



WORK IN A WARMING WORLD

RESEARCHERS' WORKSHOP

**UNIVERSITY OF
TORONTO**
VICTORIA COLLEGE
ALUMNI HALL
91 CHARLES ST. W

JANUARY 25-26 2013



W3 | Work in a Warming World



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

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**Work in a Warming World- January 25-26 2013
Annual Researchers' Workshop**

Day 1 - Friday, Jan 25, 2013	
8:15-9:00am	Registration - Light Breakfast
Morning Session	
9:00-9:15am	Welcome: Laurel MacDowell
9:15-10:45am	W3: Where we are at and where we go next? 1. Mid-term review; 2. New members; 3. Next research focus; 4. Funding rounds; 5. Publishing; 6. International conference
10:45-11:00am	Break
11:00-12:00pm	Breakout to discuss next research topics and organisation
12:00-1:15pm	Lunch on your own (suggestion card available)
Afternoon Session	
1:15-3:00pm	Session 1: Regional Strategies Active Discussant: TBA <ul style="list-style-type: none"> • Steven McBride & John Shields: Sustainable Economic Development Policies in Mid-sized Canadian Cities • Warren Mabee & John Holmes: How Green Works in S-E Ontario • Joan McFarland: Labour's Response to Environmental Issues: A New Brunswick Case • Keith Brooks: Making Green Work: Building Capacity for the Green Economy • Joanna Robinson: Building a Green Economy: Advancing Climate Justice through Labour-Environmental Alliances in California and British Columbia
3:00-3:15pm	Break
3:15-3:30pm	Marc Lee: Letter from 2040
3:30-4:15pm	Session 2: Climate and Work: the case for gendering policy and labour action Active Discussant: Jan Kainer <ul style="list-style-type: none"> • Marjorie Griffin Cohen: Initiatives for Including Gender in Climate Change Labour Negotiations and in Government Policy • Joan McFarland: The Gender Impact of Green Job Creation: A Call for Gender-based Analysis
Evening	
5:30-7:30pm	International Panel: Green Work, Brown World: Labour and the <i>Dilemma</i> of Climate Change Chair: John Shields, Opening Remarks: Carla Lipsig-Mumme Speakers: <ul style="list-style-type: none"> • Karen Hawley, Environmental researcher and educator (Ottawa) • Donald Lafleur, 4th Vice-President, Canadian Union of Postalworkers (Ottawa) • Andrea Peart, National Representative, Health, Safety and Environment, Canadian Labour Congress (Ottawa) • Isabelle Menard, conseillère syndicale--environnement Confédération des syndicats nationaux (Montréal) • Joe Uehlein, Director, Labor Network for Sustainability (Washington, D.C.)
8:00-10:00pm	Dinner at l'espresso Mercurio for W3 members 321 Bloor St West (southeast corner of Bloor and St. George)

Day 2 - Saturday, Jan 26, 2013**Morning Session**

8:30-9:15am	Light Breakfast
9:15-9:45am	Work and Climate Change Report: questionnaire, feedback and going forward
9:45-10:00am	Tom Mann and Charlotte Mann: Clearing the Air: How behaviour analysis can assist labour's contribution to a green economy
10:00-10:15am	Break
10:15-11:45am	Session 3: Sectors and Professions: Active Discussant: Warren Mabee Agriculture: <ul style="list-style-type: none">• Luis Aguiar: It's the Workers, Stupid! Challenges in researching labour processes and climate change• Jan Kainer and Laurel MacDowell: Climate Change, Work and Employment in the Agri-food Sector: Is the Ontario food system sustainable? Postal: <ul style="list-style-type: none">• Karen Hawley: Postal Unions and the Environment: A work in progress
11:45-1:00pm	Lunch on your own
Afternoon Session	
1:00-2:30pm	Session 4: Green Training and Union Education. Active Discussant: Steve Shallhorn <ul style="list-style-type: none">• Jeff Carey & Steven Tufts: 'Greening' in Lean Times: The amalgamated transit union and eco-socialization of Canadian transportation systems• Bryan Evans and Adam Wellstead: Institutional overview of the Canadian Green Employment Training Provision Landscape• Kean Birch & Dalton Wudrich: Climate Change, Sustainable Infrastructure and the Challenge Facing Engineers• John Calvert: Investment in Skills Development and Trades Training: The prerequisite for building a greener construction industry in Canada
2:30-2:45pm	Break
2:45-5:00pm	Decisions on 2013-2015

STEVEN MCBRIDE

Professor, Political Science, McMaster University

JOHN SHIELDS

Professor, Politics and Public Administration, Ryerson University

STEPHANIE TOMBARI

PhD Candidate, Political Science, McMaster University

SUSTAINABLE ECONOMIC DEVELOPMENT POLICIES IN MID-SIZED CANADIAN CITIES

This project is in its early stages and what follows is a preliminary report.

Cities are the centres of economic activity and the largest producers of pollution; as the order of government closest to the citizenry cities experience both the immediate and long-standing effects of climate change. It is often argued that cities must take the lead in constructing a green economy, increasing the number of green jobs and thus enhancing green growth (Environmental Symposium, March 2012). The country's largest cities – Toronto, Vancouver and Montreal – have been adopting policies to reduce GHGs produced by municipal services and buildings since the early 1990s. But the policies of mid-sized cities have rarely been explored. This is interesting, given that an estimated 41% of Canadians live in small cities (HRSDC, 2012). Despite numerous studies that have been done on the politics of climate change, there is still very limited research on the role, abilities and effects of local climate change policies. This project seeks to refocus the lens so as to take on a more local approach (Schreurs 2008).

For the purposes of this study mid-sized cities are those with populations between 50,000 and 900,000, and are not part of a major metropolitan area (eg. Richmond, BC, or North York, Ontario). It is acknowledged that "mid-size" is an awkward construct and that grey areas abound. A scoping exercise identified 26 cities with populations between 50,000 and 900,000 (characterised here as 'mid-sized' cities). City websites were examined to determine whether they had a green economic plan. Three did, and are included in the study. Nine others had green economy sections within broader economic strategy plans. Further investigation is underway to determine the salience of jobs and employment within those plans.

