

# ENVIRONMENTAL PSYCHOLOGY NEWSLETTER

April 22, 2010

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CPA, Winnipeg  
June 3 - 5, 2010:

- Invited speaker
- Symposium
- Dinner gathering
- Poster Session
- Business Meeting

[www.cpa.ca/convention](http://www.cpa.ca/convention).

## MESSAGE FROM THE CHAIR

DR. JENNIFER VEITCH

From where I sit, this is a very good time to be an environmental psychologist. For the first time ever, I have seen a posting for a faculty position (a Tier II Canada Research Chair, no less) in environmental psychology (at Wilfrid Laurier University, see <http://info.wlu.ca/academic/postings/item/08022010WedFeb17110806EST2010.html>). I get frequent requests for information from prospective students who want to know where to study in our field, and I have begun to see more requests from other psychologists about environmental psychology topics. Both within Canada and internationally, the technical community concerned with energy conservation shows increasing awareness that regardless of the equipment they create there are behaviours involved in its selection and its use (e.g., the American Council for an



Jennifer Veitch, Chair of Environmental Psyc

Energy-Efficient Economy, see <http://www.aceee.org/energy/eemra/index.htm>). At the application level, principles of environmental psychology are put into action through companies like OPOWER (which uses feedback and social norms to foster energy conservation, <http://www.opower.com/>). There is lots to do and more and more places in which to do it. This is all to the good.

Sometimes, this is not such a comfortable seat: Within CPA we remain a small, seriously understaffed section. Members know that we had a bit of an e-mail discussion about this

early in 2010, and that we did not reach any strong conclusions. There was then no consensus about our future activities. Whereas when I think about the larger picture, I feel very optimistic, when I think of the CPA Section on Environmental Psychology I feel rather discouraged. We have had many successes – viz., CPA Invited Speakers at the convention, special sections and special issues in the journals, and coverage in *Psynopsis* – but we are still in need of a Chair-Elect (to start a 2-year term in June 2010), and we could use other participants in the form of a new Webmaster and more contributors to this newsletter. Most importantly, we need to foster other means to build up our subject area in the minds of our colleagues. We can do this – but only with member support. Send me your ideas!  
[jennifer.veitch@nrc-cnrc.gc.ca](mailto:jennifer.veitch@nrc-cnrc.gc.ca)



**CPA, Winnipeg  
June 3 – 5 2010:**

• Invited speaker:

Dr. Robert Gifford,  
University of Victoria, BC.



• Informal Dinner  
Gathering

June 3, evening.

Contact Jennifer Veitch

• Symposium:

Lorraine Lavallee  
(Moderator, UNBC)

Amanda McIntyre,  
Jonathan Rush & Robert  
Gifford (U Victoria)

• Business meeting

June 4, 12:30

Cabinet Rm. Delta

• Poster session

June 5, 1pm

Grand Ballroom

***CPA 2010: INVITED SPEAKER  
ENVIRONMENTAL PSYCHOLOGY SECTION  
DR. ROBERT GIFFORD***

**Psychology's Contributions to Combating Global  
Climate Change: The 2009 APA Task Force Report**

*Thursday, June 3, 1:00 p.m. (Delta Winnipeg, Colbourne room, 3rd Floor)*

Climate change is occurring: where is psychology? The conventional wisdom is that amelioration of the impacts of climate change is a matter for earth and ocean science, economics, technology, and policy-making. However, psychological science is now recognized as a key part of the solution to the problem. Identifying the obstacles that people face as they struggles to align their environmental attitudes with their everyday behaviour is one task. Thirteen such obstacles were identified by the APA Task Force on Psychology and Global Climate Change in 2009. Psychologists can contribute in other ways too, but challenges to these contributions do remain. Minimizing the personal and environmental damage caused by climate change necessarily is a multidisciplinary task, but one to which psychology not only should, but must contribute more than it has so far.

***CPA 2010: ENVIRONMENTAL  
PSYCHOLOGY SYMPOSIUM***

**Understanding Pro-Environmental Behaviour and  
Environmental Inaction: Theory and Research**

*Friday, June 4, 10:00 a.m. (Delta Winnipeg, Albert room, Concourse level)*

National surveys have shown that North Americans view environmental protection as a high priority; nevertheless, we continue to live the most consumptive lifestyles in the world and most people state that they are not prepared to do very much to change their lifestyle. Why don't our actions match our attitudes? In this symposium, three presenters will explore the complex relations between the individual's values, beliefs and decision making processes and the context that influences these processes to identify barriers to change and possible approaches for increasing conservation. The first two speakers will provide an overview of research on aspects of people's belief, goal and identity systems that are linked to pro-environmental action and will explain how a better understanding of individual differences is needed for developing effective behaviour change strategies. The second presenter will describe research demonstrating that people understand the logic of conservation and are motivated to conserve, but this motivation can be undermined by the environmental inaction of others. The final speaker will provide a broad analysis of the factors that influence pro-environmental behaviour and describe how cognitions and decision-making processes serve as key mediators.

## APA'S CLIMATE CHANGE TASK FORCE REPORT

The American Psychological Association's (APA) task force studying the interface between psychology and global climate change recently released [a report of their findings](#). The report goes in depth exploring the connection between psychology and global climate change and makes numerous policy recommendations for psychological science. The report works to understand psychology's contribution to understanding climate change through answering the 6 questions below:

1. How do people understand the risks imposed by climate change?
2. What are the human behavioral contributions to climate change and the psychological and contextual drivers of these contributions?
3. What are the psychological impacts of climate change?
4. How do people adapt to and cope with the perceived threat and unfolding impacts of climate change?
5. Which psychological barriers limit climate change actions?
6. How can psychologists assist in limiting climate change?

