c. 19m). In addition to a number of known dinocyst taxa (e.g. *Peridinium wisconsinense*, *P. willei*, *P. limbatum* and *P. volzii*) cysts attributed to *Peridinium gatunense* and an unprecedented variety of unknown dinoflagellate cysts were found. The additional identification of two types of dinoflagellate thecae (possibly *Parvodinium umbonatum* and *P. inconspicuum*) highlights exceptional preservation resulting from BOD-induced bottom water anoxia. Surface sediments of Sluice Pond reveal severe effect levels of heavy metals such as arsenic and chromium, leading to a sharp decrease in dinocysts in the deep basin (Chem-Core) and an increase in eutrophic indicators (*P.willei*) on the margin. Additionally, protozoans such as the ciliate *Codonella cratera* show a strong relationship with water depth/anoxia ($R^2 = 0.94$) and with heavy metal loading.

Session: WED-08:30-4

Research, Policy & Politics in Healthier Built Environments Change for Ontario

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There is now a large body of evidence showing a relationship between characteristics of built environments and urban form on the one hand, and a variety of health indicators such as physical activity, obesity and even diabetes on the other. This evidence has given considerable fuel to a wide range of advocacy groups who are promoting more dense, compact, transit-oriented, bicycle- and pedestrian-friendly mixed-land use development in both greenfield and infill development, as well as overall curtailment of urban sprawl. This paper will examine the relative roles of research, policy development and politics in future directions for this cause, drawing on existing frameworks on the ways in which public health research can contribute to the policy process. The paper argues first that the policy rhetoric and development is significantly more advanced than the evidence for the public health impacts of built environment change. Specifically, there are significant gaps and weaknesses in the current evidence base that usually go unacknowledged. Rather than signaling more evidence of the same kind, this represents a key strategic vulnerability that needs to be addressed with stronger, quasi-experimental evidence, as well as evidence that is more geared to specific stages of the policy process, namely implementation and evaluation, whereas most effort has been geared to agenda-setting research. The second major argument is that to make a real difference in policy in this area requires a highly strategic reading of complex multi-jurisdictional (municipal, regional and provincial) and multi-sectoral (public health, public works, planning, infrastructure, transportation, etc.), and insertion of key evidence in this dynamic, rather than the simple accretion of more evidence of an association between built environment characteristics and health outcomes and risk factors.

Coffee and Conversation at the Kitchen Table: Diffusing the 'Power-Laden Nature' of Interviewing

Susan Dupej, Department of Geography, York University (sldupej@yorku.ca)

Interviews are social encounters in which both the researcher and 'the researched' are caught in webs of power relations. In my research I adopt a 'conversational interview' strategy to diffuse power dynamics between researcher and participant. I explore what agritourism production looks like 'on the ground' as a lived everyday experience by encouraging the participant to 'takes the reigns', 'steer' the conversation, and 'tell their own story'. Letting the participant speak not only gives more weight to the participant's role, but also leaves room for understanding a phenomenon without imposing an a priori categorization that limits inquiry and preconceives notions about a topic. In this paper I present several examples from my research that demonstrate how conversational interviews play out in practice. This includes using the participant's home as the interview location, normalizing the interview with coffee at the kitchen table, and creating conversational fodder by asking questions about various household items and family pictures. The goal is to remove 'barriers' (perceived power relationships) that might inhibit 'accessing' knowledge situated to specific individual everyday contexts.

A Socio-Ecological History of a Forest in British Columbia, 1959 to Present

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This paper describes the history of a particular forest contained within the jurisdictional boundaries of the Jamieson Creek tree farm license (also known as TFL 35) in the south-central interior of British Columbia (BC), Canada. The license was first issued in 1959 and has since undergone significant change – environmentally, politically, and administratively. Though the discussion is of a very specific place, the account avoids parochialism or provincialism, and describes the history of forestry as a practice involving transnational linkages and local-global processes. The case study is based on administrative parameters, thought of as an advantageous starting point when examining forestry within its managerial and scientific foundations. Yet, the advantage of place-based research is that it can show the contingent nature of absolutes and universals that are employed in the extraction and use of natural resources. In light of this, the paper questions the logic of boundaries and exemplifies how social and cultural 'mappings' often run contrary to lines of formal governance, and points to the porousness of administrative boundaries when it comes to ecological phenomena. Within the managerial paradigm of predict and control that has existed since the post-WWII period, arthropods and fire have repeatedly forced humans to question their managerial ways. These forces of 'disturbance' are also highlighted. Conceptually, the paper draws upon notions of *scale*, *location*, and *globalization* coming from geographical and postcolonial schools of thought; this is explored in conjunction with historical methods and sources (oral history interviews and archives), offering a unique approach to forestry research.

Impacts of New Tourism in Rural and Remote Communities in Jalisco State, Mexico

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Puerto Vallarta is a well-established tourism-based resort community, attracting more than 2 million visitors annually. These visitors are important not only to Puerto Vallarta itself, but to several surrounding communities which have become important destinations for day trips: Yelapa, Sayulita, Mismaloya, and Bucerias, for example. More recently, several other communities surrounding Puerto Vallarta, at a slightly larger range of distances, are planning to expand their tourism base by likewise actively attracting day-visit traffic. This paper reports on a preliminary study which attempts to establish a base-line of perceptions of impacts of tourism in several of these places: Talpa de Allende, San Sebastian, and Mascota, all in the interior of Jalisco State, east of Puerto Vallarta. Interviews with key tourism and municipal officials help illuminate the motivations and strategies underlying the drive to expand tourism, while resident surveys begin to document the expectations of impacts, both positive and negative, on culture, economy, and quality of life in these communities.

Session: FRI-13:30-5

Regression Modeling to Predict Drinking Water Well Vulnerability During a Flood in Southern Alberta

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In June 2013, Alberta experienced devastating floods over much of the southern portion of the province. This flood caused the loss of housing, and physical damage to infrastructure. This research strives to evaluate one of the less publicized impacts of June's flood: how the quality of rural water wells, which are sourced for drinking water, were impacted. The objective of this research was to determine the vulnerability of contamination for private groundwater wells in the Calgary Health Zone during a flood. To complete this analysis, test results for routine water quality indicators, total coliform and E.coli were obtained through Alberta Health Services' Provincial Laboratory (ProvLab) for June 19th through September 30th, 2013. In R 3.0.2, spatial regression modeling was used to determine the attributes that could best predict water well contamination. GIS layers used as independent variables in this analysis included total rainfall in the month of June 2013, attributes of geologic conditions and groundwater, attributes of elevation, proximity to water features, proximity to farming operations, and features of the wells. The produced regression equation was then mapped using ArcGIS 10.2 to produce an aggregated risk surface that indicated the risk of private water well contamination during a flood.

Session: WED-15:30-2

Local Environmental Planning in a Japanese Industrial Cluster: the Case of Higashi Osaka

David W. Edgington, Department of Geography, University of British Columbia (David.Edgington@ubc.ca)

Higashi Osaka is one of Japan's distinctive industrial clusters on the eastern edge of metropolitan Osaka. While it grew rapidly in the 1960s and 1970s, today it faces challenges due to the incursion of residential condominiums and newcomers who commute from Higashi Osaka to downtown offices. Based on field work conducted since 1999, this study charts the land use conflicts between industrial and residential uses that emerged in the 1990s and how these have been resolved partially by Japanese-style consensus decision making and the involvement of stakeholders such as the local industrial association, residential developers and the Higashi Osaka municipal government. Instead of legal planning solutions the outcomes reflect informal environmental management rules and amelioration programs.

Session: FRI-13:30-6

Measuring well-being on a global scale: taking well-being indices out of their comfort zone in order to measure the impact on well-being of targeted economic growth

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For many years, developed countries have used GDP (Gross Domestic Product) as the key indicator of the health of a country, or at least that country's economic well-being. With recent concern regarding the inability of such macroeconomic indicators to adequately portray the true state of a population's well-being, several countries have launched "Beyond GDP" initiatives –one example is the Canadian Index of Well-Being (CIW). LMICs (low to middle income countries) who are on the cusp of targeted economic growth have not yet ventured into this area. Recognizing the timeliness of applying the rubric of a well-being index concomitant with planned, targeted economic growth, this presentation explores the transferability of an index like the CIW to a LMIC context, using the East Africa Region as an empirical example. We start with a comprehensive review of existing measures to discern cultural and geographical relevance to LMICs, and the East Africa Region. Given the importance of well-being indicators (e.g., access to social services, sustainable environmental conditions, governance) to informed policy development and evaluation, we propose that transferability is possible at the level of domain/concept, but substantial work must be undertaken in order to develop socially, culturally and geographically relevant indicators for specific regions.

Session: TUE-13:30-6

Wildlife and Roads: Examining the Incorporation of Wildlife Management Strategies Into Our Road Infrastructure in Ontario

Kristin Elton, School of Planning, University of Waterloo

Our ever-expanding road infrastructure is having a profound negative impact on wildlife populations. Ample strategies, such as wildlife fencing and crossing structures, exist to mitigate these impacts but implementing them in the midst of a growing human footprint and limited financial resources is becoming increasingly difficult. In order for ecological strategies to be successful, we need to understand how to incorporate them in a way that balances the interests of both wildlife and society. The purpose of this study is to examine and understand the incorporation of these strategies into Ontario's road infrastructure. Qualitative semi-structured interviews with decision-makers and key stakeholders will be conducted to determine the experience of each project with regards to the development and implementation of the wildlife management strategy(s); 'experience' will include social, financial, political, legal, technological, and geographic elements. It is important to emphasize that this research is seeking to understand more than the traditional scientific recommendations alone, and instead include the influence of socio-political factors in decision-making with regards to these projects. This information will be analyzed to develop a grounded theory that identifies the key elements that lead to successful incorporation of wildlife management strategies. Using this information, a decision-support tool will be developed. Decision-makers will be able to compare the individual characteristics of their potential projects with the decision support tool to identify its likelihood of success, therefore more efficiently allocating the scarce resources available for ecological protection.

Session: WED-20:00-1 PECHAKUCHA PRESENTATION

Procedural Justice in the Alberta Regional Plan

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Resource allocation is often a contested process, involving various sectors with conflicting interests. The issue of social justice arises when various sectors are concerned about getting their fair share of resource allocation. In Alberta, regional plans are being initiated to integrate the management of water, land, air and biodiversity resources. It is important to understand how such plans contribute to various dimensions of social justice. This research focuses on identifying the interconnectedness of various components of procedural justice in Alberta regional planning which leads to policy makers making better decisions in regards to social and geographical content of regions. The research is based on an analysis of data from four sources: policy documents, in-depth interviews, public opinions posted on various blogs and web sites, and personal observations. Content analysis and thematic analysis methods are employed to identify the critical components of procedural fairness. The study models the complex interrelationship present in the critical components of procedural justice. The analysis reveals nine critical themes of procedural justice by evaluating two plans in Alberta, the Lower Athabasca Regional Plan and South Saskatchewan Regional Plan.

Session: TUE-13:30-3

Farming Flutes and Sands on the Grand-Speed Divide: Detailed Agricultural Landscape Mapping for 2010-2014

Scott N. Ertel, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
J. Douglas Aspinall, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
Zachary J. Steckley, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs

The Speed River joins the Grand River at the southwestern edge of the Preston part of the City of Cambridge in the Regional Municipality of Waterloo. The southern portion of their divide area has become increasingly urbanized. This study focuses on the agricultural areas within this divide landscape. The northwestern corner of the City of Guelph marks the northern limit of this study area. The northern part of this divide area is characterized by a prominent series of fluted glacial landforms with a sub-parallel alignment trending from west-northwest to south-southeast. Closer to the rivers themselves, the sands and gravels of glacial spillways dominate the landscape. A detailed digital polygon framework was developed from the 2010 Southwestern Ontario Orthophotography Project (SWOOP) 20 cm imagery product for this area. It is part of the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013). Detailed field-by-field crop mapping results are presented for the 2010 to 2014 time period. Mobile mapping technology was deployed for ground-truth agricultural management observation collection. High-resolution satellite and airborne imagery were used to augment the visual mapping results. Multi-temporal maps are presented on a detailed digital elevation model (DEM).

Session: THU-8:30-7 POSTER

Nurturing the 'will to live': Understanding harm reduction programs as life-affirming places

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For several decades, the emphasis on abstinence within homeless support systems has presented significant barriers to care for those who continue to use alcohol or drugs further marginalizing them in terms of housing and health/social services. In response, grassroots advocates, health care specialists and policymakers have recommended the integration of harm reduction philosophies and interventions into system-level responses to end homelessness. Managed alcohol programs (MAPs) have been developed to this end and have demonstrated positive results. While recent studies of MAPs have focused attention on reductions in alcohol related harms and contacts with police few have examined their meaning from the perspective of clients who use them. Moreover, even fewer have examined the role of place. In this paper, we utilize the 'personal recovery' and 'enabling places' frameworks to identify the place-bound properties that make a difference in the recovery journeys of MAP clients. Drawing on in-depth interviews with clients from one program in Ontario we develop a description of MAPs as socio-material environments that afford the elemental resources for personal recovery.

Methods and Challenges of Generating Data for Urban HEART @Toronto: A WHO Tool to Identify Health Inequities and Plan City Actions

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Antony Chum, Centre for Research on Inner City Health, St. Michael's Hospital
Patricia O'Campo, Centre for Research on Inner City Health, St. Michael's Hospital
Kelly Murphy, Social Development, Finance & Administration, City of Toronto

Urban Health Equity and Response Tool (Urban HEART) was created by the World Health Organization (WHO) to examine health inequities across a geographic region. It is being used by the City of Toronto to inform the city's future plans for investments in neighbourhoods (i.e., Toronto Neighbourhood Improvement Areas). Urban HEART @Toronto examines the economic, physical, population health, and social aspects of all 140 neighbourhoods in Toronto. This poster will present the challenges and solutions in generating the indicators used in Urban HEART @Toronto. Specifically, we present how spatial and data complexities have been addressed using different Geographic Information System (GIS) techniques to make the indicators more representative of experiences within the community.

Session: WED-08:30-8 POSTER

Valuing landscapes: the culture and economics of wind energy landscapes

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Warren Mabee, Department of Geography, Queen's University
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Wind farms extend the generation of electricity into areas which previously only consumed power. By virtue of their large size and visibility, wind farms are a driver of landscape change with substantial cultural and economic implications. This paper assesses the manner and degree to which wind turbines change landscape values in Ontario, Canada using two approaches. First, a cultural analysis of the origins of the "industrialized" landscape critique is presented which argues "industrial" wind turbines has emerged as pejorative and an opposition rallying phrase partly because seasonal migrants' (cottagers) discomfort and ambivalence over industrial progress and human-environment relations are now more widely shared in the broader rural population. Second, trends in property values are assessed from a sample of 483 properties proximate to wind turbines, in order to describe a financial value for wind energy landscapes. This allows the development of a preliminary cost – distance function for wind farms. Taken together these two approaches advance a broad understanding of the value of wind energy landscapes.

Session: TUE-08:30-4

Building collaboration into the Food Security Equation: Participatory Mapping of Local Food Systems using Volunteered Geographic Information (VGI)

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Food security—a situation where all members of a community can self-reliantly obtain safe and healthy food sources—is a far-reaching issue that spans multiple jurisdictions. The most successful local food initiatives require multi-stakeholder partnerships and participation, and call for greater collaboration moving forward. In the Region of Durham, food insecurity garners significant attention from government, NGOs, and community actors alike. Each stakeholder possesses fragments of valuable information about the local food system; fragments that, if put together, could provide a holistic dataset to assess the entire local food value chain. Furthermore, much of the information these stakeholders possess has a spatial component. This research aims to leverage existing stakeholders to collaboratively map local food system initiatives and resources by “volunteering” their individual geographic information. VGI, part of a larger phenomenon of user generated content, is as much a social phenomenon as it is a spatial process; thus, encouraging collaborative action while generating a valuable source of information for decision-making. In addition, the web-based mapping infrastructure (Geoweb) provides the opportunity to overlay VGI on a sophisticated base of geographic information, including settlement areas and proposed development, potentially revealing inter-linkages between local food initiatives, food insecurity, and the built environment.

Session: THU-13:30-6

Global Community Engagement and Experiential Learning: A Case Study of Student Voluntourism in El Salvador

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Two recent short-term university-student ‘builds’ in partnership with Habitat for Humanity’s Global Village (HFH-GV) program in El Salvador, provided an opportunity to explore experiential learning in this north-south setting. A summary is given of the build-experience, the case study objectives, and an early interpretation of the qualitative data collection – pre & post-build surveys and on-site facilitated discussions with the students. The research talk: raises questions concerning the value of short-duration global engagements; reflects on the bigger picture of such north-south encounters; poses service-learning considerations and needs in this context; comments on appropriate university partnership-collaborations; and muses on effective global-engagement course development in this light. Examination of the students’ aspirations, expectations, observations, and insights, etc. over this period suggests of shifts in their thinking and understanding, while also signaling of the constraints of short-term engagement, and, of limitations to effective service-learning in such experiential forays. Though much is written about the neo-colonial concerns arising with such encounters, I look for hope amidst these concerns with respect to some form of progressive global engagement and learning for our students through such forays.

Session: TUE-08:30-2

Geographic Effects of Home - Work Locations on Immigrants' Labour Market Outcomes: A case study of Chinese high-tech workers in Ottawa

Jing Feng, Department of Geography, University of Ottawa (jfeng027@uottawa.ca)

With the increasing numbers and influence of well-educated and experienced immigrant professionals to Canadian cities, urban geographies of employment have been significantly shaped by the ways that immigrants negotiate between the places where they live, and the kinds of jobs in which they are employed. Using 2006 Canadian census microdata files and multilevel regression modeling, this paper presents a case study that examines the geographic effects of home-work locations on Chinese high-tech workers' employment in Ottawa. In relation to the high-tech industry clusters in Ottawa, this study suggests that the contingency of Chinese immigrants' employment is highly related to the socioeconomic characteristics of places where they live at the census tract level. In addition to examining the relationship between high-tech employment and immigrant geographies of residence and workplace, this study investigates the gendered differences/similarities of social and spatial processes of employment. The results suggest that Chinese immigrants' residential concentrations contribute to their employment in the high-tech sector, but that the magnitude of this relationship is different for men and women.

Session: FRI-10:30-6

Understanding Gendered Food Security in Peri-Urban Households of Punjab

Garry Fehr, Geography and Environment, University of the Fraser Valley (Garry.Fehr@ufv.ca)

Theories of food security have been re-scaled from national scales of food production and distribution to the level of communities, households and individuals. It is also well documented that women tend to be more food insecure than men due to gendered household and community relations. This research uses household data from a rooftop agriculture project in a peri-urban community of Chandigarh, India to provide a more nuanced understanding of urban household food security. Factors that are considered in this study include food consumption, household structure, class, gender, livelihood activities, income, home ownership and longevity of residency. Overall at the community scale, inflation has heightened an increasing food security gap between peri-urban households that is dependent upon whether livelihoods are situated in the formal sector or the informal sector. Within households, female food security is highly influenced by the sector in which livelihoods are situated relative to livelihoods held by other household members.

Session: FRI-13:30-6

Strengthening Community-Based Climate Change Adaptation Geo-Visualization and Design Techniques

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As understanding that coastal change resulting from sea level rise and changes in extreme events improves it must be translated into detailed understanding of the implications for infrastructure, safety and security, and heritage resources to inform community-scale climate change adaptation planning. This presentation examines innovative stakeholder-based decision support process being utilized in the ParCA project. An interactive 3-D geo-visualization platform known as CLIVE (Coastal Impacts Visualization Environment) that allows stakeholders to interactively explore scenarios of future sea-level rise and storm surge along PEI's shoreline will be presented. Geospatial Web 2.0 technologies are also explored for its ability to foster dialogue among decision-makers, researchers, and stakeholders. A Nova Scotia-based pilot project to explore the potential of combining Scenario-Based Stakeholder Engagement (SBSE) with emerging participatory geospatial technologies that allow stakeholders to interact with and update dynamic on-line maps that synthesize multiple data streams for decision support is also examined.

Session: TUE-08:30-1

The Trashy Past of Edmonton's Parks: A Preliminary Module for the Ribbon of Green Digital Historical Atlas

Michael Ferber, William VanArragon, MJ Valiquette, The King's University College

Edmonton possesses the largest interconnected parkland in North America. Unlike other urban parks, such as those in New York City or Vancouver, there is little scholarly research on the history of this environmental and recreational treasure. We are creating a digital atlas showcasing the historical development of the parks system. Initially funded by a grant from NiCHE, and now through SSHRC, the digital atlas will showcase the history of the river valley through a number of digital online modules. This poster highlights preliminary research for a module on parks that originated as landfills, including Edmonton's Emily Murphy Park and Rundle Park, which are both located in the city's famously aesthetic river valley. Through an analysis of historical primary documents and contemporary local, provincial, and federal legislation, we will discuss the positive and negative implications of transitioning landfills to parks in Edmonton within different eras.

Session: WED-08:30-8 POSTER

Lindsay 360: a detailed agricultural landscape geography study of the central Kawartha Lakes watershed

Tim Ferguson, Sir Sandford Fleming College

Sarah Pettes, Sir Sandford Fleming College

Dave Schofield, Sir Sandford Fleming College

Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs

This “Lindsay 360” project was developed collaboratively between students in Sir Sandford Fleming College’s (SSFC’s) intensive geographic skills development programs and the Ministry of Agriculture and Food and Ministry of Rural Affairs (OMAF/MRA). Its core activities involved crafting high-resolution digital map and database products for agricultural and rural landscape information within the central Kawartha Lakes watershed area surrounding the SSFC Frost campus in the Town of Lindsay. High-resolution digital orthophotography images from 2008 and 2013 regional coverages were used as the base imagery for manual digitizing of incremental 5 km radii areas centred on the campus location. All landscape features were delineated within a seamless polygon framework according to protocols established by OMAF/MRA for the Ontario Agricultural Resource Inventory (AgRI). These 2008-version and 2013-version AgRI frameworks were directly compared to produce a 2008-2013 change detection layer for this agricultural landscape. Mobile mapping technology, equipped with an AgRI-specific ArcPad script, was used to capture field observations of local cropping systems in Spring 2014. These observations were attributed on-the-fly directly to the area’s farm field polygons. The area’s first field-by-field Ontario AgRI cropping system ground-truth map was produced.

Session: THU-8:30-7 POSTER

Determining the Quantity of Data Required to Effectively Model Hummock Terrain

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This geomorphometrical study was conducted to determine the most accurate and efficient interpolation method for hummocky terrain with subtle elevation changes. Primary elevation data was collected on hummocky terrain using a S320 GNSS Survey Receiver, interpolated using GIS, and run through a Monte Carlo simulation on MatLab. This analysis was done to determine the number of primary data points necessary to sample in order to accurately and efficiently model hummocky terrain. Research was conducted in Georgetown, Ontario, a region with extensive coverage glacial landforms resulting from Wisconsinian glaciation. It was determined that such terrain is best modeled using Ordinary Kriging, that the ideal number of points, when taking into account efficiency of data collection, should be about 300 for a 100 by 200 square meter area, and that such terrain appears flatter when fewer data points are analyzed in its interpolation. The increased understanding of the subtle relationship between landscape slope/curvature and interpolation error will improve the accuracy of future geomorphological studies.

Session: TUE-08:30-7 POSTER

Bathymetric Visualization of Contaminated Sediments in Lake Ontario

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The Great Lakes of North America contain approximately 20% of the world's fresh water. Lake Ontario is the smallest (18,960 square kilometres) and second deepest (average depth 86 metres) of the lakes. This research used '3D' bathymetry to visualize the distribution of contaminated sediments. Historical and contemporary sediment sample records were obtained through the Environment Canada Great Lakes Sediment Quality Assessment Program. The bathymetry data resulted from a joint effort between the United States National Oceanographic and Atmospheric Administration (NOAA) and the Canadian Hydrographic Service (CHS). The ordinary kriging geospatial analysis technique (as implemented in ArcGIS) was applied to generate sediment surface layers that were draped over the bathymetry data. The results indicate that contamination continues to be a source of concern in Lake Ontario. Decreased levels have generally been observed, however problem areas still exist. Higher concentrations were mostly found in proximity to traditional industrial areas, inflowing rivers and in deep lake basins where pollutants tend to migrate over time. The bathymetry data considerably enhanced the visualization of contaminant distribution relationships and enable a better understanding of the observed pollution patterns.

Session: TUE-08:30-7 POSTER

ESPOIR Ecuador: Representations Of Women And Reflections On North-South Connections

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This paper draws attention to the nature and practices of representation of women in micro-financing promotional discourses. The study of these discourses is important because they shape mainstream notions of development, raise awareness of and attract lenders/donors to micro-financing programs in favour of women. More importantly, the way women's stories and development issues are represented and conveyed by micro-financing NGOs matters because it reflects complex North-South relations and provides critical insights into who is served, who is borrowing and who is profiting. For the purpose of this analysis, the examination of ESPOIR's promotional discourses is used as an instrumental case study. ESPOIR is a successful Non Governmental Organization (NGO) that provides micro-credits for women in Ecuador. I undertake a discourse analysis of ESPOIR's marketing materials from a feminist geographic perspective in order to examine how women are represented and how their stories are framed. This discourse analysis is supplemented by an ethnographic examination that allows exploring the reasons and motives behind ESPOIR's discourses and the beneficiaries' interpretations of the portrayals of women used in these artefacts. Drawing on Feminist Geography and Critical Development studies, I argue that the representations of women in micro-financing promotional discourses have been increasingly reshaped by neoliberal configurations of power; and that by portraying women in roles such as entrepreneurs, mothers, and agents of development, these representations reinforce the conceptualization of women as key actors

in the development process, not only of their households but also of Ecuador as a nation. This conceptualization elicits conflicting and contradicting implications that may either empower women or exacerbate inequality issues that undermine gender equity.

Session: TUE-13:30-5

Boundless creativity and a strategically 'bounded' community: exploring rights to (and in) place in Vancouver's Downtown Eastside using arts-based methods

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Using multiple methods – archives, interviews and participatory arts-based methods – the research project “Revitalizing Japantown?: a unifying exploration of Human Rights, Branding and Place” strives to contextualize and thread together the multiple dispossessions of DTES residents, from the original colonization of Coast Salish people through to the intensifying gentrification and community asset-stripping ongoing today. Using participatory arts for research about human rights, identity and place brings up many questions and opportunities. This paper explores the dynamics of locally grounding a perhaps ‘universalist’ discourse of rights, and the resulting implications for expression and resistances that honour and privilege the place of the DTES, particularly the Low-Income community. In addition, the project’s two key arts-based research partners serve multiple-facing communities: Gallery Gachet is located in the DTES but is a hub for artists living with mental health differences from across the city, and the Nikkei National Museum, which engages with the history of (and dispossession forced by) the WWII Japanese-Canadian Internment with Japanese-Canadians nationwide. How can differing processes of creating, experiencing, analyzing and eventually curating participatory art create dialogue on human rights in the DTES both within and beyond its bounds?

Session: THU-13:30-5

'We Need More of This': Benefits of a University-Community Rural Land Use Planning Partnership

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The ability of many rural places to grapple with the challenges they face is often hindered by a lack of community capacity, particularly within the realm of economic development and land use planning. Hiring outside consulting firms to provide direction in these areas is also often beyond their budgetary means. However, given growing calls for universities to engage in community-based research and to provide students with practical experience, there is great potential for university-based Geography faculty and students to engage in partnerships with rural communities that can benefit everyone involved. This presentation will document one such initiative, a five-year-long project through which the presenter and seventeen undergraduate Geography students worked with the community to craft a new official plan for the Township of South Algonquin, an amenity-rich but economically-depressed rural municipality adjacent to Algonquin Park. Through this partnership, the Township witnessed the adoption of a formal land use plan

that will guide future planning and development decisions, the students have earned “real world” experience that has contributed to their pursuit of planning-related careers, and the presenter has furthered his research about the rural community economic development process. This initiative can serve as a model for geographers considering similar university-community partnerships.

Session: TUE-10:30-4

Health risks associated with hydroclimatic hazards and extremes: the case of cold and warm spells across various Canadian areas

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According to the last assessment reports of the Intergovernmental Panel on Climate Change, new scientific evidence has revealed that potential risks associated with weather-related hazards are on the rise across the world, owing to the increasing frequency and severity of extreme temperatures among others, linked to climate variability and change. In Canada, there is a clear need to better evaluate if new patterns of risks are emerging, i.e. if the current level of risk associated with these hazards will be exacerbated in the future to mainly enhance early warning systems. Under the research project (IRIACC-FACE), a work on redefinition of heat and cold waves’ indices for health application is presented. The indices combine several criteria of occurrence, duration and intensity in links with the impacts on the health of populations, and in taking into account regional climate conditions. Using various observed products and different simulations of regional climate models, trends in cold/warm spells are evaluated over both current and future climate. The results reveal that changes in cold/warm spells are underway over the historical period, mainly over southern and eastern Canada, and these changes will be exacerbated and will be spatially extended towards north and west of these areas in the future.

Session: TUE-13:30-1

Lifestyle Centres in the Greater Toronto Area, Current Developments and Future Prospects

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The design and organization of retail space plays a vital role in business success and consumer satisfaction. For decades, retail developers have altered built design to adopt new store formats, diversify store mix and incorporate leisure, services and entertainment components to attract and retain consumers. Retail format and focus tend to reflect the local market, resulting in a diversity of retail structures over a large urban marketplace. The most recent addition in retail format has been the lifestyle centre. The emergence of lifestyle centres, it is proposed, reflect a dissatisfaction on the part of some consumers with existing shopping centres and power centres and an eagerness for a shopping experience that combines leisure and retail within creatively design space. Lifestyle centres focus on affluent and informed consumers and

developers typically locate them close to high income neighbourhoods. This paper explores the development of lifestyle centres in the Greater Toronto Area through an examination of location characteristics, market focus, store mix and built design. It probes the reasons for the development of such centres, considers their role in the retail economy and investigates the prospects for further expansion of this retail format.

Session: WED-10:30-6

Variations in Sense of Place across Immigrant Status and Gender: Relationship to Air Quality Perceptions amongst women in Hamilton, Ontario, Canada

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The objectives of this project are threefold: (I) to establish measures and determinants of *sense of place* across immigrant status and gender in Hamilton, Saskatoon, & Charlottetown; (II) to compare air quality perceptions and associated coping strategies between immigrant and Canadian-born women in Hamilton; and, (III) to determine if evaluations of *sense of place* inform perceptions of air quality among these women. Ordered logistic regression determined four significant predictors of *sense of place* among Canadian-born and immigrant residents of the three cities in question: income; age; neighbourhood length of residence and, city of residence. Focus group data suggested that Canadian-born women were more aware and knowledgeable about air quality, compared to their immigrant counterparts. Differences in air quality perceptions amongst the two groups may be due to: lower socioeconomic status among immigrant women; comparative views of air quality; and, relative variation in levels of environmental concern across countries. Bringing the qualitative and quantitative data together, it appears that individuals with a higher *sense of place* (i.e. Canadian-born respondents) are more aware, knowledgeable, and concerned about higher-level environmental issues in their neighbourhood (i.e. air quality). It is suggested that Canadian-born individuals actively include immigrants in efforts to address local environmental issues.

Session: WED-15:30-6

There once were apples on the shore: land management history on a shorefront Norfolk County farm in relation to soil erosion and runoff

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The Leedham family has managed a Lake Erie shorefront farm in southern Norfolk County for the past nine decades. Apple orchards were established in 1937. They were cropped continuously until 1996. Some livestock were pastured until field management was converted to entirely cash cropping. The current cropping system rotates approximately 50 acres of soybeans across the farm's fields which are otherwise cropped continuously in grain corn. Carolinian forest occupies a steep slope along the Inner Bay shoreline of Lake Erie along the farm's southern edge. The farm's soils had been mapped as belonging to the Kelvin catena (Muriel, Gobles, Kelvin; Present and Acton, 1984). These soils developed on the regionally-extensive Port Stanley glacial till. Pockets of sandy glaciolacustrine materials overly this till in the region. Soils on

them were mapped as the members of the Bookton catena (Bookton, Berrien, Wauseon; Present and Action, 1984). This study examined the soil erosion and runoff implications of the farm management history of the shorefront field on this farm. The GeoWEPP model (Renschler, 2003) was employed to model scenarios that include the actual farming history, continuous apples and continuous cash cropping. The latter scenario yielded the most runoff and soil erosion.

Session: THU-8:30-7 POSTER

Understanding the factors determining the spatial distribution of boreal birds in Quebec: a multivariate approach

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Climate has been proposed as a key factor in the distribution and abundance of bird populations and will be one of the main drivers of ecological changes in upcoming decades. Climate variables, followed by elevation, appear to be key variables shaping the distribution of avian species, as suggested by numerous studies. The boreal region of Quebec provides a rich environment for migratory bird species. However, climatic changes have altered the ecological status, impacting the distribution and behaviour of both resident and migratory birds. The study aims to get a better understanding of the relationships between multi-temporal data of bird abundances and presence/absence with climate and elevation, in order to clearly identify the driving variables in adaptation and spatial patterns distribution of boreal birds. The explanatory datasets used are climate variables, elevation, forest cover and anthropic disturbances. The response variables were bird abundance data, courtesy of eBird and species area ranges, courtesy of NatureServe and BirdLife, for thirty different bird species. The methods used for the analysis were multiple stepwise regression and redundancy canonical analysis. The results of this study can help to better understand the spatial and temporal relationships between boreal birds' spatial distribution and climate change.

Session: WED-15:30-1

Reducing heat wave risks to human health in Canada and Africa through the use of warning/management tools

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While the relationship between heat waves and mortality has been well established for decades, this doesn't imply automatically that health authorities currently implement recommended surveillance and preventive strategies to reduce the burden on vulnerable populations, either in Canada or Africa. Several factors can help explain this state of affairs. While they are increasing in frequency and severity with climate change, heat waves remain rare events usually lasting only a few days. Excess mortality often hovers between 30 to 150% over baseline, but this remains difficult to highlight except in big cities

equipped with real-time surveillance systems, which is another rare occurrence. Finally, preventive and protective measures require extensive data on and knowledge of pre-existing health determinants and meteorological exposure on a spatial basis, an even rarer event in Canada or Africa, not to mention adequate funding. We present the current situation of Quebec, Morocco and Niger regarding heat wave preparedness and the potential contribution of the SUPREME system for prevention and real-time surveillance, within the International Research Initiative on Adaptation to Climate Change. The system's generalization to other extreme meteorological events allows it to become an effective tool for enhanced preparedness and cultural change in the field of public health.

Session: TUE-13:30-1

Climatic potential for agriculture in Ontario's Far North

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The warming climate of Ontario's Far North has allowed for the possibility of local agriculture. A pilot community garden project has proven to be successful in Fort Albany since 2011. In this work we examine the potential for such projects in the following communities in Ontario's Far North: Fort Albany, Moosonee, Attawapiskat, Lansdowne House, Big Trout Lake, Peawanuck and Fort Severn. In particular we use the growing requirements of potatoes, 1000 growing degrees, as the metric of agricultural viability. Using climate projections to 2100 we identify agricultural timelines for each of the communities.

Session: FRI-10:30-1

The (d)evolution of social housing in Canada: a comparative study of municipal and provincial governance in Toronto, ON and Vancouver, BC

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Neoliberal policies have been widely adopted and implemented in capitalist societies. Canada is no exception, as neoliberal strategy is evident at the federal, provincial and municipal levels. Examples of this can be seen in Canadian social housing, among other areas of policy. Since the 1990s the ways in which social housing is managed and funded have changed significantly. Through devolution the federal government's role has decreased considerably, resulting in increased responsibilities for provinces and municipalities. While most provinces now manage social housing portfolios, Ontario is the only province to subsequently devolve its responsibility to the municipal level. Given reduced levels of government funding, providers are increasingly challenged to find new and innovative ways to assist in the delivery of social housing. The purpose of this research is to examine if and how varying levels of government devolution

have produced, and are producing, different outcomes in social housing at the local level. This is achieved through an in-depth comparison of Toronto and Vancouver, two of Canada's largest cities. The results highlight how neoliberal policies are experienced differently across both time and space, the complexity of policy devolution, and the role of local path dependencies in social housing provision.

Session: FRI-10:30-5

Managing Natural Resources in the Northwest Territories: Successes, Challenges, and Scale

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The Northwest Territories: the final frontier of sustainable resource management, one of the most pristine areas of Canada, covers over 135 million hectares and sustains a population of only ~44,000 people. With a demographic of nearly equal proportion Aboriginal to Non-Aboriginal people, our communities are governed through balancing both traditional ways of life and 'Western' economies. Currently there are four settled land claims, three asserted territories, and many overlapping and disputed traditional use areas, proposed conservation areas, and royalty interests. My presentation explores the NWT's natural resource management approach and highlights successes, challenges, and issues of scale. Using an example of a pellet mill, the presentation illustrates how a new economic driver has been introduced while addressing traditional knowledge, local government interests, community perspectives, and cumulative effects.