There is a jurisdictional vacuum, into which cities or provinces can march. This is caused by federal abdication. The abdication of Canada from the Kyoto Protocol following the UN Climate Change Conference in 2011 was a clear statement by the federal government that climate was not its concern. Despite the fact that Canada is one of the world's worst greenhouse gas (GHG) emitters (Conference Board of Canada, n.d.), the Harper government's call for a 'Made in Canada' climate change strategy has signalled a rejection of federal responsibility in favour of citizens and their cities.

Cities face obvious barriers to being active in green economic strategies. First, it is important to recognize constraints imposed by federal and provincial jurisdictional agreements and divisions of power that cut municipalities out of much decision-making. However, while cities have traditionally had limited power, neoliberalism may be increasing it, though without providing resources with which to exercise it: "At the same time, devolution and decentralization, celebrated in the canons of new public management, have shifted attention from the national to subnational governments. Such downscaling is reinforced by the growing interests in city-regions as the scale best able to capitalize on newly important economies of agglomeration" (Mahon, Andrew & Johnson, 2007, 43). Provincial governments vary in their degree of support for actions like GHG reduction incentives and green technology investments. As such, federal and some provincial governments may have unofficially increased flexibility for cities to set policies, simply because these other levels government prefer not to deal with climate change issues themselves.

Lack of information is one of the largest barriers inhibiting cities from taking action on climate change (Betsill and Bulkeley, 2004, 477-478). Barriers faced by municipalities which lead to the inability to take action include: financial, human resources, capacity, knowledge, leadership, lack of capacity to take action, information/knowledge/training barriers (may not recognize climate change as a local concern), downloading, decentralization and jurisdictional ability (Robinson and Gore 104-108). It is apparent that while some cities are adopting measures to curb GHG emissions, they are not necessarily choosing measures that might also strengthen their local economies. Similarly, some cities are investing to expand their local economy, but have left opportunities for economic growth in green energy and technology unrealized. However, there are some mid-sized cities that are addressing both climate change and economic growth in comparable policy programs and instruments and it is this group that will be of most interest in this study. It is clear that a considerable amount of horizontal policy learning takes place. Cities with the most aggressive green economic development plans are turning to other jurisdictions for policy learning; Hamilton, for example, has looked to European cities for lessons in developing a green economy and to learn how to build an internationally competitive green technology sector. Cities in 'greener' provinces are more likely to go green as well. Put another way, the adoption of climate change mitigation and adaptation policies, and more importantly, green economic development policies are influenced and shaped by provincial attitudes and incentives. In the case of Sault Ste Marie, for example, a number of projects took advantage of incentives under Ontario's green energy act, such as the FIT (recently the subject of an adverse WTO ruling, due to local content provisions). The recognition of co-benefits appears to be an incentive for some mid-sized Canadian cities to adopt climate change policy. Ontario's mid-sized cities hurt by the decline of the manufacturing sector may be looking to green technology and manufacturing as a way to breathe life into the local community and make it competitive again. Cities with greater economic diversification may not feel the same pressure to integrate economic with environmental priorities.

Public-Private Partnerships (PPP) between government and the private sector have been deemed necessary to stimulating new investment in a city, without taxpayers footing the entire bill. As such, citizens are more likely to support initiatives that pose the least amount of risk to them. Indeed, "the role of city governments is likely to grow again in the initiation and planning of new, localized energy, water, and waste services provision, but mostly in public-private relationships with the privatized providers of infrastructure services and technologies, as well as the housing sector" (Cohen & Robbins, 2011, 276.) PPPs fit with the rhetoric of community engagement but the downsides of this administrative form receive little mention.

Interviews in this project are just beginning and a fuller report will be available at the next group meeting.

JOAN MCFARLAND

Professor, Economics and Women's Studies/Gender Studies, St. Thomas University

LABOUR'S RESPONSE TO ENVIRONMENTAL ISSUES: A NEW BRUNSWICK CASE STUDY

In examining the response of labour to environmental issues, the paper starts with the question of whether there is an inherent conflict between jobs and the environment or whether progress on the two can be compatible.

The question is explored in the context of the province of New Brunswick. Where does labour in New Brunswick see itself on the issue? What responses has labour made over the last forty years or so to environmental issues? What factors determine such responses? Has there been co-operation and have there been alliances between labour and the environmental movement? What stands out as most significant in labour's responses? What are some of the stories? What can we learn from them?

Back in 1983, New Brunswick held its first conference, hosted by St. Thomas University, exploring labour/environment movement relations. Richard Kazis, co-author of *Fear at Work*, was the guest speaker and "job blackmail" was a key issue discussed. The 1983 conference was followed by three more exploring similar themes: one in 1990 organized by the New Brunswick Federation of Labour (NBFL), one in 2000 where a bluegreen alliance over the Crown Lands issue was formed, and one in September 2011 organized by a regional Work in a Warming World team.

The two main organizational players in the relationship between the labour and environmental movements in the province were the NBFL representing 47,600 workers in 2011, with a very small staff; and the Conservation Council of New Brunswick (CCNB), the leading environmental NGO in the province. The individual unions such as CUPE, CEP, the Steelworkers and the New Brunswick Union were also important organizational players on the labour side.

We carried out intensive interviews with five individuals from labour: the current president of the NBFL, the retired but longtime executive secretary of the NBFL and three union members who had been active in specific unions, namely CUPE, CEP and the New Brunswick Union (NBU-NUPGE). Similar interviews were held with three individuals from the environmental movement in New Brunswick: the executive director of the CCNB, a previous executive director of the CCNB and the current forestry campaigner for the CCNB.