Members of the APA Task Force include: Chair: Janet K. Swim, PhD, Pennsylvania State University; Susan Clayton, PhD, College of Wooster; Thomas Doherty, PsyD, Lewis and Clark College; Robert Gifford, PhD, University of Victoria; George Howard, PhD, University of Notre Dame; Joseph Reser, PhD, Griffith University; Paul Stern, PhD, National Academies of Science; Elke Weber, PhD, Columbia University

## THE (UN)HAPPY PLANET INDEX 2.0: WHY GOOD LIVES DON'T HAVE TO COST THE EARTH

NIC MARKS THE NEW ECONOMIC FOUNDATION



The New Economics Foundation has released the *Happy Planet Index*, the second global ranking of the ecological efficiency with which the world's nations deliver long and happy lives for the people who live there. The report reveals a surprising picture of the relative wealth and progress of nations:

- Latin America tops the Index with Costa Rica the 'greenest and happiest' country. Nine of the ten highest-scoring nations are Latin

American

- The USA, China and India were all 'greener and happier' twenty years ago than today
- The World's richest plummet from 1960s to late 1970s, with scores still lower today than 1961



Costa Rica

Out of 143 nations surveyed, the UK comes 74th, Canada comes 89th, and the USA 114th. The new Index is based on data for 143 countries around the world, representing 99 per cent of the world's population.

The HPI strips the economy back to its ultimate outputs (lives of varying length and happiness) and links these with the fundamental inputs (the Earth's finite resources). Researchers at the New Economics Foundation believe that the multiple crises the world is facing provide a unique opportunity for societies around the world to speak out for a happier planet, to identify a new vision of progress, and to demand new tools to help work towards it. The HPI is one of these tools. But if it is to be effective it must also inspire people to act. The full report and data are available for free download at the accompanying web-site: [www.happyplanetindex.org](http://www.happyplanetindex.org)

UPCOMING CONFERENCES

Environmental Design Research  
Association EDRA  
Washington, DC  
June 2-6, 2010  
[www.edra.org](http://www.edra.org)

APA 2010  
San Diego, CA  
Aug. 12-15, 2010  
<http://www.apa.org/convention/index.aspx>

International Society for Quality  
of Life Research  
Oct. 27-30, 2010  
London, England  
<http://www.isoqol.org/>

99th meeting of the Assoc. of  
Collegiate Schools of  
Architecture  
March 3-6, 2011  
Montreal  
<https://www.acsa-arch.org/conferences/Annual2011.aspx>

FOR MORE CONFERENCE  
INFORMATION SEE:

Conservation Psychology  
Website:  
<http://www.conservationpsychology.org/conferences/>

APA-Population and  
Environmental Psychology  
<http://apa34.cos.ucf.edu/>

International Association for  
Society and Resource Mgmt  
<http://www.iasnr.org/>

## REPORT ON ENVIRONMENTAL PSYCHOLOGY AT CPA IN MONTREAL 2009

BY REUVEN SUSSMAN, MSc  
UNIVERSITY OF VICTORIA



The 2009 Canadian Psychological Association conference in Montreal presented two symposia, an invited speaker, a keynote speaker and a theory review session on Environmental Psychology. All four sessions addressed important environmental issues and psychologists' perspectives in tackling these problems. Louise Davey, an expert trained by Al Gore and David Suzuki in explaining the impacts of climate change began the day with a clear and sobering description of the problem.

Paul Stern then provided an overview of what psychologists can do to address the psychological aspects of climate change behaviour. Research areas where psychology can contribute include:

1. Understanding the causes of environmentally significant individual/household behavior.
2. Interventions to change environmentally significant consumption in households.
3. Understandings of climate risk.
4. Improving processes for environmental decision making.
5. Climate-related decision support.
6. Developing data to inform responses to climate change.

Stern also stressed that psychologists need to move beyond a disciplinary focus to examine the issues broadly. Working with interdisciplinary teams creates the possibility for more holistic and impactful behaviour-change strategies. A conversation session entitled *Thinking green: How can psychologists from all areas collaborate to improve human and environmental health*, led by Lisa Nibet and Mary Gick of Carleton University explored these themes in a more informal format.

In the two Environmental Psychology symposia that followed (chaired by Robert Gifford and Fredrick Grouzet), several students from the University of Victoria described their research. Leila Scannell presented preliminary results from a study suggesting that local messages were more effective than global messages in promoting pro-environmental behaviour. Ildiko Kovacs, and Angel Chen presented research on

(Continued on page 5)

commons dilemmas which suggested that cooperation in a simulated dilemma was weakly related to personality but well predicted by 10 hypothetical barriers to behaviour change. Robert Gifford (on behalf of Fabio Iglesias) presented a questionnaire that could be used to assess the hypothetical barriers, and it possessed good convergent and divergent validity.

Fredrick Grouzet then suggested a compelling motivational model which could explain a lack of pro-environmental behaviour as attributable to competing goals. Christine Kormos showed us how social norm messages can sometimes be effective in her longitudinal study of drivers on campus, and Robert Gifford presented a model which predicted quality of life based on subjective and objective neighbourhood features. I also had the opportunity to discuss my own research on pro-environmental behaviour, where I employed models in a cafeteria setting to demonstrate proper trash separation to unsuspecting customers who then perpetuated the behaviour (they put compostable items into a compost bin and the non-compostables in the garbage). In a separate theory review session, Colleen Braun explained how the use of subject-driven research was used to evaluate the effects of tourism on tribes in Namibia.