Session: TUE-13:30-3

A role for local values in climate change adaptation: Exploring opportunities for place-based adaptation in Churchill, Manitoba

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The need for proactive climate change adaptation is broadly recognized, and local governments are already working to identify probable impacts, assess key vulnerabilities, and define opportunities for resilience building. However, current adaptation approaches do not generally recognize intangible community dimensions like risk perceptions or cultural values. This is an issue, because values can contribute to community vulnerability, yet are also an important foundation for identifying culturally appropriate adaptive pathways.

This mixed methods case study evaluates the efficacy of an emerging place-based adaptation model that is believed to address deficiencies in current adaptation processes. A community survey in Churchill, Manitoba reveals that citizens' experiences with local climate change are intertwined with their social connections to the landscape. Moreover, in-depth interviews suggest that the influence of the global climate change agenda in Churchill, has paradoxically, contributed to a sense of disempowerment that is suppressing opportunities for local climate action. These findings provide empirical evidence that supports

the place-based adaptation concept. More specifically, they inform strategies for supplementing current adaptation processes in a way that can help to ensure local values inform policy development.

Session: THU-10:30-1

Putting the 2011 “Big Flood” Into Context: Using tree rings to understand the patterns of floods and droughts in Southeast Queensland, Australia

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In Southeast Queensland (SEQ), Australia rainfall has been proven to play a major role in extreme climatic events. The catastrophic Lockyer Creek flood of 2011 cost \$2.3 billion and took 38 lives. This flood was thought to be a 1 in 1000 event however, preliminary research using optically-stimulated luminescence dating of past flood deposits has indicated that similar sized events could in fact occur much more frequently. In order to determine the accuracy of these recurrence intervals a better understanding of the flood and drought patterns of SEQ is needed. Current flood records extend historically into the 18th century but are only of significant strength and accuracy over the past 40 years. This project uses dendrochronology, tree-ring records, to develop a long-term rainfall record from *Araucaria cunninghamii* trees from a site at Lamington National Park in SEQ. This rainfall reconstruction will be used to determine a long-term flood and drought pattern for the region which will be the first long-term (>150yrs) of its kind in subtropical Australia. Preliminary results of this reconstruction using ring widths will be presented along with strategies for future research using a multiple technique approach.

Session: FRI-08:30-2

Building a Place of Wellness and Success: A Geographer’s Perspective on Institutional Mental Health Strategies

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The issue of mental health and wellness on university campuses has become a hot button issue for students, staff, faculty, and administrators. There is an evident shift in the role and responsibility of post-secondary institutions with regard to the mental health and wellbeing of their campus communities. In particular, as universities seek to increase student persistence and academic success, campuses are challenged to address ways to support students who are struggling with stress, anxiety, sleep problems, depression and other issues that their coping skills and are factors associated with lower GPA, reduced course loads (and therefore increase time to completion), and stopping/dropping out. This paper will review, using the example of a new University of Manitoba strategy for mental health and wellness, how a critical eye to the importance of ‘community’ and ‘sense of place’ can inform the work of building a post-secondary institution that is a place of wellness and success.

Rural Road Construction in the Global South: How Does Process Shape Outcome?

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Rural roads in the Global South are understood as ‘symbols of modernization’ by both agents and beneficiaries of development, because they facilitate communication and transportation. The existing literature focuses on the social, economic, political, cultural or environmental impacts of roads, but has given little attention to the context of road construction itself. This is problematic, because between the aspiration to construct roads and their eventual social, cultural, economic, political and environmental outcomes lies the actual process of road construction, which inevitably shapes roads’ impacts on the rural populations they serve. This paper takes road construction itself as an object of inquiry, arguing that how roads are built, by whom, through what labor processes, and with what capital inputs, is integral to their effects on local populations. In so doing, it will discuss the existing scholarship on impact study, political economy and political ecology, and an emerging field of mobility studies in order to develop an approach to studying road construction in the Global South. It will argue that the most important insights from a social justice perspective can come from a “cultural politics” perspective.

Session: TUE-15:30-4

New Frontiers of Rural Ageing: Resource Hinterlands

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Rapid population ageing is underway in hinterland regions of many industrialized nations, creating a widespread need to transform resource dependent communities into more age-friendly places. Government and private sector interests, however, are often reluctant to take up many of the challenges of supporting healthy ageing in these challenging service environments, leaving much for the local voluntary sector to look after. In many ways, therefore, resource hinterlands represent a “frontier” in rural ageing research. In a literal sense, remote resource communities are the most recent settings to experience population ageing. But there is also a sense in which the social and spatial dynamics of resource communities offer fresh insights into rural ageing processes. We outline three figurative “frontiers” of rural ageing research offered by examining resource community adaption to population ageing. The first is the interconnected processes of place making and healthy ageing initiatives. The second is the reconsideration of agency and change processes that accompany resource frontier ageing. The third relates to policy debates with respect to the role of civic society in contemporary systems of governance. We conclude with thoughts about future directions in “resource frontier ageing,” including theoretical, methodological and policy considerations.

Unpacking Canada's access to specialist health care services: Evidence from four Canadian provinces

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Though specialist health care services are covered through provincial health insurance plans in Canada, a recent international comparison of health care access across 11 countries reported that Canada ranked the worst in terms of accessing specialist healthcare services (e.g., oncologists, cardiologists etc.) as measured by time spent waiting for an appointment. Much of what we know about access to specialists in Canada comes from research conducted at large geographical scales (i.e., international comparisons) and regional studies, with a relative lack of research that has adopted inter- or intra-provincial perspectives. This study pools two cycles of the Canadian Community Health Surveys (2010, 2011/12) to analyze an optional content module related to accessing specialist health care, administered in British Columbia, New Brunswick, and Newfoundland and Labrador (2011/2012), and Ontario (2010). Using logistic regression, we analyze individual (i.e., demographic, socioeconomic, health status), and place-based factors associated with difficulty accessing specialist services when required. Paying particular attention to vulnerable populations, and geographical differences, we also examine the primary reasons why respondents reported experiencing difficulties. The relevance of the results to specialist health care delivery and policy in the Canadian context will be discussed.

Post-storm damage survey of tornadic events in Canada: Implications for disaster risk reduction and policy

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Tornadoes are an important hazard that must be considered in disaster management in many parts of Canada. Following a tornadic event, damage surveys are conducted by Environment Canada to determine the extent and severity of the damage, and to assign an Enhanced Fujita scale rating. Very little research has been conducted into the effectiveness and potential of these surveys in Canada. This study identifies the strengths and future opportunities for these surveys in Canadian disaster management by documenting the methodology behind them. A secondary review of the literature was included as part of the research. Various journal articles, web-based materials from government and disaster organization websites, reports, and conference proceedings relating to disaster management, risk reduction, and tornado hazards in North America were consulted. Primary research for this study involved conducting semi-structured interviews (n=12) with Environment Canada damage surveyors from various provinces, and wind engineering researchers from Western University in London, Ontario. It was found that the majority of surveys are now conducted remotely through photos, videos and phone interviews with key witnesses. Based on the

results, the damage surveys were found to be critical in the disaster management cycle by feeding back into risk reduction and preparedness.

Session: FRI-13:30-1

Methodological approach for dendrochronological analysis of *Juniperus communis* in Saskatchewan prairie

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Background and Aims: Dendrochronology is a key component in understanding past and future climatic changes on the prairies of Saskatchewan. The purpose of this research was to assess the dendroclimatology potential of a prostrate shrub, *Juniperus communis* (Common juniper), given that trees in the prairie region are found generally only around water sources and tend to be short lived.

Methods: Approximately 25 discs from 5 plants of Common juniper were collected from plants growing on sand dunes in the north-east region of Douglas Provincial Park, Saskatchewan. Three stems from each plant were sampled, by cutting discs ~2cm thick. Cross-dating was performed with skeleton plots and the COFECHA program to understand the ring growth pattern. The ring-width chronology was developed by fitting a negative exponential function or a straight line of any slope with the ARSTAN program.

Key Results: The study shows a great potential for the use of Common juniper in future dendroclimatological research in the prairies of Saskatchewan. The key attributes of the Juniper potential are the long life, well-defined and highly sensitive growth rings, and strong correlation of ring growth throughout and amongst the individuals.

Conclusions: Common juniper provides new research opportunities for investigation into past and future prairie climatology where limited shrub and tree selection is available.

Session: FRI-08:30-2

Understanding the statistical bias of geographic scale in environmental inequity research

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An ongoing emphasis of environmental justice research has been the need to improve spatial methodologies to advance our understanding of how differing spatial contexts produce observed patterns of environmental inequality. Spatial methodologies can reveal relationships between society and the environment, but are susceptible to bias when point source data is aggregated to geographic units. This paper investigates how changes in the geographic unit of analysis influence the statistical significance of the relationship between prevalence of low-income and point source air pollution emissions in Scarborough, ON. We use a kernel density estimation to create an aggregate toxicity surface from multiple chemical

emissions from a range of facility types. That surface is then compared to low-income prevalence through a bi-variate spatial correlation analysis at several spatial scales. We identify variation in the spatial patterning and indication of environment inequity when spatial units of analysis are shifted from the dissemination area, to census tract, and to neighbourhood level. This paper has implications for researchers, advocates, and practitioners interested in public health and environmental inequality. Further, this paper facilitates increased understanding of the modifiable areal unit problem and the use of aggregated data in environmental justice decision-support.

Session: THU-13:30-6

Gunkanjima (Battleship) Island from Industrialisation to Decay: A Modern Industrial Heritage Tourism Site in Japan

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Hashima Island, also known as Gunkanjima (Battleship Island) is located off the coast of Nagasaki, Japan. The base for an undersea coal mining operation run by Mitsubishi Corporation from 1890, the island is less than a square kilometre yet by 1960 it was home to close to 6000 people, one of the highest population densities ever known. To accommodate the residents, large concrete apartment complexes were built up to 10 stories along with schools, restaurants, baths, a hospital, a cinema and a hotel, all surrounded by a seawall taking on the shape of the Japanese Battleship Tosa. The mine closed in 1974 and the Island now stands abandoned and in decay. In 2009 it was the focus of the History Channel's series "Life After People" showing the decay of concrete buildings after 35 years. In the same year tourists were allowed to visit the island and within 4 and a half years, 400,000 visitors have landed on the island. In 2012 the James Bond film "Skyfall" was set on the island. The island is included in a submission to be on the UNESCO World Heritage List as part of "The Modern Industrial Heritage Sites in Kyushu and Yamaguchi". This presentation will examine the significance of the island in terms of architecture design, planning and community development during Japan's rapid industrialisation period on Hashima island which is now a popular "modern industrial heritage tourism" attraction in decay.

Session: WED-08:30-6

Growth and Erosion: Reflecting on the Dominant Paradigms of Salt Marsh Morphology

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Changing perception of salt marshes, especially the shift from human mastery of marsh environments in the industrial period using sophisticated diking and drainage machinery (1850-1980), to their preservation and restoration in the post-industrial era (1980-), has been the subject of numerous studies. Little study, however, has been given to the evolution of scientific thinking about salt marshes, especially the rupture between the explanatory paradigm of continual marsh formation in the industrial period, and the post-industrial paradigm of generalised erosion. How is this radical interpretive shift explained? Was it driven by

environmental change, new methodologies, or socioeconomic events? Using a critical geohistorical approach to this problem, this study illustrates how inadequate understanding of this rupture is at the root of an epistemological problem that restricts investigation of alternative explanations of marsh evolution in the St. Lawrence Estuary and has important implications for coastal management.

Session: THU-10:30-4

Visualizing the Cold War in a Northern Ontario Cree Community

Sue Heffernan, Geography Department, Laurentian University

My PhD research focuses on the small Cree community of Moosonee as a case study of Cold War impacts at a local level. Moosonee had its own radar base -- part of the Pinetree Radar Line — from 1961 to 1975. During the life-span of the Moosonee base, it appears that the local Cree and non-Cree residents of Moosonee co-existed in a symbiotic relationship with air force staff and families on the “Sasakipao’ radar base. Thesis research links archival narratives, interviews and air photos in order to understand personal and community impacts of the placement of a radar base directly beside a small indigenous community. My research also uses photo-elicitation to facilitate ‘visual-mapping’ of personal and community changes within Moosonee during the Cold War. My presentation will use aerial photos from the 1960’s to demonstrate landscape change in Moosonee and to link physical changes with personal dynamics. I will also indicate the apparent contradiction between data from military archives and the recollections of people who lived in Moosonee during ‘the base’ days. My research is conducted within the Human Studies Interdisciplinary program at Laurentian University in Sudbury, Ontario.

Session: THU-10:30-5

Navigating Jurisdiction: Local and Regional Strategies to Access Economic Benefits from Mineral Development

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Concepts of territory and jurisdiction are being used to create places of benefit from resource activities in remote rural regions. Our case study of mineral development in northwest British Columbia compares the experiences of First Nation and municipal and regional governments in accessing economic benefits from mineral development. Territorial land claims are changing the multi-scalar jurisdictional hierarchy and the socio-spatial relations between senior levels of government, resource companies and local communities. The territorial rights of First Nation governments provide the political leverage to negotiate with companies seeking to “earn a social license” to operate within their territories. Municipal and regional governments, however, are restricted by their role in the multi-scalar jurisdictional hierarchy. In response, municipal and regional governments are devising strategies to capture economic benefits. We discuss three economic development strategies used to access benefits from mineral development activities: negotiating commitments during the environmental assessment process, investment attraction strategies, and lobbying the Provincial government for a share of the resource revenues generated from mining. These strategies

reflect the political and economic context for local government in remote resource-dependent regions and the changing socio-spatial relations between senior levels of government, resource companies, and First Nation, municipal and regional governments.

Session: THU-13:30-2

I Set My Intellectual GPS to (Neo)Liberalism – You Won't Believe What Happened Next: Negotiating the Epistemic-Affective Boundaries of Academic Geography

Victoria L. Henderson, Queen's University

The intellectual geography of neoliberalism has a definitive roadmap. Rooted among adherents of the Austrian School of Economics in Europe and the United States, neoliberalism – according to academic geographers – was transferred to Chile and institutionalized for the first time as a state project in the 1970s, during the dictatorship of Augusto Pinochet. Drawing on archival research that identifies spatio-temporal anomalies in this mainstream narrative, I show that the Austrian tradition was active in Latin America long before the Chilean experiment (and remains so today), yet never gained a foothold in Chile. Correcting the existing literature in this regard should be straightforward. To the extent that corrective scholarship challenges the epistemic-affective boundaries of the discipline, however, it raises fundamental questions about just what it means to cross “enemy lines”.

Session: FRI-15:30-4

Weather Sensitivity and Climate Change Impacts for Park Visitation in Ontario

Micah J. Hewer, Department of Geography, University of Toronto (micah.hewer@mail.utoronto.ca)

Using a revealed climate preferences approach, this study analysed daily park visitation data from 2000-2010 for two provincial parks in Ontario in combination with historical weather data for the same period to determine the weather sensitivity of park visitation in Ontario. Due to the natural and institutional seasonality associated with park visitation in Ontario, two different seasonal weather sensitivity models were constructed (a shoulder season model for May to June and September to October as well as a summer peak model for July and August). Furthermore, using statistical downscaling to produce local point climate change projections for the 21st century, this study reassessed the work of Jones & Scott (2006) concerning the impact of rising temperatures and changing precipitation patterns on future visitation to these two provincial parks. In addition, changes in the frequency of exceedence under projected climate change of certain temperature thresholds for park visitation defined by Hewer & Scott (2012) were also assessed. Furthermore, an analysis and discussion of the differences in weather sensitivity and subsequent climate change impacts between the two parks were also conducted. To conclude, management and planning implications were discussed as they relate to the opportunities and threats associated with climate change and park visitation in Ontario. The novelty of this study rests in the use of daily visitation data to determine the weather sensitivity of and project the impact of climate change on park visitation as well as in the application of stated climate

Session: FRI-08:30-1

GeoFoundation Exchange (GFX): Progress and Future Directions

Paul Heersink, Esri Canada

The GeoFoundation Exchange (GFX) is a collaborative project that was created for the exchange and distribution of an authoritative Canadian base map in a cloud based secure platform where transactional data is contributed by municipal, provincial and federal participants. The benefits derived from the GFX system includes open data that is accurate, current and complete and is the definitive source in the creation of the Community Map of Canada. Map quality is maintained by enabling feedback from authoritative sources on data accuracy for continuous quality improvement. The presentation will highlight progress to date and focus on future directions and goals.

Session: WED-15:30-8

Do Canadians Enjoy Congested Travel? Measuring Commute Satisfaction and the Effects of Congestion in Canadian Cities

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One of the most peculiar aspects of commuting is that average travel times have held relatively constant at approximately thirty minutes both over time and across cities of different sizes, even as average trip distances have increased and billions have been spent to reduce congestion. However, what is missing from such research is greater insight into the acceptability of particular travel times. Previous studies allude to thresholds at which commute travel times become unacceptable to individuals, but offer no quantification of such values. In response, we utilize a multinomial logit model of commute satisfaction based on data from the 2010 Canadian General Social Survey to gauge these thresholds. Results indicate that even when experiencing congestion, individuals are only more likely to become dissatisfied with their commute after experiencing one-way travel times of approximately sixty minutes. Such results offer several important policy implications, particularly in the local context of the Toronto region where billions of dollars in new transportation infrastructure are presently being considered as a way to reduce current 41-minute average one-way travel times by only a few minutes. Our research suggests that if travel time savings were realized, they would produce only a small impact on overall commute satisfaction.

Session: TUE-08:30-6

Move to High Ground: Mobilising Community Assets to Reterritorialise and Decolonise

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The colonisation of the world by “Industria” (Hipwell 2004)—the now-globalised complex of political and economic power/knowledge—has involved the ongoing severance of connections between peoples and their lands and the imposition of State-centric private property regimes. This is one of the processes that Deleuze and Guattari (1987) have described as “deterritorialization”. “Deterritorialization” in this sense is not only the capture of territory but, as importantly, the erasure of the physical traces and cultural preconditions of non-State *territoriality*. Resistance by colonised peoples in turn now frequently takes the form of reterritorialisations. This paper discusses a PAR project undertaken in 2012 with members of the indigenous Truku nation’s Skadang and Xoxos *alang* (communities) in eastern Taiwan, in support of their effort to formalise their ownership and occupancy of traditional village sites situated in the highlands of Taroko National Park. It discusses the successes and failures of the author’s effort to utilise an “asset-based” approach in this project, and suggests a framework of “territorialisations” for guiding future development efforts by colonised communities.

Session: TUE-10:30-4

Team-Based Learning and Assessment in the Geography Classroom

Amanda L. Hooykaas, University of Guelph (alhooyka@uwaterloo.ca)

Team-Based Learning is an innovative learning approach where courses are taught in flipped classrooms and concepts are made concrete through high-performance learning teams. Students spend a significant portion of the classroom component in groups but are largely assessed on their own engagement with the material and the ways that they prepare for class.

The basic structure of this approach encourages deep learning and opportunity for both team and individual work. Multiple choice tests, debates, personal reflections, and traditional lectures are all presented as options. These approaches lead to various methods of assessment and with clear, repeated structure throughout course; students learn how to learn and improve results in the classroom. By moving away from the traditional assessments of papers and exams, students are challenged to redefine their educational experiences and to become more engaged geographers.

A case study is presented of a tourism geography course taught at the University of Guelph that was originally structured in a lecture format but redesigned to offer students this new way of learning. Students in this course come from diverse backgrounds and disciplines and this is the first time most of them have taken a course on the topic. Even with an early class (8:30am), students come prepared and are highly-engaged with the material.

Session: TUE-08:30-2

Trends in the Metrological Conditions Associated with the Duration of Winter Road Seasons in the Western James Bay Region of Northern Ontario

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Winter roads in northern Canada consist of ice roads over land, frozen lakes, and rivers. The seasonal length of the roads depends on particular meteorological factors play a significant role in determining the viable operating season of winter roads. However, in recent years, there has been increasing concern that the average opening date of winter roads has been delayed and the quality of the roads has been reduced due to a warmer climate. Climate change is of particular importance to people of the western James Bay region of northern Ontario, particularly to the remote-northern First Nations, because of the potential impacts on winter roads which are critical to sustain their way of life. The purpose of this study is to investigate whether there is a temporal relationship between the trends of freezing degree-days (FDDs) and the historical opening and closing dates of James Bay winter roads. The statistical significance of the temporal trends and their magnitude are determined by the Mann-Kendall test and the Theil-Sen approach. This presentation will focus on the preliminary results of the doctoral research study that develops effective adaptation strategies for remote aboriginal communities in northern Ontario.

Session: FRI-10:30-1

A GIS-Based Assessment for Redistribution of Infrastructures in order to Achieve Equality in Spatial Distribution of Health Services Case study: Mashhad, Iran

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In the process of fast urban development some cities faced with a kind of asymmetric spatial distribution of public services. Equal access to health services is principle of course for those in equal needs. But sometimes accessibility to these services is easier for nearby residents in comparison with those who living further away. However, this problem occurs through inferior physical accessibility and difficulty of overcoming distance. This research intends to assess the accessibility to the health infrastructures from population centers for each urban district .The case study is Mashhad, which is the second significant metropolis in Iran. There is no equality in spatial distribution of health services in distinct areas of Mashhad, they must restructure based on frequency of transport and infrastructures spatial distribution. This research has been done through descriptive analytical method with the use of Geographical Information Systems (GIS) and digital map databases. These Instruments have made it possible to measure the physical accessibility including, travel time, distance, spatial distribution. Consequently, this research has been conducted the aspects which caused to unequal distribution of health services in Mashhad's municipality

zones. In addition, the result makes it possible to recognize the shortages of health services and identify opportunities in each district in order to redistribution of health infrastructures.

Session: TUE-10:30-6

Spatio-temporal variations of PM2.5 concentrations and their association with rapid changes in land use/cover, demographics, and economic development in major metropolitan areas in China

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This paper examines the spatial-temporal variations of fine particulate matter (particles smaller than 2.5 micrometers, PM_{2.5}) concentrations and their relationship with rapid use /cover changes, human population dynamics, and economic development. PM2.5 is associated with human health risks. Since the beginning of the new century, China has been experiencing rapid changes in population, urbanization, economy and environment. In recent years, China has been suffering more and more extreme smog events. Covering the period from 2001 to 2010 and using global annual average PM2.5 grid maps calculated from MODIS and MISR aerosol optical depth data, this study first explores the spatial-temporal patterns of PM2.5 using the SatScan software to identify the hot spots of PM.25 pollution and their dynamic changes. A series of Landsat satellite images were used to extract land use/cover changes. The same SatScan procedure was applied to human population grid maps to reveal the population migration and dynamic changes and to maps of county-level economy (including energy use). The patterns were visually compared. Last a spatially extended Bayesian statistical simulation model was used to examine the relationship between patio-temporal variations of PM2.5 concentrations and changes in land use/cover, population, and economy. It was found that rapid urban expansion, migration of people from rural to cities, industrialization, and burning of fossil fuel for heating and industry drove PM2.5 pollution.

Session: THU-08:30-5

Consuming Niagara's Agricultural Landscapes: A Regional Assessment of the Constraints and Opportunities for Developing a Sustainable Agritourism Destination

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Niagara farmers have experienced worsening economic fortunes in recent decades, due largely to increasing globalization-induced competition. The subsequent agricultural restructuring process has prompted many farmers to adopt multifunctional mediums of agrarian opportunity into their operations through the introduction of agritourism. These activities, which generate additional income for farmers by attracting visitors seeking value-added products associated with the "rural idyll", have expanded in number considerably over the past several years. However, a cursory review of policy and academic literature suggests that wine and culinary ventures have been particularly favored by many of Niagara's key agritourism stakeholders. This calls into question the degree to which agritourism represents a sustainable strategy for rural economic development, as the formation of a dominant "wine and culinary agritourism" image may result in economic and socio-cultural consequences for competing agritourism ventures. This presentation examines these issues through a two-stage research process. The first stage will involve the in-depth analysis of agritourism-related planning documents prepared by various levels of government, while

the second will use key informant interviews to explore the perspectives of government officials and agritourism operators. It is anticipated that the findings will provide lessons for future agritourism development planning in Niagara and beyond.

Session: TUE-08:30-5

Nitrate sources in alpine lakes determined from $\Delta^{17}\text{O}$, $\delta^{18}\text{O}$ and $\delta^{15}\text{N}$

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Paleolimnological evidence indicates that atmospheric nutrient deposition may be leading to changes in primary productivity at some high elevation lakes, but so far scientists have been unable to pinpoint the relative contributions of different nitrate sources to these cold aquatic ecosystems. The modern sources of nitrate inputs to six lakes in the Uinta Mountains, Utah, were determined from the analysis of $\Delta^{17}\text{O}$, $\delta^{18}\text{O}$, and $\delta^{15}\text{N}$ of nitrates in modern snow and water samples. The proportional contribution of four potential nitrate sources, (atmospherically oxidized nitrate; manure; soil nitrate; and nitrate and ammonium-based fertilizers + ammonium in rain) were identified using SIAR, a Bayesian isotope mixing model. Our results show that the dominant source of nitrate input to these high elevation sites is the atmospheric transport of nitrate- and ammonium-based fertilizers. Atmospherically oxidized nitrate and soil nitrate sources are of secondary importance. Anthropogenic sources (fertilizers + fossil fuels) account for 45 % (lakes) and 72 % (inflows) of nitrates at these sites, which represents an important change in bioavailable nitrogen. These results provide a modern context for paleoenvironmental studies that implicate atmospheric deposition of nutrients as an agent for recent ecological changes. Comparisons of Uinta Mountain nitrate isotope compositions with snow samples in the U.S. Rocky Mountains suggest that anthropogenic nitrogen deposition is common in other regions of the western United States.

Session: WED-10:30-4

'Sustainability' and the governance of biofuels

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Governance measures aimed at reducing the social and environmental impacts of biofuels have proliferated, but questions remain about their effectiveness. In this paper we build on insights from social science research on biofuel crops. First, we identify livelihood dimensions that are particularly likely to be affected by their cultivation in the global South – income, food security, access to resources, and social assets – showing that equity effects are crucial to evaluating the outcomes of biofuel production across

these dimensions. Then we examine selected biofuel governance mechanisms, asking how well they address livelihood and equity concerns. Our analysis suggests that biofuel policies treat livelihoods as an afterthought to other goals. We suggest integrating livelihoods into a multi-criteria policy framework from the start – one that prioritizes equity as well as overall outcomes. We also show that the instruments with strongest provisions for safeguarding livelihoods and equity appear least likely to be implemented. Together, shifting both the priorities and the hierarchy of biofuel governance instruments could help produce strategies that more effectively address livelihood and equity concerns.

Session: TUE-08:30-3

Spaces of Resurgence: Rupturing Colonialscares

Sarah Hunt, Independent Research Consultant

In recent years, the cultural, political and legal resurgence of Indigenous nations has taken shape through the actions of Indigenous people whose political consciousness arises from an orientation toward Indigenous, rather than colonial, law. These diverse expressions of Indigenous resurgence cannot be contained within colonially-delineated Indian reserves, but instead enact a network of territorial relations which together cover all of what is now known as Canada. In this paper, I argue that these networks of resurgence provide a site of transformation for contemporary Indigenous identity formation and legal consciousness. The intimate, local and embodied nature of Indigenous resurgence actively rupture what I call colonialscares – the interrelated spatial rationales of *terra nullius*, the frontier and Indian reserves. As spatialized realizations and representations of colonialscares, Indian reserves reinforce the underlying power relations which naturalize settlement. Indian reserves also and always hide Indigenous ways of living in relation to the land and their corresponding territorial ontologies. Thus, understanding Indian reserves as both spatial strategies of colonialism and imagined sites through which Indians are produced as delegitimized subjects, this paper will explore the potential for pluralistic expressions of Indigenous resurgence to disentangle Indigenous people and Indian reserves. First, I use spatio-legal analysis to develop an understanding of status Indians and reserves as mutually constitutive under Canadian law; second, I situate this analysis of reserves within colonialscape logics, or representations of the space now called Canada, which perpetuate and manifest particular (colonial) expressions of power; finally, I explore how Indigenous people are challenging their 'reserved' subjectivity through localized acts of cultural and political resurgence. Relationships and processes of Indigenous cultural strength are often actively refused and rendered invisible outside of the contexts where they unfold, yet give rise to a shifting Indigenous legal consciousness which, I argue, actively undermines the closure of settlement, poking holes in the colonialscape.

Session: WED-20:30-1 ACME LECTURE

Geospatial Thinking Assessment Practices in Secondary Schools – A Global Survey

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Bob Sharpe, Wilfrid Laurier University, (bsharpe@wlu.ca)

This presentation explores the results of a global online survey of geospatial thinking assessment practices of secondary school teachers. The survey examines the nexus between what the literature suggests about the assessment of geospatial thinking, and how teachers put these ideas into practice. The assessment of geospatial thinking can involve a range of practices including: the use of questions in geography-related textbooks; in-class multiple choice quizzes; in-class map, atlas, globe reading exercises; online virtual-globe reading exercises; in-lab problem-solving using GIS; field-based problem-solving using GPS; and assessment practices outside formal learning environments. In this research presentation the literature is first reviewed to determine what is already known about assessment practices of geospatial thinking in the secondary school context. Much of the extant literature is from the North American context, so little is known about other jurisdictions. To address this deficiency, geography educators from around the world were invited to comment on geospatial thinking assessment practices in their jurisdictions. Survey results are analyzed to identify the prevalence and types of assessment practices adopted by educators as well as the key challenges in assessing geospatial thinking in different contexts.

Session: TUE-10:30-2

Community Vulnerability to Drought and Flood

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Harry Diaz, Department of Sociology and Social Studies, University of Regina

Erin Knuttila

Bruno Hernani

The VACEA project seeks to understand the consequences of global climate change for both regional climate variability and extremes and the associated vulnerabilities and adaptive strategies of rural communities in five countries: Argentina, Brazil, Canada, Chile and Colombia. In selected study areas in each country, the VACEA researchers seek to understand the vulnerability of rural communities and their livelihoods through assessing the community's vulnerability to extreme climate events and the role played by the different levels of governance in reducing vulnerability. In Canada, the VACEA project is focused in two basins, the Oldman River basin in southern Alberta and the Swift Current watershed in southwestern Saskatchewan. The role of climate variability and climate change as stressors that create risks (and opportunities) for rural people are emphasized and two dimensions of vulnerability, adaptive capacity and sensitivity, are assessed; including the determinants of adaptive capacity: economic resources, technology, human capital, natural capital, infrastructure, and institutional capital. The institutional capital is further explored in the governance assessment where local, provincial, and national institutions are assessed in relation to their role vis a vis community vulnerability. This presentation will outline the VACEA community vulnerability methodology and review some of the preliminary findings of the study.

Session: TUE-12:00-1

Living with Climate Change: Mapping Experience and Adaptation in the Global South and North

Michaela Hynie, Department of Psychology, York University (mhynie@yorku.ca)

Adaptation strategies to climate change are shaped by individuals' and communities' understanding of the changes they are experiencing, as well as the resources, tools and knowledge they have available to mitigate these changes. However, existing literature on climate change rarely explores how adaptations vary as a function of different dimensions of environmental and social vulnerability. Moreover, it rarely integrates the knowledge and adaptation strategies of the global North and South, thereby making coordinated global responses almost impossible. In this paper, we introduce the Living With Climate Change (LCC) partnership, which strives to address these gaps. The goal of the LCC is to build the foundations of an international interdisciplinary research collaborative to generate new knowledge about how local knowledge and understanding of environmental change interact with social and environmental vulnerabilities and with governmental policies to shape adaptation strategies and responses at individual and community levels. We describe the structure of the partnership, and report on the activities and strategies of the LCC to compare and contrast how these understandings and adaptations develop in low- (Nepal), middle- (India) and high-income (Canada) countries in order to develop best practice recommendations for local to global collaborative research and knowledge exchange and cooperative policy recommendations.

Session: THU-08:30-1

Analyzing Spatial Change in Ottawa through Income Polarization

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This study examines spatial change in Ottawa through an analysis of income polarization. Data is used from censuses between 1970 and 2005. Apart from using quantitative techniques to derive unpublished data from already published data, this study maps out income polarization according to census tracts in the inner city and inner suburbs. This presentation will show that while central parts of the city are increasingly becoming areas of capital accumulation, which cater to upper classes, there is a worrying trend of suburban areas declining.

Session: THU-13:30-3

Language Revitalization through Lexical Analysis of New York State Place Names

Rebekah R. Ingram, Seneca Nation of Indians (rringram@gmail.com)

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The state of New York is known for village, town and city names from a variety of Native American languages including the Algonquian and Iroquoian language families. However, because of the decreased

use of these languages following European settlement and colonization, the meaning behind these names has often been obscured by history, re-interpretation, or Europeanization leading to debate regarding the original intended meaning. It is widely acknowledged that language loss is equated with the loss of culture and vice versa, and therefore that the decreasing use of indigenous languages may lead or have led to difficulty in identifying the sociological context of certain places. Using the example of the Passamaquoddy Place-Names Project, this paper documents work with the Seneca First Nation of Indians, and an analysis of a variety of reoccurring morphemes (often prefixes or suffixes) and attempts to give possible or probable meaning. The aim is to use geography as a link between linguistics and culture through these translations to “define place with cultural context...from those who used space and named it to reflect its significance in their lives, thereby making place dynamic and relevant to how Native peoples view the land.” (Hirsch 1995)

Session: WED-13:30-3

The Canadian Geomatics Round Table: Building a Pan-Canadian geomatics strategy I

Anna Jasiak, Natural Resources Canada

The Geomatics Community Round Table is an informal gathering of Canadian geomatics stakeholders. Representatives of organizations spanning the geomatics sector have participated at several meetings hosted by the GeoConnections Program of Natural Resources Canada. Participants have included federal and provincial/territorial governments, private sector companies, non-governmental organizations, professional organizations and associations, and geospatial data and service consumers. The Round Table provides a forum for discussion of issues and concerns that affect professional practice and activities in the Canadian geomatics sector – and to find ways in which to collaborate in resolving some of those issues. In 2012, the Round Table undertook the development of a pan-Canadian geomatics strategy. In January 2013, the Round Table agreed to take a Team Canada approach whereby governments adopt a facilitating role, where the private sector thrives under supporting policy, where there is sector-wide and citizen collaboration and wherein the sector is conscious of supporting Canada’s future economic, social and environmental future. Based on seven strategic dimensions: Identity, Market, Business Model, Leadership and Governance, Education and Capacity Building, Data Sources, and Legal and Policy Interoperability, the Round Table Steering Committee developed the first draft of a Pan-Canadian Geomatics Strategy between January and December 2013. Input to and feedback on the Strategy from the Canadian geomatics community was gathered over the early part of 2014. Endorsement, action and implementation planning by the community will be sought in May 2014.

Session: WED-15:30-8

The Influence of El Niño-Southern Oscillation on Tropical Cyclone Activity in the Eastern North Pacific Basin

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The inter-annual variability of tropical cyclone activity due to El Niño-Southern Oscillation (ENSO) phenomenon has remained undetermined at the main development region of the eastern North Pacific basin. Here we classify years of El Niño, La Niña and neutral conditions using the Multivariate ENSO Index. Between 1971 and 2012, the seasonal storm measurements of the net tropical cyclone activity index and power dissipation index are used to summarize the overall seasonal TC activity and TC intensity and are both found to be statistically different between the two opposite ENSO phases at the basin's main development region. However, when the area is longitudinally divided, only the western portion of the development region experienced a significant difference ($p < 0.05$). Specifically, El Niño years are characterized by more frequent, more intense events than during La Niña conditions for this sub-region. Bivariate correlation analyses on the relationship of MEI and both TC indices demonstrate strengths of correlation between ENSO and TC activity and TC intensity are statistically significant ($p < 0.01$) only at the western region.

Session: FRI-08:30-1

Exploring the Impact of Religious Beliefs, Leadership and Networks on Response and Recovery of Disaster-Affected Populations: A Case Study from Indonesia

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Although religion often comprises a central component of the social and cultural make-up of communities in developing countries affected by disasters, there is often limited understanding of how religious faith, religious leaders and religious institutions contribute to vulnerability and resilience in the post-disaster period. Using a case study of the 2006 Yogyakarta, Indonesia earthquake, this research examined the role of faith and religion from the perspective of impacted populations, including individuals, religious leaders, and academics. The research suggests complexity in fatalistic thinking and the role of religious activities, where both vulnerabilities and resiliencies co-existed. The nature of religious leadership was found to be highly dependent on the individual, although leaders primarily saw their role as supporting the psychological recovery of the impacted population. Examining religious institutions suggests that physical structures, collective engagement in activities, networks and theological perspectives provided opportunities for disaster risk reduction initiatives, although not all of these aspects remain functional in the aftermath of disasters. The research concludes by discussing the importance of incorporating religious faith and institutions in disaster risk reduction programming and unifying messages between faith and non-faith organizations.

Session: FRI-10:30-4

Governing the Ungovernable? Pudrición del Cogollo disease and Roundtable Palm Oil Governance

Adrienne Johnson, Graduate School of Geography, Clark University (AdJohnson@Clarku.edu)

Since 2007, Ecuador has taken a particularly strong lead in reasserting state control over its natural resource sectors by increasing domestic capital in its national palm oil industry. This is being accompanied by a growing private sector commitment to 'cleaning up' the industry via adherence to voluntary certification standards after years of negative social and ecological effects resulting from its expansion. Recently, emphasis has been placed on the industry-led governance institution known as the Roundtable on Sustainable Palm Oil (RSPO). This institution's voluntary certification standards are viewed as a way of rectifying major power inequalities in the industry while forging positive and inclusive social, economic and environmental pathways.