When we combined the information that we obtained from these interviews with other data that we had collected, including resolutions from NBFL conventions, four main "stories" emerged: a nuclear power story, a NBFL environmental committee story, a Crown Lands story, and a climate change story.

The nuclear story involved the building of a nuclear power plant in New Brunswick between 1974 and 1984 and the possibility of building a second one. From our interviews and examining NBFL resolutions, we could see that the basic position taken by labour was one of opposition to nuclear power in the province. The exception was the position of the building trades but, for other reasons, the building trades locals had left the NBFL in 1982 so that their opposition did not play a role in the NBFL resolutions.

The NBFL environmental committee story involved an era from the mid-1980's to the mid-1990s when some strong environmentalists, including the president of the NBFL, took strong environmental initiatives. This was the group that organized the 1990 conference exploring labour/environmental issues.

The Crown Lands story is a long and convoluted one beginning with the passing of the provincial Crown Lands and Forestry Act in 1982. Under the Act, Crown Land is leased to the major forestry companies who became responsible for its "proper management". But there are those- the CCNB being a major voice among them- who are critical of the companies' management of the forests. They point to the companies' clearcutting and replanting of hardwood and mixed wood forests with softwood plantations. The companies and their representative, the New Brunswick Forest Products Association, on the other hand, complain that there are too

many regulations and restrictions on their cutting by government. In the late nineties, labour stepped forward in their support of environmentally sound forest policy. The NBFL was an initiator of the “Emerald Alliance”, an alliance between labour, environmentalists and other stakeholders, calling for a Royal Commission on Crown Lands policy in the province.

The NBFL carried their support forward after the Emerald Alliance meeting by presenting a powerful brief at the government’s Select Committee on Wood Supply hearings in 2003. However, previously, at the press conference immediately following the Emerald Alliance meeting in 2000, representatives from the regional office of the forest workers’ union broke away in their support for the alliance agreement. Meanwhile the companies had started a powerful campaign calling for an increase in their wood allocation on Crown Lands. As environmentalists pointed out, increasing wood allocation on Crown Lands was against the recommendation of the provincial Department of Natural Resources and ignored the fact that private woodlot owners had plenty of wood to sell that could make up any shortfall. When the matter came to a head in 2011, a number of forest workers’ locals got behind the companies’ campaign and also brought a resolution to the NBFL convention that supported the companies’ position on wood allocation.

The main climate change story in New Brunswick involved a campaign, started in 2008, by one particular union, NBU-NUPGE, to get their members, the wider labour movement as well as the community at large not only aware of, but also acting on, climate change issues. There was also the 2011 regionally organized Work in a Warming World conference which brought those from the labour and environmental movements together to work on climate change issues.

Unfortunately, the issue of climate change has been rather difficult to sell in the province. The problem is not one of conflict but rather of an issue that struggles to get labour’s attention. Climate change is just not seen as directly labour related at the local level. Further, we do not yet have the bluegreen alliance in the province that it was hoped might emerge from the 2011 conference.

In conclusion, looking over the past 30-40 years in New Brunswick in terms of the labour and environmental movements working together, there have been periods of progress but also those of regression. As one of the leading environmentalists told us, all he could do when there were setbacks was to take the longer view and keep environmental issues on the table. There is really no other choice if we want to save the planet.

KEITH BROOKS

Program Manager, Environmental Defense

MAKING GREEN WORK: BUILDING CAPACITY FOR THE GREEN ECONOMY

In recent years, the case for a green economy has been fairly well articulated (for example by UNEP, 2011). In addition, a number of key policies have been identified which, if implemented, could spur a transition toward a resource efficient, low-carbon, socially inclusive economy. Yet, comparatively little is known about how the green economy comes into being and what it looks like on the ground.

In this year-long project, we set out to shed some light on this matter. Our central research questions included: How do we build support for the green economy at the community level and how can communities pursue green economic development? What are the enabling conditions that promote the green economy? And what are the greatest challenges that must be overcome?

These are obviously complex problems and, as such, a year's time is insufficient to yield substantive answers. However, in the course of our work and research, we were able to draw some preliminary conclusions about the keys to "making green work" and suggest some areas that would benefit from further work. Those findings, as well as our methodology, will be shared in this paper and presentation.

Methodology:

The project included three main components: A literature review, comparing and contrasting the knowledge base contained in multiple bodies of literature; interviews with experts and members of the community of practice -- people engaged in green economic development; and direct engagement in three Ontario communities: Guelph, Hamilton and the Mount-Dennis neighbourhood in northwest Toronto.

Key Findings:

These are preliminary findings, and shared here for the purposes of discussion.

1. There is near unanimous agreement among international organizations that the environmental crisis and climate change pose a threat to our long term prosperity and that the pursuit of a green economy offers an opportunity for new jobs and economic growth.

The prescription as to what should be done differs, of course, but there is broad agreement that governments and private firms both have vital roles to play, and governments must take the lead and work to "get the economy right" (UNEP, 2011).

2. Municipalities and communities are key. They are the scale at which the green economy is being built, "firm by firm and cluster by cluster" (Brookings, 2011). Furthermore, there are many ways municipalities can spur or inhibit the green economy: they deliver many services to businesses and individuals, they exercise control over infrastructure projects, and can make use of their traditional economic development toolkit. The participation of communities is also critical given that a socially inclusive economy cannot be imposed from above, nor can it be blind to local variables (for example, see WEF 2012).
3. Municipal political and bureaucratic support are determinants of success. Communities with engaged leadership and/or dedicated staffers can and do get ahead in the green economy.
4. Senior level policy is essential. Municipalities and communities are ultimately limited in their capacity to drive a transition toward a green economy. They operate within the context set, in part, by more senior levels of government. Ontario's Green Energy Act is a prime example of this more senior level policy. A price on carbon is another such example. Additionally, policies need to be well thought out and they need to be stable and consistent.