Overall, the CPA conference did a good job of highlighting the importance of psychology in dealing with environmental issues. Along with symposia officially designated the topic "Environmental Psychology," several other speakers clearly identified issues within the field without referring to it as such. In the future, I hope that the presence of Environmental Psychology will continue to grow and include research from even more Canadian regions, perhaps also examining areas of cross-disciplinary research.

## *RECENT GALLUP DATA ON (LACK OF) SUPPORT FOR ENVIRONMENTAL ISSUES IN THE US*

This year's Gallup poll yielded several historically low figures regarding public support for environmental protection and, particularly, concern about global warming. In the face of constant attacks from the American Right, overall support for the environmental movement, especially among Republicans, is declining. While the organized environmental moment is meeting increasing opposition, self-reported environmental behaviours have remained very stable..

For more, see article by Riley Dunlap, Dept of Sociology, Oklahoma State:

<http://www.gallup.com/poll/127487/Environmental-Movement-Endures-Less-Consensus.aspx>

## *ENVIRONMENTAL PSYCHOLOGY IN EUROPE THE 8TH BIENNIAL CONFERENCE. ZURICH, SWI*

...NEXT PAGE



*Ah, Switzerland.... gorgeous cities, efficient and well-used public transit, people walking and cycling, and farmer's markets*



# *ENVIRONMENTAL PSYCHOLOGY IN EUROPE* *THE 8TH BIENNIAL CONFERENCE. ZURICH, SWI*

BY LORAINÉ LAVALLEE

UNIVERSITY OF NORTHERN BRITISH COLUMBIA



Having become discouraged by North American inaction on climate change, I decided to attend the European Environmental Psychology conference because Europeans are clearly leading the way on environmental policy and environmental urban design. I wanted to see whether European Environmental Psychologists had unique insights and, perhaps, more sophisticated ideas about how we can move people in (over) developed nations toward more sustainable lifestyles. I was not disappointed. In fact, after attending the 8th Biennial Environmental Psychology conference in Zurich Switzerland (Sept. 6 –9, 2009), they practically had to drag me from the country kicking and screaming. In my short visit I became very, very attached to the livability of Swiss cities.

The priority given to all aspects of transportation other than the automobile was remarkable. As an avid cyclist, I was extremely impressed with the cycling infrastructure, which included designated cycling left-hand turn lanes (see photo below), dedicated traffic lights, and bike lockers at the train stations that stored hundreds



of bikes (see bottom of page). I would have loved to spend several days photographing the delightful diversity of cyclists — from the angsty bohemian pulling her bulldog in a baby trailer, to bankers cycling in their 3-piece suits, to very-fit elder cyclists who, I knew, could cycle circles around me in any Tour de France. The urban design choices made in Swiss cities clearly promote human health, but the priority given to public spaces and transit also seems to encourage social interaction. I stayed in a hotel in the Zurich old-town and the cobble stone streets were alive with people strolling and people sitting at outdoor restaurants and bars until very late into the evening, every evening. It was sad to realize that seeing people on the street in the evening was a culture shock for this Canadian.

The central themes of the Environmental Psychology conference included conservation behavior and the psychology of sustainability, environmental decision making and risk perceptions, living in built environments, methods in people-environment studies, consumer behavior, psychology of noise annoyance, and mobility and transportation. On the next page I have included some examples of the research that caught my attention.



## ***EXCITING RESEARCH IN EUROPE: CHAOS THEORY, COMPLEX MODELS, AND SIMULATIONS***

In a compelling Keynote address entitled “Can marketing save out environment?”, Wander Jager (University of Groningen, Netherlands, [w.jager@rug.nl](mailto:w.jager@rug.nl)) applied Chaos theory to explore the non-linear and thus difficult to predict patterns of behaviour displayed by consumers. He argued that the “average consumer” does not exist and that linear models are limited when dealing with complex and turbulent systems. For example, 95% of new products introduced to the market place, which are predicted to succeed based on past consumer behaviour, in fact fail. Social norms and networks influence people’s behaviour in unexpected ways and can cause “non-optimal” behaviours and choices to become predominant and locked in. An article of his in the *Journal of Social Issues*, 2007, 63 (1), 97-116, explores some of the issues he described.

### ***HOW PROMPTS AFFECT BEHAVIOUR: A SIMULATION-BASED ANALYSIS OF TIME-SERIES DATA GATHERED DURING BEHAVIOUR-CHANGE CAMPAIGNS***

**ROBERT TOBIAS, EAWAG, the Swiss Federal Institute of Aquatic Science and Technology, Switzerland**

For a behavior to be performed, it not only must be more preferred than alternative behaviors, it also must be possible to perform it, and it must be remembered. Particularly in the case of repeated behaviors (e.g. recycling), forgetting can be a crucial factor. In these cases, prompts or reminders are efficient measures for changing behaviors and maintaining these changes for longer periods. To investigate the way of functioning of prompts, a formal model was designed based on findings on prospective memory and habit development, and time-series data were gathered during behavior-change campaigns. By calibrating the computer simulation to the empirical data and performing a system analysis of the model, the latent processes producing the observed behavior dynamics could be isolated: prompts prevent forgetting the new behavior shortly after the behavior was changed. By performing the behavior sufficiently often, habits develop, which then support remembering the behavior. Even though the prompts lose effectiveness over time they accelerate habit development and finally habits prevent forgetting the behavior even without the effect of the prompts. However, the effect of prompts depends strongly on the commitment to perform the new behavior. This investigation shows how empirical and simulation-based as well as laboratory and field research can be combined to reach a better understanding of the complex processes by which behavior-change techniques deploy their effects. [robert.tobias@eawag.ch](mailto:robert.tobias@eawag.ch)