But these 'sustainable' governing efforts are being disrupted by Pudrición del Cogollo (PC), a bud rot disease that has devastated thousands of hectares of palm oil plantations across Latin America. Research shows that a major force driving the mutation of PC is the further intensification and extensification of palm oil plantations. This paper examines the emerging contradictions embedded in the RSPO mechanism as it aims to support large-scale agro-industry amidst the PC epidemic and argues that instead of ameliorating social and environmental inequalities, it is reinforcing existing ones while bringing new ones to the fore.

Session: WED-15:30-7

The Emerging Skytrain Poverty Corridor?

Craig E. Jones, University of British Columbia

Recent research into urban income inequality has revealed a transition in Canadian cities over the last 40 years. Traditional inner-city areas of poverty have become revalorized in post-industrial cities while some middle-income suburban districts have transitioned into low-income areas, reversing our traditional understanding of the geography of urban income distributions. In Greater Vancouver, a distinctive zone of districts along the rapid transit Skytrain corridor have moved into low income status in the past 40 years, a trend that has accelerated since 2000. This paper attempts to address the factors which have led to the development of this new low-income region in formerly middle-income neighbourhoods, straddling four municipalities from inner city Vancouver through the suburbs of (South) Burnaby, New Westminster and (North) Surrey? It raises questions regarding the security of the region's affordable housing in light of public intensification strategies, attendant with policies to encourage transit oriented development.

Session: WED-10:30-3

Risk management in water resources: low flows, river water temperature and climatic changes in Québec

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Risk management efforts in hydrology are most often associated with flood control. However, low flows also pose risks to human population and aquatic organisms. In agriculture, the amplitude, duration and timing of low flow events are of the utmost importance and long term low flow forecasts are required to initiate adaptation strategies. For aquatic organisms such as stenotherm fish, risks associated with low flows can include a decrease in available physical habitat and an increase in water temperature. This project deals with the development of methods to downscale low flow indices. A relatively new approach, Relevant Vector Machine, is used to downscale low flow indices. A case study on three Québec rivers (Ouelle, Romaine, Moisie) is presented. Downscaled indices for the recent past were compared to those obtained using climate change scenarios. In a separate project, water temperature was studied in one of the targeted rivers (Ouelle). Daily water temperatures were modelled using statistical approaches and climate variables as predictors. The same models were used to generate future water temperature scenarios. Our analyses show minor changes to the downscaled low flow indices, but significant changes in the water temperature regime of the Ouelle River were observed when simulated future air temperature and precipitations are used.

Session: TUE-13:30-1

A resource based view of First Nation economic development

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First Nation communities are facing socioeconomic challenges, which can be addressed through the pursuit of economic development and entrepreneurship. There is currently an increased interest in a range of natural resources related projects in the proximity of First Nation communities and the potential for First Nations to gain employment, equity and revenue benefits. The decision of a First Nation to participate in a project is based on their strategic choices of how to promote economic development and a set of guiding principles that act as criteria for the evaluation of any proposed project within their territories. The aim of this study is to review strategy and decision making approaches and criteria proposed by First Nation communities for project evaluation and to apply a Resource-Based-Theory lens in order to investigate which strategy and principles contribute to creating sustained competitive advantage. The results show that the holistic approach for evaluation adopted by First Nation communities reinforces their positioning strategy and increases the sustainability of rents by making their resources valuable, rare, imperfectly imitable, and non-substitutable. The approach can provide insights for developing engagement strategies beneficial to all parties involved.

Session: THU-13:30-2

Smart Cities Healthy Kids: The Need to Study Seasonality with Built Environment

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Purpose: To create active urban communities, emerging evidence suggests the need to study how built environment modifies the influence of seasonality on physical activity (PA). Answering this call, we aim to understand how children's PA varies in an urban environment during the transition from spring to summer.

Methods: As part of Smart Cities, Healthy Kids study (www.smartcitieshealthykids.com), based on urban design, city of Saskatoon was classified into grid-pattern, fractured grid-pattern and curvilinear neighbourhoods. Thereafter, to capture objective PA of 455 children (10-14 years), accelerometers were deployed between April and June 2010 (spring-summer). Finally, comprehensive weather data were obtained from Environment Canada. After analysing group differences in PA between different neighbourhood types, weather data were explored to generate evidence-based adverse and non-adverse days.

Results: Overall, during the transition from spring to summer, children living in fractured grid-pattern neighbourhoods were less active and this pattern re-occurred on adverse days.

Conclusions: This preliminary evidence will inform multivariable multi-level analyses, which will take into consideration seasonality, neighbourhood built and social environment, and household and individual level factors. Ultimately, this study will serve as a pilot to a Canadian Institutes of Health Research funded longitudinal investigation, where children's PA will be measured in all four seasons of Saskatoon.

Session: THU-08:30-2

A Study of Within Group Inequality in the Geographic Distribution of HIV/AIDS in Thailand

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Developing analytical techniques that provide insight into spatial disparities in health outcomes remains a central need in the fields of health geography and spatial epidemiology. Existing spatial statistics identify clusters of disease and characterize their relationships across geography. However, prior research focuses less on within group and within cluster variation. This paper utilizes a unique decomposition of the Gini coefficient into a hierarchy of inequality to measure within group health disparities across geographies. Specifically, this paper uses the decomposed Gini variant to analyze inequities in HIV/AIDS morbidity and mortality in Thailand. Recent studies of HIV/AIDS in Thailand have revealed significant geographic variation in both the incidence and treatment of the disease, but have not analyzed within cluster variations. Moreover, epidemiological studies of HIV/AIDS in developing countries stress an ongoing need to undertake more local level analyses. The findings of this study will be of interest to government officials, health

practitioners, and researchers interested in understanding the spatial distribution of disease and the underlying causes of HIV/AIDS inequities.

Session: TUE-15:30-6

Toxic Legacies: Community Perspectives on Arsenic Pollution at Yellowknife's Giant Mine

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This poster introduces a community-based research project exploring local perspectives on arsenic pollution and environmental remediation at Yellowknife's Giant Mine, Northwest Territories. For over six decades, environmental contamination has been a pressing issue near Yellowknife as a result of the production of highly toxic arsenic trioxide, the byproduct of the roasting process that separated gold from ore. In the 1950s and 1960s, pollution spread widely from Giant's roaster stack, causing severe health effects in neighbouring Yellowknives Dene First Nation (YKDFN) communities due to the contamination of local food and water. Now closed and abandoned by its owner, the mine site remains a concern today, as 237,000 tons of arsenic trioxide that was captured by pollution control equipment remains stored in chambers underground. The federal and territorial governments have proposed to freeze this toxic liability in perpetuity, a solution that produced intense local controversy during an environmental assessment process in 2012. Ongoing research in collaboration with YKDFN, including oral history interviews and a documentary film project, is examining the toxic legacy of Giant Mine and the problem of communicating this hazard to future generations, who will inherit the site.

Session: TUE-08:30-7 POSTER

Intergenerational social mobility and Filipino youth outcomes in Canada

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There is increasing interest in the educational and employment outcomes for 1.5 and 2nd generation youth in Canada - that is, those who immigrated to Canada in childhood, or those who were born in Canada to an immigrant parent. For some groups there is a pattern of upward social mobility across generations, but outcomes for Filipino youth are anomalous in two senses: they are poor compared to many comparable peer groups; and, they represent downward mobility relative to their parents' generation. This paper reports on findings from the Filipino Youth Transitions in Canada project, a university-community collaboration examining Filipino youth outcomes across Canada. Focusing on post-secondary educational trajectories in three provinces, we will identify geographical variations in outcomes, and use qualitative data to identify some of the factors that explain these patterns.

Session: FRI-10:30-6

Nature, development, consumption: Representations in conservation cause-related marketing campaigns

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Cause-related marketing links non-profits and corporations together in mutual promotion of a 'cause' and is a strategy increasingly used by non-profits to supplement dwindling government and individual donations. In addition to producing a new funding stream, cause-related marketing also provides an opportunity for awareness-raising and promotion for both partners. Corporations are able to highlight their corporate social responsibility and non-profits are able to communicate about their initiatives to a wide audience outside of their traditional base. Within the field of geography a small, but emerging, literature is critically engaging with cause-related marketing as a new site of 'ethical' consumption, consumption motivated by moral considerations. This presentation seeks to expand this literature by focusing on findings based on a survey of recent conservation cause-related marketing campaigns. Conservation is of interest because consumption has traditionally been framed as at odds with environmental protection, whereas cause-related marketing embraces consumption as a solution. The presentation will first discuss how the surveyed campaigns communicate the complexities of nature, development and consumption to consumers. Secondly, the presentation will question whether these representations result in (de)politicized narratives regarding corporate and non-profit interventions and how this relates to broader trends and implications of ethical consumption.

Session: FRI-10:30-4

Climate Change Adaptation: How Ready and Resilient are Our Coastal Communities?

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Despite the growing evidence on the science of climate change impacts, little effort is directed in understanding the governance of climate change adaptation. We focus on coastal regions in understanding community resilience and investigate their readiness towards climate change threats. Coastal regions are unique because of the high level of interactivity between land and sea, the range of biodiversity and coastal habitats, risk of sea level rise and flooding, social complexity of urban settlements and maritime industries, and major investments in tourism and fisheries activities. Building upon an analytical framework by Ford and King 2013 on adaptation readiness, we plan to assess how climate smart and resilient our coastal regions are from a governance perspective. We are currently developing various criteria and rule-based approaches to assess key attributes of climate change adaptation architecture. These include: leadership, science and policy nexus, decision-making frameworks, stakeholder involvement, funding, R&D, ecosystem-based approaches, and technological innovation. The analyses initially focus on four case studies in Atlantic Canada and the Caribbean, under the Partnership for Canada Caribbean Community Climate Change Adaptation (ParCA) Project. The aim is to synthesize key findings on enabling institutional mechanisms, cross-sectoral synergies, stakeholder partnerships, community resilience, and knowledge mobilization in adapting to climate change.

Session: TUE-08:30-7 POSTER

The VACEA Project: Modeling Climate Impacts on Agro-Ecosystems

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This task of the interdisciplinary research project VACEA aims at advancing our understanding of regional hydro-climatic variability and extreme events and shifts in the frequency and intensity of inter-annual variability and extremes as a consequence of global climate change. The work also includes enhancing our understanding of the past, current and future vulnerabilities of rural agricultural and indigenous populations to climate hazards and related stressors. Climate extremes were characterized for the Canadian study watersheds, including a new index, the Standardized Precipitation and Evapotranspiration index (SPEI) and remote sensing variables. The SPEI is being compared with crop yields and groundwater resources, important assets for the communities. The ACRU agro-hydrological modelling system was set up for three watersheds to simulate daily snow pack, soil moisture, and streamflow for the period 1951-2010. The model will be used to analyze future changes in frequency and duration of critical hydro-climatological indicators, including changes in water supply, streamflow regimes, growing season length, and heat exposure. During the final two years we will finalize the model verification, downscale future regional climate model output to spatially match our 10 km climate grids, and analyze future climate simulations. We continue to exchange results with participating VACEA researchers.

Session: TUE-12:00-1

Between Neo-Extractivism and Mother Earth: Bolivia's Process of Change

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Since coming into power Evo Morales and the MAS government Bolivia has sought to position itself as a leader in environmental protection. The government has been quick to point to capitalism as the cause of the ecological crisis and has demanded systemic change through the concept of “living well” and radical measures such as repayment of the ecological debt and the environmental protection through an international code of rights for the earth. Nonetheless, the government has simultaneously supported significant expansion of mining and a dramatic increase in co-operative mining that operates outside of environmental and labour regulation, calling into question the extent to which systemic change is being enacted domestically. To some extent, the conflict between extraction and environment can be seen as representing the underlying contradiction between the primary demands that brought the MAS to power: nationalization of hydrocarbons and other natural resources and respect for indigenous rights and territories. This paper asserts that the economic interests of an extractive economy continue to dominate Bolivia's governance while the well-publicized environmental discourse has not manifested in material change and served largely to distract from ongoing internal conflicts around extractive sites.

Session: WED-15:30-7

Biodiversity model uncertainty analysis considering spatial and thematic uncertainty

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The importance of including uncertainty estimates with model results is fairly well recognized. Uncertainty analyses, while useful for decision support, are also useful for identifying models that may benefit from revision. We have built on a separate study wherein several forms of biodiversity in eastern Ontario agricultural landscapes were regressed on metrics of landscape structure and composition. While the study considered model selection uncertainty, we have extended the uncertainty analysis to consider parameter uncertainty associated with the landscape metrics. Landscape structural uncertainty was estimated through a combination of vertex matching and air photo interpretation. Landscape composition uncertainty was based on class membership probability estimates from a crop classification. Monte Carlo simulation was employed, generating realisations of landscape structure and composition, and extended through model averaging to produce updated confidence intervals. For many models, model selection uncertainty outweighs parameter uncertainty, showing relatively little change. However, some models exhibit larger coefficient changes, particularly for the landscape composition metric. In these cases, biodiversity may be responsive to one or more sources of within-class variability. These results may be useful for identifying models that could benefit from revised landscape metrics.

Session: THU-8:30-7 POSTER

Risk and Resource Extraction in St. Lucia

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Financialized risk management is a kind of alchemy, turning the dangers to many into the profits of a few. Such transmutation works by imposing order on the worrying uncertainties of our world. At the centre of this process is risk: an entity sought for within nature-society relations, isolated, and refined into a simplified state of the world where losses are appraised, assigned probabilities, and transferred to another's responsibility. This paper explores how this entity, risk, can be usefully conceptualized as a resource. More specifically, it explores how a particular risk-as-resource, formed to manage the hazards of climate change, is embedded in weather index insurance (WII) contracts sold in St. Lucia. WII is an affordable risk-management tool because it assumes that everyone within the contract's area will experience identical losses to extreme weather events. After a storm, weather data is used to indemnify all policyholders equally regardless of actual damage. Because of this simplifying assumption, WII allows for-profit insurance against climate change to be sold in the developing world. Using this example of WII in St. Lucia, I argue that this risk-as-resource has become an opportunity for profit by foreign companies in ways analogous to historical resource exploitation in the Caribbean.

Session: WED-15:30-7

Mona, mona, mona! Whiteness, tropicality, and the international peacebuilder in Colombia

Sarah Koopman, Department of Geography, Wilfrid Laurier University

Mona is what I get called as a white woman when I walk down the street in Colombia. This presentation builds on the arguments about the racialization of space and the spatialization of race in Colombia, made by Wade and Applebaum, by highlighting the role of tropicality in these constructions. Through this colonial geographical imaginary race in Colombia, I argue, is not only regionalized but also internationalized. Various attempts were made historically to 'whiten' the nation and the 'Colombian race', particularly through fostering European immigration. I look at how these racial imaginaries are changing and hardening through the armed conflict, and how imaginaries of 'the international' continue to be part of that process. Spatial and social organization work together in Colombia to keep people 'in their place' both regionally and racially. Some internationals though, are 'out of place' in ways that go against the script, and use their privileges to support and protect Colombian peace activists as companions. I argue that they, however unintentionally or reluctantly, use the associations between race and place to make accompaniment work in Colombia – but that there are ways of doing accompaniment that are more and less likely to contribute to reinforcing or changing those systems of domination.

Session: THU-13:30-5

Disaster risk reduction in the human security perspective: the case of urban Ghana

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The numbers of disasters have been increasing worldwide and the numbers of people affected as well as cost have been increasing tremendously. Several scholars and practitioners of disasters have called for different frameworks to help reduce disaster risk and impacts.

Conventional notions of security understand insecurity in terms of "threats to the state". The human security concept reconceives security as "protection of people". My research extends the human security concept further by including disasters as a human security concern. It examines the relevance of the human security concept in reducing disaster risk. Specifically, the research develops a conceptual framework for examining disasters from a human security perspective, through a literature review of the concepts of human security and disasters. The research attempts to enhance the utility of the human security concept by strengthening its practical application to empirical situations. It also adds to existing literatures on disaster studies by offering a framework for reducing disaster risk. This presentation will focus on the combination of Wisner et al's (2004) Pressure and Release model and the human security perspective into a new human security disaster model, and the utility of the new model to the disaster context of Ghana.

Session: FRI-10:30-4

Exploring the role of community engagement in protected area management, a case study of the Gulf Islands National Park Reserve, BC. Canada

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The evolving understanding of sustainability emphasizes the inseparability of environmental, community and economic dimension in planning and development. However the community dimension suffers in terms of influencing decision making processes and planning involving protected areas. It is therefore important to let suitability take its place to remove or limit effective and efficient communication barriers in protected area planning and decision making process. The purpose of this study is to explore a) to what extent should community members be engaged in planning and decision making processes, and b) how their engagement influenced management policies. Purposeful interviews were conducted with a snow ball approach to recruit participants to participate in a focus group discussion among local community members and semi-structured interviews with national park managers in context. This study was conducted within the Protected Areas and Poverty Reduction project-supported by International community University Research Alliance which conducted trans-cultural research (Ghana-Canada-Tanzania) in protected area s governance. Preliminary analysis of the data reveals several themes related to the role of community engagement in the policy development of the Gulf Islands National Park Reserve, including: engagement process approach; power relations with respect to vulnerability (local communities and Indigenous People), governance effectiveness, assets, institutional conflicts, the nexus between management and development; and varying challenges and uncertainties.

Session: FRI-13:30-5

Weather Normalization of Household Energy Consumption in Ontario

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Measuring the effectiveness of energy conservation is not straightforward because energy consumption is partly affected by, among other things, weather variability. One method of normalizing energy consumption against weather variability is by using the concept of Heat Degree Days (HDD) and Cool Degree Days (CDD). Most energy conservation measurements were aggregated to provincial level hence providing no spatial information on the amount of energy used and conserved at household level. The significant importance of this study is to provide the realization on *when* and *where* the limit of energy conservation effort. This paper will approach by firstly calculating the actual amount of energy used for space heating by households for different income groups. Secondly, localised HDD values are obtained from several weather stations across Ontario and by using Euclidian vector, HDD values will be interpolated for other locations within Ontario where they are lacking of meteorological data. The computation results will be integrated into spatial census dataset. Finally, study will also present the affect of future climate regime on energy consumption pattern in Ontario. This is achieved by downscaling future climate projection and incorporating new climate data into the computation.

Session: FRI-13:30-4

Helping to feed people or a nuisance to a modernizing city? – Policy environment and the reality of urban agriculture in Accra Ghana

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Urban agriculture (UA) contributes substantially to dietary needs and livelihoods of poor populations in cities of developing countries including those in sub-Saharan Africa. It is projected that urban agriculture will continue to grow and increase in prominence in these cities due to the combined effects of rural-urban migration and rapid growth and expansion of rural areas into towns and cities. Despite these projections as well as the potential of UA to contribute to enhancing food security and improving livelihoods in rapidly growing African cities, the practice does not feature prominently in official planning documents and is even illegal in some cities. Yet, UA is omnipresent in these cities and towns of developing countries such as Accra in Ghana regardless of unfavourable policies. Using in-depth interviews with city authorities, farmers and urban residents, this study examined UA contribution and perspectives about the current state and future prospects within the prevailing framework that govern the practice of UA in Accra. Preliminary results show that although UA is an important source of income for practitioners as well as a source of readily available fresh food for residents of Accra, extensive education is needed to enhance safety of crops and animals being produced.

Session: FRI-15:30-1

Legislating Canadian Disposal at Sea: Implications for the Northwest Passage

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In recent years, the Arctic has gained prominence in national and international politics. With an increase in temperature and melting sea ice, the Canadian Arctic is becoming accessible to shipping vessels for longer durations each year. Industrial, recreational, and tourism vessels produce waste that is disposed of in a variety of ways, including being dumped at sea. The paper uses governance theory to highlight the roles and impacts of various government, non-government, domestic, and international partners in the disposal of waste in the Arctic Ocean. Governance theory refers to the manner in which issues, like waste transportation, are produced, controlled, and regulated through the practices of actors and institutions. Governance theory is an effective means of analyzing the complex processes and implications of policy-making, policy implementation, and ongoing practices associated with marine waste transportation and disposal. In identifying the ways in which waste disposal is governed in the Arctic Ocean, the paper will explore the implications of increased activity in the Northwest Passage

Session: WED-13:30-7

Neoliberal food safety regulations and the challenges for direct marketers in North America

Julia Laforge

Colin Anderson

Stéphane McLachlan

Neoliberalized government policies support corporate food regimes and systematically marginalizing small-scale, sustainable alternatives. Farmers are attracted to local food for a range of economic, social and environmental benefits. However, farmers face a range of challenges that impede their ability to effectively engage in these markets including: distance to market, access to quality land, consumer attitudes, lack of institutional support, and food regulations. This study focuses on the role of government in shaping local food systems, particularly as it relates to meat production and distribution. We draw from interviews with direct marketers across North America and a Manitoba case study to characterize the impact of food safety regulations designed for industrial facilities on small-scale farmers. Our findings suggest that government's influence on the emerging direct marketing niche is to contain innovation and to suppress dissent through modes of governmentality. Farmers were found to be less willing to develop new products because of inconsistent interpretation of unclear regulations and furthermore were reluctant to contest regulations out of fear of retribution. However, our case study also exemplifies how new political opportunities are arising from the emergent alternative food movement and how transgressions can create opportunities for all food citizens to advocate for change.

Session: TUE-08:30-3

Conventional Management and Indigenous Fisheries: The Case of the Tropical Rock Lobster Fishery in Torres Strait, Australia

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The tropical rock lobster (TRL) fishery in Torres Strait will soon undergo major changes as the Australian government prepares to introduce a quota management system (QMS). This fishery is particularly complex and includes a diversity of fisher groups (indigenous Islanders, fishers from Papua New Guinea and non-indigenous fishers from mainland Australia). Indigenous Islanders' views as to what constitutes "good fisheries management" do not concur with the dominant discourse of conventional management held by the Australian Fisheries Management Authority. Islander perspectives tend to be informed by a holistic knowledge of the marine environment, customary institutions of marine tenure, and economic values at odds with those of mainstream society. In this presentation we outline the various economic, social and cultural motivations for Islander TRL fishing and explore how local institutions contribute to social-ecological sustainability. We then discuss how the objective of 'optimal utilisation' and assumptions about fishers' behaviours and motivations underpinning fisheries management in Torres Strait are creating added pressures to increase the economic profitability of the TRL fishery and influencing the upcoming QMS. We argue that under the current framework, proposed fisheries measures have the potential to erode local knowledge, fishing practices and institutions, and threaten equity of access to resources and benefit distribution.

Session: TUE-15:30-3

Proximity to LGBT Social Resources as a proxy for defining Queer Communities in Ontario: A GIS Perspective

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The concept of Queer space attempts to identify the emerging characterizations that break heterosexual definitions of space. Queer geographers have attempted to define these communities in terms of queer ethnicities, perceptions and attitudes of the greater “non-queer” community, large-scale events such as pride festivals, and epidemiological rates of HIV/AIDS. These previous studies have discussed the ideologies and sociological constructs that delineate what constitutes a queer community. However, the actual spatial distribution is not used in these constructions. This paper will apply a new framework for defining queer communities by quantifying the availability of LGBT-specific social services in major cities in Ontario. Specifically, this paper uses a cluster analysis of the locations of these services to gain an understanding of how much of these resources are available for queer individuals in these major cities. The socio-psychological needs of queer individuals have been established to be very unique, and this supports the use of this method as a spatial indicator of these individuals. The findings of this study will be of interest to institutions that are providing resources geared to the LGBT community in Ontario, and to ethnographic researchers interested in understanding spatial distribution of these communities.

Session: FRI-15:30-2

Developing a Composite Human Health Impact map for a Metropolitan Area

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As part of a larger project to develop a dynamic systems model of coastal city resilience it became apparent that the input data would lend itself readily to mapping techniques. The maps created provide a stand-alone, layered, temporo-spatial image that can be further modified to suit other cities. The methodology used as well as the maps created will be shown. The final map provides a composite picture of areas where human health is most vulnerable, in this case as a result of a flooding event. How this information could be used to identify where adaptive measures may be most effective in cities planning for climate change will be discussed.

Session: TUE-15:30-1

Knowledge as Relationship: Understanding ‘Traditional Ecological Knowledge’ as a Collaborative Concept for Transformative Environmental Governance in Canada

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Interdisciplinary studies of common pool resources and adaptive resource management often characterize Indigenous or traditional knowledge (TK) as complementary to western science. From such an ecological perspective, TK has been rediscovered as a form of adaptive management that is capable of addressing existing knowledge gaps. In contrast, a power/knowledge orientation understands the relationship between western and Indigenous knowledges as mediated by uneven relations of discursive and material power that marginalize and render TK, and embedded governance regimes, wholly unintelligible. But where does this leave us? How might scholars, technicians, and resource users navigate the spaces between distinct systems of environmental governance? In this paper, I will explore Indigenous scholarship on knowledge systems and TK as a collaborative concept. Guided by insights that include Deborah McGregor’s full circle, Charles Menzies’ operational optimism, and Willie Ermine’s ethical space of engagement, I will argue for an approach to TK that attends to the diverse processes and relationships of knowledge acquisition, valuation, control, use, and sharing that are thoroughly rooted in place, power relations, historical context, and socio-cultural meaning. Uncoupling ‘TK’ from colonial constructs and centering Indigenous peoples and worldviews creates the space needed for renegotiating relationships and authority over environmental decision-making in Canada.

Session: WED-13:30-7

Simulated Point Processes of VGI at Different Spatial Aggregation Units

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Many studies of VGI have had narrow foci, both in spatial scale and in the type and characteristics of the VGI data investigated. In this paper, we introduce a new metric for better understanding VGI irrespective of platform (e.g. Twitter, Foursquare, or Yelp), and more specifically, to use this understanding to develop novel ways of mining and analysing publically volunteered data over varying spatial scales. VGI point patterns were assessed for variability in local coverage, density, and user-heterogeneity over multiple spatial grain sizes. A comparison of the component and aggregate measures for different simulated point processes was completed to demonstrate the properties of the metric under random and clustered conditions. A key practical outcome of this research is a set of open source tools which allows VGI evaluation / assessment from a user-oriented perspective, irrespective of scale or platform. Five Canadian cities, each of varying size, were used for comparison: Vancouver, Kitchener, Toronto, Moncton, and Halifax.

Session: WED-15:30-1

Methods, Practices and Tactics to Go beyond “Gender Borders” in Latinized Fieldworks: How We Will Be Made into Feminist Geographers?

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Violaine Jolivet, University of Montreal

As an empirical method of interaction with people and places, fieldwork drives us to a better understanding of visible and invisible, explicit and implicit borders in the geographical areas we study. The distance, real or cultural, leads the geographer to a certain reflexivity about methods and practices. We base our proposal, a posteriori, on research experiences in American latinized areas, where relationships between men and women are more often described as dominated by masculinity, in their representations: ‘el pater familias’, ‘el macho’..., but also in everyday life. Therefore, we try to analyze the tactics and practices we developed as foreign young white women to investigate in this context, theoretically gender mixed. How our methodological choices in our inquiries as much as our attitudes in the field (language, body language, emotions, taken habits...) do reflect our confrontation / adaptation to these gendered borders? How do we use gender inequalities, playing with them or rejecting them, to introduce ourselves and build our objects? How do we manage to displace borders in special moments or interactions? Accordingly, we do not consider us just as observers: we rather are interested in the way the geographer, as a woman, suffers, provokes, reveals and negotiates gender borders and, thereby, in the way she may have to redefine her theoretical profile as a feminist geographer to act on them.

Session: TUE-15:30-5

Protected and Designated Area Tourism in the Bay of Fundy

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New Brunswick and the Bay of Fundy have protected areas such as Provincial Parks, National Parks, Nature Trust Preserves, as well as international designations such as UNESCO Fundy Biosphere Reserve in New Brunswick, and Joggins Fossil Cliffs World Heritage Site across the Bay of Fundy in Nova Scotia as well as the newly designated Stonehammer Geopark in the southern part of New Brunswick. These designations vary from protection, recreation and public education, e.g., national parks, and provincial parks, to others that work collaboratively with local businesses (especially in tourism) and communities to encourage sustainable development, along with the previously mentioned goals (e.g., Fundy Biosphere Reserve), and/or protection of significant geological attributes e.g., Stonehammer Geopark and Joggins Fossil Cliffs World Heritage Site. Current collaborations, corroborations and cross promotion between the various management agencies are examined as well as the benefits of the status quo versus an increase in collaboration amongst the various management agencies and its potential influence on increasing tourism and length of visitor stays in the region.

Session: FRI-13:30-5

Hudson Bay: A source for moist polar air mass during ice-free periods

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Climate change has been shown to affect northern Canadian communities. In Hudson Bay, the warming temperature effects caused earlier ice break up and delayed ice freeze up. Aside from animals who rely on sea ice, these effects also changed weather patterns in the region. Past researches identified that dry air mass passing through Lake Michigan and Lake Ontario could be modified into moist air mass through the interaction between the air and the surface water in a relatively short period of time. Wind data from 1971 to 2011 at Kuujjuarapik, Quebec was used to determine if a longer ice season resulted in more locally generated moist polar air mass. Results showed that daily and seasonal average wind speed increased over time. During winter, moist polar air mass coming from the west increased by 35% over the data period. Since the village is located on the eastern shores of Hudson Bay, the increase in moist polar air mass with westerly winds came from Hudson Bay. This explained the increased frequency of MP observed in the region and the change in wind speed and direction.

Session: FRI-10:30-1

'The world's favourite property market': Housing and austerity in London (UK)

David Ley, University of British Columbia

The role of residential property in the economic turbulence of the past decade provides a new urgency for revisiting the geography of housing. Residential real estate's emergence as a bubbly asset, a vehicle for private retirement saving, a preferred form of portfolio investment, an instrument for economic stimulus and a path to economic catastrophe, have all propelled its significance in local and national geographies. This paper will review the recent development of London's housing market under a state-declared regime of austerity, where spatial gradients have sharpened, social divisions have deepened, and extraordinary provisions of class privilege for global elites, but austerity with dispossession for low- and middle-income Londoners, have become unquestioned and seemingly unquestionable. Figuratively and literally, the global city increasingly belongs to a peripatetic cohort of high net worth individuals.

Session: WED-10:30-3

Facilitating Student Success through Experiential Learning and Professional Development

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To encourage student success, it is essential that the academic skills developed through program curricula be supplemented with experiential learning and professional development. Experiential learning provides

students with hands-on experiences that help relate course materials to real work practices, assist in better understanding of key concepts, and builds transferable skills. Professional development focuses on skills that are not necessarily emphasized in the classroom or not central to program curricula but are still of vital importance to student development and their future marketability.

This presentation reports on and assesses initiatives introduced to integrate experiential learning and professional development into the geography program at the University of Toronto Mississauga. These initiatives include an extracurricular professional development program based on a series of workshops and career events; a Research Opportunity Program where students work within a faculty-led research team; an internship course involving work placements and targeted professional development assignments; and the completion of a minimum number of field days to satisfy program graduation requirements. Reflective journal submissions for all completed activities foster active engagement of participants in the learning process. This integrative approach, it is argued, has greatly enhanced the student learning experience and has built skills vital to success beyond graduation.

Session: TUE-08:30-2

A geo-spatial analysis of quality and safety of children's play-spaces in Hamilton, ON

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The concept of spatial justice invokes fair and equitable geographic distribution of goods or services to a particular population. This research assesses play-spaces as an important component of municipal services in the City of Hamilton (Ontario). To assess the distribution of these spaces, an audit was conducted of the equipment they contain, the amenities they provide, and the features of their surrounding perimeter. This assessment permitted play-spaces to be evaluated against each other by common criteria. In turn, the geographic distribution of play-spaces was analyzed to consider access to facilities based on the assessment of quality and safety. Further research has the opportunity to measure civic engagement in play-spaces—either through amount of use or measures of social investment/divestment—and consider the impact that quality and safety may have. Health practitioners have noted that physical activity is an important contributor to reducing rates of childhood obesity. Therefore, researchers and policy makers can utilize the approaches used herein to assess fair and equitable access to play-spaces, thereby enabling healthy lifestyles in children.

Session: TUE-15:30-6

Transitions around Smoking: The Experiences of Chinese Migrants to Edmonton

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This research concentrates on how migrants experience the transition from a middle-income country where smoking remains socially acceptable and relatively unregulated, to a high-income country where it is de-

normalized and subject to widespread spatial restrictions. It focuses on Chinese immigrant community in Edmonton, Alberta, Canada. Generally, people in Canada are unable to smoke in most indoor and some outdoor public spaces; while in China smoking is still allowed in a large range of indoor public places and is almost completely unregulated outdoors. Chinese immigrants to Edmonton, a city with stringent smoking bans and low tolerance for public smoking, will experience these transitions in both regulatory and social environments around smoking. For this research, data collection involved eight focus groups, with 57 total participants. Questions focused on participants' experiences on smoke-free places and social norms around smoking in China and Canada. Participants' responses were transcribed then analyzed using a thematic approach. Demographic data was also collected to examine its impacts on people's experiences. Main results from analysis of focus group data included: (1) Social norms around smoking, especially taking cigarettes as gifts in everyday life, were considered responsible for the high prevalence of smoking in China; (2) Despite migrating to Canada, smoking participants reported high loyalty to Chinese brands; (3) Stringent spatial regulations in Canada not only protect non-smokers from exposure to smoke, but also work as powerful pressure for smokers to smoke less; (4) Smoke-free public indoor environments in Canada not only restrict where smoking and exposure to smoke occur spatially, but also encourage mutual respect between smokers and non-smokers.

Session: WED-08:30-2

Confrontation and Compromise over Livelihood Approaches in Miao and Dong communities in Southwest China

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Sarah Turner, Department of Geography, McGill University (sarah.turner@mcgill.ca)

Since the late 1970s, specific ethnic minority communities in China's southwest provinces have been selected by provincial and prefectural governments to become show cases for development via ethnic tourism. This tourism has flourished, causing fierce disputes about the impacts on local livelihoods, land use, social structures, cultural change and income disparities. Focusing on three case-study villages in Qiandongnan Hmong and Dong Autonomous Prefecture, Guizhou Province, we examine the impacts of tourism in Dong and Miao livelihoods. Specifically, we compare the livelihoods of villagers from one village without tourism to date, one with a medium level of tourism, and one where tourism is in full force and often compared with the ethnic minority tourism hotspot of Lijiang, Yunnan. Our analysis of the transitional characteristics of these communities focuses on agricultural production, social structures and culture to shed light on the reactions and adaptations of ethnic minority households and communities under different stresses and demands from local government and state-controlled tourism businesses. We hope that our findings may provide support for more sustainable livelihoods and tourism development patterns in the future.

Session: TUE-08:30-5

Labouring in carboniferous capitalism: Cape Breton and the Alberta Tar Sands

Doug Lionais, Community Economic Development, Shannon School of Business, Cape Breton University

Carboniferous capitalism has (re)shaped the world as places become constituted by and linked together by flows of capital, people and commodities linked to fossil fuel extraction, production and consumption. In Canada, the Alberta oil sands are an important, perhaps even central, component of the economy. The growth of the Alberta oil sands is reshaping the geography of the Canadian economy, creating new patterns of uneven development and new relationships between Canadian regions. This paper will explore how Cape Breton, in Nova Scotia, is being reconstituted by its continuing but shifting relationship to carboniferous capitalism through its connection to the oil sands through multiple flows. These flows are, on one hand, propping up a chronically lagging economy, and on the other bring in new sets of social, economic and health challenges, labour subjectivities and toxic material exchanges.

Session: WED-13:30-4

Transport-geographic continentality of Canada: from sea to sea

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Maritime location of Canada has not been questioned by many generations of researchers. But in our study we have used a method, which yields to estimate continental/maritime location in transport-geographic terms, based on population distribution and the impact of inland waterways suitable for sea transport. The estimate proves that Canada is a country with low continental degree. However, neither Canadian coastline, nor the access to three oceans, determine its maritime location but deep-water system of Great Lakes and the St. Lawrence River. Comparison of transport-economic and transport-geographic remoteness from the sea confirm the constant influence of these unique seaways. This suggests the conclusion that Canadians themselves have made their country maritime. Paradoxical conclusion was that in different parts of Canada maritime influence is not always defined by distance to the sea. For Canada, there is another unexpected pattern: the further north is, the higher the degree of transport-geographic continentality. Population and economy, originally developed in these transport and geographical conditions, are mainly located in coastal and maritime areas in their new, non-traditional interpretation. Ultracontinental territories compensate unfavorable interior and landlocked location, using the continental neighbourhood. Overall, Canada demonstrates a successful realization of its maritime potential.