5. More education and outreach is needed. Although the green economy is gaining profile, it is still poorly understood or entirely unheard of by many, which is a critical barrier. Virtually everyone we interviewed spoke of the need to better educate their audience. Politicians must understand the green economy in order to draft and advance policies intended to support it, the financial community has to see the value proposition in order to invest in it, and individuals must appreciate the green economy in order to support progressive policies and build markets for green goods and services.
6. Universities can and have been central players. In our work in Hamilton and Guelph, McMaster and the University of Guelph were identified as key sources of knowledge and social approval for green economic development.
7. Major local environmental campaigns set the stage for environmental awareness among the community members that facilitated green economic development. In Guelph waste management and river water quality were the early issues. In Hamilton it was the restoration of Hamilton Bay.

In both cases political, social, and business leaders became engaged and long term plans were devised and implemented with visible results that legitimated the effort.

8. Collaboration across groups, sectors, and scales is critical. The green economy has far reaching implications, and it requires a broad base of support in order for it to flourish. An economy, by definition, includes producers and consumers, which means that a green economy must include businesses. In addition, in order to green the economy, equal attention must be paid to how and what things are made as is given to what or how little one consumes. Furthermore, in order to advance toward a green economy, civil society groups and businesses must work with governments to change the rules, and “get the economy right.”
9. It takes time. Building a green economy cannot be done overnight, and it is not an easy task. A well thought out and executed strategy can help line up support and keep forward momentum.

JOANNA ROBINSON

Assistant Professor, Sociology, Glendon College/York University

BUILDING A GREEN ECONOMY: ADVANCING CLIMATE JUSTICE THROUGH LABOUR ENVIRONMENTAL ALLIANCES IN CALIFORNIA AND BRITISH COLUMBIA

One of the most pressing challenges facing the world today is mitigating the social, economic and ecological consequences of accelerating climate change, including *increased inequality* and *ecological degradation*. While these two consequences of the carbon-intensive economy have traditionally been considered as separate problems, there has been growing scholarly and public attention to the connections between socioeconomic inequality and environmental destruction. Policy makers, labour unions, environmental groups and social justice organizations are increasingly discussing the potential of a green economy for combating climate change and as a solution to the economic crisis and rising unemployment, underemployment and the expansion of precarious jobs.

Yet climate justice and equity are often excluded from mainstream policy discourse about climate change and its effects. Recently social movement actors have begun to advocate for policies that will create a socially and environmentally just transition to a post-carbon economy. The new politics of climate change that stresses climate justice makes coalitions possible between traditionally opposed movements, including environmental and labor movements. Based on data collected from 50 in-depth interviews with leaders from labor unions, environmental and social justice organizations and policy makers in California and British Columbia, the paper examines the role of cross-movement coalitions in shaping policies around green jobs and the development of environmental-labour coalitions in the context of the shift to the green economy in California and British Columbia. The paper examines how the social mobilization around adapting to and mitigating climate change contributes to environmental and social justice, and discusses the role of context – local, regional, national and global – for shaping environmental-labour coalitions and climate change policies. Comparing coalitions California and British Columbia allows for the study of the role of context for shaping social movements advocating for climate change mitigation policies, and illuminates the complex interactions of context-dependent factors with global economic and environmental processes. The comparative design also provides the opportunity to learn from successes and avoid obstacles based on the experiences of each case.

While the findings reveal that some union leaders have begun to seriously engage with the implications of climate change – including building strong alliances with environmental organizations and supporting green workforce initiatives – these initiatives have yet to find widespread acceptance with their broader union membership, particularly in private sector domains. At the same time, support from environmental leaders is stronger among organizations that focus on issues of environmental justice at the local level. The findings also point to the critical role of social justice organizations for bridging the concerns of labour and environmental groups and strengthening the ability of these coalitions to mobilize around green jobs.

MARJORIE GRIFFIN COHEN

Professor, Political Science/Women's Studies, Simon Fraser University

GENDER IN GREEN JOBS: BEST PRACTICES?

This paper examines how gender is normally treated in Green Jobs Initiatives, with an attempt to understand the 'best practices' that have been used to date. Green job creation that specifically includes women is not prominent in practices and is contingent on policies geared toward the creation of green jobs in the first place.

Developed countries like the United States, Australia, Denmark, Finland, Sweden, Norway, Germany, Luxembourg and Iceland all stress gender-inclusive policies and even "green jobs for women", yet the green jobs policies in these countries are predominantly informational, only sometimes involve education and training, and rarely lead to sustained employment. Such programs are typically of short duration, are very modestly funded, target a very small group, and are not at all integrated into a coherent climate action. Governments in the north appear hesitant to use more direct means of ensuring targets are reached, such as mandatory compliance on hiring targets, something that is more common with respect to 'green' development projects in the south. There have been examples of this approach in Canada in the past, but it has not translated into a perception of 'green job' creation.

So far the research indicates that the attempt to include women in green jobs in Canada is virtually non-existent. However, in the US the American Economic Recovery and Investment Act 2009 did have projects aimed at employment for green jobs. This fund of \$100 million specifically included women in 10 of the 25 projects supported by the fund. Through interviews with those involved in different types of programs supported by the fund, there is some indication of what types of programs were most effective. In Canada the \$46.6 billion Economic Action Plan provided only \$1 billion for a Green Infrastructure Fund that operated on a cost-share with the provinces. There was no plan for including women in the job creation of this plan.

In addition to providing an analysis of what is most likely to work in a green job initiative that includes women in its targets for employment in traditionally male fields, this paper explores the potential of the expansion of the concept of 'green jobs' to include areas that are more typically female. It will show how this can act as a powerful economic stimulus as well providing a shift in thinking about how an economy itself can become more 'green.'