### ***FAIR FREE RIDERS? JUSTICE MOTIVATION AND SELF-INTEREST IN ENVIRONMENTAL DILEMMAS***

**GRÜSGEN, VOLKER, UMWELTCONSULTING JUST SOLUTIONS, GERMANY**

The attitude-behavior gap is often explained with additional causal factors and moderators in motivation phases and volition phases of actions. Even if these approaches may contribute to explain some of the variances in behavior, they miss one of the key characteristics of environmental behavior: Environmental decisions are made by humans in mutual social interdependencies. Above that, in the relevant research about environmental dilemmas it is mostly the Rational Choice (RC) paradigm that guides its method and design. The research about a genuine motivation and sentiment for justice stands in strong contrast to a homo economicus inherent in RC. Taking the view of psychology of justice opens the floor to a concurrent interpretation of noncooperation: It is not the mere self-interest, but also a genuine motivation for justice that prevents at least a part of the addressees from environmental concern. The belief that others profit with defections from one’s own cooperation can be experienced as unjust and aversive. Reducing one’s own environmental endeavor is a possibility to reduce such injustice. On the other hand, it can also be used as a mere strategic argument that conceals one’s self-interest. The presentation is an excerpt from my PhD, where I made use of an experimental game. The results reveal behavioral, cognitive and emotional indicators for injustice sentiments and give an account of the moderating effect of the justice motivation and self-interest.

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## ***NERDS GONE WILD!***

REUVEN SUSSMAN, UNIVERSITY OF VICTORIA, BC

**SUMMER SCHOOL: THEORIES IN ENVIRONMENTAL PSYCHOLOGY  
JULY 13-17, 2009.** Department of Psychology, University of Groningen,  
Netherlands



STEP: the First Summer school on Theories in Environmental Psychology. The aim of the summer school was to provide PhD students in environmental psychology the opportunity to learn from leading scholars in the field, and to meet and discuss their work with peers. Students participated in one of five theme sessions:



- Values, norms and environmental behavior
- Changing behavior via community approaches
- Strategies to reduce household energy-use
- Transport pricing
- Stress and the city - restorative environments



I first learned about the Step Summer School in the Netherlands from my Brazilian friend, Fabio Iglesias, who joined our Environmental Psychology lab here in Victoria for a year. When he first arrived, Leila, Christine, Angel, he and I (Environmental Psychology grad students) formed a formal group that met regularly to discuss environmental psychology papers, research questions, stats problems and other things that only scientists and researchers might find fun. Basically, we were a bunch of nerds and so our regular gathering came to be known as “nerd lunch.” We didn’t mind, in fact, we embraced the term and happily endorsed it. Going to go see a guest lecture became a “nerd field trip” and practicing our CPA presentations was a form of “nerd-tainment.” So when Fabio got word of the Step Environmental Psychology summer school in the Netherlands he insisted that this was a must-attend event for us nerds. Before arriving, we thought that we were nerds, but nothing really brings out the inner nerd like meeting other nerds. That’s why this is the story of *Nerds Gone Wild*.

We started our trip in Amsterdam, the city where one can do just about anything. Of course, we took care to see the standard tourist spots – Ann Frank’s house, the red light district, the restaurants, the bars and the coffee shops – but we couldn’t help discussing everything in Environmental Psychology terms. “I wonder if a man-made building can have a restorative effect?” “this city has low legibility,” and “do you think we could ever get this many people to ride bikes in Victoria?” This last issue, cycling, was truly a site to behold. The Dutch have near perfect conditions to ride bikes and they have really taken full advantage of that fact. A bicycle parkade two stories tall next to the train station was packed to the brim with cruiser-style no-gear bikes, and everywhere you looked people of all ages were riding (we later learned that this was the case across the Netherlands – in the northern city where school took place 50% of people ride their bike to work).

Our next stop was Groningen, two hours north of Amsterdam, where the summer school was set to take place. While we may have thought that our group from Victoria were kind of nerdy, we were very excited to see that all around the world were other grad students *just like us!* From the moment we arrived, conversations did not take the form of basic chit chat about the weather, home countries, or world sports. Even basic small talk centred on social norm theories, the restorative properties of nature, pro-environmental behaviour, and other Environmental Psychology principles. Of course this was fostered by the amazing schedule of lectures and workshops led by prominent researchers in many areas.

The basic day consisted of attending a keynote lecture or two in the morning followed by smaller workshops, and then another lecture in the afternoon. The lectures were excellent and served to enhance our understanding of concepts in many domains of Environmental Psychology. I found keynote addresses by Wesley Schultz and John Thøgersen on social norms and pro-environmental behaviour particularly interesting as they happened to relate to my own research. They discussed both their current research on employing social norm information to encourage pro-environmental behaviour and a review of the literature on the subject. I also highly enjoyed Birgitta Gatersleben's talk on how materialism is connected to Swartz' values and pro-environmental behaviour. Apparently, materialism is related to self-enhancement, while environmentalism is related to the opposing concept of self-transcendence (a fact that you might only really find interesting if you are a fellow nerd). Other keynote speakers included Agnes van den Berg (landscape preferences), Phil Lehman (social influence), Judith de Groot (values), Yannick Joye (perceptual fluency), Jens Schade (transportation pricing), Annika Nordlund (reducing car use), and Sebastian Bamberg (transportation). All of the lectures were excellent and can be viewed, along with their PowerPoint slides and abstracts at: <http://www.rug.nl/psy/onderwijs/firststep/keynote%20lectures>