Session: TUE-08:30-6

The Nature of Till and Drumlins in Peterborough: Implications for Developing a Community Groundwater Supply

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While the origin of the drumlins is widely debated despite many years of study, one aspect remains certain; glaciated terrains have significant implications for groundwater movement and public water supply. The late Wisconsin Northern Till, deposited by the Laurentide Ice Sheet, underlies the Peterborough Drumlin Field in southern Ontario, and is considered to have formed primarily by subglacial deformation processes. The till is up to up to 65 meters thick and commonly contains coarse-grained interbeds of sand and gravel. The presence of these interbeds within the till produces groundwater flow pathways that are not easy to predict but have significant implications for contaminant transport and groundwater supply. A First Nations community located within the Peterborough Drumlin field has been attempting to find a more sustainable groundwater supply in the drumlized terrain. Currently, homes are supplied by private wells. Correlation of subsurface data between a recently drilled, cored and geophysically logged well and lithological and hydrogeological data obtained from local water well records across the Peterborough Drumlin Field allows detailed analysis of the till stratigraphy and groundwater availability. This interpretation of the local stratigraphy will provide the basis for improving the supply of drinking water for communities within the drumlin field.

Session: THU-13:30-2

Marketing palimpsests: Real estate advertising and the promotion of urban space in the Canadian city

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This paper explores cyclical narratives of urban place-making in real estate advertisements. In particular, we compare historical and contemporary real estate advertisements for 'new' housing developments in Toronto (ON) and Victoria (BC). Building on the literatures in urban branding and 'critical infrastructure', we conduct a textual analysis of both archived and recent housing promotions to show that real estate advertising, past and present, (re)deploy narratives of walkability, access to public transit, and, 'live-work-play' philosophies in the sales pitch. Moreover, viewed through an historical lens, we argue that these advertisements represent not only powerful discourses framing local concepts of house, home, and the city, but also reveal how critical narratives of urban place-making, produced by key agents in the housing market, recycle rather than emerge anew.

Session: WED-10:30-6

“The City Council should pass a traffic law to keep the people moving on”: Contesting Toronto’s sidewalks, 1880s-1920s

Phillip Gordon Mackintosh, Department of Geography, Brock University

Sidewalks represent the coincident social production of public space *and* technocratic and legal production of urban flow – as we would expect in the contradictory modern city (Berman 1982). Accordingly, historical Toronto reveals the simultaneity and complexity of both ideals, as pedestrians negotiated lived life and modernizing expectations on the city’s sidewalks. Following Mitchell (2003), Low and Smith (2006) and Blomley (2011), we know that public space is never given, only socially produced and maintained through intense political struggle. Toronto’s sidewalks, from roughly the 1880s to the 1920s, to varying and somewhat ironic degrees, support such a view. Thus it is possible to posit the presence of two competing and salient realities on the sidewalks of late Victorian, Edwardian, and Interwar Toronto. The first I call *pedestrian publicity*: the simple act living city life on sidewalks. Because much of urban life and especially impoverished life was lived outdoors, historical sidewalks presented an obvious locus for that living. The second contradicts the first. *Efficient walking* describes an extant technocratic urban contention that sidewalks existed –were provided – to expedite modernism’s interest in the flow of people, traffic, goods, services, and money. And while Toronto’s police oversaw the latter, the vigorousness of the former suggests the attempt to reduce sidewalks to mere flow was not easy.

Session: WED-15:30-3

Kwinana Industrial Area: Measuring Industrial Inertia, Agglomeration Economies, and Industrial Symbiosis on Western Australia’s Cockburn Sound

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The Kwinana Industrial Area is nearing its sixtieth anniversary as a resource processing industrial cluster. Its longevity may be understood in the traditional terms of industrial inertia resulting from three types of agglomeration economies: localization, transfer, and urbanization economies. However, industrial ecology provides an alternative approach to describe the environmental impacts of interplant linkages: utility/infrastructure sharing, supply-chain synergies, by-product exchanges, and joint provision of services. The agglomeration economies and industrial symbiosis approaches to clustering are compared using interplant relationships drawn from the case of Kwinana.

Session: THU-13:30-3

Teaching Geospatial Literacy to Large Classes: A Blended Learning Approach

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During the 2012-13 academic year students in first year geography courses at McMaster University were exposed to blended learning modules aimed at improving geospatial literacy skills. The eight modules enabled 24-7, 'on-demand learning' for students through the course learning management system and cover topics such as map elements, map referencing systems, and fire insurance plans. Students use the modules to prepare for a time-limited assignment in the McMaster Map Library. The modules will be viewable during the presentation to further discussion on how they align with both traditional lecture hall and map library instruction. Assessment of this initiative includes both qualitative and quantitative feedback from students and instructors. Results show that prior to using the on-line tools, students commonly acknowledged their skill and knowledge shortcomings challenging many assumptions about pre-existing student comfort with all things digital. Instructors felt that by students having the material in advance, in-class time could be better focused on interaction, assignments and assessments and resulted in reduced anxiety in busy lab environments. This poster will build upon results reported in the recent Higher Education Quality Council of Ontario report '*An Assessment of a Blended Learning Model for Information and Geospatial Literacy*'.

Session: TUE-13:30-2

Analysis of Drumlin Spatial Distribution in Select Southern Ontario Drumlin Fields

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Reconstruction of former ice conditions and glacier dynamics in previously glaciated terrains requires understanding of the processes and controls on the development of subglacial landforms such as drumlins. This poster presents a quantitative analysis of the spatial distribution of drumlins identified from digital elevation model (DEM) data within three drumlin fields in southern Ontario (the Arran, Galt and Guelph drumlin fields) and a field description of a partially excavated drumlin within the Guelph drumlin field. Drumlins are identified and their morphological parameters documented using a computer-based process that allows direct comparison of forms within and between individual fields. Statistical analysis of the morphological characteristics and spatial distribution of drumlins within each of the three drumlin fields, using kernel density and nearest neighbour analysis, indicates that drumlins of particular types show distinct patterns of clustering. These patterns of clustering appear to be related to several different factors including length of time under ice, bedrock topography, and ice velocity. The ability to consistently identify and characterize drumlin morphology and distribution will allow more objective and systematic

comparison of these landforms both within and between drumlin fields and will enhance understanding of the spatial controls on the development of these enigmatic landforms.

Session: TUE-08:30-7 POSTER

Therapeutic landscapes of South Asian women: a geography of traditional medicine use in Ottawa

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Human geography has developed an interest in health. Shifting from an epidemiological focus, a new medical geography has been credited in presenting a cultural interest in health. Wilbur Gesler's concept of 'therapeutic landscapes', which refers to physical, social, cultural as well as symbolic landscapes people associate to well-being has been the most revered. My MA research will use this concept to understand traditional medicinal practices of South Asian women in Ottawa, Ontario, to illustrate how health should not only be understood clinically, but also geographically as. With this, public health programs for this demographic may be effective if cultural health practices are understood. Through community health centres in Ottawa, I hope to show how these therapeutic landscapes are created through everyday traditional health practices. The methods of ethnography and life history interviews will present a rich, 'thick' description of these practices. These methods will highlight issues of representation, as well as situated knowledges. Also, Lidia Marte's method of foodmapping will also be used to illustrate the routes women take to obtain medicinal ingredients that may link to other landscapes, local and global. In all, my research will show how geographers can contribute to studies of diaspora and health.

Session: WED-08:30-8 POSTER

Is the United Nations Framework Convention on Climate Change an effective (or appropriate) institution for supporting indigenous populations' adaptation to climate change?

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The United Nations Framework Convention on Climate Change is an intergovernmental institution that was established in the 1990s with the objective of bringing nations together to negotiate policies in a global effort to stabilize greenhouse gas emissions in the atmosphere at a level that would prevent dangerous interference with the climate system. Today, with increasing scientific certainty regarding the current and future impacts of climate change, and the growing notion that some degree of change is unavoidable regardless of mitigation, the role of adaptation, and its scope, have expanded a great deal since the institution was first envisioned. This study uses critical discourse analysis to examine the evolution of the official discourse on adaptation to the adverse effects of climate change in the institution based on decisions rendered by the Conference of the Parties, and seeks to expose the policy implications for indigenous peoples at different scales. Noteworthy trends include an increasingly explicit recognition of the heightened vulnerability of indigenous peoples to climate change, and growing promotion of participatory approaches to involve vulnerable stakeholders in all aspects of the Convention, including the consideration

of traditional and indigenous knowledge. Adaptation assistance however, remains exclusively aimed at developing country Parties.

Session: TUE-10:30-1

Examining Elements of the Feedback Stages of Community Based Vulnerability Assessment: A Case Study of Negril, Jamaica

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Small island developing countries and low-lying coastal regions are particularly vulnerable to the impacts of climate change. The adaptive capacities of many of these vulnerable regions are underdeveloped, which poses risks to the future of existing communities of these regions. The Partnership for Canada-Caribbean Community Climate Change Adaptation (ParCA) program takes an interdisciplinary approach to understanding multi-scalar vulnerabilities and sensitivities shaped by socioeconomic, governance, and environmental factors for four comparative sites. The objectives of the ParCA project are to examine regions facing comparable stresses to their foundational livelihoods (tourism and fisheries), to allow sharing of knowledge and best practices to mobilize communities to move towards more sustainable development with enhanced ability to cope with the impacts of climate change. At each site, exposure-sensitivities based on existing stresses are identified using the process of conducting a community based vulnerability assessment (CBVA). As part of the CBVA process, feedback workshops are conducted to validate results from the CBVA data collection stage. This research examines elements of the feedback workshop stage conducted in Negril, Jamaica, to demonstrate the importance of this stage within the overall CBVA process.

Session: THU-13:30-1

“TFWs offer stability” and “This is all for him”: Experiences of labour outside the primary industry needs of Fort McMurray, Alberta

Claire Major, Department of Geography, York University (cmajor@yorku.ca)

Fort McMurray, Alberta reportedly suffers from both a shortage of skilled labour for oil sands extraction work and an actual shortage of de-/un-skilled workers to do the relatively poorly paying jobs in the service and retail sectors. It is also home to workers who have skills that do not match the local labour market and that far exceed the work they end up doing. The demand for labour is often pitched and interpreted as opportunity that is not available elsewhere, but for those whose skill is not recognized or absorbed, their actual laboring potential is suspended, skill development on hold, and job satisfaction wanting. Most of these people are [im]migrants of some sort, either Temporary Foreign Workers, secondary migrants, or the professional female spouses of men recruited to work in the oil industry's professional positions. As such, opportunity and the job one actually finds can be a complex interaction of particular and local hiring norms, [im]migration, citizenship status, perceptions of value, and credentialism at other scales, resulting in an individual latency or unrealized potential of the oil sands dream. Drawing on interviews, this presentation discusses the range of migrant types that make up this pool of labour.

Mechanisms of Enhancing Social-Ecological Resilience in Human-Altered Wetlands through Comanagement

Abdullah Al Mamun, Department of Geography and Environmental Studies, Wilfrid Laurier University,

The objective of the research was to highlight if comanagement can be used as a tool to enhance social-ecological resilience. In this regard, this study investigates the mechanisms of enhancing resilience concerning social-ecological systems of small-scale fisheries of Bangladesh. Aspects assessed concerning establishing resilience include: habitat protection measures through natural sanctuaries, local rules and fishing practices on maintaining habitat features to support ecosystem functions/services. A case study based approach followed by Participatory Rural Appraisal (PRA) techniques was used for data collection and subsequent analysis. This study identifies that comanagement has the potential to operationalize social-ecological resilience as it employs low cost measures to support ecosystems such as using locally based materials in sanctuaries and engaging local rules to managing fish habitats. Habitat management programs under comanagement also can enhance the incomes and access of fishers to their traditional fishing grounds during recovery of ecosystem processes. However, some inherent constraints such as funding issues, degradability of the sanctuary materials and gaining support from related stakeholders need to be addressed for future applicability of comanagement in building social-ecological resilience.

Session: THU-10:30-1

Sexual Assault Services for Online Students and Related Job Strain Issues for Online Faculty and Staff

Sarah Mann, Brock University

Not long after I began undertaking feminist research in an online MA program at a Canadian university, other students began to tell me about their experiences of violence and its effect on their studies: describing past and current experiences with domestic violence, sexual assault and sexual harassment, as well as difficulties with participation and confidence in classes, stemming from their experiences of violence. My larger project investigates the systemic issues producing these disclosures, particularly in online programs and schools, where the student population is distributed and disclosures are always mediated by technology. This presentation will discuss how the need for student sexual assault services may differ at online universities, and why online universities may not offer adequate counselling services; the difficulty of recognizing and addressing job strain for distributed faculty and staff who field student disclosures of violence in place of counselling services; and opportunities to address these issues by “closing” physical distance with information and communication technologies or forming service partnerships with other organizations and institutions.

Session: WED-10:30-7

VACEA Project Integrated Vulnerability Assessment

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Involving natural and social scientists working in five countries in the Americas, The VACEA project posed two key challenges: how to integrate qualitative interview data with quantitative climate science; and how to integrate and compare results on climate vulnerabilities across the country studies. Drawing upon the methodologies used in other international indices (e.g. the Human Development Index), the Rural Adaptability to Climate Extremes (RACE) Index for climate vulnerability analysis was created in order to integrate and compare climate vulnerability in some of the most environmentally sensitive areas in the Americas. The RACE index contains 36 indicators of climate vulnerability, which were drawn from both existing literature and the VACEA project findings. Drawing upon the conceptual climate change literature, the indicators were categorized into three sections: 1) environmental exposure in terms of future and baseline climate variability; 2) the sensitivity of human/social systems; and 3) adaptive capacity at the individual and community level.

Session: TUE-12:00-1

Anecdotes vs. Evidence: The Role of Place-based Development in Becoming a Region in Rural Canada

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How do regions become? Historically in Canada regions have played a prominent role, with climatic, physical features, political delineations, and economic regions dividing the country. The result is various overlapping and conflicting regions. Presently 'the region' is argued to be making a comeback, although from a different perspective than previous iterations - a transition from space-based to place-based development, from top down, arbitrary delineations of regions to a more bottom up, organic formation. Using a case study approach, this research investigated whether place is emerging in practice in the development of rural Canadian regions, helping to better understand how regions become. While identity plays a critical role in fostering the regional development processes, regional identity is found to be either too emergent or actively suppressed to be a significant force. Additionally, while the importance of identity for defining effective regions is a critical factor for developing effective place-based policy, this requires capacity and willingness from both the top and the bottom. However, while there is some evidence of this 'co-construction' in regional development, governance structures surrounding regions remain at odds with identity-based regions. Overall, this research suggests that despite recognition of the importance of place there are considerable barriers to achieving place-based regional development in rural Canada.

Session: WED-13:30-6

Poverty, Housing, and Urban Forestry: Interrogating Intertwined Social and Environmental Justice in Toronto's Inner Suburbs

Cosmin Marmureanu, MSA, Ryerson University (cosmin.marmureanu@ryerson.ca)

Within the last century a growing body of research has shown the myriad of benefits of vegetation, and trees in an urban environment, especially to the development of children. These findings have helped make the urban forest an important issue for many cities around the world. The benefits associated with trees and vegetation include environmental, economic, and psychological. These findings have led various institutions to recognize the value of urban forests, and take initiatives to help improve and maintain this valuable resource. This makes site selection for tree plantings an important consideration. This paper examines the site selection methodology used by the Toronto District School Board (TDSB) for tree plantings, and develops an alternative method that takes into account the socio-economic status (SES), housing, and student achievement variables of a school. This would assist the TDSB in their work to develop the urban forest in the most effective way that provides the maximum benefits to their students.

Session: THU-13:30-6

Urban biosolids as a waste or a resource in the rural landscape: A point of tension and heightened community conflict

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In developed nations, there is conflict between those who view 'rural' as a resource, equating it with agriculture and primary production, while others view the pastoral rural countryside as an escape from urban centers. This has amplified conflict as urban by-products increasingly intrude into pastoral rural spaces. Secondary treatment and disposal of municipal biosolids (treated sewage sludge) is emerging as an area of waste management controversy. Utilizing in-depth interviews (n=22), this paper examines narratives around the 'waste' versus 'resource' debate surrounding biosolid management in Southgate, Ontario. This work draws on theoretical constructs of rural sociology and the pastoral rural landscape and is situated within the wider conceptualization of the risk society. The results show intra-community conflict and divide arising from differing values, ways of life, and perceptions of the rural landscape more broadly. Rhetoric of 'us' versus 'them' was evident as this community was historically driven by agricultural and is transitioning as many residents are in-migrating, which is subsequently changing community composition, values and overall expectations of the rural landscape. There is conflict arising from biosolids' perceived value as an agricultural resource compared to the belief of the intrusion of urban waste and these differing perspectives have heightened community impacts.

Session: TUE-08:30-4

Analysis of the Extratropical Transitions in the Atlantic Canada under a Changing Climate Condition

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There is a tendency to equate the word “hurricane” with tropical regions. Certain cyclones of tropical origin undergo extratropical transition where the cyclone will develop a front and grow significantly larger. Atlantic Canada is most at risk for these storms. Newfoundland, in particular, has suffered devastating impacts, notably Hurricane Igor. This research focused on the North Atlantic Ocean from 1991 to 2011. Each cyclone that underwent extratropical transition was tracked and plotted using GIS software along with information regarding the cyclone’s wind speed, movement, date and time, latitude and longitude, and pressure at the time of transition. It was determined that out of 324 tropical cyclones formed, 121 underwent extratropical transition, a mean of 5.76 per year. 29.2% of the cyclones emerged from transition stronger than the tropical state, bringing widespread disaster to areas in the path of the storms. Extratropical transitions were analyzed to determine if the frequency, magnitude and intensity of potential shifts can be calculated for the purpose of more accurate forecasting and the benefit of public awareness, safety management, and preparedness in Atlantic Canada. Better forecasts could warn a given population of when and where a transition might take place and how best to prepare for the consequences.

Session: FRI-08:30-1

Development of a Flexible Winter Severity Index for Canadian Road Authorities

Lindsay Matthews, University of Waterloo
Jean Andrey, University of Waterloo
Derrick Hambly, University of Waterloo
Brian Mills, Environment Canada

Snow and ice control on Canadian roads is crucial for enabling the safe and efficient movement of people and goods. The severity and frequency of this winter weather that predicates the need for snow and ice control has a strong relationship with winter road maintenance (WRM) activities and expenditures. Assessing past and forecasting future WRM activities and their respective expenditures are significant challenges for Canadian road authorities. A way of measuring the need for, and possibly forecasting WRM activities, is through the representation of winter weather based on indices. Although many winter severity indices (WSI) have been developed, many of these are complex and of limited practical use for road authorities. In this research, a method has been developed to optimize a simple-to-calculate WSI for regional use. This WSI assigns each day a weather score based on seven weather attributes. Each weather attribute is calculated based on attribute-specific thresholds that then trigger a score. These daily scores are aggregated to weekly, monthly or seasonal levels and are correlated to maintenance activities. Site-specific WSIs can then be developed for many Canadian jurisdictions through use of an optimization tool that alters the weather-attribute thresholds and scores, reflecting the specific maintenance practices in that region. A preliminary analysis of Canadian data from two jurisdictions in Western Canada demonstrates the value of this approach.

Session: FRI-13:30-1

'Gone, leave, go, move, vanish': Race, Public Space and (In)Visibilities

Jeff May, Department of Geography, University of Toronto Mississauga (jeffrey.may@mail.utoronto.ca)

This paper is a discussion of the various ways Canadian-born young men of colour (aged 17-26) experience (in)visibilities in public spaces of the Greater Toronto Area (GTA). This research is based on ethnographic interviews with 40 young men in Mississauga, Scarborough, and downtown Toronto. Given that their homelessness necessitates much of their lives be conducted in public space, these young men must navigate being visible and invisible in multiple ways and to multiple agents. I begin this paper by analyzing the different ways 'visibility' and 'invisibility' have been conceptualized in the scholarly literature, including literatures on homelessness, public space, and race. Invisibilities include 'invisible homelessness' as well as material invisibilities in which young men of colour both purposefully and accidentally navigate public spaces in ways that affect whether they are seen or unseen and by whom. This research emphasizes the contingency and indeterminacy of (in)visibilities. Despite the various ways they move between visibility and invisibility in public spaces, young men of colour experiencing homelessness maintain an explicit presence in urban street spaces. Understanding their experiences of (in)visibility in urban space helps us understand the geographies of race and racism in the GTA and in North American cities more broadly.

Session: FRI-10:30-5

Stay Eat Love: A Hermeneutical Approach to Analyzing English Language Travel Narratives about Italy

Kelley A. McClinchey, Wilfrid Laurier University (kmclinchey@wlu.ca)

One might perceive that the end is near for the written word, the paperback copy that gets wet, wrinkled, with pages turned and faded. In a world of immediate social media updates, status changes, travel blogs, personal websites, and commercial on-line travel forums this may seem a surprise. However, more travelers than ever are documenting their experiences through literary travel. Within the postmodern turn, the travel writer has been normalized and the boundaries between author and tourist/traveler are becoming blurred. Within Tourism Studies, recent attention by scholars has argued for increased use of less traditional, and more qualitative, methods for analyzing tourism phenomena. Using hermeneutics, travel narratives about Italy were examined through a latent content analysis of 13 literary travel books. Findings revealed a distinct set of themes relating to Food, Simple and Natural Landscapes, the Other, Everyday Experiences and the Anti-tourist. The importance of understanding travelers' attraction and attachment for places that maintain "Old World" experiences is discussed. The search for nostalgia through meaningful place experiences has led, not only to our yearning for the meanings associated with places in the "Old World" but for the media within which we document these travel experiences.

Session: WED-08:30-6

Assessing the dendroecology of black walnut (*Juglans nigra*) growing in natural and agroforestry conditions in Southwestern Ontario

Reilly McIlhone

Ze'ev Gedalof

Mohammed Idris

Naresh Thevathasan

Andrew Gordon

The current knowledge regarding the growth and climate relationships of black walnut (*Juglans nigra*) and the comparisons of such relationships between different growing environments is limited. For this study, dendroecological methods were employed to compare the sensitivity of growth to temperature and precipitation for black walnut trees in natural and agroforestry growing conditions in order to better understand how current and changing climate may impact this species. Samples were taken from two locations in Guelph, Ontario, Canada. The natural environment samples were taken from a mature stand of mixed tree species with a closed canopy, and the agroforestry samples were taken from the agroforestry experiment at the Guelph Turfgrass Institute (GTI), where trees were located in an open canopy, intercropped environment. Climate correlations were low overall, suggesting that climate currently plays only a small role in limiting the growth of black walnut at its northern range limit. However, results also indicated that the samples located in the agroforestry setting were more sensitive to temperature than the samples located in the natural setting because of their open environment characteristics. Precipitation had no significant role in growth for either area that was sampled. These results suggest that with continued climatic warming, growth conditions will likely improve for black walnut, potentially improving its utility as an agroforestry crop.

Session: TUE-08:30-7 POSTER

Creating Phase Spaces: Teaching Writing Using Concept Mapping and Geographic Understandings

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This paper draws on my experiences teaching writing strategies, specifically concept mapping, to undergraduate and graduate students at York University's Writing Centre. Concept mapping offers students technique through which they can graphically represent the content of their essay, creating a scaffold for deep learning (Novak and Cañas 2004). Concept mapping relies on articulating the linkages between concepts (thinking of space relationally) and on the "confined, connected, inertial, and always context-specific nature of existence and emergence", phase space (Jones 2009, 489). Drawing together geographic thinking about space and insights from teaching concept mapping, this paper concludes that teaching students to think spatially about their writing is valuable at graduate and undergraduate levels.

Session: TUE-13:30-2

Sustaining livelihoods through fair trade tourism: Narratives from Nicaragua

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The development of small-scale tourism has been suggested as an important component of a sustainable livelihood strategy for people living in rural areas, particularly in the Global South. This paper builds on this prior work by presenting and analysing the perspectives of tourism hosts and guides involved in an agro-ecotourism project in the central highlands of Nicaragua. Five community members participated in narrative interviews. They discussed a variety of reasons for joining the tourism initiative, with a strong emphasis on the more diversified and robust livelihood they achieved through participation. Beyond financial impacts, program participants also saw their involvement in tourism leading to better education for their children, more harmonious family relationships, and greater autonomy and empowerment for female community members. These insights can help people working in academic and practical contexts comprehend how the 'targets' of sustainable tourism development initiatives experience and understand such projects.

Session: TUE-08:30-5

Volunteer Tourism as Neoliberal Conservation: A case study approach in Northern Belize

Alexandra Meeker, Department of Geography, University of Guelph

New and innovative strategies to rally interest and support for the conservation of the planet's dwindling biophysical resources and fragile ecosystems are continually being forged on the international stage. Increasingly, market-based initiatives are among these strategies, ripe with the tantalizing promises of simultaneously providing community prosperity, biodiversity conservation and oftentimes-lucrative economic incentives. However, in the literature these approaches have been exposed for their exploitative qualities as they often times are responsible for commodifying natural landscapes and organisms in order to transform and distill them into easily marketable packages, made available for consumption. Volunteer tourism has been identified as one of these neoliberal conservation strategies and shares similar praises and criticism. In order to adequately contextualize this steadily growing alternative industry and provide further insight into the place-specific functions and relationships of the market, Meeker draws upon the a case study approach and qualitative data sourced from multi-stakeholder groups. In an attempt to identify the beneficial and problematic elements of this particular volunteer tourism project she implements Wearing's (2001) spectrum of commodification and decommodification. Results indicate that despite the determined presence of both of these elements in the case study, volunteer tourism can make positive contributions to the host community and environment and therefore should be considered as another strategy for conservation rather than simply an extension of the tourism industry.

Session: TUE-13:30-4

Modelling Regional Airport Success

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This study examines regional airports in the United States and what makes them successful. The study uses multiple linear regression to model regional airport activity as a function of distance from a large airport, the size of the large airport that is closest to the regional airport, population of the regional airport city, and local economics. It was found that, although distance from a large airport and size of the nearest large airport did influence regional airport activity, the population of the regional airport city as well as economic variables were more important. The presentation ends with a discussion of the implications of the findings for the siting and expansion of regional airports.

Session: WED-08:30-8 POSTER

Queering Labour Mobility

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Nathaniel Lewis, School of Geography, University of Nottingham

Despite the ongoing interests of economic geographers in mobility and migration, little work has addressed the role of sexuality and sexual identity in the movements of workers. That which has tends to be global (and not regional) in scale, and to focus on how neoliberal immigration policies privilege and/or suppress sexual identity to attract global talent. Research on the migration of sexual minorities, alternatively, has frequently been regional in scale but overlooks economic factors shaping migration decisions, instead highlighting cultural capital and community as the chief pull factors for migrants. In this paper we unpack the embedded assumptions in dominant discourses on queer migration and inter-regional work-related migration. The narrative of the closeted queer individual moving to the metropolis for self-actualization underplays the roles that labour markets, social class and geography play in the migration of sexual minorities. Likewise, narratives of inter-regional economic mobility, often presume heterosexuality. In this paper we bring the literature on inter-regional migration into conversation with the literature on queer migration to explore how sexual identity intersects with labour markets, class identities and education to influence worker agency. In queering a discussion of labour mobility, this paper seeks to both call attention to how class and labour markets shape the lives of queer workers, and to craft a political terrain that incorporates sexuality and sexual identity into understandings of how workers shape the organization of capital.

Session: TUE-13:30-5

Late start of antenatal care in Malawi: Who is at risk?

Paul Mkandawire, Institute of Interdisciplinary Studies, Carleton University

Antenatal care is a widely used strategy for identification and management of obstetrical complications in order to improve maternal and perinatal health. This paper uses data from Demographic and Health Survey

to examine the timing of first antenatal care visit among pregnant mothers in Malawi. Survival models show that, overall, less than 30% women make their first antenatal care visit prior to the gestational age of 16 weeks as recommended by the World Health Organization. However, the findings show that even with this pervasive reticence to book for antenatal care, there is still a social gradient, with least educated mothers most likely to further delay first antenatal care visit. However, after controlling for domestic violence, the positive relationship between education and antenatal care is attenuated and loses significance. The study makes relevant policy recommendations.

Session: TUE-10:30-6

Climate Change Vulnerability and Adaptive Capacity of Tourism Destination Communities: Comparing Indicator and Community-Based Approaches

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Appropriate adaptation measures need to be planned and implemented in regions of the world that are particularly vulnerable to climate change and dependent upon climate-sensitive sectors. This research focuses on the tourism sector, a highly exposed economic sector, and where further research is needed regarding the vulnerability and adaptation of tourism-destination communities in developing countries, including coastal zones and Small Island developing states (SIDS). More specifically, the research employs two comparative methods, an indicator and a Community-Based Vulnerability Assessment (CBVA) approach, to assess the vulnerability and the adaptive capacity of a site-specific tourism destination community and its range of tourism stakeholders in Barbados, a SIDS located in the eastern Caribbean. The first approach develops and applies a set of process-based/ contextual indicators for the determinants of climate change vulnerability and adaptive capacity at the destination and household level. The second approach carries out CBVAs with stakeholders whose livelihoods are most connected to the tourism related activities of the destination. The research examines the strengths and limitations of each method, how they might integrate and which approach, or combination of, was found to be most useful to undertake the assessment. It also examines which method could best facilitate the targeting of tourism specific adaptation initiatives.

Session: FRI-08:30-4

Special Panel on Proposal for a Canadian Historical GIS Network

Byron Moldofsky, University of Toronto
John Bonnett, History Department, Brock University

The idea of a Canadian Historical GIS Network has been circulating for several years among CAG, CHA, CCA and ACMLA members. Last year at the CCA/ACMLA conference a presentation on this initiative met with substantial popular support. In February of this year a 2-day Canadian Historical GIS conference-workshop (Atelier-conférence canadien sur le SIG historique) was held in Montreal, attracting 40 participants from across the country, meeting at the Bibliothèque et Archives nationales du Québec, and sponsored by "Montreal - Plaque tournante des échanges", a partnership project financed by SSHRC and based at UQAM.

Examples of spatial history projects were presented and goals, prospects and ways of developing a network to facilitate historical GIS on a national basis were discussed. This panel will review some of these ideas, and throw the floor open for discussion of building such a network going forward.

Session: WED-13:30-8

Odours of resistance? Ethnic politics and Singapore's 'cook curry' movement

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Serene Tan, Independent Researcher

In August 2011, many citizens of Singapore took to their pots and use the city-state's so-called 'national obsession' to express their growing dissatisfaction with the authorities' immigration policies targeting increasing numbers of foreign workers. As a local act of response to Chinese newcomers complaining about the smell of their Indian Singaporean neighbours' food, the 'cook and share a pot of curry' movement finds significance on its reliance on the contemporary social media framework to organize the protest, and its framing of smell as the main human sense of resistance within this totalitarian regime. By documenting and analyzing this event, our intent is three-fold: (1) to conceptualize the role of smell as resistance in the Southeast Asian and totalitarian context of Singapore, (2) to understand how it helps shed light on current trends in the city-state's evolving ethnic politics, and (3) to reframe the significance of the curry movement as an act of citizenship at the intersections of smells and the production of them through cooking.

Session: FRI-13:30-6

Nashville Model of Economic Development

Garrett Morgan, University of Toronto

Music City is no longer just a destination for aspiring musicians and songwriters, but is also increasingly attracting young professionals, entrepreneurs, and major corporations. While the music industry is integral to city's economic rise, it is only part of the story. The 'Nashville model' then, illustrates how a metro or region can successfully leverage a niche cultural market advantage, in this case, music recording studios and businesses, and quality of life indicators, such as low cost of living, into a metropolitan wide, cross sectoral, economic development strategy without the high-wage job growth or extensive natural resources typically associated with 21st century urban growth. The presentation will address the following questions: How did Nashville develop into the model metro? How does music fit into the metro's success? And what can other regions learn from the Nashville model?

Session: WED-08:30-3

20th Century Changes in Climate-Growth Responses of White Spruce in the Yukon Territory, Canada

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Brian Luckman, Department of Geography, Western University (luckman@uwo.ca)

Networks of 73 ring width (RW) and 12 maximum density (MXD) treeline chronologies were developed for sites across the Yukon. Principal Components Analyses indicated a strong common growth pattern amongst the RW chronologies for the 1900-1950 period (68.5% of chronologies on PC1E) but varied patterns over the 1950-2000 interval (30.1% on PC1L). PC1E chronologies showed strong relationships with summer minimum temperatures (positive) and summer maximum temperatures of previous year (negative) for the 1900-1950 period but only four of these chronologies retained this summer signal for the 1950-2000 period. 32% of the PC1E chronologies showed negative responses with spring/summer minimum temperatures during the latter period, mainly for sites in the central and north-central Yukon. Principal Components Analysis of the MXD chronologies for 1900-1950 period showed a large coherent group (central/southern sites) loading together on PC1. Results for 1950-1983 period separated this group over two components suggesting the possible emergence of a regional signal from the south-eastern sites. Most (9/12) of the MXD chronologies have significant relationships with summer maximum or mean temperatures prior to 1950 and six retain a slightly weaker summer signal post-1950 but all are positive. These sites are all located in the central and southern Yukon.

Session: FRI-10:30-2

Developing an Ontario Maple Syrup Sector Profile: A Value Chain Analysis

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Brenda Murphy, Department of Society, Culture and Environment, and Geography, Wilfrid Laurier University (bmurphy@wlu.ca)

Maple syrup will always have a strong connection to the Canadian economy and identity, partly due to Canada's dominant role in maple syrup production. While the industry has been present for generations, there is little academic information to provide a sufficient understanding of the system from an economic standpoint. The larger project that this poster presentation contributes to has the overall goals to identify competitive, innovative opportunities for capacity development in Ontario's maple syrup agri-food value chain by increasing value added related to new products and services, better market differentiation and stronger network relationships.

The question explored for this poster is: what is the current configuration of the maple syrup industry in Ontario, including its accompanying products and supply chain from a value system perspective? A value system can be understood as a network of enterprises and inter-organizational relationships through which maple products move from preproduction to consumption/postproduction. To analyze this question, raw data collected through interviews was used to model the maple syrup value system.

It was discovered that one of the industry strengths is the informal networks created among individuals working within the industries. Furthermore, since the industry has been present for such an extended period of time, this has resulted in numerous advancements in technology and innovations.

Session: THU-8:30-7 POSTER

King Abdullah Economic City, Saudi Arabia's grand social experiment

Sarah Moser, Department of Geography, McGill University (sarah.moser@mcgill.ca)

Saudi Arabia is in the early stages of constructing four new master-planned 'economic' cities in the coming decades. The new cities are part of a national city-centric strategy to diversify the economy away from oil, create jobs, and encourage manufacturing, high-tech and downstream industries. The new cities are also a strategy for addressing growing social unrest in a population that is young, increasingly tech-savvy and underemployed. Of the four new cities planned, King Abdullah Economic City (KAEC) is the first to have started construction and currently has about 1,000 residents. With a projected population of 2 million people, KAEC will be a gated private city run by a CEO, rather than by a mayor and will be policed entirely by private security. I argue that scholarship theorizing gated communities is inadequate for understanding issues of governance and social exclusion on the scale of KAEC. While KAEC is conceptualized as an oasis of freedom that is shielded from the restrictions of Saudi society, I contextualize it as part of a broader neoliberal trend that will serve to perpetuate and exacerbate growing cleavages within Saudi society.

Session: THU-08:30-3

Identity in a Suitcase: Transformations in identity through physical mobility

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The aim of this study is to examine the transformation of an individual identity through physical mobility in a globalized world. Applying the metaphorical concept of a suitcase—as a representation of mobility that can be relevant in different contexts such as migration, labour market, travel, tourism, etc. — this study examines participants' perception of transformation of identity in a hypothetical situation of physical mobility. Based on a qualitative approach that uses performance as a research tool, the participants were asked to answer two open-ended questions in a stage set by the researchers which included open suitcases of various size and characteristics. We asked the participants to place their written answers to these following questions inside the selected suitcases: (i) What are the most valuable objects you would pack in your suitcase if you wanted to travel somewhere far away from your home for a long time and why? (ii) After that travel if you want to come back to your home, what would be the most valuable objects you bring them and why? The presentation is focused on critically assessing methods applied to explore the link between performance and representation of identity.

Session: FRI-08:30-3

Understandings of power and embodiment in the tourism experience: A memory-work project

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This presentation reports on a recent project undertaken by four qualitative researchers (one professor and three students) interested in the tourism experience and memory. Memory-work was used as a way to understand the various dimensions of power and embodiment as they were layered through our travel memories. While relatively underutilized, Small (1999) led the way for those interested in memory-work and illustrated how tourism researchers can (and should) foreground feminism and critical, qualitative analyses. For this project, each researcher wrote detailed memories of an experience where she felt: (1) powerful and (2) powerless. Then the group met for regular sessions of collaborative reflection and analysis where major themes were identified and the relevant tourism literature was discussed. Each researcher felt the benefits of a collaborative effort to share her memories and to engage with tourism knowledge from a place grounded in her own personal way of knowing. In short, the discussion allowed for a deep, critical engagement with theories of power in tourism, which are exemplified by Hollinshead (1999) and others in the tourism field and theories of embodiment, which are exemplified by Crouch (2000), Veijola and Jokinen (1994) and others in the tourism field.