JOAN MCFARLAND

Professor, Economics and Women's Studies/Gender Studies, St. Thomas University

THE GENDER IMPACT OF GREEN JOB CREATION

There are many who fear a negative employment impact from measures to fight climate change. Those fears have been countered by others such as those in the BlueGreen movement who point out the potential for green job creation in replacing the jobs lost in fossil fuel and other CO2 emitting industries. However, there has been little gender-based analysis of the impact of green job creation. This is despite warnings from some that "green jobs are almost entirely male, especially in the alternate energy area".¹

This research seeks to make a start in filling the void in gender-based analysis. I look at the more general analyses around green job creation and then present evidence that I have gathered around green job creation's gender impact. The evidence comes mostly from New Brunswick but one of the case studies comes from Nova Scotia.

The research begins by looking at various studies of green job creation. Unfortunately, none of them has looked at the issue of gender impact. Some do, however, list the types of jobs that would be created from green initiatives. Taking these lists and finding the gender breakdown of those jobs in New Brunswick with data from the 2006 Census, I am able to get an indication of the gender impact of green job creation.

This is followed by the presentation of two case studies of green initiatives- one in New Brunswick and one in Nova Scotia. The first is a case study of Efficiency New Brunswick, a government organization that "promotes and rewards the use of energy efficiency in the province". Although achieving energy efficiency in the province is Efficiency New Brunswick's primary goal, green job creation is also an important outcome of its work. The second case study is that of Daewoo, a plant established in 2010 and partly owned by the Nova Scotia government, which builds turbine parts for the production of green energy. From the point of view of the government, job creation and specifically green job creation would be the primary goal of this initiative. In each of these cases, I seek to determine the gender impact of the green jobs created.

Since both the data and the case studies show that the green jobs created are almost all non-traditional for women, I turn to the whole question of women in non-traditional occupations. This examination includes women in apprenticeship programs and women's experiences in non-traditional jobs at the workplace.

Lastly, I look at the policy implications of my findings. If women are severely under-represented in the green jobs created to mitigate climate change, are there ways to counter this effect? Could women and men benefit more equally in such job creation initiatives? In this light, certain employment and training equity policy options are put forward.

¹ Linda Hirshman, Op-ed, *New York Times*, Dec. 9, 2008.

TOM MANN

Deputy Minister, Post Secondary Education, Training and Labour, Government of New Brunswick

CHARLOTTE MANN

Graduate Student, Western New England University

CLEARING THE AIR: HOW BEHAVIOR ANALYSIS CAN ASSIST LABOUR'S CONTRIBUTION TO A GREEN ECONOMY

Since the 1970's the fields of applied behavior analysis (ABA) and labour have individually demonstrated concrete levels of commitment to the discussion addressing the impacts of climate change. The authors suggest a pragmatic approach to introduce the fields to a joint discussion of their demonstrated shared values and vision for the future and encouraging a collaborative relationship, allowing both fields to reach their potential to help preserve the environment.

Dating back to Earth Day 1970, behavior analysis has demonstrated the effectiveness of its principles in ameliorating the negative effects of human behavior on the environment. While the research is compelling, the external validity of these applied studies is weak or non-existent (Lehman & Geller, 2004). It is widely recognized within the field of ABA that in order for the full benefit of the pro social research findings to be recognized, a broader audience is required. Labour (15 million unionized workers in North America) has proven its ability to challenge the status quo on a variety of large scale public policy issues. However, the impact of climate change on employment and work has been strangely absent from policy and research (Lipsig-Mumme, 2010). There is a growing recognition that in order for unions to succeed, they need to have a wider social vision (Bernard, 2003).

The authors propose that labour and applied behavior analysis can work together to better understand how citizens get along both with each other and with our planet.

LUIS AGUIAR

Associate Professor, Sociology, University of British Columbia-Okanagan

IT'S THE WORKERS, STUPID! CHALLENGES IN RESEARCHING LABOUR PROCESSES AND CLIMATE CHANGE

In this presentation I discuss issues identified in post research of the agriculture industry – greenhouses more specifically – in British Columbia under the auspices of the W3 network. I have been thinking about these issues since producing a paper on the greenhouse industry in BC and challenges of climate change. The paper was personally unsatisfying as the research initiative was mainly focused on industry strategies on climate change and the recognition thereof. Excluded from the study, were workers and their knowledge. The workers I'm referring to are primarily migrants hailing from depressed economic spaces in the global capitalist mode of production. We live in a world where the opinions and views of the elite (corporate and otherwise) are those that seemingly matter only. I am thus concerned about researchers (me) ignoring and by-passing the views of workers on, in this case, climate change and its impact on work process and workers ideas on how to mitigate it. But if we (I) believe that those on the margins (and these are workers on the margins – temporary, migrant, non-English speakers, etc. - have the greatest insight on how the system works since it is there, on the margins, that the system is most brutally evident, experienced and debilitating, can we afford not to listen to workers? Long ago Braverman reminded us that the restructuring capitalist labour process uses workers' knowledge to implement new work practises that in the process further entrenches them into oppressive conditions. How is climate change really being addressed in the labour process? Few read or speak of Braverman anymore, but I wonder if his analytical revelations about change and how workers are further distanced from control is what is happening in the climate change workplace. That is, is workers' knowledge about mitigating climate change in the labour process being heeded by management? And if it is, what risk do they run in providing management with their insights? This presentation, then, is more a call and reminder to researchers to "listen" to workers and their knowledge and expertise. While the issues emerge in researching the greenhouse segment of the agricultural industry, they nevertheless speak to absences beyond greenhouses and thus relevant to W3 network researchers.

JAN KAINER

Associate Professor, Affiliation, York University

LAUREL MACDOWELL

Professor, Affiliation, University of Toronto

CLIMATE CHANGE, WORK AND EMPLOYMENT IN THE AGRI-FOOD SECTOR: IS THE ONTARIO FOOD SYSTEM SUSTAINABLE?

This paper seeks to analyse the current food system in Ontario – both the industrial system and the growing alternative, often organic, local food system. We will focus on jobs and employment in the food system. We will analyse how best to make the food system in this province sustainable in the face of climate change and we will suggest ways of mitigation and adaptation to ensure future food security. Some of this information is known. Some requires more research, which we are undertaking, so this is very much a working paper.