Each of the keynote speakers was also a workshop leader. In total, there were five workshops with about 12 people in each. Each workshop had a sponsor which donated money in exchange for the opportunity to have an issue they presented discussed (Eneco, City of Groningen, SenterNovem, Transumo, and the Ministry of Housing/Spatial Planning/Environment). The purpose of the workshops was to discuss theories in Environmental Psychology and use them to develop a research proposal that would be presented to the sponsor (and the whole group) at the end of the week. The proposal would provide solutions to the sponsor's problem and research that could be conducted to improve future proposals. Each workshop focused on theories that the leader was an expert in (Values, norms and household energy use; Changing behaviour via community approaches; Strategies to reduce household energy use; Transport pricing; Restorative environments), but were generally self-guided.

Despite being nervous at first about this self-guided style of learning (some might call it Problem-Based Learning) where we determined our own timeline and progress, I quickly found that it was very effective and that I really enjoyed learning from my fellow students. By the end of the week we presented a coherent research project, and learned a great deal about various theories in Environmental Psychology.

Of course, anyone who's been to university knows that school is not just about books – and that was the case in the Netherlands as well. An extremely detailed social program was arranged for us that included extravagant dinners, complimentary beverages and nightly activities – all geared towards encouraging networking between participants. As a social science researcher, I was ill-prepared for the luxury afforded to students with this program. Like most social science students I expected no more than a cheap place to stay and perhaps a dinner on the first night (drinks extra, naturally). Instead, what we found were extravagant meals every night, canal trips and free drinks at every opportunity. On the last night there was even a school party, and I must admit that it was lots of fun cutting a rug with the likes of Linda Steg and John Thøgersen who I had, until this summer, only recognized as names atop well-known Environmental Psychology journal articles.

All in all, the week was an incredible success. I learned a lot, made new friends, connected with the future leaders in Environmental Psychology, and shared some good times. A hearty "well done" is in order for Linda Steg and the entire organizing committee who put together the Step Summer School (I'm told it took two years to get it off the ground). I look forward with great anticipation to *the next Step!*

See more summer school pictures here: <http://picasaweb.google.nl/summerschoolfirststep>

## RECENT RESEARCH AND PUBLICATIONS

### *CONSUMER QUEST FOR EMBEDDEDNESS: A CASE STUDY OF THE BRANTFORD FARMERS' MARKET.*

**ROBERT B. FEAGAN (WILFRID LAURIER) &  
DAVID MORRIS (UNIVERSITY OF WATERLOO)**

Farmers' markets (FMs) in the US, Canada and Britain are often held as one key response to the unsustainability of conventional food production systems, as they provide consumers with a potentially more comprehensive valuation venue for their food purchases. This paper categorizes and examines the range of consumer motivations at the Brantford FM in Ontario, Canada using the concept of embeddedness. Though not a simple concept, embeddedness proves useful for framing non-economic values sought by consumers at FMs in a way that helps to build our understanding of the context-specific quality of patron motivations at FMs. In the study, values of social embeddedness (social interaction, knowledge of vendors, etc.) and spatial embeddedness (food freshness, supporting the 'local', etc.) emerge as core sets of consumer motivations at this FM, while natural embeddedness values (organic production, 'food-miles' concerns, etc.) are less strongly held. This case study helps advance that specific sets of embedded values are expressed at FMs—consumer motivations partly reflect their historic and situated contexts, while contributing to our understanding of the importance of the embeddedness concept to alternative food system arguments for change.

Published in the *International Journal of Consumer Studies*, Vol 33(3), May, 2009. pp. 235-243.

### *THE NATURE OF AFFECTIVE FORECASTING: INDIVIDUAL DIFFERENCES IN PREDICTION ACCURACY FOR POSITIVE AND NEGATIVE EMOTIONS DURING OUTDOOR EXPERIENCES*

**ELIZABETH K NISBET & JOHN ZELENSKI OF CARLETON UNIVERSITY**



There is considerable research supporting the beneficial effects of nature on human physical and psychological health (Frumkin, 2001). People surrounded by concrete in urban centres may feel unhappy when deprived of natural spaces (Feral, 1998) and may be unaware of the potential for personal happiness available through spending time in nature, even nearby urban nature. Despite the fact that being in the natural environment may promote psychological well-being (Hartig, Kaiser & Bowler, 2001), people may underestimate the mood benefits or be poor at “affective forecasting” and therefore miss out on the psychological rewards

associated with nature experiences. Elizabeth Nisbet and John Zelenski, researchers at Carleton University in Ottawa, have been investigating these ideas in their walking studies. Not surprisingly, they find that even brief experiences outside in “nearby nature” promote positive affect, compared to being indoors. In other words, people feel happier after a 15 minute walk outside, compared to inside. To test the novel idea that people fail to appreciate these potential benefits and err in their affective forecasts regarding the natural environment, they ask participants to predict or ‘forecast’ their emotions, prior to an inside or outside walk. Outdoor walkers underestimate how happy they will be walking outdoors while the indoor walkers overestimate their happiness. These findings may help us to understand why more people are not spending outdoors, connecting with the natural environment. A strong connection with nature promotes psychological well-being as well as pro-environmental behaviour (Nisbet, Zelenski, & Murphy, 2009, 2010). Thus, by correcting underestimates of nature’s psychological benefits we may be able to improving human happiness as well as environmentally responsible behaviour.