Session: FRI-10:30-3

On the line: Sustaining subsistence fishing in the Coastal Cree Community of Wemindji, northern Quebec

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Kanwaljeet Dewan, Department of Geography, Planning and Environment, Concordia University

Katherine Scott, Department of Anthropology, McGill University

Subsistence or traditional fishing in the estuarine and coastal waters of James Bay is an important dimension of personal well-being and cultural identity for many individuals in the coastal Cree community of Wemindji, as well as a locally valued source of healthy and preferred food. We report on current and ongoing collaborative research we are undertaking with the Cree Nation of Wemindji. Drawing on participant observation and interviews with coastal fishing families and the local leadership, we document the contribution of subsistence fishing as well as concerns about its maintenance. The impact of a twenty-year coastal fisheries program designed to offer financial assistance to support summer fish camp operations and increase the availability of fish to elders and other community members is investigated, along with other options to maintain the fishery. Our study is significant in documenting the multiple benefits derived from traditional fishing as well as identifying innovative options for renewing and sustaining community engagement in such fisheries.

Session: TUE-08:30-3

Maple Syrup Value Systems and Value Chains: Considering Aboriginal and Non-Aboriginal Perspectives

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Annette Chretien, Wilfrid Laurier University
Grant Morin, Wilfrid Laurier University

Harvested from both intensive sugar maple stands and diverse mixed forest ecosystems across Ontario, maple syrup is an important rural and Aboriginal non-timber forest product that contributes to social, economic and environmental sustainability. This paper presents our ongoing work to map Ontario's maple syrup value system. In the economic sense, analyses of value systems are useful for members to identify the opportunities and challenges they are facing to advance industry growth and innovation. A value chain is a firm's strategic activities that contribute to cost reduction, increased profits and product differentiation. A value system is the inter-connected network of firms and activities that comprise an industry from the supplier to the consumer. In this project, we pushed the boundaries of this traditional business approach, thinking about value systems from the perspective of sustainable development and re-imagining the mapping according to Aboriginal ways of knowing. We undertook 35 interviews representing Aboriginal and rural industry members and other key informants. We demonstrate how we incorporated the sustainable development lens and compare and contrast the rural and Aboriginal models of the value systems. We offer a preliminary analysis about how such analyses contribute a deeper understanding of forest ecosystems, economies and places.

Session: TUE-10:30-3

Toward a Therapeutic and Autism-friendly Home Environment

Wasan Nagib, School of Geography and Earth Sciences, McMaster University
Allison Williams, School of Geography and Earth Sciences, McMaster University

Autism is by far the most rapidly advancing childhood disorder in North America as it affects 1 in 88 children and 1 in 54 boys. Despite this high incidence of autism, there has yet to be developed architectural design guidelines catering specifically for autistics. Due to sensory and social dysfunctions related to autism, living in an inadequate physical environment contributes to, and exacerbates, many of the daily living challenges facing autistics and their families. Framed within *therapeutic landscape theory*, this study aims at establishing general guidelines for creating autism-friendly home environments. The study employs a variety of qualitative research methods including semi-structured interviews with architects, a focus group interview with occupational therapists, and an online questionnaire for families with autistic children (age 4-16). The research results shed light on the common daily challenges faced by individuals with autism, their caregivers, and families, the main features of home environment that contribute to such challenges. It also ascertains the common home modifications made to address these challenges. Therefore, improve the quality of daily life for individuals with autism, their caregivers and their families.

Session: TUE-15:30-6

Contrasting Visions of Modernity: Landscapes of Albert Anker and Paul Klee

Kim Naqvi, Geography & Environmental Studies, Thompson Rivers University (knaqvi@tru.ca)

Albert Anker's *The Surveyor/Der Geometer*, and Paul Klee's early abstractions of landscape and colour reflect two very different sensibilities of modernism. Swiss painter Albert Anker (1831-1910) and Swiss-German painter, Paul Klee (1879-1940) overlap in time and space as natives of the Canton of Berne, and witnesses to the modernisation of Switzerland. Though each was exposed to, and appreciative of, radical changes in society and art, each painted very differently, capturing very different view of and modernism. Though Anker was well versed in contemporary art, he favoured realistic portraits of village life, which have become iconic representations of Swiss culture. Klee is identified with modernism at its peak, teaching at the Bauhaus school of art, architecture, and design, and producing hundreds of works in varied and unique style. Anker's *Der Geometer* depicts modernism as an exciting, mysterious, yet reductionist measure of the Swiss countryside. Klee's modernism, by contrast, abstracts colour, light, and form landscape and music, producing multiple styles, and illustrations that can be fantastic or meditative. Each view of modernism makes an interesting contrast to contemporary disillusionment over its limitations as the pathway to sterility and uniformity.

Session: WED-08:30-8 POSTER

Benefits and Limitations of an Interdisciplinary Approach to Place in Place-Based Teaching

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The Curriculum of Place group at Thompson Rivers University is exploring the effectiveness of place-based teaching across eight disciplines by evaluating the effectiveness of a similar assignment in increasing student engagement. The theme of "place" reflects research indicating that place-based assignments increase student engagement by giving meaning to the places where we teach and learn, grounding abstract content in everyday experience, and allowing student experience to contribute original insights. Data comprises in-depth interviews with 18 students, 47 questionnaire responses, and 170 images. Despite this rich data set, the complexities of disciplinary difference and assignment design create new challenges. In particular, the concept of place used was broader than anticipated. But is this the strength or the limitation of multidisciplinary and co-disciplinary research? Diversity within class populations and assignment design also make comparisons across identical questions difficult, but potentially richer. We present the first stage in analysing these data, in the light of the original questions and emerging questions. Geography's emphasis on place-based research, with its in-depth focus on integration and complexity in specific locales, can be challenged by multidisciplinary and cross-disciplinary broadening in ways which are both distracting and enriching.

Session: TUE-13:30-2

Abrupt Changes in Chilika Lagoon Social-Ecological System: An Historical Analysis

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Innovations in social-ecological research require novel approaches to conceive change in human-environment systems. The study of history constitutes an important element of this process. First, using Chilika Lagoon small-scale fisheries, India, as a case, I reflect on the appropriateness of a social-ecological perspective for understanding economic histories. Second, I examine how changes in various components of the Lagoon social-ecological system influenced and shaped economic history and the political processes surrounding it. I discuss the two-way linkages between economic history and social-ecological (environmental) processes to highlight that the components of a social-ecological system, including economic aspects, follow an interactive and interdependent trajectory such that their combined impacts have important implications for human-environment connections, and sustainability of the system as a whole. Social, ecological, economic and political components of a system are interlinked and may jointly contribute to the shaping of specific histories, not separately by drawing lines based on disciplinary boundaries. Based on this synthesis, I offer insights to move beyond theoretical, methodological and disciplinary boundaries as an overarching approach - an inclusive lens - to study change in complex social-ecological systems.

Session: THU-08:30-1

Tourism and modernity in Mt. Everest Region: Reflecting on research participants' reflections

Sanjay K. Nepal, Department of Geography and Environmental Management, University of Waterloo (snepal@uwaterloo.ca)

This paper provides a counterpoint to cultural studies of tourism that seem to indicate toward a definitive outcome of tourism's effect on local cultures. Drawing on literature on globalization, modernity, and cultural competence, this paper provides an overview of recent fieldwork conducted in Nepal's Everest region, findings of which suggest that tradition and modernity are negotiated concepts, and subject to multiple perspectives based on pre-determined roles and situated contexts. The views of the researcher, local interview participants, tourists, and a team of Canadian university students on an extended geography fieldtrip to Everest conducted in 2012 are compared. The focus of this presentation is on the methodological aspects of the research. First, the paper examines how the researcher's background and past recollections of similar trips to the Everest region, and student preparations for the field trip and their field encounters contribute toward a more nuanced understanding of concepts such as globalization, modernity, and social and cultural change. Second, the paper then critiques the research approach and questions whether student perspectives could have been different had there been a different approach to research and field preparation. Also, questions are raised if the researcher's familiarity with the region could have introduced bias in the methods and the results of the study.

Session: FRI-08:30-3

A Validation of the Most Recent Global Climate Models of the IPCC AR5 with Canadian Observational Data

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Adam Fenech, Climate Research Lab, University of Prince Edward Island

Bill Gough, Climate Lab, University of Toronto

Forty different global climate models were used in the deliberations of the fifth assessment report of the Intergovernmental Panel on Climate Change (IPCC AR5) to provide projections of future climate under varying greenhouse gas concentrations. These global climate models, whose formulations vary in size, scope, scale and complexity, are policy-relevant tools when trying to inform interested stakeholders about the impacts of climate change. Considerable inter-model variation is expected to occur due to differences in the mathematical formulation, grid network and input variables of these global climate models. If the impacts of climate change are to be assessed, the focus should be on choosing an accurate climate model which is able to reproduce previously observed climate data. To narrow projections that can be used in a potential impact study in Canada, all forty global climate models were validated against Canadian observational data from the National Center for Environmental Prediction (NCEP) climate re-analysis. The methodology and results of this validation will be presented to demonstrate which global climate models best simulate the climate in Canada.

Session: FRI-08:30-1

Effects of Warming Temperature and Changing Precipitation on Alpine Lakes

Shirley Ngai

Katrina Moser

Mountainous regions are among the most vulnerable to climate warming, and projections have shown that annual temperatures in the Western USA will increase 2-5°C in the 21st century. It is unclear how specific lake properties will change in response to climate variations. This research examines the relationships between climate variables (air temperature, precipitation, lake water temperature) and nutrients and chlorophyll *a* (chl*a*). From spring 2010 to autumn 2013, temperature dataloggers were deployed at various depths in five lakes that span an elevational gradient in the Uinta Mountains (Utah, USA). Water samples were collected twice a year and analyzed for constituents of phosphorus and nitrogen, and chl*a*. Surface water temperatures were linked to air temperatures, and increased with decreasing elevation, but high elevation microclimates affected this relationship. Deeper water temperatures decreased with elevation owing to differences in water chemistry and associated lake water transparency. Lake heating varied between years of different weather conditions; heating at depth was much less in colder years, and therefore stratification was weaker. Total phosphorus and chl*a* were significantly negatively correlated to temperature, and nitrates were significantly positively correlated to precipitation. A shallower and weaker thermocline would result in better internal cycling of phosphorus and would lead to increased lake production (chl*a*). Nitrates are primarily delivered to these lakes atmospherically, so an increase in precipitation increases nitrates, and therefore lake production (chl*a*). These results indicate that warmer and drier conditions led to decreased lake production in the Uinta Mountains.

Session: WED-10:30-4

Critical Speaking: Preparing our students to change the world

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Although universities are placing an increasing importance on critical reading and writing, this paper argues that current pedagogy in the social sciences gives far too little emphasis to what I term “critical speaking.” I first review existing teaching techniques commonly used to develop critical speaking skills in lectures and tutorials within the social sciences. The level of importance given to verbal communication skill development within the geography department of a large university is then reviewed according to the allocation of classroom resources commonly devoted towards participatory tutorials and oral presentations. A number of factors explain the deemphasis of critical speaking in the classroom: what universities see as their role in preparing students for the labour market; the political-economy of classroom resources; the socio-cultural norms of academia; and the already dominant use of verbal communication in everyday life. But I also develop the hypothesis that students who are confident critical speakers are more likely to be politically active in their schools, communities and workplaces—a value not well enough emphasized (and at times discouraged) within the academy. The paper concludes that a radical reorientation that prioritizes critical speaking skills development over written communication is necessary for at least some courses.

Session: TUE-13:30-2

The Last Ontario Heinz Tomato Ketchup Crop: Field-by-field Mobile Mapping Results for Essex Region Tomato Fields in 2013

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Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs

The first bottle of ketchup was produced at the H.J. Heinz plant in Leamington, Ontario in 1910. After more than a century of production, the closure of this plant was announced in 2013. Almost one-half of the annual Ontario processing tomato crop (well over one quarter million tons) was grown to supply this enterprise. This study is focused on the spatial distribution of processing tomato fields in the Regional Municipality of Essex in 2013. This crop was the last one sent to manufacture the famous Heinz ketchup product at Leamington. A detailed field-by-field polygon framework of all farm and rural landscape features in Essex Region was developed through manual digitizing efforts. It is part of the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) that is being built incrementally for province-wide agricultural landscape coverage. Mobile mapping technology was used in a field mapping campaign conducted in the 2013 cropping season that covered all of Essex Region (Vanthof et al., 2013). All crop observations, including those for processing tomatoes, were attributed on-the-fly to the Ontario AgRI database. Maps and analyses of this last tomato crop from this area to supply the Leamington Heinz plant are presented.

Session: THU-8:30-7 POSTER

Environmental Factors and Transnational Migration: A Case Study of Filipino Newcomers in Ottawa, ON

Reiko Obokata, Department of Geography, University of Ottawa (robok060@uottawa.ca)

The Philippines is now one of the largest source countries of newcomers to Canada, and as was demonstrated recently by Typhoon Haiyan, is also a country that is highly vulnerable to climate change and other environmental problems. Although Filipino migration has been studied in depth both within and outside of Canada, very few studies have considered the role of environmental factors in the migration process. This paper will discuss preliminary results from qualitative field work conducted in Ottawa, ON in early 2014 with Filipino newcomers. It will examine whether environmental problems are perceived to influence migration decisions alongside social, economic and political motivations. In addition, it will discuss the ways in which environmental factors affect settlement and transnational practices such as sending remittances, fundraising, maintaining connections to family and friends in the Philippines, and influencing the desire to return. The aim of this presentation is to contribute to our knowledge of the relationship between environment and migration and to provide a new perspective on global Filipino migration.

Session: FRI-08:30-6

Effects of community versus individual soundscape contexts on traffic noise sensitivity

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Environmental noise can impact health and wellbeing, and noise from transportation sources is of particular concern in urban environments due to their ubiquity. Previous research suggests that soundscapes, or real-time perceptions of sonic environments, are context dependent and can vary considerably among people exposed to similar noises. The Community Tolerance Limit (CTL) measures the difference between observed and predicted levels of noise annoyance and provides a metric for community context influences on soundscapes. Therefore, the CTL complements individual context measures for understanding how soundscapes affect health. This study investigates (1) impacts of traffic noise on health and wellbeing, and (2) effects of community versus individual context on noise sensitivity, which moderates the local soundscape and noise annoyance in individuals. Surveys were administered (N=611) and residential traffic noise was modeled in two neighbourhoods in Windsor, Ontario, one of which surrounds the busiest border-crossing corridor in Canada. No significant differences in health as measured by the SF12v2 were observed. Differing CTLs and logistic regression on noise sensitivity in the study areas suggest that neighbourhood noise characteristics along with appraisals of risks and benefits associated with traffic result in desensitization, which may function as a health-promoting mechanism among residents in the border corridor.

Session: THU-10:30-2

Religion on the Move: The Case of the Wayside Chapel in Brandon, Manitoba

Daniel H. Olsen, Department of Geography, Brandon University

The number of tourists who travel for religious and spiritual reasons has increased over the past few decades. Coinciding with this increase in religious and spiritual travel has been increasing concern by religious authorities regarding the potential influences of tourism on the religiosity of tourists and host communities. As such, questions have arisen regarding how these leaders can reach out and cater to the religious and spiritual needs of people “on the move”. One way in which this has been done historically is through the building of churches along major tourist transportation arteries. In particular, in Europe and North America a number of “wayside churches” have been built that serve as pastoral and outreach centres that give travelers both a place to worship and a tangible reminder of the importance of engaging in worthwhile and uplifting activities while traveling. The purpose of this paper is to briefly examine the history and purposes of wayside chapels, and more specifically look at the way in which the Wayside Chapel in Brandon, Manitoba is used both as a manifestation of “highway evangelism” and as a tourist attraction in its own right.

Session: WED-08:30-6

The Future of Northern Ontario Minetown: the Role of Nature Based Tourism

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Northern Ontario has a long history of mining and a number of communities affected by operations. Diversification is critical to the longevity of mining communities. Post-WWII communities which have been dependent on the mining industry are examined with a focus on diversification through tourism. Through demographics and industry shifts, the trends in northern Ontario and implications are examined. Findings show that nearly half the communities have amalgamated, and only one has been abandoned (Renabie), resulting in twenty-three communities for study. Only two communities (Red Lake and Dubreuilville) were found to still be dependent on mining, but sixteen communities had an increase in mining employment; five out of the twenty-three communities had an increase in population. Special focus is given to the process of community transition to include nature-based tourism activities and businesses in diversification efforts. Northern Ontario is rich with the landscapes suited to such endeavours. Case studies of Atikokan and Elliot Lake are used to illustrate both the need and possible routes to the inclusion of nature-based tourism in a mining community.

Session: TUE-08:30-5

Parameters of Regionalization Outputs to Decision Making for Sustainable Development under Climate Change Constraints: Morocco Case Study

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In this presentation, we show the interest of the regionalization of different statistical parameters of different climatic and hydrological data to decision making in the context of sustainable development under climate change constraints.

An application to climatic and hydrological data in areas of high Moulouya and basins of Ziz , and Rheriss Guir in Morocco is made to illustrate the approach which consisting in:

- Correcting and evaluating climate models through a linear regression relationship between daily rainfall observations at the stations in the study areas and model grid points close to the observation stations.
- Development of IDF curves (intensity -duration- frequency) in each observation station and in all model grid points of the most powerful model.
- Extreme's evaluation by comparison of the results of the statistical adjustment through probability distributions by calculating some statistics (Correlation, RMSE: Root Mean Squared Error, MAE: Mean Absolute Error).
- Elaboration of regionalization maps of hydrometeorological parameters and extremes predicted by probability distributions for each return period for the calculation of project parameters.
- Evaluation of climate change scenarios, for precipitations through a statistical downscaling at the study area level.

Session: TUE-13:30-1

Unequal vulnerability to flood hazards: "Ground truthing" a social vulnerability index of five municipalities in Metro Vancouver, Canada

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Indexes that measure social vulnerability to hazards have gained acceptance as a research tool that is relevant to local policy making. Many indexes, however, are created remotely by researchers without using the input of those working in local policy. If practitioners are involved in creating an index that they find accurate and useful, it is more likely they will incorporate the findings of the index in their work. This presentation describes the process of "ground truthing" a social vulnerability index with practitioners in five municipalities in Metro Vancouver and how the index was then revised to reflect their input. This process involved presenting an index to focus groups of municipal practitioners for their feedback and conducting a survey of participants that was then used to assign weights to the variables in the index. The study found that practitioners were generally accepting of the research approach to quantifying social vulnerability by place, though they often had specific concerns regarding the methodology and offered suggestions to make the index more reflective of the local context. The process of revising the index illustrates that local practitioner input can be used to create a measure of social vulnerability to hazards that is meaningful to those working in the community.

From the Right to the City to the City of the Right? Recent Developments in Urban Social Movements in Brazil

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Is the Right to the City turning into the City of the Right? Recent developments in social movements in Brazil have unfortunately suggested so. Multitudes came to the streets in the months of June to August, 2013, to claim for reduction in bus ticket prices and changes in political procedures in congress. The movement had no clear political party leadership. With time, as the movement was criticizing the democratically-elected and popular government of President Dilma Rousseff and individuals committing vandalism were profiting from the large quantity of people in the streets to assault shops, right wing leaders and political parties began to invite/organize manifestations for any possible reason and as a way to reduce the popularity of a middle-left government such as that of Dilma Rousseff. The presentation reflects on these events in a critical way using Lefebvre's categories of social space and right to the city.

Session: WED-08:30-8 POSTER

From Garden-cities to the Preservation of Historical Centers: The Geography of the International Federation for Housing and Planning (1913-2000)

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Thiago Mauer, Group for the Study of Societies and Territories, Universidade Federal do Rio Grande do Sul

The research investigates the historical process and the development of new ways of thinking about the city and territory by the IFHP - International Federation for Housing and Planning – from its foundation in 1913 to the end of the 20th century. The IFHP was founded as International Garden-Cities Association and changed its name several times to adapt to new necessities of the institution and the abandonment of the garden-city ideal. The focus of the IFHP changed from the reconstruction of cities devastated by the two world wars to the economic development of the third world and the city as a provider of social welfare in the 1960s, the preoccupation with the environment in the 1970s, the reduction of energy consumption and the preservation of historical centers in the 1980s and the struggle against housing segregation and the use of new technologies in the 1990s. One of the main preoccupations of the IFHP was housing as a tool for the reduction of social inequalities.

Session: FRI-10:30-5

Understanding Climate Change Vulnerability in the Context of Broader Socio-Economic and Environmental Change: Challenges and Opportunities for South-West Tobago's Artisanal Fishery

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Artisanal fisheries are subject to multiple stressors across social, economic and environmental domains. These stressors are, and will continue to be, further exacerbated by climate change impacts, making it imperative that we understand and begin to address the vulnerability of this industry. This research draws from the qualitative data collected through a Community-Based Vulnerability Assessment by the Partnership for Canada-Caribbean Community Climate Change Adaptation Project to explore the perceived challenges and opportunities presented by over sixty individuals involved in South-West Tobago's artisanal fishery. It presents these findings in the broader context of climate change, highlighting some of the tension between short term and long-term challenges and the difficulties of garnering support for longer-term action without addressing immediate concerns. It then considers ways Tobago's fishery can address some of these challenges and harness potential opportunities in a way that reduces vulnerability.

Session: THU-13:30-1

Gentrification, Alternative Medicine and the idea of "Great Places" to Live

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This paper presents an analysis of the relationship between gentrification and the nature and availability of "complementary and alternative" (CAM) products and services in Toronto's Roncesvalles Village neighborhood. The Canadian Institute of Planners recently named Roncesvalles Village one of Canada's "Great Places to live".¹ However, while this and other mainstream celebrations of gentrification in this area consistently privilege notions of "livability", this is usually understood in terms of the presence of cafés, art galleries and restaurants; rarely are specifically health related amenities mentioned. Yet, in the Roncesvalles neighbourhood, health related amenities abound, and a significant number of these offer what can be classified as "CAM" products and services. Thus the relative absence of references to health amenities in general and CAM services and products in particular, in the literature celebrating the gentrification of Roncesvalles, forms the problem space of this paper. I argue that there is a dissonance between, on the one hand the invisibility of "health" in representations of the neighborhood, and, on the other, the ubiquity of discourses and representations of "health" in situ – in other words there is a dissonance between the representation of space and the space of representation (Lefebvre, 1991). Further, I suggest that this can only be partially explained by the "newness" of the adoption of CAM's as mainstream health practices (Turner, 2004; Health Canada, 2003). A fuller explanation is possible when the longer history of discourses around health and livability in these environs are taken into account.

Session: WED-08:30-2

Mental wellness in the university sector: Feminist geographers' perspectives

Kate Parizeau, University of Guelph

There would appear to be a resonance between feminist geography and attention to mental wellness issues in academe. Feminist geographers believe that the personal is political/structural/institutional, and topics of embodied knowing, emotional well-being, caring, and affect are central to feminist geographical research and teaching. However, despite the seeming relevance of mental wellness to our work, there has been a collective silence on this issue in feminist geography writings and academic presentations. Based in conversations with members of the Great Lakes Feminist Collective, I will discuss some of the concerns, assumptions, beliefs, and constraints expressed by feminist geographers that contribute to our personal hesitations in addressing mental wellness, as well as institutional silences on this issue.

Session: WED-08:30-7

Examining Water Security in Nova Scotia's Rural Coastal Communities and the Role of Governance in Shaping Climate Change Adaptation Strategies

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A community-based vulnerability assessment was conducted in the summer of 2013 as part of the Partnership for Canada-Caribbean Climate Change Adaptation (ParCA) project to identify and assess the current and potential vulnerabilities associated with water security in Nova Scotia's rural coastal tourism communities. This paper presents the key factors that frame water security issues for the area and the capacity for communities to adapt to projected changes. Emphasis is placed on issues related to municipal and private water sources, water quality and quantity, health impacts and other technical and socio-economic factors that affect water or access to water. The potential implications for water policy and governance are outlined.

Session: THU-13:30-1

Rethinking Feminist Interventions into Geography

Linda Peake, York University

In the current era characterized by anxiety and insecurity one must ask whether feminist work in geography is able to generate new possibilities of knowledge and of existence. In asking this question I explore the long history of feminist interventions in geography, the contours of which are wide-ranging but also mercurial and uneven. In this talk I explore the work these interventions have done, and not done, in advancing possibilities both within the discipline and beyond. In doing so I explore three aspects of feminist work in geography: looking back to (the collective forgetting of) feminist work prior to the 1960s; looking around at (the limitations of) feminist approaches to methodologies and methods; and looking ahead to (the as yet not undertaken) work on addressing mental health issues in the academy. I conclude by discussing the place of feminist geography in the academy.

Critical Reflections on Mental Health and Wellness in the Academy: (What have Geographers got to do with it?)

Linda Peake, York University
Beverley Mullings, Queen's University

A rising number of students seeking mental health services across university campuses has prompted faculty, administrators and student service providers to call attention to what some describe as a “crisis of mental health”. Geography, however, has not yet begun to explore a collective and professional response to this crisis. In this session we seek to explore what a critical commitment to emotional and mental health in the academy might look like. We invite reflection as educators, administrators and researchers on these emerging conversations and interventions from a variety of critical perspectives. Drawing on various debates, for example, over the relationship between mental health and social space, the changing balance between work and life, the value of social reproduction and the relationship between the neoliberalization of the academy and mental health, we seek to explore how the organized practices that produce the space of the Academy are implicated in the current state of mental health among students, faculty and staff across university campuses.

Session: WED-08:30-7

Designing and Producing an Online Interactive Mapping Application for the Brock University Campus (St. Catharines, Ontario, Canada)

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Brock University has experienced high student population growth and increased numbers of campus visitors during the past decade. It is necessary to accommodate the navigational needs of those on campus so that people can more efficiently find their destinations. With the support of Brock Marketing and Communication, development of an online interactive campus mapping application has been underway for several months. The initial launch of this application will provide users with the ability to search for and navigate to campus destinations using a mobile device. The application utilizes an ESRI ArcGIS Online template and will be published online using the ArcGIS Server. Brock University spatial data being used in the application has been acquired through digitizing recent aerial photographs and georeferencing of building floor plans. The final map will have a high level of detail and include features such as rooms, pathways, hallways, and pavement markings. By providing an improved navigation system, this tool will help to enhance the experience of long- and short-term visitors to Brock University.

Session: WED-13:30-1

The Harper Government and the design of the new environmental subject

Jonathan Peyton, Environment and Geography, University of Manitoba

Aaron Franks, Environment and Geography, University of Manitoba

Since coming to power as the 'New Conservative Government' in 2006, Canada's federal government under Stephen Harper has worked at fever pitch to unravel and reknit federal regulatory, legislative and economic development frameworks as they overlap in the littoral zone of the environment. As witnessed daily in the mass and independent media, albeit with widely differing levels of empathy and critique, this project has in turn met with a variety of resistances nationwide. In this paper we offer a critical analysis of the Harper economic-environmental project as a politically and culturally disciplining force that leverages both traditional mythologies of Canada as a normatively passive or 'neutral' resource provider in the global political economy, and an emergent, ideologically aggressive role as driver of the dark but necessary fossil fuel extraction without which, it is claimed, continued economic and hence social progress will be impossible.

This paper interrogates the environment as a social target within the catalogue of new legislative, administrative and regulatory contexts designed by the Conservative Party of Canada since its ascent to power and particularly since winning a majority government in the spring of 2011. We argue that this newly articulated angle of vision has shaped the uneasy social relations that have emerged from the creation of the environment as new object of knowledge. Further, following Birkenholtz (2009), we suggest that, through the management of consent and complicity and through the creation of certainty, we have witnessed the fashioning of the "willing environmental subject" in Canada.

Session: WED-13:30-4

Managing Insects in Australia: biosecurity, boundaries, and belonging

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Biosecurity has received increasing attention from social scientists. In addition to developing insights into particular outbreaks, this interest reflects a broader concern with the roles of nonhumans and the politics of knowledge involved in their ordering and surveillance. The trend in agrifood biosecurity studies has been to orient around food-animals, particularly those affected by diseases that can be transferred to humans; however, there has been little scrutiny of the roles of insects. Drawing on policy review and ethnographic research, this paper explores two cases of insect-related biosecurity in Australia: the Fruit Fly Exclusion Zone, a tri-state initiative within Australia; and, the Asian honeybee program, a defense against external incursion. The cases illustrate how insect movements challenge and reassert particular boundary-making practices that attempt to deal with uncertain futures. This paper considers not only these territorialisations but also the ensuing ethico-political and practical questions raised about nonhuman belonging, the fixity and fluidity of biosecurity mandates and implementations, and the relations of public and private action in biosecurity.

Session: FRI-10:30-4

Three Applications of V.3 Google Maps

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Computer-programmers have been able since 2005 to code and display their own data on Google maps via the internet. Google basically rewrote its Version 3 JavaScript map application interface, and released it in 2009 for free non-commercial use without the need for a personal key, as documented at <https://developers.google.com/maps/documentation/javascript/reference>. I have now upgraded three different types of Google map applications to V.3 for teaching and research purposes: (1) Point maps with street views, for example, of exterior qualities of houses in two Windsor neighbourhoods, at <http://web2.uwindsor.ca/courses/sociology/hipps/courses/bqmss/uhq2013maps.html#Uhqmap>. (2) Polygon maps of dissemination area data from the 2011 Canadian census for metropolitan Windsor, at <http://web2.uwindsor.ca/courses/sociology/hipps/courses/is/windea11maps.html#Windsormap>. (3) Locational maps for automatically geocoding and displaying points of interest, including the user's location, for example, at <http://web2.uwindsor.ca/courses/sociology/hipps/courses/np/indvillslides.html#IndVillmap>. In demonstrating these types of maps, (1) the speed of rendering V.3 maps has improved over V.2 in general, and in particular if mapping data from an online fusion table. However, (2) synchronous as opposed to asynchronous loading of map data is required for dynamic analysis of those data, such as in creating map legends.

Session: WED-15:30-1

“Le social et le culturel est économique!”: Community economic development and the rise of ethno-cultural entrepreneurialism in Francophone Manitoba

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Mark Skinner, Department of Geography, Trent University

The rise of market-oriented governance has resulted in sub-national jurisdictions adapting entrepreneurial strategies into their policy and planning frameworks to promote local economic development (Hackworth, 2007). Yet, local development policy is a “complex cultural project” in constant evolution that is practised differently across time and space (Wilson, 2004) as a result of varying local political, social, and cultural contexts (Milligan, 2007). This paper examines the evolving concept and practice of ‘cultural entrepreneurialism’. Drawing on interviews with community development organizations in francophone Manitoba, it extends research on ‘social entrepreneurialism’ by investigating the increasing role played by ethno-cultural organizations in community economic development. The findings reveal how economic development in francophone Manitoba has been adapted to historically and geographically grounded cultural and institutional legacies to formulate a particular mix of social entrepreneurialism infused with cultural practice. Our research shows how francophone community development organizations upheld an expansive view of community economic development and promoted a wide range of projects. The research argues scholars need to consider how everyday cultural practices and ethno-cultural territory influence how community-based organizations engage in local economic development.

Utility of UAVs in viticulture health status and hydrologic mapping

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The Niagara region is home to many large, commercial scale wineries where traditional field-based measures of health status assessment are both time consuming and costly to implement. In this study, two multi-rotor unmanned aerial vehicles (UAVs) captured both still and video imagery in the visible and near-infrared wavelengths over a Niagara area vineyard. The NIR imagery was examined for utility in identification of photosynthetic activity, while the true colour was used to test the utility of UAV imagery in the generation of a highly detailed digital terrain model (DTM) for surface hydrological mapping. While the operation of UAV's for commercial and research purposes do require licensing and insurance in much the same manner as manned aircraft, the inherent flexibility of these smaller aircraft, which includes the potential for very low flying heights, small ground target identification, safer, shorter flights, and inexpensive operational costs lend their way favorably for widespread adoption in precision agriculture / viticulture. This study aims to indicate that the high resolution imagery afforded by such low-altitude photography provides a suitable alternative to traditional vegetation assessment with the added benefit of DTM mapping for the early identification of hydrologic pooling and drainage.

Session: THU-8:30-7 POSTER

The late Holocene fire and vegetation history of Little Trefoil Lake, Jasper, Alberta

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In Canada's boreal forest, wildfire is the dominant disturbance agent. Records of fire occurrence and severity, however, tend to be temporally limited or unavailable for many regions of the country. Proxy-based fire records that characterize long-term fire and vegetation histories are therefore invaluable tools for placing current fire regimes in the context of what has occurred in the past.

This study presents the results of a high-resolution fire history for the watershed surrounding Little Trefoil Lake, Jasper, Alberta. A multi-proxy approach was used to develop a ~3000-year fire record using macroscopic charcoal preserved in a dated lake sediment core. Pollen analysis provided information about historical changes in vegetation. To characterize the contemporary fire regime, tree-ring evidence was collected from 12 sites around the lake.

The results of this study indicate that the watershed is currently experiencing a mixed-severity fire regime, with fire return intervals during the contemporary period among the longest of the record. Pollen accumulation data show that vegetation assemblages have changed little over the past 3000 years. Finally, fire frequency, inferred from peaks in macroscopic charcoal accumulation, has changed through time in response to top-down controls.

Session: WED-08:30-4

Agro-ecosystem enhancement on Ontario farms: Making a place for the province's pollinators

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Globally, farmers rely on pollinator insect populations to sustain agricultural production. Pollinator population health stresses may be both natural and human-induced. Honey bees are important human-managed pollinators across Ontario's agro-ecosystem. Total honey production in this province is worth about \$25 million a year (OMAF/MRA, 2013). Beehive sustainability is an on-going challenge for the 3,000 registered beekeepers who manage over 100,000 honeybee colonies across Ontario. Most Canadian apiculturists consider winter kill losses of 15% to be acceptable but, within the past decade, these losses have reached as high as 43% in Ontario (Health Canada, 2013). Parasitic varroa and tracheal mites caused about 35% of Ontario's honeybee colonies to die off between 2007 and 2010 (University of Guelph, 2013). Furthermore, human-induced bee mortalities have been attributed to pesticide spray drift and most recently to exposure to neonicotinoid, a pesticide used to treat corn and soybean seeds. This project considers opportunities for agro-ecosystem enhancement on Ontario farms to facilitate honey bee and wildlife population resiliency. Windbreak and shelter belt design and deployment have been an on-going effort by the Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs (OMAF/MRA) for many decades.

Session: THU-8:30-7 POSTER

"It's like we are from Mars:" The labour market and pre-employment program experiences of immigrant young adults in Metro Vancouver

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Recent research demonstrates the consequences of socioeconomic restructuring on the employment and earnings of both 'Generation Y' young adults and recent immigrants in Canadian cities. In a competitive labour market characterized by precarious employment, immigrant young adults often struggle to find work related to their skills, education, and experience. How can nonprofit organizations better meet the needs of this group as they seek entry into professional careers? This paper presents the findings of a qualitative study, conducted by the author on behalf of the North Shore Multicultural Society, comparing the labour market experiences of immigrant young adults (ages 18 to 29) who are job searching, employed, or

attending a post-secondary institution in Metro Vancouver. Drawing on five focus groups with immigrant older youth, and fifteen interviews with employment counsellors and human resources personnel, this study illustrates the unique set of barriers faced by immigrant young professionals in Vancouver's labour market. Although service providers are making a positive impact through currently existing employment programming, immigrant young professionals require access to pre-employment services that are more tailored to their needs. This study shows that mentorship programs act as a bridge between generalist employment counselling and the specialized needs of immigrant young professionals but that access to these opportunities is highly uneven.

Session: FRI-10:30-5

Placing the Second Generation: A Case Study of Toronto

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In large Canadian cities, immigrants and their children are an increasing proportion of the total population whose economic success is crucial to reverse deepening socioeconomic polarization and income inequality. The majority of immigrants face increasing economic difficulties that residential segregation may exacerbate. In comparison, their children's economic experiences are diverse. This study extends current understanding of the experiences of the second generation by a comparative analysis of the residential segregation of the children of immigrants in the Toronto metropolitan area who were born in Canada or migrated before the age of 13 years. The analysis compares the residential distributions for second generation adults from selected ethnic and visible minority groups; Chinese, South Asian, Black, Southern European, and North and Western European with those of their immigrant parents. Our comparative approach reveals how the second generation has dispersed relative to the first generation, and, where possible, the 3+ generation and how levels of residential segregation vary among ethnic and visible minority groups. The social characteristics of census tracts where second generation are concentrated are also compared with those of census tracts where the first generation is concentrated. The findings suggest that levels of residential segregation differ across visible minority and ethnic groups of the second generation and segregation measures are not related significantly to the economic success of the second generation.

Session: FRI-08:30-5

Assessing the potential of maximum density in developing divergence-free white spruce chronologies, Northwest Territories, Canada

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Trevor Porter, Department of Earth and Atmospheric Sciences, University of Alberta

Dan Smith, Department of Geography, University of Victoria

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Tree ring proxies are often used to provide information about past climate conditions, particularly in remote northern locations where historical climate records are sparse and temporally limited. However, in

recent decades, it has been observed that some northern tree ring chronologies developed using ring-width measurements exhibit reduced sensitivity and coherence with growing season temperatures during the 20th century, a phenomenon commonly referred to as the “divergence problem”. While divergence has been widely identified in studies measuring total annual ring-width, it is unclear if other tree-ring indices such as maximum tree-ring density are similarly impacted. This research assesses the potential of maximum density measurements to develop a divergence-free white spruce (*Picea glauca*) chronology in the Northwest Territories, Canada. Over 200 white spruce samples were collected near the Northwest Territories tree line and were combined with pre-existing chronologies from the area to produce regional ring-width and maximum density chronologies spanning from 1025-2012 and 1308-2012, respectively. A comparison and analysis of the degree of divergence present within these tree-ring indices will be presented.