Our research is taking account of the growing theoretical literature that covers food and climate change and we link this material to issues of work and employment. An example of this approach is the human rights perspective on the right to food which is now being understood as the right to work and earn a decent wage.

We seek to examine the food system in Ontario: how it works, its producers and employees, its impact on consumers and the environment. The Ontario food system employs many people. In 2012 there were 74,840 farmers on 51,950 farms. Ontario's food processing sector consists of 3,000 businesses employing about 94,000 people across the province -- and is the sixth largest in North America, with manufacturing revenues totaling about \$35 billion.¹ The Canadian food retail sector is a large employer in Canada. It comprises 7840 food stores divided into chains, comprised of large conventional supermarket and convenience store formats, and independents, which are either franchised or unaffiliated and includes warehouses in distribution.

The alternative, local (sometimes organic) food system is growing and consists of local groups that advocate for a sustainable, secure, affordable and safe food system, distributed primarily through local or regional community markets. This movement has grown in response to consumer demand as more people search for high quality, often organic, food products. As the amount of this food increases, the jobs and labour processes are changing. The proportion of the total market for these products has increased to such an extent that the shelf space in grocery stores for such food has grown.

We also will examine the interrelationship between the industrial and alternative food systems, because organics are influencing management decisions at grocery stores, and government policy is evolving. Agriculture and Agri-Food Canada now has an organic panel in its system, and in response to numerous recent food scares and health concerns about the quality of food in Ontario, this trend is likely to continue.

With increasing extreme weather events, the need to adapt the food system to climate change, the need for food security and the necessity of having a sustainable food system in Ontario all become more urgent concerns. As the OECD recently noted, "Labour market policy choices should ... be informed by detailed case studies of the most strongly-impacted sectors, notably "green" sectors that are likely to grow rapidly and the most CO₂-intensive sectors that will need to radically change their technologies or shed jobs in the transition towards green growth."² It is our intention in this paper, to take this approach towards the food systems within Ontario.³

¹ <http://news.ontario.ca/omafra/en/2012/10/ontarios-food-processing-industry-driving-economy.html>

² OECD Employment Outlook 2012, ch. 4 "What Green Growth Means For Workers and Labour Market Policies: An Initial Assessment," 4.

KAREN HAWLEY

Freelance Researcher and Policy Analyst, CUPW

POSTAL UNIONS AND THE ENVIRONMENT: A WORK IN PROGRESS

This research will examine the best practices of unions and employers in the international postal sector to promote workable strategies to lower greenhouse emissions in the work place and protect postal workers and the public from the worst impacts of climate change.

In most technologically advanced countries several important characteristics are shared by the national postal services. The Posts continue to play a significant role in the delivery of parcels, packets and paper communications and advertisements. In many countries, including Canada, the national postal service operates the single largest fleet of vehicles and the largest number of retail facilities.

The major function of postal services of delivering paper-based information is in decline while the delivery of packets and parcels, often generated by internet-based commerce is growing. All of the major postal enterprises are heavily unionized. In many countries unions play a significant role in determining work practices and equipment and influencing public policy with respect to services.

This research will also explore the variety of ways in which postalworkers have used their statutory and collective bargaining rights to move their employers forward in emission reductions and more broadly toward environmental and socially sustainable operations.

Goals and methodology

This project will examine the role that unions are playing to promote environmentally responsible practices and reduce GHG emissions with respect to their own operations and the practices of the postal administrations. Specifically it will identify best practices that exist within the postal sector by examining:

- Union briefs, submissions, policies and education and training programs,
- Changes in union practices and operations which have been implemented to reduce GHG emissions,
- Collective bargaining initiatives or other union-management agreements designed to reduce GHG including work rules, work processes, health and safety issues, and rights of workers to identify or refuse work associated with environmental hazards,
- Institutional relationships including union-management committees and the role of unions at the workplace.

The project will involve a review of collective agreements, union manuals and policies, and educational programs and literature. A survey will be distributed internationally to identify a full variety of activities and strategies for GHG emission reductions.

The initial stage of the research has been completed with a review of agreements, manuals, policy, and/or education programmes for postal services and their unions that have implemented relevant changes. The survey has been developed and distributed to postal sector unions.

Insites

The reserach to date indicates that union participation in GHG emission reductions is larger than expected and postal services are responding to the growing threat posed by climate change.

There is a challenge in identifying the processes that work and those that fail. A survey respondent may describe completed projects, initiatives, or the results of negotiations, but leave out the path that has lead to the results.

We are likely to learn as much from our brothers and sisters failures as we will from their successes, but perhaps we won't hear of the failures. A good idea may fail due to a flawed process and these pieces of wisdom must be revealed to move success forward quickly and effectively.

As we hear back from unions that respond to our survey we will try to have personal discussions with union activists working on climate solutions to unearth their insights.

Implications

This research will hopefully present some case studies and practical suggestions for postal unions and beyond, to implement their own initiatives to reduce GHGs. Examples of educational programs for workers, best policies and practices within unions and postal services, key green provisions in collective agreements that activate change within the postal service and other initiatives will be outlined in a report.

Methods of dissemination:

- Posting the report on the CUPW and UNI websites
- Sending the report to the international postal unions
- Discussing the report at union educational programs
- Distributing the report to the environment committee of the Canadian Labour Congress
- In Canada, the researchers and W3 will also convene a 'stakeholder round-table' to make the findings available to employers, unions, and government for analysis and recommendations.

JEFFREY CAREY

Master's Candidate, Geography, York University

STEVEN TUFTS

Associate Professor, Geography, York University

'GREENING WORK' IN LEAN TIMES: THE AMALGAMATED TRANSIT UNION AND ECO-SOCIALIZATION OF CANADIAN TRANSPORTATION SYSTEMS

In recent years there has been a considerable output of literature in geography detailing the dialectical relationship between society and nature. This has ranged from more abstract treatments to more concrete analyses detailing the variegated and often contradictory relations among capital, labour, and nature in space and time. Moving from the concrete to the more abstract, this study explores the evolution of the Amalgamated Transit Union's (ATU) discussion of the environment and public transportation in Canada between 1986 and 2012.