## THE NATIONAL RESEARCH COUNCIL, OTTAWA ON

<http://www.nrc-cnrc.gc.ca/>



### *Healthy Buildings and Healthy Canadians*

Veitch, J. A. (2008). Connecting the building sciences and health sciences in Canada: Research gaps. In J. A. Veitch (Ed.), *Proceedings of the First Canadian Building and Health Sciences Workshop* (pp. 93-105). Ottawa, ON: National Research Council of Canada Institute for Research in Construction. (NRCC-51241). Available at: <http://www.nrc-cnrc.gc.ca/obj/irc/doc/pubs/nrcc51241/nrcc51241.pdf>.

**Abstract:** Canadians spend most of their time indoors. There is mounting evidence that the conditions they experience — air, light, sound, interior design, materials, and architectural features — influence their health. These effects may disproportionately occur in vulnerable populations, defined by individual, socioeconomic, cultural or geographic characteristics. In November 2008, the First Canadian Building and Health Sciences Workshop brought together Canadian researchers to identify the state of the science on buildings and health and to identify a way forward to improve the state of knowledge in Canada. This paper summarizes the state of knowledge and identifies research gaps as a first step in that process.

**Résumé:** Les Canadiens passent la plupart du temps à l'intérieur. Il est de plus en plus prouvé que les conditions dans lesquelles ils vivent ont une influence sur leur santé (l'air, la lumière, le bruit, la conception intérieure, les matériaux et l'architecture). Ces conséquences peuvent être particulièrement graves auprès des populations les plus vulnérables, définies ainsi suivant leurs caractéristiques individuelles, socio-économiques, culturelles ou géographiques. En novembre 2008, le premier atelier canadien sur les sciences du bâtiment et de la santé a permis de regrouper des chercheurs canadiens pour identifier l'état des sciences du bâtiment et de la santé et mettre au point une façon d'améliorer l'état des connaissances au Canada. Cet article résume l'état des connaissances et identifie les lacunes dans la recherche en tant que première étape de ce processus.

Veitch, J. A. (2008). Towards healthful buildings for healthy Canadians: Conclusions from the First Canadian Building and Health Sciences Workshop. In J. A. Veitch (Ed.), *Proceedings of the First Canadian Building and Health Sciences Workshop* (pp. 107-114). Ottawa, ON: National Research Council of Canada Institute for Research in Construction. (NRCC-51242). Available at: <http://www.nrc-cnrc.gc.ca/obj/irc/doc/pubs/nrcc51242/nrcc51242.pdf>.

**Abstract:** The First Canadian Building and Health Sciences Workshop brought together 50 Canadian experts from the building sciences and health sciences to discuss the state of knowledge at the intersection of those disciplines, to develop plans for how to address knowledge gaps, and to begin to break down barriers preventing both interdisciplinary research and knowledge transfer. This paper summarizes the discussions that took place at the workshop and outlines the next steps to be taken towards the ultimate goals of improved health for Canadians and improved Canadian building performance.

**Résumé:** Le premier atelier canadien sur les sciences du bâtiment et de la santé a permis de regrouper 50 experts canadiens pour discuter de l'état des connaissances au point de convergence de ces deux disciplines, d'élaborer des plans pour combler les lacunes dans les connaissances et de commencer à surmonter les obstacles que rencontrent la recherche interdisciplinaire et le transfert des connaissances. Cet article résume les discussions qui ont eu lieu pendant l'atelier et pointe les prochaines étapes à entreprendre pour atteindre les objectifs ultimes, à savoir, améliorer la santé des Canadiens ainsi que la performance des bâtiments canadiens.

## THE NATIONAL RESEARCH COUNCIL, OTTAWA ON

### *Healthy Buildings and Healthy Canadians Cont'd*

<http://www.nrc-cnrc.gc.ca/>



Veitch, J. A. (2009, October 29). *Workplace design contributions to mental health and well-being*. Invited plenary presentation at the 4th Canadian Congress for Research on Mental Health and Addictions in the Workplace, Toronto. (NRCC-51218) Available at: <http://www.nrc-cnrc.gc.ca/obj/irc/doc/pubs/nrcc51218.pdf>.

**Abstract:** People spend much of their waking time in their workplaces (~ 33% on a weekly basis), which raises the possibility that the conditions they experience there influence their health and well-being. The workplace design literature has given scant attention to mental health outcomes, instead focusing on healthy populations. Conversely, the mental health literature gives scant attention to the potential contribution of workplace design in preventing mental health problems nor on facilitating return to work. Taken together, however, the literature does suggest both lines of research and possible interventions. Existing knowledge suggests that workplace design can influence mental health via Light exposure effects on circadian regulation, social behaviour, and affect; Aesthetic judgement effects on at-work mood and physical well being and at-home sleep quality; Access to nature and recovery from stressful experiences; Privacy regulation and stimulus control. This presentation will review the literature in this area, propose new directions, and consider the implications of this information on the design choices made by business owners, designers, and facility managers. Providing suitable working conditions for all employees would avoid stigmatizing employees who have mental health problems, while facilitating prevention and return to work among those who do.