Session: FRI-10:30-2

Simulating co-evolution of industrial spatial structure and urban land use growth: a case of Shanghai

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Urban land use growth and the transformation of industrial spatial structure are two conspicuous phenomena revolving around the development processes of cities. Industrial development is often considered a major driving force of urban land use expansion and change use. Both industrial development and land use change are constrained and facilitated by urban planning and management shaping constantly spatial trajectory of urban transformation. Taking the development of industrial parks in Shanghai as a case, this research attempts to investigate how the industrial spatial structure evolution leads to urban land use growth and how urban planning and governance reconfigure the industrial spatial structure of a city. By integrating time series data of urban land use and spatial structural distribution, the study develops a dynamic genetic model to simulate the evolution of industrial spatial structure and how it has stimulated the spatial transformation of urban land use under the implementation of various urban development plans, strategies, and policies over time. The anticipated results of this research will show that planned industrial parks in suburban areas have elevated high-speed urban land use development. The overall industrial spatial structure contributes significantly to shaping residential morphology of Shanghai.

Session:

Individual Learning and Action for Sustainability: Insights from Kenya and Canada

Lisa Quinn, Natural Resources Institute, University of Manitoba (quinn@cc.umanitoba.ca)

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Individual learning and action are imperative for a transition to a more sustainable society. Transformative learning theory has become a common theory for considering learning in the context of sustainability, but it does not offer a sufficient account of the relationship between learning and subsequent action. This presentation combines the findings from two very different qualitative research projects and draws together their insights on the learning-action relationship. One project explored learning for sustainability among the staff of faith-based organizations doing environmental and development work in Kenya,

employing a series of interviews, focus groups, and participant observation. The other project sought to gain a better understanding of the role of transformative learning in individuals' transition to a more sustainable lifestyle, in particular in relation to clothing, through surveys, journals, life-grids and interviews. Key emerging themes include: the potential for action on sustainability through individual learning; the cyclic relationship between learning and action; the association between instrumental and communicative learning and action; barriers that prevent learning from being expressed in action; and, ways of overcoming these barriers. This knowledge contributes to our growing understanding of the role played by the domains of transformative learning in inspiring and guiding action for sustainability and will help us to contend with the boundaries constraining individuals' ability to take action for a more sustainable world.

Session: FRI-15:30-2

Place/People/Protest

Harvey Rainbow, Brock University

Are urban landscapes inscribed with a spirit of place - even an agency - that can help facilitate social justice in the public realm? This work explores the intersection of placescape and political activism as an expression of social justice in the public realm utilising the specific example provided by the Occupy Toronto Movement, in the fall of 2011, using St. James Park, which is adjoined to The Cathedral Church of St. James, as a base of operations. The unique choice of this particular site is significant because it was not selected for its situatedness in the financial or business district of Toronto. In fact, one could conjecture that the park space offered the exact opposite type of landscape, affording the protesters a safe haven in which to construct their library, harbour their dissident views and to plan the trajectory of their subversive message. It is this ideal conjunction of space and discourse, of form and function, of medium and message, that makes this study essential for understanding how the agency of landscape facilitates the creation of a public realm that is receptive to advocating for social justice.

Session: WED-15:30-3

Canada's Asia Strategy: the Regional Dimensions

Kasi Rao, Asia Pacific Foundation of Canada (Toronto Office)

As Asia continues to rise in terms of global prominence, experience, expertise and education about the region is of critical importance to Canadians. But how is Asia viewed in the different provinces of Canada? In this lunchtime talk, Mr. Kasi Rao, Director of the Asia Pacific Foundation of Canada (Toronto Office) examines the regional dimension of a national Asia Strategy within Canada, focusing on economic as well as people-to-people links with Asian countries. He will discuss Ontario's particular challenges and opportunities in forging Asia-Pacific relations, and draw on national opinion poll research conducted by the Foundation showing how Canadian attitudes towards Asia vary widely across the country.

Session: FRI-12:00-1

The social geography of Chinese immigrants in Ottawa-Gatineau: challenging a “self-evident” geography

Brian Ray, Department of Geography, University of Ottawa (bray@uottawa.ca)

This study examines how one newcomer group – Chinese immigrants – uses and interprets the metropolitan area and other social groups in a context of socio-spatial fragmentation created by the provincial border between Ottawa and Gatineau. Interpreting the geography of the Chinese seems to be relatively simple given the group’s strong preference for Ottawa – 94.5 percent of the community resides in Ottawa. This study, however, suggests that interpreting the social geography of this group becomes much more complex when everyday practices and behaviours are examined in relation to the border. In describing the region, its fragmented qualities, and how they perceive and use the city, the Chinese identify a geography that is complicated by the ephemeral qualities of the border – sometimes it is a barrier, while at other moments it signifies a transition into another culture and set of experiences. This paper examines the ways that a social geography partially created by a border and border practices shapes experiences among people who are relatively new to the region and have historically played a minor role in shaping the social and political meanings associated with social space in Ottawa-Gatineau.

Session: FRI-10:30-6

Mobilizing local networks for climate change vulnerability assessments: Lessons learned from the St-Croix Estuary Project, New Brunswick

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Nicole Klenk, University of Toronto Scarborough, Canada (nicole.klenk@utoronto.ca)

The St-Croix Estuary Project (SCEP) is dedicated to the continual improvement of environmental quality of the St Croix estuary ecosystem in New Brunswick, in full collaboration with and in support of, healthy and prosperous coastal communities. SCEP’s goal is to engage local and regional decision-makers and citizens in working together to better understand, sustain and improve the environment at local and regional scales through research & monitoring, application of scientific data, education and action. SCEP has recently conducted a community-based climate change adaptation study. The Charlotte County Community Vulnerability Assessment process was developed from a format used in various other vulnerability assessments, but formatted to suit the participating communities. In this presentation, we describe our approach and discuss the methodological lessons we learned during this process. We conclude with some insights as to the potential role of local ENGOs in attracting and maintaining community engagement in local climate change adaptation planning.

Session: THU-10:30-1

Mobile external economies, fan seriality and the economic geographies of Phish tour

Tim Reiffenstein, Mount Allison University

Like other cultural products industries, musical production and consumption spawn important external economies within places, hence the attention devoted to scenes. Yet we are also aware that touring as a

spatial practice is an increasingly important source of revenue to the music industry. This paper investigates the external economies generated by touring musicians in general and in particular the unique but significant mobile external economies that characterize fan-bases whose concert consumption is serialized in nature. In contrast to most live music fans, and continuing the legacy of Deadheads, fans that follow the band Phish frequently see multiple shows over the course of a tour in numerous locales. Serialized consumption within this fan community arises because the product on offer varies by location, where every show's set list is unique and where every concert is recorded and shared. Consequently fans cultivate a keen sense of history and location based lore that becomes highly anticipatory when tour itineraries are announced. Drawing on real and virtual ethnographic accounts, this paper traces the evolving geographies generated by fan travel and buttressed by fan ticket exchanges, tailgate vending cultures as well as the knowledges that circulate amongst fans as they plan and practice the logistics of a Phish tour.

Session: WED-08:30-3

Landscape Expertise for Adventure Role-Playing Game Design

Scott Rice-Snow, Department of Geological Sciences, Ball State University
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Worldwide popularity of table-top roleplaying games (RPGs) provides a distinctive opportunity for informal education on natural landscape features and processes. Players invest hundreds of hours per year, and game masters (GMs) are eclectic in their search for material to enliven adventure game sessions. Outreach avenues to the gaming community include convention GM seminars, print resources including maps, and the running/dissemination of RPG adventures exemplifying rich involvement with landscape. The subject matter of geomorphology connects to practical development of RPG adventures at many levels. Diverse types of terrain alter line of sight, impede character movement, present unique hazards, and provide unexpected resources. Active surficial processes provide key story elements overtly (flash flood in arroyo) and subtly (treasure revealed by dune migration). Even in games with fantastic elements, acquaintance with real landscape diversity enriches variety, detail, context, and continuity of physical environment. Novel surroundings can inspire players, and natural processes offer metaphors for story themes. Emphasis on issues relevant to story and gameplay can also return unique perspectives to the earth scientist. It gives new engagement with key concepts of the discipline, leads to focus on terrain details and unique context of place, and emphasizes a multi-sensory experience of natural sites.

Session: WED-08:30-8 POSTER

Independence of Watershed Boundary Irregularity from Topographic Relief, Prince Edward Island, Canada

Scott Rice-Snow, Department of Geological Sciences, Ball State University (ricesnow@bsu.edu)

The multi-scaled irregularity of watershed boundary traces affects various issues, ranging from local pollution mitigation to arbitration of national borders. Prior empirical evaluation of this quality's geomorphic controls gives little evidence that topographic relief has significant effect. Those studies treated primarily mountainous regions, including fewer examples of low-relief areas. Prince Edward Island (PEI), consistent in bedrock geology, provides a focus case for evaluation of relief control on watershed

boundary irregularity across the range of low to medium relief (~150 m). This study treats 30 high-resolution watershed boundary traces resulting from a recent province LIDAR survey, 15 watersheds each in hill and plain regions of the island. The divider method provides multiple summary measures of trace complexity. A comparison of fractal dimension values, including prior studies, further indicates that watershed boundary irregularity is independent of topographic relief. An irregularity ratio value allows assessment of the full set of PEI watersheds, with no assumption of self-similar form. These data also show no statistically significant trend in boundary irregularity with relief. Most suggestion of a trend relates to three plain region watersheds with anomalously high irregularity values, clustered in a western portion of the island, suggesting a distinctive local control.

Session: THU-08:30-4

Rainwater Harvest in the Niagara Region

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With the continuing growth of urban centres, a vast amount of land has been allocated to urban settings. The ability to harvest rainwater and use it for select purposes (i.e. gardens and toilets) presents an excellent opportunity for the conservation and recycling of our most important resource. Harvesting rainwater could hold the potential to reduce the demand on infrastructures, alleviate storm-water concerns, and protect fresh water sources. This project looks at the rainwater harvesting potential over three 'catchment areas' (North Thorold neighborhood, Brock University, and Niagara Region residences). Though several assumptions regarding the efficiency of collection have been made, encouraging numbers have been calculated. Estimates of potential rainwater harvesting were calculated at different collection efficiencies using GIS to calculate roof 'foot-prints' alongside regional precipitation data. Beyond the scope of calculating harvesting potential, costs associated with implementation of collection systems was evaluated, along with the potential for households to save money on their water bill.

Session: WED-13:30-1

Practicing 'Gender' in Urban Malawi: Untangling Gender and Development Discourses in Food Security Fieldwork

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Feminist research has demonstrated a strong link between gender and household food security. This paper contributes to the theorization of these linkages in the context of urban Africa by drawing on in-depth interviews with men and women in Blantyre, Malawi to reveal ways that gender, as both category and construct, shapes household food security. The key to interpreting what seemed to be inconsistent responses from men and women was to disentangle the meaning of 'gender' intended in the research design from the meaning received by research participants. In Malawi, the term 'gender' is bound up with an image of exogenous social change that incorporates development, modernity, individuality, democracy, and human rights, especially as experienced since the country's 'democratization' in 1994. Men's claims to

be ‘practicing gender’ at home thus represent a desire to appear urban and modern, exposing a gap between what men said they do in interviews and how households access food in practice. Addressing the semantic hurdle presented by the untranslatable word ‘gender’ was fundamental to understanding how gender shapes household food security in Blantyre, including entrenched and persistent ideas about what men and women ought and even are able to do in the production, procurement and preparation of food.

Session: TUE-15:30-5

“All that matters is building mega projects for the one percenters”: the entrepreneurial city and the spatial politics of citizenship

Michael Ripmeester, Department of Geography, Brock University

St. Catharines, Ontario has, like many other Canadian cities, embarked on a creative city plan in order to offset the devastating effects of the decline of fordist manufacturing. In many ways, urban managers have few options. Provincial policy, regional intra-politics, and competition have combined to force their hands. The outcome of this adoption is strikingly similar to that of other cities. Local urban managers have: adopted a creative city plan; actively planned for gentrification; used public funds to build arts and sports facilities; and privileged the development of incubator/cluster development around interactive media, bio-health sciences, and advanced manufacturing. Though these plans are just underway it is already possible to detect elements of the management of micro-spaces in the redeveloping downtown. These changes point to the development of a particular type of citizenship, one that is based on consumption in a vibrant, safe downtown. Though this research is in its early stages, examination of newspapers, city council minutes and by-laws, and property development marketing literature suggests that the material redevelopment of downtown that is to attract creative workers and the firms that employ them will exclude others.

Session: THU-08:30-3

Free Maternal Health Insurance in Ghana’s Upper West Region: Is it Really Free? Exploring hidden determinants related to under utilization

Andrea Rishworth, University of Western Ontario
Isaac Luginaah, University of Western Ontario
Jenna Dixon, University of Western Ontario

This paper examines challenges related to the Maternal Exemption Policy (MEP) within the National Health Insurance Scheme in Ghana’s Upper West Region (UWR). Aimed to reduce the country’s maternal mortality ratio and increase facility delivery, Ghana implemented the MEP providing free antenatal, postnatal, and facility delivery for pregnant women who enroll in the policy. Although the MEP is considered to be highly advantageous, many unforeseen challenges impede the MEP’s goals, especially in the poor, marginalized, rural communities of the UWR. We conducted in-depth interviews (20), focus group discussions (12), and key informant interviews (13) in 2013 and used an interpretive analysis to examine the barriers to access and utilization of maternal health services in the context of the MEP. Findings suggest certain socioeconomic, geographic and cultural characteristics are intertwined, dramatically inhibiting access and use of free health services. Although the MEP is technically free, barriers to access exist at every stage of

pregnancy, posing detrimental health risks and outcomes for women that will likely prevent Ghana from attaining comprehensive reproductive health coverage. We conclude with recommendations for policy modifications to alleviate maternal mortality, pertinent to access and gender equity.

Session: TUE-10:30-6

“Thinking of the land ‘in that way’”: Feeling(s) in worldviews, knowing traditional ecological knowledge and the spatial politics of “attentiveness” in the protection of Skwelkwek’welt

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Secwepemc activists attempted to slow the development of a ski resort on an important site for the practice of traditional ecological knowledge (TEK). They and scholars assert that the objectives included protecting their culture, rights, and the environment. It is also claimed that the affirmation of grassroots democratic systems and a space of resistance were further consequences. Explanations for Native resistance often hinge on a “connection to the land.” This phrase demands closer scrutiny so as to better understand both this event and its outcomes, as well as TEK, how it informs worldviews, and its spatio-political consequences. I critique comparativist attempts to understand other ontologies for their neglect of the role of “feelings in” and the “feel of” place. Through qualitative methods and more-than-representational theories of emotion and affect, I reassess conventional understandings of the epistemology of TEK. By illuminating the spatiality of feeling(s), I extend the insight of Indigenous scholars that decolonization requires “attentiveness” to the experience of place. As for the politics of attentiveness, I show how the Secwepemc risked sanction for summoning spaces always-already deemed unintelligible.

Session: TUE-15:30-5

Climatic drivers of *Betula glandulosa* growth in subarctic Québec, Canada

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Shrub expansion has been recorded in many subarctic regions, and the recent increase in temperature is usually pointed out as its main driver. In this study, we aim to evaluate the influence of climatic parameters on the growth of the main shrub species in Québec's forest-tundra ecotone, *Betula glandulosa* Michx. This study took place in the Boniface River region, Nunavik (57° 45' N, 76° 20' W) on three different types of environment (hilltops, terraces and snow patches). In the field, we harvested 135 *B. glandulosa* individuals (15 per sites, 3 sites per type of environment). We used the root collar and the two main branches to evaluate their radial and axial growth, respectively. For terraces and hilltops, radial growth was positively correlated with July, August (current year) and September (previous year) mean temperatures. The climatic signal was not as clear for snow patches. Local factors, such as snow cover duration, could be more important than regional factors for this type of environment. Axial growth rate is higher from the decade

1990 for all types of environments, independently of the year the branch started to develop. This increase corresponds to the increase in mean temperature recorded in the region.

Session: FRI-10:30-2

Housing and home for single people in early-to-mid 20th century Canadian cities: the gendered qualities of boarding and lodging

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Feminist scholarship on the gendered qualities of housing has examined distributional (social justice) aspects; and also how housing designs, markets and policies convey particular social representations and expectations about gender performances in domestic and public life. Recently, the concept of heteronormativity has been mobilized to consider how housing actors exclude from recognition single persons' needs and desires to form households of their own. This paper draws on an ongoing study of never-married adults' living arrangements in Canadian cities from 1921 to 1951—when most lived with their parental families. Our interest lies in the exceptions, whose autonomous residential arrangements were precursors to the diversification of household forms in recent times. While the apartment building sector was of growing importance for single people, we focus here on the larger sub-markets of boarding, lodging and rooming (BLR). We use recently-created census micro-data samples for Canadian cities (1921-1951) to describe the characteristics of never-married renters in BLR. We also analyse a large sample of Montréal daily press classified ads offering BLR. We examine their gendered representations of prospective tenants, and we use this source plus print media articles to assess to what extent these types of accommodations are portrayed as offering single women and men the qualities of 'home'.

Session: TUE-10:30-5

Identity, Place and Ethnic Associations: Jamaican Immigrants in the GTA

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Many studies focus on exclusionary experiences, social structures in the receiving country, home country directives and gender as the most significant factors influencing the participation of immigrants in ethnic organizations. Using the results of in-depth, semi-structured interviews, I explore the factors influencing organizational participation amongst Jamaican immigrants in Toronto. Jamaican immigrants provided a more diverse set of explanations for why they became involved or were not engaged in Jamaican organizations in Toronto. The responses of Jamaican immigrants in Toronto highlight that loyalties to the country of origin and settlement experiences in Toronto are not the only factors which shape the participation of Jamaican immigrants in Jamaican organizations in Toronto. The intersections between

place, identity and experience are important for influencing the extent to which Jamaicans in Toronto participate or do not participate in Jamaican organizations in Toronto.

Session: FRI-08:30-5

Art is the New Steel

Paul Russumanno, Department of Geography, Brock University (pr04jo@brocku.ca)

In the guise of Richard Florida's creative city logic (2005), Hamilton boosters and policy-makers have recently embraced and institutionalized neoliberal urbanization as the solution to de-industrialization in the once-upon-a-time steel town. *The Hamilton Spectator*, *Hive* and *Economic Development*, disseminate creative city rhetoric through various media channels to convince Hamiltonian's that "Art is the New Steel" and "You Can Do Anything in Hamilton". Over the last five years, this brand of city regeneration has been manifested by spectacular events within the core, most popular being the "The Gore Park Promenade", "James Street SuperCrawl", "Locke Street Festival" and Ottawa Street "Sew Hungry". These temporary changes to Hamilton's downtown are a reflection of creative class logic and represents a transition phase that prepares both people and place for the permanent changes to the urban landscape. Through the various stages of gentrification, a proliferation of business improvement districts and the privatization of public space, Hamilton's downtown core is being converted into an exclusionary site in which neoliberal ideology has materialized and influences day-to-day practice.

Session: WED-10:30-6

A Comparison of Place Branding Strategies in Michigan and Ontario

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Evan Cleave, Department of Geography, University of Western Ontario
Godwin Arku, Department of Geography, University of Western Ontario

Within the dominant neoliberal political-economic structure and competitive global market environment, municipalities have been forced to become increasingly proactive and entrepreneurial in their approaches to economic development to attract and retain business, investments and talents. One approach increasingly being taken is the application of 'place brands' to specific locales, whereby municipalities attempt to highlight their strengths to the external markets. Although the body of literature on place branding and economic development is still growing, few comparative studies exist which can help elucidate the differences of place branding usage in different political, institutional, and geographic contexts. This research considers the use of place branding in municipalities of two cross-border sub-national entities: Michigan and Ontario. Comparisons have been made between national and sub-national political contexts, city size, and geography with regard to the types and scale of place branding occurring in the study area. Results suggest that political context influences place branding more than city size or geographic area. This is of importance for future place branding initiatives and research, as the uptake of this method of economic development needs to be considered in light of the context in which it was implemented, and in light of other political-economic structures which may influence economic development.

Assembling publics in motion: Visualizing the rolling out of Indian road infrastructures

David Sadoway, Centre for Engineering in Society, Concordia University

Govind Gopakumar, Centre for Engineering in Society, Concordia University

Employing walking as both a method of analysis and a disposition, this paper seeks to explore the rolling out of novel urban infrastructures in India. Walking not only affords important visual perspectives on signs and signifiers of the changing production of urban space in relation to infrastructure — it also provides glimpses of the myriad injustices in the making as infra-programs and projects are rolled out across city spaces and places.

This paper employs a 'walking analytics' to examine and understand the fluid dynamics involved in the assembling of urban infrastructure in Indian cities. In particular, the paper will focus on how the (re)assembling of urban Indian roadways and sidewalks — simultaneously shared by hawkers, pedestrians, bicycles, auto-rickshaws, buses, trucks, private autos, livestock, amongst others — involves both polycentric state programming and private sector power plays and represents a vast public place-making endeavor interwoven across the urban fabric.

The paper will juxtapose visual-walking analyses of road infrastructures at specific sites in Bangalore and Delhi with a high visibility 'right to walk' newspaper campaign organized by the Indian news daily, *The Hindu*, during the Summer of 2013. The analysis raises important questions about the uses of roads as public spaces and utilities versus as private design build vectors or 'premium network spaces'. The paper also raises critical questions about the role of publics in road place-making and infrastructure programming processes.

Session: TUE-15:30-4

Environment and sustainable development: the Environmental Petitions Process in Canada

Johanne Sanschagrin, Office of the Auditor General of Canada

In 1995, the Canadian Parliament established the environmental petitions process to make sure Canadians can get answers from federal ministers on specific environmental and sustainable development issues that involve federal jurisdiction. In addition to providing information to petitioners, petitions have prompted such action by federal departments as new environmental projects, follow-up on alleged violations, and changes or clarifications in policies and practices. This poster will present an overview of the environmental petitions process in place and the dialogue that such process permits between the public and the state.

Session: TUE-08:30-7 POSTER

The VACEA Project: Goals and Progress

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The interdisciplinary research project 'Vulnerability and Adaptation to Climate Extremes in the Americas' (VACEA) addresses a gap in the current understanding of the consequences of global climate change for regional climate variability and extremes and the resulting vulnerabilities of agricultural and indigenous communities. Our goal is to provide new knowledge to strengthen the adaptive capacities of communities and governance institutions in Canada, Argentina, Brazil, Chile and Colombia. The research framework, based on a vulnerability and impact assessment models, actively engages stakeholders and directs all research activities towards evaluating past, current and future exposure, sensitivity and adaptive capacity. The major research themes are Regional Vulnerability Assessment, Climate and Agro-Ecological Variability, and Integrative Risk Analysis of agricultural and natural systems. By the mid point of the five-year project, we had gathered considerable input from the rural communities and institutional decision makers, and we have completed extensive analysis of hydroclimatic and environmental data within this social context. During the final two years we will apply the research findings to a collaborative and comparative analysis of vulnerability and risk, and towards achieving community- and policy-relevant outcomes and deliverables.

Session: TUE-12:00-1

A Comparative Analysis Using Change Detection to Monitor Urban Growth and its Influences on Public Transportation in St. Catharines and Thorold, Ontario (2000-2013)

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The form cities take have major impacts on the lifestyle choices of their residents. In a North American context, urban development continually sprawls outward from downtown centres. Sprawling growth generates difficulties for transportation engineers, urban planners and citizens within cities. Therefore, it is crucial to understand the interconnectedness between both urban development and the transportation network in a rapidly urbanizing world. More importantly, understanding the interconnectedness between urban infrastructure and public transit participation. Public transit allows cities to thrive via the mobility of capital and culture. The following was an analysis of the adequacy of the St. Catharines Transit Commission (SCTC) services offered in St. Catharines and Thorold, Ontario. Sustainable land-use planning requires the cautious use of resources and the management of the process of landscape change. The use of remotely sensed imagery allows for a means of gathering data on temporal trends and spatial distribution within images. Using change-detection techniques provided insight into assessing both, urban growth and how urban growth influences public transit. Although attempting to reverse urbanization would be extremely problematic; continued research similar to this study ensures future growth will be of a sustainable nature. The future of our cities starts with today.

Session: WED-13:30-1

Thinking geographically about law: A case study of the Jay Treaty and First Nations' border-crossing rights

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On March 22nd, 1988, Grand Chief Mike Mitchell of Akwesasne, accompanied by chiefs of other nations and over 400 community members, walked across the International Bridge linking Massena, New York and Cornwall, Ontario with the explicit intention of bringing the border-crossing provisions of the 1794 Jay Treaty before the courts. The Jay Treaty was signed between Britain and the United States to ensure good trade relations after the Revolutionary War and stated that "Indians" living on either side of the newly established boundary line could pass the border freely and without paying import taxes or duties on their goods. For Mitchell and many others the Jay Treaty does not grant border-crossing privileges but ensures the continuation of First Nations' rights to travel unimpeded through their territories. In this paper I analyze the geographic strategies at play in the Supreme Court's rejection of Mitchell's argument for continued Haudenosaunee sovereignty. These included locating "culture" in a pre-contact past, bounding Haudenosaunee territory to pre-contact location, and parsing and repurposing culture by redefining its elements as either "central" or "peripheral" to community identity. The Mitchell case reflects the geographic strategies and consequences of legal reasoning and its role in upholding the sovereignty of the Canadian state.

Session: WED-13:30-3

Are Genetically Modified Crops Pro-Poor? The Case of Matooke Banana in Uganda

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Genetically Modified (GM) matooke banana is heralded as an agricultural technology capable of uplifting the poor and driving rural development in Uganda: it is the primary staple crop grown throughout the country, it is produced mainly by small-scale farmers, and it reproduces clonally – meaning that once purchased farmers will own its offspring and not be subject to restrictive intellectual property regimes. Poor, smallholder farmers should benefit through improved yields and livelihoods. But this positive scenario rests on a number of assumptions related to the ecological, social and economic contexts facing small-scale producers. This study combines quantitative and qualitative methodologies to capture the complexities of farmer decision-making around matooke banana, in order to determine whether this technology will help the poor. We draw on a random, representative data set that includes 168 farmers who participated in on-farm ranking exercises, as well as an additional 60 farmers who took part in focus groups. Findings reveal three potential obstacles to GM matooke helping poor farmers 1) traits and varieties currently under experimentation do not match up with farmer preferences, 2) GM matooke might benefit wealthier, larger-scale farmers more than smaller-scale producers, 3) the cost of planting materials may prove prohibitive for poor farmers.

Mediated Regional Images: the case of local postcards in NW Bohemia (Czechia)

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With this paper we would like to contribute to the contemporary European regional discourse that stresses the importance of regional identity and its formation as one of the key aspects of contemporary regional development strategies. Building of regional image and its promotion is not strictly tied to the main products of regional branding process (name, logo, slogan), but is formed through regional awareness, inhabitants' sense of belonging and the recognition of region in the minds of the general public as well. These are highly dependent on information originating from various different sources. One such a source are postcards offered within the region, which serve not only as a memory on a holiday, but as an agent promoting the region to the outsiders as well. We have conducted extensive research on postcards distributed within the North-Western Bohemia region, where we have focused on content analysis of postcards' images as well as their spatial distribution. According to the results of our analyses we have tried to identify partial subregions in the case study area. The paper is part of ongoing research dealing with regional identity formation in areas with intensively changed landscapes.

Herring and Heiltsuk Well-Being

Maria Shallard, Department of Geography, University of Guelph

Examining the intersection of well-being and resilience can have effects on governance in complex social-ecological systems, particularly coastal-marine environments. Western ways of thinking and economic development projects have often neglected to understand other ways of seeing the sea including interpretations and meanings that indigenous cultures give to the ocean and marine environments. Specifically, this is exemplified on the central coast of British Columbia where the harvesting, management, and trade of herring roe spawn on kelp is integral to well-being individually and communally but is influenced by contested fishery management options and Aboriginal rights. From May to August 2013, in-depth semi-structured interviews were conducted with local fishermen and women from the Heiltsuk First Nation community in Bella Bella, British Columbia. These interviews elicit how local use and management of herring contribute to Heiltsuk well-being. These findings determined the full range of benefits accrued through community use and management of commercial herring roe-on-kelp licences and determine the degree to which this system reflected Heiltsuk perspectives on well-being and sovereignty in territorial ocean space. This presentation demonstrates how resource management and economic development planning may account for a range of benefits including monetary income, reciprocity, trade, food security and cultural continuity in contested seascape environments. Findings demonstrate that there is much to be

gained by thinking about the commercial fishery as an opportunity to improve communal/community well-being (rather than just accumulating wealth). Additionally, this research can assist in positive change to equalize power relations between cultures and aid in informing more socially and ecologically just management. Given that conflict over ocean governance will continue to grow as our world economy and technology leads to exploitation and resources it is pertinent to examine alternative viewpoints, particularly the voices of First Nations people who have often been excluded from the conversation.

Session: TUE-13:30-4

Building the Community Engagement (CE) Option: Reflecting on a Collaborative Curriculum Initiative between Laurier and Kitchener's Working Centre

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In the Fall 2014, Laurier's Faculty of Arts is introducing a new mini-specialization known as the Community Engagement Option. The Option includes three core courses open to all 3rd and 4th year honours Arts students. These core courses will: be taught off-campus in downtown Kitchener; appeal to students who are passionate about social inclusion and eager to integrate university learning with the broader world; and, create opportunities for students to reflect on their values, nurture interdisciplinary thinking and action, and gain marketable skills. The Option has been developed in partnership between Laurier's Faculty of Arts, Kitchener's The Working Centre, and Laurier's Centre for Teaching Innovation and Excellence, and Community Service-Learning. This presentation outlines the stages in the development of the CE Option, including its conceptualization, curriculum development, course building, and program promotion. It reflects on the efficacy of the collaborative experience, the role of geographic and spatial thinking in such a curriculum and on the possibilities for program assessment and future refinement.

Session: TUE-08:30-2

Vulnerability and Adaptive Capacity of Community Food Systems in the Peruvian Amazon: A Case Study from Panaillo

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Projections of climate change indicate an increase in the frequency and intensity of climatic hazards like flooding and droughts. It is thus increasingly important to understand communities' adaptive capacity to extreme hydrological events. This research uses a case-study approach to examine food system vulnerability in Panaillo, a flood-prone indigenous community in the Peruvian Amazon. Semi-structured interviews and participatory rural appraisal methods were utilized to examine how biophysical and socioeconomic factors constrain or enable local adaptive capacity to climatic hazards over time. Seasonal flooding and droughts were found to strongly shape the Panaillo food system. However, non-climatic factors, including economic development, low institutional capacity, and the assimilation social model in Peru, exacerbate the impact of climatic hazards on household food security and ultimately increase the vulnerability of Panaillo's food system by changing resource availability, traditional livelihoods, and adaptive

strategies. Climate change has the potential to exacerbate these socioeconomic and biophysical drivers and further compromise community food systems in the Peruvian Amazon in the future.

Session: TUE-10:30-1

The Evolution of Flood Management Strategies in Canada

Dan Shrubsole, Department of Geography, The University of Western Ontario

Flooding remains an important public policy matter in Canada. The institutional arrangements for flood management will be described. The evolution of flood management strategies consists of four stages: (i) Structural Control, (ii) a Reliance on a Mix of Structural and non-Structural Adjustments, (iii) Paralysis and the non-Development of a National Mitigation Policy, and (iv) Municipalities and Provinces assume Leadership. The implications for the development and implementation of future strategies arising from recent weather events and to climate change will be explained.

Session: FRI-08:30-4

Mapping the Arts Ecology of Saskatchewan

Julia Siemer, Department of Geography, University of Regina

The term 'arts ecology' is used increasingly to imply that artists create within an interactive, symbiotic system of relationships among themselves and with their larger environment. This SSHRC funded project investigates the arts ecology of Saskatchewan and how artists interact among themselves and with society, what connections are important to their art-making, and whether they form any networks. The impact those connections have on art making, creativity and innovation, economic and cultural wellbeing, and the health and sustainability of communities is mapped using GIS technology. Cartographic output of this study will include visualizations that (1) identify and map the distribution of artists and arts organizations, (2) compare the distribution of artists and their basic demographic characteristics within and among the provincial districts, and (3) identify and map interactively the key networks and interconnections between artists and other artists, artists and arts organizations, artists and other segments of their 'community' (geographical, disciplinary, virtual) and their contributions to local development and the economy. This paper will present some preliminary mapping results and discuss cartographic techniques used to map the variables of the arts ecology of Saskatchewan.

Session: THU-10:30-7

“It still feels like Goderich to me, and I think that it will be beautiful again”: The positive and negative impacts of an F3 tornado on residents’ sense of place.

Amber Silver, Department of Geography & Environmental Management, University of Waterloo
Jason Grek-Martin, Department of Geography & Environmental Management, University of Waterloo

Recent research has examined the influence of abrupt environmental change on place attachments, including war, terrorism, and climate change. However, there has been much less empirical research that examines the influence of natural disasters on place attachments. The few studies that exist tend to focus on the negative impacts of disaster on place (e.g., displacement, disruption, and loss), and fail to adequately explore the positive impacts that may also occur as a result of disaster (e.g., sense of community, social cohesion, and collective efficacy). This research examines the F3 tornado that impacted the community of Goderich, Ontario on 21 August 2011. Using semi-structured interviews (n=35) and close-ended questionnaires (n=268) issues relating to sense of place and long-term recovery were explored. The results showed a strong connection between the tornado and participants' perceptions of place. As anticipated, many residents expressed feelings of loss, sadness, worry, and grief as a result of the salient changes to their familiar landscapes. However, it was also found that many participants experienced profoundly positive outcomes as a result of their shared experiences during and after the disaster. Notably, many Goderich residents reported strong feelings of social cohesion and optimism that persisted well into the reconstruction phase.

Session: WED-15:30-6

A view from the tradeshow floor: on the spaces and social relations of sustainable seafood

Jennifer J. Silver, Department of Geography, University of Guelph

Advocates of the green economy suggest that rewarding firms for sustainable behavior will shift commodity production standards over time. In practice, this premise is operationalized by large retail firms (e.g., Walmart) committing to ‘greener’ sourcing, and then, imposing sustainability requirements down supply chains. Research suggests that retailer commitments present challenges and opportunities for producers in specific places. However, less attention has been given to how sustainability standards are internally constructed, debated, and employed by actors in various sectors. Drawing on seafood sector-produced media and participant observation from four international seafood trade shows, this paper explores debates regarding the production and certification of sustainable seafood internal to the seafood sector. Although sustainability assurances are now a prerequisite to Western market access, I demonstrate that what constitutes ‘sustainable seafood’ remains hotly contested. Findings highlight that sectoral events, like trade shows, can be read as temporary economic spaces where internal challenges, allegiances and conflicts are aired. I conclude that positions regarding sustainable seafood taken by actors in the seafood sector are decidedly social, influenced by (geo)politics, the actions of others, and awareness for gossip and conflicts. This complicates narratives about the green economy as a smooth, incentivized path towards enlightened commodity production standards.

Session: TUE-13:30-4

The breathing space between cultures: notes on wisdom as a visceral kind of learning

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In migrating from culture A to culture B, one does not merely increase one's store of factual and procedural knowledge through the summation of the learnings of the two cultures. Rather, a qualitative leap in one's knowledge occurs, because the move from one culture to another opens up a breathing space between them. That breathing space allows one to sniff the scent of wisdom. It means that one can learn how to escape being spellbound by the hypnotic trance of any given culture (Heller & Steele, 2009) and that one can become acutely aware of why "language is the House of Being" (Heidegger, 1947) and of the extent to which humans are social animals, mere waves in the ocean of their own culture. That breathing space enables the acquisition of wisdom through the sheer ability (and propensity) to compare everything between the country left behind and the newly elected country. Personal geographical change enables and compels geographical comparisons, and through these comparisons we learn to appreciate (a) the relativity of values and (b) the importance of learning to live with uncertainty, both of which are prerequisites for wisdom.

Session: FRI-15:30-2

"Everyone is fed, bathed, asleep, and I have made it through another day": surviving academia through a feminist ethics of resistance

Laurence Simard-Gagnon, Queen's University

This contribution offers my experience as a graduate student and mother of two children, one with autism, as a starting point to problematize models of individual accommodation and resilience within academia. Based on a liberal framework of human rights, such models are what presently allow my pursuit of a doctoral degree without fear of direct discrimination or exclusion due to my family status. However, they also individualize the anxieties of attempting to address the multiple needs of my well-being and that of my family, as well as the expectations of competitive productivity and individual achievements that characterize success in the world of graduate studies and research. Beyond exposing the emotional and physical costs of navigating a neoliberal academia, my aim is to critique the fatalist, constrictive and oppressive implications of one of its products, namely the upholding and exaltation of (personal) resilience in the face of inhumane and unjust expectations. Particularly, I would like to address the inadequacy of a model of resilience to build collective (and institutional) concern and compassion towards individual circumstances and failures. I wish to highlight the severe impacts of this inadequacy for the mental health of struggling individuals. On the other hand, I would like to explore the possibilities of answering de Certeau's (1980) call to "make a perruque", that is, to open utopic places of resistance within the totalizing space of academia through tactics of micro-scale diversion, including acts of friendship, solidarity and care.