In order to gain insight into the complexities of the capital, labour and nature trialectic in the Canadian transportation sector, three sources of data were examined. Internal union publications, specifically *inTransit* magazine were reviewed to gain insight into the union's internal (union bureaucracy-members) discussion of the environment. Further, Canadian newspapers between 1986 and 2012 were analyzed to identify the union's broader discourse on the environment and the links that it made to the broader community and environmental issues. And finally, a recent advertising campaign entitled "Protecting What Matters" was analyzed.

Most notable from this analysis was that the union was often 'outflanked' by management on environmental issues, specifically climate change. This occurred most frequently during protracted strikes when the employer and the state used the environment as a wedge issue in the collective bargaining process. This was most evident in a 2006 strike in Toronto and was used similarly in a prolonged strike in Ottawa in 2008. In both cases, the state leveraged issues of climate change and greenhouse gas emissions, producing cleavages between the union and the broader community. This particular finding is notable in that it is the state that is using the environment (i.e., climate change, greenhouse gases, and its derivative effects) as pretext to discipline workers. Given current events, specifically recent moves by government to designate transit workers as essential to the economy, this finding prompts some concern of future moves to declare workers as essential to the environment (or, essential 'green' workers) and hence provide further avenues for government to limit collective bargaining rights.

Second, where the union did make explicit reference to environmental issues was primarily in the way of expanding public transportation systems both in terms of increased public funding and increasing ridership. These calls were made most frequently during periods of economic crisis and eventual austerity in government. The union couched calls for increased public funding of transit in terms of environmental sustainability in the early 1990s. Interestingly, government officials made similar explicit ties between increasing funding for public transportation and decreasing greenhouse gases, mitigating climate change, and increasing economic efficiency during this period. This was especially evident in debates to expand rail transportation to Hamilton in 1992. Similar calls were made in 2001 when the union called for employer subsidized transit passes in Toronto.

Carrying this finding forward to the current economic crisis, the union's recent discussion of the environment was found to be disjointed and lacking coherence. Unlike earlier periods of austerity, the union has drawn only fleeting links among workers, the environment and the larger community. This is evidenced most strongly in the general lack of an environmental message in Local 113's most recent advertising campaign "Protecting What Matters". In the campaign, the union makes explicit ties between *specific* workers and the community, but no reference to the role of transit workers may play as stewards of the environment. This absence prompts the question: do transit workers really see themselves as green workers?

The findings have theoretical, strategic and practical implications for workers. The case may be evidence of how the state can use the current environmental crisis to its advantage to discipline labour in the current 'age of austerity'. Second, it points to the limits of public transit union's strategic capacity to engage with community groups. Lastly, it has several implications for broader educational issues as public transit workers struggle to define the value of their 'green' work.

BRYAN EVANS

Associate Professor, Politics and Public Administration, Ryerson University

ADAM WELLSTEAD

PhD Candidate, Michigan Technological University

INSTITUTIONAL OVERVIEW OF THE CANADIAN GREEN EMPLOYMENT TRAINING PROVISION LANDSCAPE

This is a two phase project seeking to identify nodes of training provision for green employment related jobs and careers. The first phase is a scoping of training provision using the Virtual Policy Network (VPN). Past VPN research has found that activity on the world wide web activity is a proxy for on-the-ground activity. The analysis will map the world wide web links of key green job training organizations. This macro level analysis is a valuable source of information allowing the researchers to determine the number of organizations involved in green training networks as well measuring – including visual representations – the number of links (www addresses) between organizations. The dominant (nodal) organizations will be identified as a result of this. A VPN is a useful scoping exercise to undertake before a more comprehensive analysis of training for green jobs, at a micro level is undertaken.

Phase II will employ a follow up survey to gather data on training content and will identify training for which occupations. The development of a green job training provision survey will consist of six stages and questions (and variables) will be developed to specifically address a) type of training is being provided b) the types of individuals receiving training, and an assessment of the training (e.g., challenges and barriers faced in training provision)

1. Determination of the number of surveys to be undertaken. The results from the VPN will allow researchers to define the number of contiguous or overlapping job training networks. They can then identify training providers. Surveys will be developed with questions that are both unique to the training field and common across the green training population.
2. Identification of the study population. This is the most challenging stage of such an evaluation. From the VPN, we will be able to measure the initial size of the population in question. From the selected organizations, senior managers would be recruited to participate in the study. Part of the questionnaire will involve a "snowball" recruiting question that will allow researchers to add any organizations/participants that the VPN was unable to located to find.
3. Development of an online survey instrument(s). First, a search of previous green training jobs surveys (Canadian and international) will be conducted. Second, from the available literature and consultation with experts in the field the questionnaire will be developed. Questions relating to the type of training provided, future needs of the industry, and challenges will be asked.
4. The survey(s) will be prepared (on an online software such as Survey Monkey) and a pre-test of the survey will be undertaken.
5. The survey(s) will be carried out over a three-week period.
6. The data set will be cleaning and the results analyzed.

KEAN BIRCH

Assistant Professor, Business and Society, York University

DALTON WUDRICH

Masters' Candidate, Environmental Studies, York University

CLIMATE CHANGE, SUSTAINABLE INFRASTRUCTURE AND THE CHALLENGE FACING ENGINEERS

What is becoming clear with the continuing failure of international efforts to come to some sort of agreement about climate change mitigation is that it is likely that we will face increasing climate uncertainty through the coming years. According to the economist Lord Nicholas Stern, professor at the London School of Economics, we have to take “strong action now” in order “to avoid the worst impacts of climate change”.¹ This means we have to be forward-thinking when it comes to core infrastructure (e.g. bridges, roads, energy distribution, water, buildings, etc.) because what we are building now will be with us for the next half-century or more. As a result, our construction activities today have a direct bearing on our ability not only to mitigate but also to adapt to the impacts of climate change in the future. This is a particular challenge for engineers since they are at forefront of this effort and currently do not feel that they have the skills or knowledge necessary to professionally react to climate change within their jobs.² We have to consider the future now or risk locking ourselves into inadequate or inappropriate infrastructure in the future.