**Résumé:** Nous consacrons une part importante de notre temps de veille au lieu de travail (~ 33 % hebdomadairement), ce qui soulève des questions quant aux conditions qui y sont vécues qui peuvent influencer sur notre santé et notre bien-être. La documentation existante qui porte sur la conception des lieux de travail n'a jusqu'ici accordé que peu d'attention aux effets qu'ont les conditions de ces lieux sur la santé mentale, et s'est plutôt intéressée aux populations affichant un profil sain. De même, la documentation portant sur la santé mentale ne s'intéresse que peu à la contribution potentielle de la conception de ces environnements à la prévention des troubles mentaux ou à la facilitation du retour au travail. L'une et l'autre prises globalement, toutefois, elles suggèrent la viabilité des deux approches et indiquent des interventions possibles. Les connaissances accumulées jusqu'ici dans ce secteur semblent indiquer que la conception du lieu de travail peut influencer sur la santé mentale, par exemple par le biais des effets de l'exposition à la lumière sur la régulation du rythme circadien, sur le comportement social et sur l'affect; par les incidences du jugement esthétique sur l'humeur éprouvée au travail et sur le bien-être physique ainsi que sur la qualité du sommeil; par l'accès aux espaces verts et la récupération après des expériences stressantes; par la régulation de l'intimité et le contrôle des stimuli. Dans cette présentation, nous passerons en revue la documentation existant dans ce domaine, proposerons de nouvelles avenues à emprunter et tiendrons compte des répercussions de cette information sur les choix en matière de conception qui s'offrent aux propriétaires d'entreprises, aux concepteurs et aux gestionnaires d'installations. En procurant à tous les employés des conditions de travail adéquates, on éviterait le problème de la stigmatisation de ceux et celles qui peuvent souffrir de troubles mentaux, tout en facilitant la prévention de ces problèmes, ou, le cas échéant, le retour au travail.

## THE NATIONAL RESEARCH COUNCIL, OTTAWA ON

### *INTELLIGENT BUILDINGS*

<http://www.nrc-cnrc.gc.ca/>

Newsham, G. R., Mancini, S., Veitch, J. A., Marchand, R. G., Lei, W., Charles, K. E., & Arsenault, C. D. (2009). Control strategies for lighting and ventilation in offices: Effects on energy and occupants. *Intelligent Buildings International*, 1(2), 101–121. (NRCC-49249) DOI: [10.3763/inbi.2009.0004](https://doi.org/10.3763/inbi.2009.0004) Available at: <http://www.nrc-cnrc.gc.ca/obj/irc/doc/pubs/nrcc49249/nrcc49249.pdf>

**Abstract:** Participants (N=126) spent a day in a full-scale office laboratory, completing questionnaires and standard office tasks. Some participants experienced typical constant lighting and ventilation conditions, whereas others were given personal control over the dimming of lighting in their workstation and over the flow rate of air from a ceiling-based nozzle in their workstations. Half of the participants, some with personal control and some without, were exposed to environmental changes typical of demand-response load shedding in the afternoon: Workstation illuminance was reduced by 2%/min, and ambient air temperature increased by ~1.5 °C over a 2.5 hour period. Results showed that personal environmental control improved environmental satisfaction. Personal control over lighting led to an average energy reduction of around 10% compared to a typical fixed system; participants with personal control also reduced flow rate compared to the constant condition. Use of each control type averaged 2 – 3 control actions per person per day, which dropped to less than one control action per person per day in a longer-term pilot study (N=5) conducted in the same space. Load shedding had some small negative effects for occupants, but in practice is unlikely to create substantial hardships, and is a reasonable response to peak power emergencies.

**Résumé:** Des participants (N=126) ont consacré une (1) journée à remplir des questionnaires et à accomplir des tâches ordinaires liées au travail dans un bureau. Certains d'entre eux ont été exposés à des conditions d'éclairage et de ventilation constantes types, tandis que d'autres avaient accès à un contrôle individuel sur la gradation progressive de l'intensité de l'éclairage dans leurs aires de travail et sur le débit de circulation de l'air qui y était admis au moyen d'une tubulure de ventilation au plafond. La moitié des participants, dont certains disposaient d'un accès à un appareil de contrôle individuel et d'autres, non, ont été exposés à des changements environnementaux caractéristiques de l'adaptation à la demande (« délestage ») en cours d'après-midi : l'intensité de l'éclairage dans les aires de travail était réduite de 2 %/min, et la température de l'air ambiant, augmentée de ~1,5 °C sur une période de 2,5 heures. Les résultats révèlent que le contrôle individuel de l'ambiance (éclairage et ventilation) a amélioré le degré de satisfaction par rapport à l'environnement au travail. L'utilisation des appareils de contrôle individuel de l'éclairage a entraîné une baisse de la consommation d'énergie moyenne d'environ 10 % comparé à une installation fixe du type courant; les participants disposant d'un contrôle individuel de la ventilation ont également réduit le débit d'air par rapport aux conditions à débit constant. L'utilisation de chaque type de contrôle s'est traduite par une moyenne de 2 à 3 interventions de contrôle par personne, par jour, qui a chuté à moins d'une (1) intervention journalière par personne dans le cadre d'une étude pilote à plus long terme (N=5) ayant été menée à l'intérieur du même espace. Bien que l'adaptation à la demande (délestage) ait eu certaines incidences négatives légères pour les occupants des lieux, dans la pratique, elle risque peu de leur être préjudiciable de façon marquée et demeure une réponse justifiée aux situations d'urgence en périodes de consommation de pointe.