Session: WED-10:30-7

Predatory Finance in Canada? A View From the Marginalized

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R. Alan Walks, Department of Geography and Program in Planning, University of Toronto

Rising household indebtedness is a key attribute of globalized financial capitalism. One aspect of financialization has involved the rise of various forms of predatory lending, including many of the subprime mortgage loans that target low-income, racialized, and immigrant communities in the United States (Hernandez 2009; Wyly et al. 2006, 2009). While the relationship between race, immigration status, and predatory finance has been a central focus of scholarship in the US, this issue has received little attention in other national contexts. Building on the earlier work of Walks (2012, 2013), this paper investigates levels of household indebtedness at the neighbourhood scale, for all Census Metropolitan Areas (CMAs) in Canada, and seeks to understand whether racialized and immigrant communities experience higher and more predatory kinds of debt than the general populace. Using a proprietary dataset assembled by Environics Analytics for the years 2010-2012, types and levels of debt are examined by visible minority status, immigration status, and race/ethnicity. In addition, the translation of patterns of indebtedness across scales is investigated, by comparing patterns within cities (between neighbourhoods), with those observed between metropolitan areas. For example, this paper asks whether marginalized groups in Toronto or Vancouver – the two largest Canadian global cities – exhibit higher levels of debt than their non-global counter parts in Hamilton or Saskatoon? Descriptive statistics are used to compare and contrast the experience of marginalized populations, after which regression models estimate the likelihood of racialized and immigrant communities being located in ‘highly indebted neighbourhoods’. The paper concludes by discussing the implications of the findings for understanding the relationships between racialization, immigration and financialization – connecting with the conference themes surrounding spatial justice, multiculturalism, and inclusive cities. It then relates these questions around the production of urban socio-spatial polarization, regressive social and financial policy, and ‘the right to the city’.

Session: THU-10:30-3

Effect of grain size on morphological pattern elements and land cover within boreal wildfire residual patches

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Wildfires burn about 1% of boreal forests in Ontario each year. Post-fire conditions comprise a matrix of burned land cover classes that contained unburned patches, where these residual patches are important ecologically providing habitat, food resources, and other ecological services to the surviving flora and fauna. We study a 55,000 ha fire that burned in north-western Ontario during the 2011 fire season and characterize the residual patches based on land cover composition and their internal morphological characteristics. Our goal is to understand the scaling relationships of pattern measurement across 5 grain sizes (4 to 64 m) using Ikonos imagery, to identify optimal scales of mapping. We measure and test whether grain size coarsening alters the frequency of 10 land cover classes and 8 spatial morphological pattern elements (core, islet, perforation, edge, loop, bridge, branch and background). We also measure the frequency of land cover and pattern elements with 4 and 8 neighbourhood connectivity, 1 and 2 pixel widths, transitioning and intext parameters. Guidos’ MSPA tool is used for the measurement by computing

morphological metrics based on mathematical operators which describe the geometry and connectivity of landscape features. Preliminary findings show that the occurrence of each MSPA element decreases with an increase in grain size. When considering land cover, the frequency of land cover classes increases especially when observing grain sizes from 8 to 16 m.

Session: WED-10:30-1

Participatory Visual Ethnography to Study Affective Encounters of Socionatures

Neera Singh, Faculty of Forestry, University of Toronto

In Odisha, India several thousand villages are involved in conserving state-owned forests through community-based patrolling arrangements. Through the caring labor of regenerating forests, villagers are not only growing forests but also cultivating new subjectivities. These laboring practices also articulate biopower from below, or what Negri terms as *biopotenza*, i.e. the power of life, to bring alive new ways of being and relating. In this paper, I discuss insights from a participatory visual ethnography project in two villages in Odisha to study transformations in subjectivity and affective encounters of socionatures. I discuss how participatory visual methods supplement “talk and text” methods to explore “sensory, bodily and affective registers”. This paper discusses methodological challenges of studying the liveliness of life and emergent subjectivities. I illustrate how video cameras in the hands of village women and men not only reveal affective relations and intimate sociality in forest-people relationality, but also become tools for “attunement or education of attention”, which as per Tim Ingold (following Gibson) involves fine tuning of perceptual skills to not merely construct but discover meaning immanent (or emergent) in the environment.

Session: THU-10:30-5

Dendroglaciological exposés in the Mt Waddington area, British Columbia Coast Mountains

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Jess Craig, Department of Geography, University of Victoria
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Dendroglaciological investigations in the Mt. Waddington area of the central British Columbia Coast Mountains provide an increasingly detailed perspective of Holocene glacial activity in this high mountain landscape. Field surveys initiated in 2000 have led to the discovery of subfossil wood mats and glacially-sheared stumps exposed by ongoing glacier retreat and down wasting at numerous sites. Radiocarbon and tree-rings dating of these dendroglaciological deposits provide evidence of glacier fluctuations extending from the Younger Dryas to present. The earliest evidence for glacier expansion following the Late Glacial Maximum was located at Franklin Glacier, with dendroglaciological and stratigraphic evidence for regionally-recognized advances between 6.4 and 5.4, 4.8, 3.2, 2.6, 1.7 and 1.0 kya common in this area. Our findings in the Mt. Waddington areas are consistent with the timing of glacier expansion episodes reported

elsewhere in the Coast Mountains and serve to corroborate the regional synchronicity of Holocene glacier activity in Pacific North America

Session: FRI-08:30-2

Exploring the Dimensions of Support for and Opposition to Regional Land-Use Planning in Western Canada

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Comprehensive regional land-use planning is a long-standing approach to addressing conflicts over land and resource use in large, diverse, non-urban regions. In places where multiple land and resource uses are possible and decisions about specific uses are necessary, it is an important approach. Comprehensive regional land-use planning is also often desired to provide context for other important processes such as environmental assessment. In Canada, regional land-use planning has emerged variously from specific resource and environmental management needs, policies, and practices, including formal local and regional planning legislation and processes, as well as comprehensive land claims and location specific conservation policy and legislation. Yet support for and success of comprehensive land use planning vary. Comprehensive regional planning programs outside metropolitan areas have tended to come and go subject to political will and financial support. And increasingly they are subject to complex patterns of both local support and opposition, and upper-tier government support and opposition. There are places with planning that don't seem to want it, and others that want planning but aren't getting it. This paper reports on efforts to distinguish and elaborate the contextual factors and underlying causes and consequences. Initial review of documentary and interview-based case studies in BC, Alberta and Yukon suggests a diverse set of reasons, based in local and upper-tier government perceptions of the needs, challenges, and rationales for and against comprehensive regional planning.

Session: WED-13:30-6

Mapping Indigenous Geographies: Investigating the Cultural Landscapes of the Yucatan Peninsula from a Mayan Perspective

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In Mexico and other parts of the world mapping continues to be dominated by government agencies. Their "official" cartographies are widely accepted as objective and authoritative depictions of reality, but they often ignore important relationships between indigenous peoples and their ancestral territories. This research, based on participatory mapping and other ethnographic methods, investigates how Mayan people conceptualize the landscapes surrounding their villages. Mapping done in three neighbouring communities documented dozens of named places not present on existing maps. The results reveal that there is a shared understanding of what constitutes the most salient aspects of landscape, which is evident in the types of places included on the maps. Local people also have a shared terminology for different geographic features, which is embedded in the toponyms that they use. The findings also reveal the import

role that water has played in shaping the cultural landscape in the region. More broadly, the research shows that indigenous peoples have their own distinctive geographic knowledges and ways of conceptualizing the landscape. As such, maps made using participatory approaches do not simply communicate spatial information, but rather, are cultural texts that reflect distinct world views.

Session: THU-10:30-5

At the intersection of gender and class: spatialising production and performances of a transnational 'middle-class' identity

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This paper presents the gendered production and performance of a transnational 'middle-class' identity by examining the case of Indian International students across three time-space locations: before the students left India; while abroad in Toronto; and their return to New Delhi. Framed within Pessar and Mahler's Gendered Geographies of Power, the discussion reveals how power-geometries of time-space compression influence the (re)production of specific gender role expectations and performances of the transient transnational 'middle-class' as they move from one space to another; where each space possess its own set of hegemonic gender norms. Drawing on 14 months of fieldwork conducted in Toronto, Canada and New Delhi, India in 2010-2011, the paper brings two sets of voices in conversation with each other: students, and parents whose son/daughter have studied abroad. The dialogue between the voices (across the three time-space locations) reveals the divergent narratives and practices of gender role expectation of both the students and their parents. The comparison provides a key insight for the Indian case, but also speaks to the production of the wider transnational middle-class. The power geometries which stretch across the 'transnational' space produce new gender role expectations for women, while simultaneously reproducing 'traditional' gender role expectations for men – thereby spatialising gender and class. The production of these narratives and the practices reflects not just an essentialised Indian middle-class gendered identity, but one that is also linked to an essentialised 'Western' middle-class identity. The narratives of the archetypal and supposedly dichotomous middle-class identities converge within the 'practice' of a unique middle-class identity that is linked to the 'transnational' and continually mobile nature of these individuals.

Session: TUE-13:30-5

Community Wildlife Conservancies in Kenya: Governance and Conservation Strategies

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With most wildlife in Kenya living outside of protected areas, communal lands are very important for wildlife conservation. This paper examines the emergence and management of community wildlife conservancies on group ranches in Kenya, identifying best conservation and governance practices, as well

as challenges, for this type of conservancy. Il Ngwesi Group Ranch Conservancy, in Laikipia County is used as a case study. This case represents a shift from colonial and state-centred initiatives that often alienated communities to a people-centred approach characterized by democratic representation, local decision making, transparent accountability, peer learning, and supportive regional and international networks. The community is now the primary decision-maker for biodiversity conservation, local resource management (grazing) and natural resource-based enterprises (ecotourism). Setting aside land for conservation and a community realization that conservancy contributes to the overall security of people, wildlife and property, better grazing management and entrenchment of democratic principles in conservancy governance, represent important milestones towards community wildlife conservation initiatives in Kenya. However, ongoing socio-economic benefits and the development of an equitable sharing strategy remain a challenge for community governance and sustainable resource management in conservancies on communal land.

Session: WED-13:30-7

Manufacturing Corporate Landscapes: The case of agrarian displacement and food (in)security in Haiti

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Caribbean food insecurity and environmental vulnerability have long historical roots. The colonial inheritances of deforestation and soil erosion worsened over centuries as large-scale export-oriented agriculture, financed largely by foreign capital, dominated landscapes. To varying degrees, national independence movements supported urban industrialization at the expense of agriculture, solidifying food import dependence. In recent decades, neoliberal-inspired policies have had the effect of intensifying trade deficits and food import dependence across the region. Alongside this, climate change is magnifying risks already inherent in Caribbean agriculture. Haiti is emblematic of these trends and is the most food insecure nation in the region.

We draw from field research conducted between January-July 2013, including 15 depth interviews and 8 focus groups with peasant producers, local officials, and civil society organizations, to show that since the 2010 earthquake, the “international community” has stepped up efforts to make Haiti an export platform for manufactured goods to US markets with onerous food security and ecological costs. We highlight how the logic of market-based food security is legitimizing land appropriations and is generating food systems that clash harshly with the long-term food security interests of the poor.

Session: FRI-15:30-1

Agricultural landscapes of the Regional Municipality of Waterloo's historic Huron Road corridor: Multi-temporal, high-resolution geomatics information development

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Stewart J. Sweeney, Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs
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Over the nineteen decades since the Canada Company opened the Huron Tract to settlement, the Huron Road has been a conduit for agricultural development and commerce through the southern part of the Regional Municipality of Waterloo. Farm fields along this travel corridor have the longest continuous agricultural management history in this part of Ontario. This study focused on the development of multi-temporal, high-resolution agricultural landscape geomatics information along a 9 km wide swath centred on the Huron Road in the Waterloo Region. A detailed, seamless, digital polygon framework of all farm and rural landscape features was crafted based on the 2010 Southwestern Ontario Orthophotography Project (SWOOP) 20 cm imagery product. It forms part of the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) being developed incrementally across the province by the Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs (OMAF/MRA). Multi-temporal Ontario AgRI polygon framework versions were built for a 9 km by 9 km study area that includes the Huron Road's crossing of the Nith River at Haysville. They cover the time period between 2013 and 1946. Field-specific crop map results for the 2006-2014 cropping seasons are also presented.
(http://www.lib.uwaterloo.ca/locations/umd/photos/ap_30_55.html)

Session: THU-8:30-7 POSTER

Urbanization in India

Kevin Stolarick, Martin Prosperity Institute, Rotman School of Management, University of Toronto

India has long been recognized as one of the "BRICs", an elite club of emerging nations whose economies have shown and continue to show enormous growth potential. But, in reality, this growth and potential do not reside evenly across the entire country. Instead, the positive externalities from agglomeration and the increasing urbanization of India's cities is generating increased prosperity and opportunity. Rather than considering the BRICs, we should instead be talking about the DAMBs (Delhi, Ahmedabad, Mumbai, Bengaluru). Accelerating population growth and increasing urbanization associated with a transition from an agricultural economy to an industrial and post-industrial economy have fostered economic growth and prosperity. Since India's independence in 1947 its urban population has been growing consistently at higher rates than its rural population. In 1990, the population of the urban agglomeration of Delhi accounted for a total of 9.7 million people which grew to 15.7 million in 2000 and 22.2 million in 2010 resulting in annual growth rates of 4.8 percent and 3.4 percent respectively. This presentation will look at the past and future urbanization of India with a shared focus on the interplay of urbanization and infrastructure and the roles of technology, talent, and tolerance/diversity in generating sustainable prosperity.

Session: WED-08:30-3

Mapping Coastal Wetlands of North Carolina using L-Band SAR Images

Joni Storie, University of Winnipeg
Christopher D. Storie, University of Winnipeg

The National Wetland Inventory (NWI) in the USA is required, by congress mandate, to map wetlands every ten years. Funding and current labour-intensive methods cause challenges to achieving this mandate. The goal of this project is to map NWI coastal wetlands in North Carolina using ALOS PALSAR data. Good classification accuracy for the wetlands with larger area distributions were achieved with both Wishart unsupervised classification using Cloude decomposition products and MLC supervised classification using Touzi decompositions. Wetlands with smaller area distributions will require use of higher spatial resolution radar data to achieve acceptable classification results.

Session: THU-8:30-6

Corroborating macroscopic sedimentary charcoal records with tree ring records in mixed- severity landscapes: A case study in the Rocky Mountain Foothills, Alberta, Canada.

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Evidence of mixed-severity fire persists throughout the landscape of the Foothills of the Rocky Mountains in Alberta, Canada. Unfortunately, forested landscapes associated with mixed-severity fire regimes are difficult to manage due to the high degree of spatial and temporal variability associated with individual fire events. In addition, the spatial and temporal limitations of individual fire proxy records mean that reconstructions from a single proxy may underestimate the complexity of these regimes. Therefore, a multiproxy fire history approach is most useful in understanding fire dynamics in these regions. We will overview the similarities and differences between the macroscopic (>150µm) sedimentary charcoal record and the dendropyrochronological records in the Alberta Foothills, in order to classify and reconstruct the fire regime. Macroscopic sedimentary charcoal preserved in lake sediment can provide insight into the timing and frequency of local fires. Dendrochronological analyses of stand establishment and fire scars can also provide insight into fire history (i.e. severity, seasonality, and frequency). Since these records are from different spatial and temporal scales, together they can result in a more comprehensive reconstruction. The synchrony and non-synchrony of these records in mixed-severity landscapes will be reviewed.

Session: WED-10:30-4

Representations of Consumer Demand in the North American Sustainable Seafood Movement

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The sustainable seafood movement was originally premised on the notion that consumers are willing to pay a price premium for certified sustainable seafood, thus providing the market incentive for fisheries to

improve their management practices. Academic literature has widely addressed that this is not the case and consumers in North America have demonstrated limited demand for/and are frustrated and confused by the array of choices available when it comes to sustainable seafood. But the sustainable seafood movement continues forward and since 2009, all major Canadian retailers have established partnerships with various ENGOs and created public commitments towards improving their sourcing of seafood to be more sustainable. As such, it is the purpose of this research to explore the ways in which consumer demand is being discussed in publically available documents produced by different ENGO-retailer partnerships throughout the sustainable seafood movement. The research discovered that there has been little change in the way consumer demand has been discussed, with the exception of one organization, the Marine Stewardship Council, which has changed its mission statements to alter the originally assumed central role of the consumer in moving the sustainable seafood movement forward.

Session: THU-13:30-2

Creative Suburbs and Fifty Feet of Floor Plans: Using One to Understand the Other

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The border between the city and the suburbs is often imagined as a barrier between creative opportunity and a sea of homogeneous “cookie-cutter” houses. This may be the case in some instances, but in reality this border does not have clear-cut boundaries, and suburban communities can be hotbeds for creativity and innovative housing. Studying and understanding these novel communities can be done through a likewise novel approach, namely using floor plans as a primary visual source. Over two decades, I have collected what has amounted to fifty feet worth of floor plans, and these have been the basis for my academic work. Often disposed of as mere ephemera, historic floor plans can prove to be valuable primary resources, as it would be logistically impossible to fully understand thousands of individual suburban houses. Through the explanation of my unconventional methods of research, I will also dissolve the presumed urban-suburban barrier to creativity, and show how innovative design can be found in the most unlikely suburban tracts.

Session: FRI-08:30-5

A century of soil mapping in the province of Ontario: looking back while moving forward

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This year marks the centennial of formal soil survey mapping work in Canada. Systematic mapping was first launched in Ontario in 1914. Soil scientists from the Ontario Agricultural College (now the University of Guelph), the federal government (what is now Agriculture and Agri-Food Canada) and the provincial government (what is now the Ontario Ministry of Agriculture and Food and the Ministry of Rural Affairs (OMAF/MRA)) took on the challenge of mapping the province’s agricultural soils over the next eight decades. County-level and district map products have ranged in scale from over 1:250,000 to 1:20,000 over

that time. Only a few small area maps were produced at 1:4,000 and 1:5,000 scales. A geographic information system (GIS) was introduced to Ontario soil survey work in the 1980's. This resulted in digital soil map production and corresponding provincial soil database attribution. Over the past decade, OMAF/MRA soil scientists have developed innovative predictive digital soil mapping (PDSM) techniques to renew the province's soil maps. Highlights of some of these PDSM approaches, their map products and a project for a new standardized soil map colour legend for Ontario's soil series are presented.

Session: THU-08:30-4

Mobility and Rural Aging: Enhancing Elder Engagement and Community Vibrancy Through Regional Transportation Networks

Gina Sylvestre, Department of Geography, University of Winnipeg (g.sylvestre@uwinnipeg.ca)

Integral to rural vibrancy in the Prairie context is the social and economic engagement of older members, yet the lack of mobility options is a significant barrier to the continued community contributions of many seniors. In southern Manitoba, the aging population is faced with severe winters and long distances, combined with the excessive costs of accessing activities, care and goods. In January and February of 2014, two virtual town hall meetings using teleconferencing were held in collaboration with *Age and Opportunity's Senior Centre Without Walls*. The focus of the all-female discussions revealed varied realities as some continued to drive or had the support of their children, while others experienced inadequate mobility and isolation caused by the high rates charged by handi-van services for in-town travel and particularly for medical appointments to Winnipeg. There are important intersections between the reduced participation of aging women and the viability of rural places. The collective experiences of these seniors support the need for a new model of regionally coordinated community transportation networks. This presentation concludes with a discussion of potential provincial policy innovation to address the current fiscal and operational limitations of rural Manitoba municipalities to provide appropriate and affordable handi-van services.

Session: TUE-10:30-4

Cultivating critical practices in physical geography

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Fundamental changes in the meaning and practice of environmental science are affecting - and are affected by - the theoretical, technological, pedagogical and institutional projects of physical geography. These changes have given rise to a range of 'integrative' (or integration-directed) disciplinary narratives which articulate a role for physical geographers within an engaged project of societal relevance and transformation. In this context, we welcome the rise of a notional 'critical physical geography' and here we seek to expand the conversation to support thinking about what it might mean to be critical *within* physical

geography. Moving beyond definitions of interdisciplinary collaboration, we propose that being critical from within physical geography begins with cultivating a critical disposition toward the situated partiality of our scientific practices. This prompts consideration of the ways in which our environmental objects could be assembled differently - reflecting different personal histories and values, from different epistemic locations and management framings and through different investment narratives. A critical disposition prompts reflection upon the situated constraints and opportunities presented by our institutional locations. Recognition and articulation of critical perspectives may provoke endeavours to more consciously reassemble our scientific and institutional projects into more effective interventions to secure a more powerful and meaningful role for physical geographers across their diverse engagements.

Session: THU-10:30-4

The impact of urban drought on freshwater demand in Greater Vancouver Area, British Columbia.

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With climate change, the frequency and intensity of extreme weather events are expected to vary, creating potential burden for key resources such as freshwater availability for household and commercial use. In the past, drought research in Canada focuses analyzing its impact on agriculture and related services. Using published and grey literature, this paper uniquely analyzes the impact of urban drought on freshwater demand under current and future changes in climate. Although the city of Vancouver developed a climate change adaptation plan, results from this study indicates that the impact of urban drought on freshwater demand was not properly incorporated in the current climate change adaptation strategy. As a result, this paper provides a better adaptation option for the city to reduce the impact of urban drought on freshwater demand in a changing climate.

Session: THU-10:30-1

An Assessment of Potential Permafrost along a South-to-North Transect in Canada under Projected Climate Warming Scenarios from 2011 to 2100

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Potential permafrost distributions were assessed at five Canadian locations within 55°N to 82.5°N using future climate warming projections. An ensemble of climate models were applied to project 21st century warming under IPCC emissions scenarios of A1B, A2, and B1. Validation of the multi-model ensemble means showed differences from -0.1 to -0.2°C between the modeled values compared with the observed local climate baselines from 1971-2000. Future climate scenario results with site-specific soil thermal properties were applied to the Stefan Frost Number to assess climate impacts on permafrost distributions. Climate change projections indicate warming above the baseline mean air temperatures by a minimum of +1.5°C

and a maximum of +2.4°C for the period 2011-2040; +2.6 to +4.1°C for 2041-2070; and +3.3 to +7.1°C for 2071-2100. Stefan Frost Number results projected that climate conditions will remain supportive for continuous permafrost distributions within the Canadian High Arctic for this century. By 2040, projections in the Low Arctic indicate shifts in the potential from continuous to discontinuous permafrost. At the southernmost extent of this study within the subarctic region of northern Ontario, climate conditions are expected to be suitable for sporadic permafrost by the end of this century.

Session: FRI-10:30-1

Time, Communicative Justice and the Indonesian Littoral

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Participation, notwithstanding a robust literature questioning its efficacy and transformative potential, infuses current approaches to environmental and resource development and management. It is rare to find an environmental policy-maker or practitioner who would reject participation as essential to any resource management strategy, even as participation fails at the local point of implementation. In this paper, the disjuncture between official narratives of participation and local experiences of participation is explored in terms of communication geographies and alternative conceptions of time in an Indonesian marine park. I suggest that 'invited participation' – wherein a powerful, formal elite plan, design and construct deliberative participatory exercises to which select participants are invited – often neglects the socially constructed nature of time and communication and their relevance to participation. It is proposed that a normative approach to geographies of time and communication can further improve quality of shared information and advance more equitable outcomes in spaces of resource conflict by adopting a model of communicative justice.

Session: TUE-15:30-3

Is food insecurity a problem of unaffordable housing?

Valerie Tarasuk, Department of Nutritional Sciences, University of Toronto

Household food insecurity, the inability to obtain adequate food due to financial constraints, is a pervasive and growing problem in Canada. In 2012, 4 million Canadians were living in households affected by some degree of food insecurity. Food insecurity is a potent marker of material deprivation, intimately intertwined with household finances and housing circumstances. Homelessness and severe food insecurity go hand in hand, but securing housing does not guarantee food security. It is common for low-income individuals and families alike to forego food purchases as a way to free up money for rent when resources are scarce. More routinely, they may compromise the quality of their housing as a way to minimize this expense and thus free up money for food and other necessities. While this might be construed as evidence of the need for more 'affordable housing', our research suggests that rent-geared-to-income housing does not protect low-income households from food insecurity (Kirkpatrick & Tarasuk, J Urban Health, 2011). Through a critical examination of the notion of 'affordability', policy options to lessen low-income households' vulnerability to food insecurity will be discussed.

Toward a spatial understanding of Ontario's sustainable energy transition

Jennifer Taylor, Department of Geography, University of Toronto

While transitions studies have long contributed to enhancing understandings of the complex and multi-dimensional nature of socio-technical shifts toward greater sustainability, they have been critiqued for neglecting the place-specific contexts and network dynamics within which they evolve. Recently, a more explicit spatial perspective on sustainability transitions has contributed to the literature by examining diversity in transition processes in order to explain their geographical unevenness. This follows from recognition of the inherent variability in institutional conditions, networks, actors, resources and technologies that constitute transitions across space. This paper explores the spatial characteristics and dynamics of Ontario's efforts to decarbonize its electricity system by incorporating a relational, multi-scalar approach to analyzing the local and global dimensions of the renewable energy niche that has emerged over the past decade. It aims to provide greater insight into how a specific locality is positioned within networks operating at multiple scales in the context of an energy transition, why some renewable energy niches upscale, and how local activities and processes themselves create spaces through their own institutional arrangements, power relations, and forms of governance.

Session: FRI-13:30-4

Governance turmoil? Community forestry, organizational challenges and the merits of longitudinal analysis

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In Canada, there are few structured evaluations of community forestry. This has impeded the development of clear information about the types of results being achieved by community forests, as well as the opportunities and constraints associated with implementation in the Canadian context. This article presents a criteria and indicator framework, designed to elicit descriptive information about the types of socio-economic results being achieved by community forests in the Canadian context. The framework is oriented around three concepts described as amongst the underlying objectives of community forestry, namely participatory governance, local economic benefits and multiple forest use. The criteria and indicator framework was applied to four Canadian case studies in 2005. In this paper, we return to one case study, a community forest in Quebec, eight years later, in order to undertake a longitudinal analysis of how these indicators have evolved. This community forest has experienced considerable upheaval during this period and it is interesting to note the extent to which this is reflected in the indicator results. The broader objective of this paper is to present a critical analysis of the utility of this criteria and indicator framework, including strengths and weaknesses.

Session: TUE-10:30-3

The Housing Experiences and Coping Strategies of Recent Immigrants in the Suburbs of Vancouver

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This study evaluates the housing experiences and coping strategies of recent immigrants in Richmond and Surrey, two fast-growing outer suburbs of Vancouver where the immigrant population has increased rapidly in the last two decades and where there is a limited supply of affordable rental housing, including public and social housing. The study draws on data from seven focus groups with 88 recent immigrants and 15 interviews with key stakeholders, conducted in Vancouver, Richmond, and Surrey in 2010. The evidence indicates that this group of newly arrived immigrants faces numerous difficulties (e.g., high rents, overcrowding, poor-quality housing) in the rental housing market. Most immigrants were spending more than 50% of their monthly household income on housing, putting them at risk of homelessness. The study's findings suggest that the housing crisis affecting Surrey and Richmond—a limited supply of affordable rental housing and high living costs for many new immigrants—makes these two cities a challenging region of Vancouver in which to settle.

Session: THU-10:30-6

Overcoming Barriers to Transit-Oriented Development (TOD) Implementation

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The ability of the case study approach to integrate different methods to answer complex questions makes it an increasingly common approach in urban planning. However, case studies are often done in isolation and do not learn from each other; meta-analysis, an approach to systematic comparison of cases, can enhance generalizability and define the specific conditions under which a finding will occur. This paper details the use of a meta-analysis of case studies in transit-oriented development (TOD) in order to determine how international cities overcame barriers to implementation. After identifying critical success factors using meta-matrices, a case comparison technique, we conducted a rough set analysis to understand relationships between the factors. Finally, workshops with Dutch planners demonstrated how these critical success factors could be used to identify strengths and weaknesses in a region, and develop solutions to persistent implementation barriers in The Netherlands. The findings indicate that these factors can be used to help municipalities identify strengths and weaknesses, and adapt policy lessons to their own context.

Session: TUE-08:30-6

Working with unions as 'elite voice': labour geography, tourism research and methodological considerations

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This paper is a reflection on the challenges confronting researchers working closely with labour unions in tourism-related industries. The first section of the paper reflects on the tensions academic researchers face in working with organized labour, a very specific 'community actor'. The second part of the paper examines how this relationship with unions operating in tourism-related sectors (i.e., foodservices, accommodation, and air transportation) is further complicated when researchers are positioned as 'elite voices' by the unions themselves. The section draws on three personal projects the author has been involved in the past and present: chair of a labour market adjustment committee following a hotel closure; labour representative on an airport community consultative committee; and board member of a hospitality training centre in Toronto. I conclude that a tourism research can benefit from research insights gained through 'elite voice' positionality given the special 'insider' access researchers are given. There are also benefits to unions who can place an advocate in spaces too often occupied by non-labour friendly elites. There are, however, contradictions and tensions, specifically when the 'elite voice' takes a strong stance against union goals and objectives that complicate the relationship.

Session: FRI-10:30-3

Pro Poor Tourism & Urban Development; A walk through Vancouver's Downtown East Side- A Marketing Concept

Austin Uzama, Tatiana International Research Co. Ltd. (austin@tatianaresearch.com)

I focus Pro-poor tourism (PPT) on Vancouver's Downtown East side (DTES) more specifically on the impact of illegal activities and street poverty. The Vancouver's DTES is one of the oldest neighborhoods in the region, and was known as Canada's poorest postal code. It is home to more than 16,000 people. DTES was once Vancouver's tourism destination before it started deteriorating due to abandonment, lack of development and the city centre moving further to the West side. This area once housed the City Hall, the courthouse, and Vancouver's biggest library (Carnegie Library). The surrounding stretch of Hastings Street was a major cultural and entertainment district. The City of Vancouver has recently approved \$1billion for a 10 year development plan for the DTES, and the government hopes to develop a sustainable housing program with this money during this period. This paper therefore examines the impact of using such an enormous amount of money for providing only low cost housing when recent research has suggested that even with such modern houses, most homeless people will still prefer to stay out on the streets. The paper further suggest using part of the money to restore DTES past glorious days, by restoring its shopping activities and historical buildings in the area and also policing the streets, will attract more tourists to the area.

Session: FRI-13:30-5

Applying a Geospatial Social Network Analysis to Agricultural Advice Networks

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Agricultural impacts on water quality are an ongoing concern across Canada and globally. Land management practices that minimize these impacts have been developed and promoted. While researchers have studied the uptake of these practices, less attention has been placed on who land managers rely on for advice and the pathways through which information flows for management decisions. In this study, a social network analysis of agricultural producers in southern Alberta was undertaken to identify the individuals and organizations / agencies they consult for advice and to explore the network from a geospatial perspective to understand the spatial dimension to the network. Water quality data collected from locations matching respondents' land locations were also incorporated into this study. Geospatial analyses were subsequently employed to explore and visualize the relationships between spatial proximity and advice network members as well as identify spatial trends and patterns among advice networks, land management practices and water quality. Preliminary results suggest that geospatial analyses can generate new information to improve understanding of social relationships that can be used to inform decision-making processes and policy.

Session: WED-13:30-1

Marie Tharp: Inveterate Discoverer of Continental Drift

Will Van Den Hoonaard, Atlantic Centre for Qualitative Research and Analysis, Saint Thomas University

This presentation offers an overview of the work of Marie Tharp who affirmed the theory of Continental Drift. Although her ideas about Continental Drift were viewed as an affront or heresy to prevailing geological views of the earth, her findings were later overwhelmingly acknowledged by the scientific community. My presentation also describes my attempt to mark that recognition with renaming part of an ocean floor.

Session: THU-10:30-7

Feral Cats and the Nature of Belonging

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Feral animals are contentious and transgressive, falling somewhere between domesticated and wild. They are often actively exterminated, and are not acknowledged as having any natural habitat. Conflicts surrounding their management and the spaces they should occupy are widespread and complex. Feral animals are understudied within the animal geography scholarship, and therefore this research seeks to explore ferality and the nature of belonging through a case study of feral cats in Guelph, Canada. The way

feral cats are perceived, where they are seen as belonging, and the factors that contribute to these beliefs are being investigated empirically through semistructured interviews with community stakeholders. By interviewing individuals representative of the two extremes in positions, conservationists and animal welfare advocates, the conceptual, spatial, and ethical dimensions of human-feral cat relations can be explored in greater depth than has previously been investigated. Field observations of feral cat colonies further assists in a discussion of cat subjectivities and agency. The 'animal spaces' and 'beastly places' of feral cats are considered along with place-making from a feminist, posthumanist and non-human agency framework.

Session: WED-08:30-8 POSTER

Coastal Vulnerability Assessment for Climate Change Adaptations: Lessons Learnt from Four Learning Sites in the Caribbean and Atlantic Canada

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Human settlement in environments as dynamic as the coastal zone will inevitably lead to conflict between the natural variability of the coastal environment and the economic, social and cultural activities taking place within it. Climate change, notably sea level rise and large storm events will increase the vulnerability of coastal communities, magnifying these conflicts. The capacity of coastal communities to adapt to climate change is directly linked to the availability of physical space and stability to allow such adaptation to take place. Understanding the complexities of current and future coastal exposure-sensitivities and adaptive strategies is one of the central themes of the ParCA project. This presentation provides an overview of the innovative methods used to assess the physical vulnerability of coastal communities to erosion and sea level rise in four study areas in PEI, NS, Tobago and Jamaica with diverse data availabilities, coastal dynamics and socio-economic conditions. This will include discussion of the application of a robust shore characterization field survey using a YUMA tablet, geomorphic indicators of coastal sensitivity and resilience, customized ArcGIS scripts to model shoreline change, and ongoing application of unmanned aerial vehicle to provide cost-effective, scalable, high-resolution coastal risk mapping capabilities in small to medium-sized communities. Evidence will be provided to demonstrate that building local capacity to appreciate and recognize boundaries of coastal processes can facilitate the selection of adaptation responses that are appropriate for local conditions and have a better chance of success.

Session: TUE-08:30-1

Drought scenario development and regional synchrony for rivers on the Canadian Prairies

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Assessing water management agencies' resilience and capacities to uphold water demands and obligations during significant multi-year hydrologic drought events, is essential for proactive planning and reducing vulnerabilities to extreme climatic events. This study provides the necessary background work for the development of quantitative potential drought scenarios that must be completed before further considerations can be given to develop strategies and mechanisms to best handle drought situations. Critical drought scenarios identified from long-term historic reconstructions of annual flow volumes, for six watersheds of the Canadian Prairies, were used in the development of theoretical modern analogue drought scenarios, comprised of single years from observed gauge records corresponding to drought sequences derived from tree-ring hydrologic reconstructions; to replicate droughts of three, six, and ten year durations with 50, 100 and 200-year return periods. Spectral analyses were also employed to investigate the regional occurrence and synchrony of sea-surface and atmospheric teleconnections as potential drivers during such drought events. The resulting streamflow volumes and associated climate conditions provide modern analogues of devastating water deficits, which may then be used by water management agencies to assess how their systems would withstand these events, and determine their ability to meet water demands and obligations within their jurisdictions, as well as under the Master Agreement on Apportionment for water sharing issues.

Session: WED-08:30-4

Using Geography to Develop 21st Century Skills in Learners

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This paper describes the research methodology and results that were garnered through the question: How can secondary school geography develop 21st century skills and competencies in learners? The presentation will include a brief overview of the Action Research methodology, the geographical content taught and the 21st century teaching strategies utilized. The key findings included: improved overall geographic content knowledge and the development of 21st century skills as well as weaknesses in the research methodology. These successes that were witnessed were due to the development of the heterogeneous collaborative learning teams, and typically seen in those students who struggled in academic high school courses. Most notably the paper offers an explanation and description of how the heterogeneous teams of learners were created to achieve the results and offers practical solutions in "Engineering an Environment for Performance and Learning" for educators at all levels. Finally, the paper places Geography as a discipline extremely well situated to impart 21st century skills and competencies in learners.

Session: TUE-10:30-2

Spatial heterogeneity of self-reported health in Toronto: Exploratory analysis of anthropogenic land use phenotypes

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This paper investigates the spatial heterogeneity of self-reported health in the Golden Horseshoe. This is implemented by means of local spatial autocorrelation of response types of the Canadian Community Health Survey (CCHS) and land use. Spatial heterogeneity was tested by assessment of the stratified responses of the survey, ranging from excellent to poor. A total of 8212 collected surveys from the CCHS master file for 2010. Georeferenced surveys were agglomerated at census tract level, and spatial autocorrelation followed assessing of frequency distribution. The geography of the hotspots of surveys per response type was conducted. The resulting hotspots were compared to the properties of their land use types as to understand what is the influence on surrounding land use on self-reported health. A significant spatial autocorrelation exists over the region area concerning health perception, forming clusters in certain regions. A negative influence on self-reported health was found in commercial and industrial land use, while open spaces, on the other hands show significantly positive responses.