Integrating Climate Change into Infrastructure

Our arguments are not new, by any means. Others have made similar claims about the urgency with which we need to consider how climate change is integrated into infrastructure. This includes a new alliance called *Engineering the Future* in the UK,³ as well as closer to home with Engineers Canada's new *Public Infrastructure Engineering Vulnerability Committee* (PIEVC).⁴ What we want to emphasize here – in line with these groups and others like Infrastructure Canada⁵ – is that climate change has to be integrated into all stages of building and facility life-cycles, from design to renewal. We can see evidence of such integration already taking place in things ranging from ‘sustainability’ standards and certification schemes through to government policies and capital investments. On the one hand, there are a range of new building codes – like LEED and the recently closed ecoENERGY, for example – focusing on energy and resource efficiency, all of which have become increasingly popular in recent years.⁶ On the other hand, the consideration of the impacts of climate change on infrastructure has been incorporated into Ontario's Ministry of Energy and Infrastructure (MEI) *Capital Planning Instructions* and the Provincial Government's new 10-year *Capital Infrastructure Plan*.⁷ The future of infrastructure is tied up with these integration efforts.

Sustainable Infrastructure? More than just Bricks and Mortar

Infrastructure is increasingly being planned, developed and built as ‘sustainable infrastructure’; with increased focus on resilience, adaptability, and social relevance. The last point is critical; sustainable infrastructure is a social *and* technical system – or *socio-technical system* – and not simply a physical artefact. Promoting

¹ *Stern Report* (2006), Executive Summary: http://www.hmtreasury.gov.uk/d/CLOSED_SHORT_executive_summary.pdf

² http://www.apeg.bc.ca/ppractice/documents/CSA%202012_Rpt_Cda%27s%20Infra_Eng_Climate%20Change.pdf

³ <http://www.engineeringthefuture.co.uk/>

⁴ http://www.pievc.ca/e/index_cfm

⁵ Infrastructure Canada (2006): http://www.ipcc-wg2.gov/njlite_download.php?id=6305

⁶ Holtforsters, F. and Nielsen, R. (2011): http://members.peo.on.ca/index.cfm/document/1/ci_id/55068/la_id/1

⁷ Ontario (2011):

http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/stdprod_085423.pdf

sustainable infrastructure, therefore, requires that we think about the broader social and political context, alongside the economic and physical aspects of infrastructure. When thinking about this social side of infrastructure, it is important to recognize that the success of sustainable infrastructure is very much tied up with things like social expectations and behaviour (e.g. car usage, housing density), political decision-making (e.g. the fragmentation of infrastructure responsibilities), and economic pressures (e.g. developer profits). There are very real risks associated with ignoring these social issues, especially as they impact directly on infrastructure – for example, it would be pointless to promote public transit at the same time as promoting increasing suburbanization and car dependence.

The Challenge for Engineers

Engineering practices are changing but that they need to change further over the next few years – uncertain weather patterns mean that seasonal precipitation levels, sea and river levels, melting permafrost and water shortages are going to be hard to predict in the future and will be significantly different from our current or past experience. It might be increasingly important to plan, design and build infrastructure that is flexible, by which we mean easily adaptable to changing climates. New forms of modular design might be necessary, as might the use of building materials with low carbon footprints. Obviously engineers are constrained by the existing buildings codes and standards when it comes to integrating environmental issues, so these need to change with engineering practices. There have already been attempts to outline efficiency standards for buildings (e.g. LEED) as mentioned, but there are also more general attempts by the likes of the Canadian Standards Association (CSA) to outline sustainable infrastructure standards.⁸ Future engineering standards will need to cover a range of issues relating to engineering practices (as mentioned above) as well as building materials, location decisions, risk assessments, service levels and life-spans, waste generation, energy efficiency, and so on. While it is likely that federal, provincial or municipal governments will need to take a lead on pushing for engineering standards, engineers through their associations can also influence standards, codes and protocols that apply to them. Finally, changing engineering practices and standards will require changes to the training and education of engineers. There will need to be coordination between engineering associations and engineering schools as sustainable design, planning and development are promoted.

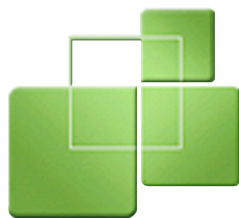
⁸ <http://shop.csa.ca/en/canada/infrastructure-solutions/adapting-your-infrastructure-to-climate-change/inv/2703207wt/>

JOHN CALVERT

Associate Professor, Health Sciences, Simon Fraser University

INVESTMENT IN SKILLS DEVELOPMENT AND TRADES TRAINING: THE PREREQUISITE FOR BUILDING A GREENER CONSTRUCTION INDUSTRY IN CANADA

This presentation will address a major gap in the current literature about greening the built environment. Proponents of low carbon construction have tended to ignore the need to provide workers with the skills and training opportunities required to be able to carry out their jobs effectively. Successful 'green' construction requires a qualified and innovative trades' workforce, one that understands the principles involved and is capable of adapting its skills flexibly and creatively to achieve these principles. Unfortunately, public policy and market pressures have combined to weaken, rather than strengthen, Canada's training system. This paper will review the current challenges the industry faces and suggest some of the changes needed in training, apprenticeship and new skills development get it back on the right track.



Work in a Warming World

York University

4700 Keele St.- 337 York Lanes

Toronto, ON, M3J 1P3

(416)736-2100 Ext. 44106

email:w3info@yorku.ca

Website: www.workinawarmingworld.yorku.ca