## THE NATIONAL RESEARCH COUNCIL, OTTAWA ON

### *INTELLIGENT BUILDINGS CONT'D*

<http://www.nrc-cnrc.gc.ca/>

Newsham, G. R., Cetegen, D., Veitch, J. A., & Whitehead, L. (2010). Comparing lighting quality evaluations of real scenes with those from high dynamic range and conventional images. *ACM Transactions in Applied Perception*, 7(2), Article 13. doi: <http://doi.acm.org/10.1145/1670671.1670677>

**Abstract:** Thirty-nine participants viewed six interior scenes in an office/laboratory building and rated them for brightness, uniformity, pleasantness, and glare. The scenes were viewed in three presentation modes: participants saw the real space and images of the spaces on a 17-inch computer monitor in both conventional and high dynamic range (HDR) mode. HDR mode allowed the high range of luminances in the real scene to be accurately reproduced, with maximum luminances more than 10 times higher than those in the conventional images. For those participants who saw the images before the real spaces (the most relevant order for practical applications), the HDR images were rated as significantly more realistic than the conventional images. However, this effect was limited to scenes with relatively large areas of high luminance, which in this study was represented by scenes with windows and daylight. Ratings of the HDR images were significantly related to simple photometric descriptors of the images in the expected manner: Brightness and glare ratings were positively correlated with overall and elevated luminance, and nonuniformity ratings were positively correlated with luminance variability. These results suggest that for evaluations of visual appearance of interior scenes featuring large areas of high luminance, the HDR method may be used as a surrogate for experiencing a real space both for lighting quality research, and in the design process.

**Résumé :** Trente-neuf (39) participants ont visionné six (6) scènes d'intérieur dans un édifice contenant des bureaux et des laboratoires, puis les ont notées quant aux facteurs de luminosité, d'uniformité, d'agrément et d'éblouissement. Les scènes en question ont été visionnées selon trois (3) modes de présentation différents : les participants voyaient l'espace réel; les images de l'espace apparaissaient sur un écran d'ordinateur de 17 po en mode conventionnel; et ces mêmes images étaient présentées à cet écran en mode à grande portée dynamique (GPD). Le mode GPD permettait une reproduction précise de la gamme élevée de luminance de la scène réelle, comprenant des valeurs de luminance maximales de plus de 10 fois supérieures à celles des images conventionnelles. Pour les participants qui voyaient les images avant les espaces réels (soit l'ordre de présentation le plus judicieux dans les applications pratiques), les images GPD ont été notées par les participants comme étant considérablement plus réalistes que les images conventionnelles. Cependant, cette incidence se limitait aux scènes présentant des aires relativement étendues de haute luminance, soit, dans le cadre de cette étude, des scènes incluant des fenêtres et de la lumière naturelle. La notation des images GPD s'est révélée être rattachée dans une large mesure à des descripteurs photométriques simples des images et de façon prévisible : les notes pour la luminosité et l'éblouissement étaient corrélées positivement à la hauteur (intensité) et à la globalité de la luminance, et les notes pour la non-uniformité, à la variabilité de la luminance. Ces résultats laissent entendre qu'aux fins de l'évaluation de l'apparence des scènes intérieures comportant des aires de haute luminance étendues, le mode GPD peut être utilisé comme substitut de visionnement d'un espace réel, tant pour la recherche dans le domaine de la qualité de l'éclairage qu'au cours du processus de la conception.

**NEW JOURNAL: *JOURNAL OF FOSTERING SUSTAINABLE BEHAVIOR***  
**EDITOR: *DR. DOUG MCKENZIE-MOHR***

The transition toward a sustainable future has already begun. Numerous initiatives to encourage behaviors that lower CO2 emissions, reduce waste, increase energy efficiency, reduce water consumption, and alter transportation patterns are first footholds in the transition to sustainability. This journal was launched to assist those who design these programs. Its purpose is simple: to provide information that can enhance the success of their efforts.



Each article in the Journal of Fostering Sustainable Behavior (JFSB) will focus on one specific behavioral change, such as the installation by householders of lowflow shower heads. Articles will be organized in four sections. The first section includes a detailed description of why it is important to foster the behavioral change (e.g., installation of low-flow shower heads reduces water consumption, enhances energy efficiency and lowers CO2 emissions). The second section reviews what is presently known regarding the perceived barriers and benefits to the target audience engaging in the behavior. The third section describes the most effective programs that have been delivered to date to foster the behavioral change. Finally, based on the previous information, the fourth section details how best to foster the behavioral change and indicates how this strategy should be pilot tested. Subsequent to acceptance for publication, articles will be copy edited to ensure a high level of readability by a non-academic audience. Accepted articles will be published online at the Fostering Sustainable Behavior website. To ensure broad dissemination, each article will be announced via the Fostering Sustainable Behavior listserv (this listserv currently reaches a global audience of over 6000 environmental program planners daily).

Submitted papers should be prepared in APA format and should be 15-20 double-spaced pages in length, including references.

## WEB RESOURCES ON CONSERVATION PSYCHOLOGY

**Conservation Psychology website:**

**<http://www.conservationpsychology.org/>**

**Conservation Psychology listserv:**

**<https://listserver.itd.umich.edu/cgi-bin/lyris.pl?enter=conservation-psychology>**

## Canadian Psychological Association

[www.cpa.ca](http://www.cpa.ca)

### Environmental Psychology Section

**visit us online at:**

[https://web.uvic.ca/~fgrouzet/CPA\\_Environmental/](https://web.uvic.ca/~fgrouzet/CPA_Environmental/)



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## Join Us

Please send ideas and submissions for the next newsletter to me, Loraine Lavallee, at [lavallee@unbc.ca](mailto:lavallee@unbc.ca).

Looking forward to seeing you at the CPA meetings in Winnipeg in June. If you are interested in becoming involved in the Environmental Psychology Section, please join us at our business meeting on Friday, June 4th 12:30—1:25 in the Cabinet Room (14 Boardroom), 2nd fl of the Delta Hotel.



*Photo by Barry Booth*

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