Session: TUE-13:30-6

Climate Change Adaptation to Water Scarcity in the Sahel Region of Africa

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Impacts of climate change, especially on freshwater, are being felt globally. As one clear example, the Sahel region in Africa will be very vulnerable because of the geographical, socio-political and economical disadvantages the region faces. The place-based solution to climate change adaptation in the Sahel is to construct a Trans Africa Pipeline (TAP). This project will provide safe drinking water for over 30 million people and create farming oases for the region. Desalination plants, one on each coast of the continent, will provide a sustainable source of potable water to be delivered to populations across the Sahel region via an 8800 km water pipeline running between Mauritania and Djibouti. In this presentation, estimates of plant size, pumping capacity and pipeline flow rates are discussed along with route maps based on topography and local population distribution. In addition, analyses of crop water requirements suitable for each region are presented. Solar energy is proposed to provide renewable and sustainable power to drive the desalination plants, pumping stations and irrigation systems. Economic, political, social, environmental and governance challenges are also addressed.

Session: THU-08:30-1

A 200-year slope instability reconstruction based on tree-ring growth response along Schoharie Creek, NY

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Trees on slopes preferentially distribute annual growth eccentrically in years with observed slope instability. Studying a network of disturbed trees allows for instability reconstruction over space and time by comparing changes in upslope and downslope growth for each tree. Using trees as tilt sensors, slope activity across an unstable section of the Schoharie Creek bank near Burtonsville, NY, was reconstructed for the last two centuries. In June 2013, 112 eastern hemlock (*Tsuga canadensis*) were sampled from six transects across the hillslope. Cores were retrieved from opposing sides of tilted trees to determine the asymmetrical growth and infer slope processes for that point. Growth asymmetry was combined with compression wood presence to validate growth asymmetry as a slope instability indicator. Spatially, the observed instability predominately occurred across the middle of the hillslope and shows little connection to adjacent transect instability. Through time, slope activity was discontinuous; typically active periods lasted 1 to 10 years and were followed by 3 to 20 years of inactivity. This research presents an innovative approach to slope stability studies using tree growth response through time.

Session: WED-10:30-4

Adaptation Responses to Climate Induced Impacts with Reference to Two Semi-Arid Locales in India

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The climatic variations especially in rainfall and temperature patterns directly influence the livelihood, specifically the agricultural capabilities of the semi-arid regions. These variations bring social implications too, which may not be directly visible. This gives rise to differential vulnerability among and within the communities, reflected through their experience of the impacts. The experience of impacts and other socioeconomic capabilities together construct individual and community's perception towards the changing climate. However, the communities will keep emphasizing on the local strategies to deal with climate variability. These adaptation strategies are based on the communities/ individuals' knowledge, experience with the climate, government support, and resources available. This paper attempts to make a case for the local adaptation strategies in semi-arid regions of northern India and the factors, which are responsible in shaping them. Further, it reflects the comparative findings of a larger study conducted both culturally unique and ecologically unlike. The findings also highlight the adaptation strategies made by individuals/ communities to cope with the subtle social implications.

Session: THU-08:30-1

Assessing ANGELO: Reflections on using an analytic tool for examining environments linked to obesity

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Jennifer Dean, School of Planning, University of Waterloo

In 2010, the Public Health Agency of Canada made a bold commitment to curb childhood obesity. In an attempt to lower the climbing rates of physical inactivity and poor eating habits that contribute to excess body weight, this commitment involves large-scale modifications to the social and physical environments. To date, research on obesity and its determinants has predominantly emphasized the importance of individual factors; however, there is now widespread acceptance among researchers and policy-makers that environmental factors are important determinants of body weight. The relationship between environment and obesity is complex. One of the most widely cited frameworks for understanding the multitude of ways in which environments shape body weight is the Analysis Grid for Environments Linked to Obesity (ANGELO) Framework. This presentation will focus on the results of a review of more than a decade of literature on the ANGELO Framework and highlight how researchers within geography and outside have utilized this tool to better understand body weight. Further, the authors will highlight two different research projects that used the ANGELO Framework in their analysis of upstream factors shaping body weight, and reflect on their experiences using this tool. Recommendations for evolving ANGELO and for future research on environments linked to obesity will also be discussed.

Session: THU-08:30-2

Exploring Implementation of the Ontario School Food and Beverage Policy (PPM-150)

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Purpose: The objectives of this study were: 1) to investigate the policy context of school nutrition in Canada; 2) to explore local level factors shaping implementation of PPM-150; and, 3) to examine implementation of PPM-150 from the perspective of secondary school students.

Research Methods: The Analysis Grid for Environments Linked to Obesity (ANGELO) framework informed this research. Mixed qualitative methods were employed, including in *phase 1*, a document analysis of Canadian policies and technical reports (between 1989 and 2011) related to school nutrition at: federal (N=8), provincial (n=24), and regional (n=26) levels. In *phase 2*, in-depth interviews were conducted with stakeholders from local agencies (n=8), and secondary school staff (n=14) from nine schools in three Ontario boards. In *phase 3*, three focus groups were undertaken with secondary students (n=20) in two school boards. Interview and focus group data were transcribed and data were organized using NVivo (8.0) qualitative software, for thematic analysis.

Findings: Key local level barriers to policy implementation include the cost of policy-compliant food for sale and cafeteria revenue loss, school proximity to off-site food outlets, role of key stakeholders, and school culture.

Conclusions: Given that the school environment extends beyond the geographical and political boundaries of the school, there is an opportunity to develop community-based partnerships to promote sustainable

and equitable conditions for healthy eating in schools.

Session: WED-08:30-8 POSTER

Adapting to risk: A conceptual framework and methodological approach for the comparative evaluation of municipal climate change adaptation

Brennan Vogel, Department of Geography, Western University (brennan.vogel@gmail.com)

What are the necessary enabling conditions for the design and implementation of effective, viable, durable and coherent local climate change adaptation plans and policies? The paper is intended to aggregate knowledge about local climate change adaptation with two objectives: 1. to develop a better understanding of the enabling conditions for adaptation policy implementation and, 2. to contribute to the research and scholarship of the politics of adaptation policy and governance. Drawing on existing literature, this paper will construct a conceptual climate change adaptation policy framework for studying adaptation as an evolutionary, local-scale social process. The paper will lay a methodological foundation for undertaking thematic and case-based research of adaptation planning and governance at the municipal scale. Conceptualizing adaptation development as progressing through a series of policy stages, the paper will specify the key thematic indicators as well as the institutions, mechanisms, processes and stakeholders that are likely to play important roles at each indicator stage of policy development. Utilizing a Canadian case study from the Province of Nova Scotia's 'Municipal Climate Change Action Planning' adaptation policy initiative, the paper presents the conceptual framework and methodological approach for studying cases of adaptation policy at the municipal and provincial scale.

Session: TUE-15:30-1

The confluence of, and conflict among, river management, electric markets, and climate mitigation: A case study of Connecticut River dam relicensing

Eve Vogel, Department of Geosciences, UMass Amherst
Brandon Taylor, Environmental Science and Public Affairs, Indiana University
Katie Ronan, GIS Intern Analyst, Massachusetts Water Resource Authority

Energy always comes from and transforms specific places and environments. However, this becomes invisible as places' transformations are metabolized into commodity and work. Similarly, environmental management is often separated from regulation of energy markets. These invisibilities and separations are no less real – and no less problematic – when energy and environmental policy are built around notions of sustainability.

This paper explores the confluences and conflicts among three realms of environmental and energy policy, each aiming to improve sustainability in some way, in a case study of five Connecticut River hydropower projects currently undergoing relicensing. Relicensing analyzes environmental impact, and the license will set constraints for power production. However, the process does not account for the ways that changing electric markets influence power production. Meanwhile, the five projects are now operated by giant multinational corporations as independent power producers within an increasingly de(re)regulated New

England electric market formed in the name of efficiency. While reducing environmental impact on river ecologies would require a more natural flow regime through the projects, maximizing efficiency (and profit) requires that flows follow fluctuating prices. The projects, especially a giant pump storage station, may also be pressed to work harder – with greater impact on the river – in order to balance the intermittent load of a growing wind and solar sector, as the latter are promoted in state renewable energy portfolios and federal and state tax incentives. This case illustrates the importance of analyzing linkages among sustainability efforts in different energy-related policy sectors through their specific material implications.

Session: WED-15:30-4

Ribbed moraine morphology and distribution in south-central Keewatin, Canada: Implications for bedforming processes beneath the central Laurentide Ice Sheet

Kaleb Wagner, Department of Earth Sciences, Brock University (kw11wm@brocku.ca)

An abundance of transverse bedforms within south-central Keewatin, Nunavut, Canada, is well-documented, and has been previously ascribed as evidence of a back-stepping, transitional (cold-to-warm-based) basal thermal boundary in the vicinity of the Keewatin Ice Divide (KID) throughout the Late Wisconsinan. While this theory conforms to early conceptualizations of the KID as a stable and persistent deglacial feature of the central Laurentide Ice Sheet (LIS), more recent studies from this sector provide strong evidence of a dynamic and migratory KID. Typically, high-mobility divides manifest in the proximate landform record as intricate cross-cutting and overprinting signatures, though in southern Keewatin, localized inheritance contributes instead to a fragmented post-glacial terrain mosaic.

Here, a combination of Canadian Digital Elevation Data (CDED) and moderate-resolution satellite imagery (Landsat 7 ETM+, SPOT 4/5 HRVIR/HRS) is employed to comprehensively map the bedform population of south-central Keewatin. Quantitative assessment reveals a broad spectrum of ribbed moraine morphologies and spatial arrangements, suggesting multiple phases of generation and a probable polygenetic mode of origin. Observations implicate early, time-transgressive ribbed moraine formation, followed by progressive streamlining and overprinting coincident with synergetic ice divide migration and the evolution of a patchy subglacial thermal regime.

Session: THU-08:30-4

Reflections on Geography of Japan Field Trips: The Use of Field Journals and the Move to More Student-Centred Learning

Tom Waldichuk, Geography & Environmental Studies Dept., Thompson Rivers University (twaldichuk@tru.ca)

A traditional approach to a field trip is when the instructor leads students from place to place, and students take notes as information is delivered to them. An alternative approach is to travel to fewer places and give students more freedom to explore while assigning them research tasks. Field journal writing and drawing are effective methods for students to process and articulate what they have learned while performing these tasks. This presentation describes the experiences and evolution of a third year geography field course in

terms of student-centred learning and field journal activities. In 2008 the field course involved extensive - and expensive - travel across Japan by charter bus and train. Most of the learning took place while instructors lectured at each place or while travelling between places. In 2010 and 2012 the course involved less travel, and students were assigned a project in which they had to evaluate walking routes and describe the surrounding landscape. To be effective, however, this independent form of learning requires clear instructions beforehand on how to take field notes and prepare a field journal, and it requires mentoring while students are researching onsite. Students seemed satisfied travelling less and undertaking more independent learning activities.

Session: FRI-13:30-6

Idyllic landscapes and invisible conflict in rural Ontario and Manitoba

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In many places around the world, the division between rural and urban political values appears to be widening. This trend seems especially important given that research and policy derives out of urban centres and rural populations are being surpassed by their urban counterparts as the majority. This research is based upon theory embedded within rural and cultural geography and makes use of case studies in Ontario and Manitoba which all involve different types of risk especially relevant to local rural populations. This perceived risk from development stems from wind turbine development and bio-solid processing in Ontario and the lake flooding problems in Manitoba. A combination of in-depth interviews and newspaper articles were analyzed and in an effort to understand the dynamics of urban/rural politics of risk. Through the multiple case study approach, the conclusions are made stronger and suggest that rural areas are experiencing uniquely rural problems brought forth by urban perspectives and biases.

Session: TUE-08:30-4

Neighbourhood Segregation of Wealth, Housing, and Class in Canadian Cities

Alan Walks, University of Toronto

While differences in income are clearly an important driver of class formation and distinction, class is by definition more a feature of wealth holdings than income. While there is by now an extensive literature analyzing the neighbourhood segregation of income, insufficient data had been available to examine inequalities in the distribution of wealth. Analyzing a very recent dataset put together by Environics Analytics with estimates of average assets, debt and net worth in census tracts in Canadian cities, this paper seeks to examine the neighbourhood segregation of wealth in Canadian cities and to compare it with the neighbourhood segregation of income. As might be expected, housing assets feature strongly in the household net worth. The spatial distribution of debt is more regressive (concentrated near the bottom of the income distribution) than is the spatial distribution of housing assets. However, the greatest spatial inequalities, as measured by the gini coefficient, occur among the liquid assets component of wealth. The spatial distribution of wealth (net worth) is shown to be far more unequal than is the distribution of

income. In addition to visualizing the resulting spatial patterning of wealth by neighbourhood, the author discusses the implications of this work for an understanding of the neighbourhood effects on class formation in Canada's cities.

Session: WED-10:30-3

Ontario's Revised Geography Curriculum: Concepts of Geographic Thinking and a Spatial Skills Continuum

Kim Wallace, Educational Consultant, Canadian Geographic Education: Ontario Representative
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This session explores an approach for the teaching of geography. If students are to do more than memorize facts and ideas, they need to learn how to think in a geographic way and apply spatial skills within an active learning experience. The revised Ontario geography curriculum attempts to broaden geographic content expectations by focusing on four concepts of geographic thinking and applying map, globe and graphic skills within a context of geographic inquiry. These concepts of geographic thinking and spatial skills are articulated and defined. While the topics and content of what geographers investigate may vary, the way of thinking through problems, and the tools used by geographers need to be fostered in a consistent manner for students to be successful.

Session: TUE-10:30-2

Transferable insights from Community-Based Vulnerability Assessments (CBVAs): can we scale findings up and out?

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D. Campbell, Caribsave and University of West Indies

Vulnerability to climate change is inherently context specific. Although there have been efforts to define global vulnerability indicators, no specific transferable suite of indicators which capture vulnerability at the scale of individuals or communities has emerged. To date, community-scale empirical vulnerability assessments rely on qualitative case study methods and are cannot be scaled up or out to speak to general exposures, sensitivities or adaptations. This paper evaluates the potential for scaling up individual cases by employing a consistent community-based vulnerability assessment (CBVA) framework to tourism and fisheries-based livelihoods in small coastal communities in Tobago, Jamaica and Nova Scotia by several members of the ParCA research team. Controlling both the analytical approach and the sectors of interest allows for direct comparison of vulnerabilities and generalizable conclusions about barriers to and enablers of adaptations despite the very different adaptation contexts (scaling out), but insights are nonetheless very locally-based and cannot be scaled up to speak directly to a larger context.

Session: TUE-08:30-1

Two Views on the Profit Motive and Sustainable Development, and some Geographical Implications

Jing Wang, Lanzhou University, University of Toronto
Pierre Desrochers, University of Toronto

Sustainable development theorists are united in their belief that “business as usual” rewards managers who decrease production costs by externalizing polluting emissions. This “market failure” paradigm has paved the way to the development and promotion of numerous fiscal, regulatory and ethical incentives. Paradoxically though, much historical evidence on actual industrial behaviour in the nineteenth and early twentieth century illustrates the widespread propensity of manufacturing operations to spontaneously create wealth out of polluting residuals and emissions in order to *improve* profit margins. The beneficial environmental impact of the profit motive and some recurring patterns of spatial outcome will be discussed through a review of early classical liberal and other material on the topic.

Session: FRI-15:30-4

The Aging Experience of Elderly Chinese Immigrants in Edmonton

Qiqi Wang, Department of Earth and Atmospheric Sciences, University of Alberta (qiqi@ualberta.ca)

Chinese people have experienced a transformation of settlement patterns in Edmonton and inhabited varied residential neighbourhoods, from a traditional Chinatown to suburban neighbourhoods. This study seeks to understand the aging experience of elderly Chinese immigrants based on the context of the changing Chinese settlement pattern in Edmonton. Sense of place, a term that signifies the emotional bonds between people and their place, is used in this research as a lens to examine the interrelationships between physical places and psychological, social and environmental processes. This study employs a comparative case study methodology to explore qualitative interpretations of interrelationships between elderly Chinese immigrants and their places. Specifically, this presentation seeks to explain the roles of Chinatown and the suburbs in elderly Chinese immigrants’ sense of place. For elderly Chinese immigrants, Edmonton Chinatown plays roles as ethnic commercial zone, Chinese cultural centre, and an arena of senior Chinese activities and elderly care. In comparison, the suburbs provide recreational facilities and amenities, offer multiple options for grocery shopping, provide social services to elderly Chinese immigrants’ needs, and support them to age with their family. The chapter concludes that spatial concentration is dispensable to elderly Chinese immigrants once they can identify ways to maintain their ethnic identities in Edmonton.

Session: FRI-10:30-6

Examining motivations of rural women entrepreneurs: gendered entrepreneurship theory in a rural BC context

Kristina Welch, School of Resource and Environmental Management, Simon Fraser University
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The decline in some resource sectors over the last two decades has left many rural communities struggling with low employment and out-migration. Employment in these rural communities is heavily influenced by

gender roles, which further complicates the employment landscape for women. Women are discouraged from participating due to gender norms as well as institutional barriers. Women subsequently experience lower employment levels and are frequently required to create their own opportunities such as home based businesses and other entrepreneurial activities. Yet little is known about the motivations and characteristics of rural women entrepreneurs, or about how their efforts contribute to economic development in a rural resource setting. My research will explore this gap in knowledge and focus on the role of gender in rural economic development, with particular emphasis on entrepreneurship. The research will ask such questions as 1) how are women entrepreneurs contributing to economic opportunity and diversity in rural communities, 2) what are the gendered biases in economic policies, 3) what are the gendered differences in motivations and other entrepreneurship characteristics in a rural context, and 4) how could a gendered perspective to rural economic development affect outcomes and improve community resilience.

Session: TUE-13:30-5

The everyday and the event of economic crisis: A feminist perspective

Marion Werner, Department of Geography, University at Buffalo, SUNY (wernerm@buffalo.edu)

Since the collapse of financial markets in 2007-8, critical scholarship has primarily been focused upon the uneven impacts of this so-called global financial crisis on women, people of color and particular communities. Despite the undeniable importance of this work, such scholarship may risk reinforcing an economic approach to the subject unwittingly, along with a north-centric understanding of economic change. I argue in this paper that a focus on the reproduction of uneven development holds more promise for feminist geography than one on capitalist crisis. Feminist geography can contribute to de-centering what I call 'crisis talk' by focusing on the gendered and post-colonial dynamics that re-make geographical uneven development. Drawing on my research on the Caribbean, and the work of writer Jamaica Kincaid, I argue that a feminist analysis of contemporary capitalism must avoid an approach that implicitly desires a revolutionary subject who responds to capital's time of crisis.

Session: TUE-10:30-5

The 9th ICA Mountain Cartography workshop, Banff, April 2014

Roger Wheate, Department of Geography, University of Northern British Columbia

The Mountain Cartography Commission meets biennially at a workshop organised somewhere in the mountains; in 2014 this was held for the first time in Canada, in Banff National Park, Alberta. This talk will summarise the workshop with an illustration from each of the ~20 presentations from Banff.

Session: WED-20:00-1 PECHAKUCHA PRESENTATION

Mapping the last spike: integrating geomatics in Canada's 1:50,000 topographic map series

Roger Wheate, Department of Geography, University of Northern British Columbia

When Natural Resources Canada finished the Pyramid Peak map sheet, Axel Heiberg Island, in 2012, they completed a task started in 1925 to cover Canada through the 13,377 map sheets at 1:50,000 scale. Due to Canada's large extent, many editions are now decades old, and especially remote northern tiles may have been created over 50 years ago. In this talk, I will demonstrate how combining remote sensing and GIS techniques can be used to both update and generate new layers for topographic mapping, to show glacier retreat, changing hydrological features and subordinate vegetation layers. Within the standard GIS toolbox, the Raster calculator, spatial analysis and Intersection overlay can be used to both create additional layers and to enhance symbolisation options. I challenge and encourage the application of these techniques in college and university courses in Cartography, GIS and remote sensing for assigned project work as a means of both updating and enhancing our national topographic mapping and for more effective geovisualisation and understanding of our northern landscapes.

Session: THU-8:30-6

A foodshed for Calgary

Jeff Wielki, TERA Environmental Consultants

Calgary is surrounded by agriculture land and is in the heart of Alberta's cattle country. In reality, much of this production is exported, but if it is assumed production surrounding the city flows into Calgary to meet production, how far does that food need to travel to meet the food demand? Statistics Canada's food production data for Alberta and BC in combination with road and land cover data was used to distribute the production of various food groups. The resulting foodshed was determined and shows that food production in Alberta does not meet the food demand in Calgary. A watershed can be described as the terrain, elevations and barriers which deflect raindrops into one river basin or another. A foodshed is similar, but the factors guiding the movement and distribution of food are economic. The results for Calgary's foodshed are depicted as a physical landscape in an effort to lend meaning to the food boundary and the landscape of food production.

Session: THU-8:30-6

A Sea of Peaks

Jeff Wielki, TERA Environmental Consultants

That stunning view while standing on a mountain summit of peaks poking through the clouds as far as you can see. It's like a new world, an undiscovered island chain. What if those clouds were truly an ocean and sailing ships could navigate those waters? What if this was mapped by James Cook and the crew of the Resolution on his third voyage in May, 1778? Based on these presumptions, the St. Elias mountain range, which contains the highest peaks in North America was drawn by hand in the style of James Cook's map of New Zealand from 1770. This map is not for navigation.

Arctic Spatial Data Infrastructure – What, Who and How

Cameron Wilson, Natural Resources Canada

The Arctic Spatial Data Infrastructure is being built to serve the peoples of the North in a changing Arctic. The presentation outlines precisely what an Arctic Spatial Data Infrastructure is; both on the International stage and within Canada. The Infrastructure's suite of data, standards and policies are explained. The presentation demonstrates who the current contributors are and how future participants may contribute for the benefit of the greater community. The session concludes with a discussion on what academic resources could be accessed via the Arctic Spatial Data Infrastructure.

Session: THU-8:30-6

Assessing the Liveability of Selected Mississauga Neighbourhoods

Heather Wilson, Department of Geography, University of Toronto Mississauga
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Joseph Leydon, Department of Geography, University of Toronto Mississauga (joseph.leydon@utoronto.ca)

There is much discussion within the academic literature on urban sustainability and the importance of urban design to the quality of life of city residents. Within this discussion, focus is placed on neighbourhood built landscape as a facilitator of liveability. Though the elements of liveability are debated, there is a general agreement that a built landscape with a diversity of residential types, integrated services, active and mass transportation infrastructure, public green space and public institutions fosters personal interaction, encourages active living and facilitates social, economic and environmental sustainability.

This paper examines the liveability of nine selected neighbourhoods in Mississauga, each with particular socio-economic and demographic characteristics. Each neighbourhood was assessed through assigning scores according to defined criteria, while temporal variations in activities were recorded through multiple site visits. The results indicate that built design rather than socio-economic characteristics of residents is the most important factor that contributes to neighbourhood liveability. Accordingly, we argue that through the creative design of new neighbourhoods and redesign of existing spaces, improvements in quality of life and neighbourhood sustainability can be achieved.

Session: FRI-08:30-5

Newcomers and Access to Health Care: Examining the Impact of Ontario's Three-Month Wait Policy

Kathi Wilson, Department of Geography, University of Toronto Mississauga (kathi.wilson@utoronto.ca)

Michele Colley, Department of Geography, University of Toronto Mississauga

Immigrants comprise approximately 20 percent of Canada's total population. The international migration process is often a lengthy and expensive one for immigrants. Accordingly, it is often the healthiest individuals who are physically and financially able to endure the rigor of international migration. In addition to self-selection, the medical screening required by destination countries also ensures that only the healthiest of individuals migrate. The self-selection process and medical screening of potential migrants have been identified as key factors explaining the observation that recent immigrants have better health than their Canadian-born and previously immigrated counterparts. Despite the apparent health advantage of recently arrived immigrants, research has shown that with increasing length of time in Canada, the health status of immigrants declines to levels on par with and in some cases worse than the Canadian population. The reasons for this are not clear, but it is hypothesized that the decline might be related, in part, to poor access to health care services. Despite the existence of the Canada Health Act, three provinces, British Columbia, Ontario, and Quebec impose a three-month wait period for landed immigrants before they are able to access provincial health insurance. A lack of access to provincially insured health care services within the first three months of arrival may result in immigrants delaying and/or avoiding seeking care, which in turn, may have important longer-term health implications. The goal of the research is to examine the impacts of the three-month wait on health status and access to health care services among recent immigrants living in the Peel Region of Ontario.

Session: WED-10:30-2

Confronting the Crisis Organically: The Role of Nature in Promoting Student Well-Being

Eric Windhorst, McMaster University

In response to the 'mental health crisis' taking place on campuses around the world, various organizations have started developing guidebooks, frameworks, and policies to help address the issue. For example, in collaboration with the Canadian Mental Health Association (CMHA), the Canadian Association of College and University Student Services (CACUSS) recently released a guidebook encouraging Canadian colleges and universities to take a systemic or ecological approach to the student mental health epidemic. Notably lacking from these documents is mention of the important role that nature might play in promoting mental health amongst the student population. Research conducted in several disciplines such as environmental psychology, medicine, and geography, suggests that there is an intimate link between mental health and nature contact. With this in mind, a truly ecological response to the mental health crisis at post-secondary institutions must consider access to nature as a key influencing factor.

Session: WED-10:30-7

Flexible or Precarious?: Millennial Women and Work

Nancy Worth, School of Geography & Earth Sciences, McMaster University, (nworth@mcmaster.ca)

This paper draws connections between young women's experiences of work and the changing meaning of contemporary adulthood within the lifecourse. I focus on the millennial generation, born 1980-1995 (also called generation Y). In particular my research picks up on the concept of 'generationing' (Alanen 2001), which considers the impact of both structure and agency as generational identities are (re)constructed, negotiated and challenged in the workplace. I'm interested in how a generation that is defined by its 'specialness' (Twenge, 2006) reconciles an increasingly insecure labour market where unemployment and underemployment are common. An emerging theme of the research is the experience of flexibility/precarity: some young women enjoy a 'pay as you go' lifestyle and insist they are happy to take life and work as it comes. Others attempt to mitigate risk wherever they can, working to live rather than living to work. While one expectation would be that social class explains this difference in worldview, the reality is more complicated, with relationships (sibling, parents, partners and friends) having a significant impact on millennial women's experience of work. I conclude with some comments about how feminist theories of relationality can help us make sense of flexible/precarious work.

Session: TUE-10:30-5

Mining Geodata From Social Media - A case study in set-jetting

Menquiáng Yang, Concordia University

With the development of web 2.0 technologies, more and more geospatial data is generated via social media. This segment of what is now called "big data" can be used to further study human spatial behaviors and practices. This presentation aims to explore different ways of extracting geodata from social media in order to contribute to the growing body of literature interested in exploring the potential of the geoweb for human geography. More specifically, this presentation focuses on the potential of social media to study a growing tourism phenomenon: set-jetting. Set-jetting refers to the activity whereby people travel to visit shooting locations that appear in movies (Joliveau, 2009). The case study presented here focuses on the Mansfield reformatory (Ohio, US) which was used as the shooting location for the film *Shawshank Redemption* (Dir. Frank Darabont, 1994). Through the analysis of georeferenced data mined from Twitter, Flickr, and Tripadvisor, this presentation presents and discusses the differences and similarities between these three platforms to share and access geodata associated to an alternative tourist destination. It also provides an overview of the origins and destinations of the tourists visiting these places and using these social media to share their experience. The next phase of this project is to use this data to determine the different spatial trajectories of these visitors in order to better understand how different social media can be used to track human mobility.

Session: THU-10:30-7

Comparison of Automatic Threshold Selection Approaches for Change Detection from Remotely Sensed Images

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Dongmei Chen, Department of Geography, Queen's University

Image differencing is one of most common techniques for detecting changes from multi-temporal remotely sensed data. When using this approach, threshold selection is a crucial component to determine change vs. non-change. Although several methods have been developed to automatically define an optimal threshold, the efficiency of these methods has not been examined in terms of isolating regions of change for remotely sensed images. In this paper, we first review image differencing method and its main considerations and issues in the literature of remote sensing. Second, we present six automatic threshold selection algorithms available from the literature including 1) Kapur's approach, 2) Rosin's approach, 3) Otsu's approach, 4) Tsai's approach, 5) Distribution-Estimation approach, and 6) EM (Expectation-Maximum) algorithm based on Bayes Framework. We tested these six approaches with multi-temporal images with different spectral and spatial resolutions including TM, IKONOS, and digital aero-photos. The results are evaluated using a feature-based evaluating framework. From initial testing results Kapur's and EM approaches show consistently high performances on the images with different resolutions while the effectiveness of other four methods varies by scales and image contextures.

Session: WED-15:30-1

Is most environmental health research false?

Niko Yiannakoulis, School of Geography and Geological Sciences, McMaster University
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In his 2005 paper "Why most published research findings are false" John Ioannidis provides a statistical critique of research designs with a particular emphasis on the medical sciences. The impact of his (and related) ideas have been considerable in medical research over the last decade, and have led some to advocate an enhanced role for fundamental science in selecting more plausible research questions in experimental health research. Observational research designs typical of environmental health are affected by a number of additional problems common in population health research, including: small effect sizes, imprecise measures of exposure and flexibility in details of research design. Using a case study, I will highlight a common measurement problem in environmental health study designs and use simulations to illustrate its likely effect in practice. Finally, I will briefly discuss whether or not the use of prior information and Bayesian statistics might enhance the rigour of environmental health research.

Session: WED-15:30-2

How has globalization affected migration? - Pull factors and push factors for South Korean migration to Winnipeg, Canada

Hyejin Yoon, Department of Geography, University of Wisconsin-Milwaukee (yoon3@uwm.edu)

Immigrants to Canada have been an important source of high-skilled labor and foreign capital under the current wave of globalization. However, only a limited number of provinces take advantage of those globalized flows of people and capital; thus provincial and city governments make efforts to attract more newcomers to their local economies through provincial nominee programs based upon the needs of each province. South Korean immigration to Canada has increased since the economic crisis of the late 1990s. While this increase has occurred largely in the gateway cities of Toronto and Montreal, smaller cities like Winnipeg also want to reap the benefit that come with increased immigration. This study examines how changes from the current wave of globalization, in particular how the global and local neoliberal regimes affected migration of Koreans to Winnipeg, Canada at different regional scales. The survey results of 91 Korean immigrants in Winnipeg are presented in this study. Overall, the neoliberal economy in Korea has pushed many Koreans to move to other countries. This migration is another way to privatize training human capital through outsourcing the development of highly skilled labor from Korea to a host country.

Session: FRI-08:30-6

An approach to collect public visions toward urban places from the Geoweb

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Robert Feick, University of Waterloo

Colin Robertson, Wilfrid Laurier University

The explosion of location-aware technologies in the past five years gives people new methods of geotagging items and events; interacting with each other; and publishing their own opinions. New opportunities are emerging for urban planners to collect public visions from citizen-contributed place semantics in ways traditional public meetings cannot. A growing body of literature has thus explored the capacity of user-generated content to discover spatial and some non-spatial aspects of place. However, relatively little scholarship to date has focused on uncovering encoded meanings of place, such as peoples' feeling toward places, from web resources. In this paper, we investigate the capability of social media to capture public opinions toward urban places. Text posts are extracted from Twitter, the most popular micro-blogging platform, to build a local knowledge repository for the City of Waterloo, Canada. Opinion mining method is applied to extract sentiment expressed in these texts. The extracted sentiment expressions are then associated with their according places based on geo-locations and place names. In this way, we are able to capture peoples' visions toward urban places from public input. Overall, this paper proposes a method that moves forward from mining place semantics only regarding locations and place names to discovering richer place semantics encoded in VGI.

Session: WED-10:30-1

Transformation Tourism – Using backpackers in Tibet as an example

Carrie S.S Zhou, Department of Recreation and Leisure Studies, University of Waterloo
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Hannam (2009) stated that travel played an important role in helping people, especially young people, to develop their inner self. Experiences, relationships and memories continue to influence ongoing journeys, including future physical travels, work lives, raising children, coping with illness, falling in love and dealing with loss. However, few studies have been done in investigating individuals' changes during certain travel experience. The purpose of this study is to explore the general themes of transformation travel based on narrative analysis of individuals' stories about their trips to Tibet. To reach the main goal, this study is focused on investigating three sub-questions:

How do travellers describe their experience in Tibet?

How do they narrate their personal change when they return home?

How do they story the relationship of personal change and the experience in Tibet?

Data collection is based on on-site in-depth interviews in Tibet and online follow-up interviews when they have finished their trip and returned home for about one month. In this study, both narrative analysis and analysis of narrative are embedded. A narrative story for each traveller is written based on what he or she narrates the Tibet trip (narrative analysis). After about one month since he or she returns home, another narrative story will be conducted focusing on what he or she narrates the change after the trip (narrative analysis). Finally, analysis of narrative will be used to develop themes emerging across all participants' stories.

Session: FRI-08:30-3

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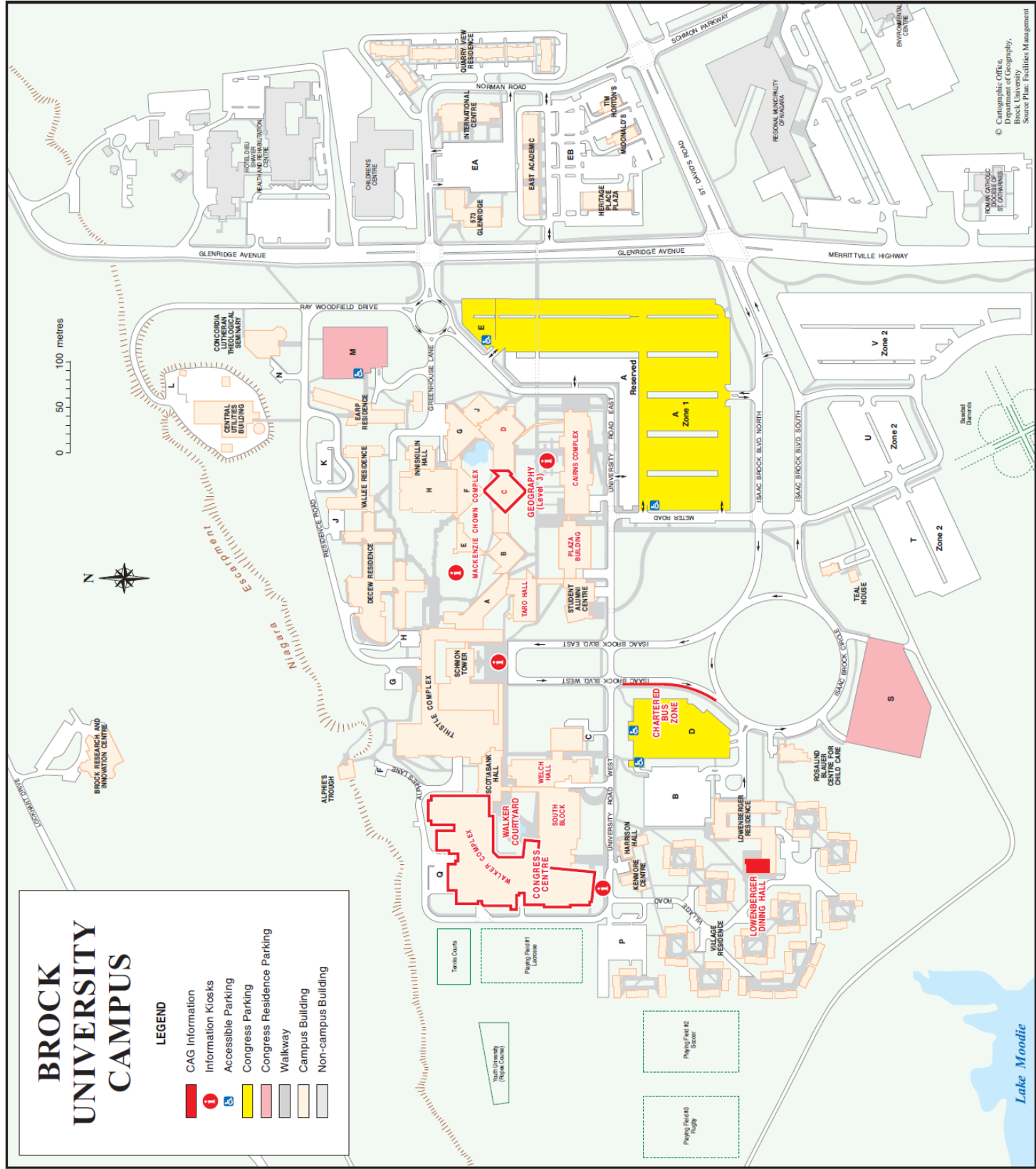
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