



# CANADIAN PSYCHOLOGICAL ASSOCIATION

## Section on Environmental Psychology

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*Section members conduct research and advance theory to understand and to improve interactions between human behavior and the physical environment, both built and natural. Our members' varied interests include: management of scarce natural resources; effects of extreme environments on personality and behaviour; territoriality and personal space; behavioural and mood effects of lighting and noise; perception and evaluation of building function and aesthetics; and, architectural design. Members receive the section newsletter, published three times annually.*

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**Winter Issue, 2002**

**Cheuk F. Ng, PhD**

Happy New Year to you all! I wish to thank those of you who have contributed to this issue.

### **CPA Annual Convention**

The 63rd CPA Annual Convention will be held at the Student Union Building of the University of British Columbia in Vancouver, BC, **May 30—June 1, 2002**. The convention will be held in conjunction with the annual meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science (BBCS).

Our section has an exciting programme this year. So mark your calendar now. The preliminary schedule is as follows:

1. Section Keynote Address: May 30 (Thurs.), 2002, 12:00-12:55 PM, in Room 211.

*Environmental Gerontology: Maximizing P-E Fit for the 65 and over Crowd*, presented by Dr. Gloria Gutman, Professor and Director of Gerontology Research Centre and Programs at

Simon Fraser University, and President, International Association of Gerontology.

*Abstract* This presentation describes recent work in Environmental Gerontology at the Simon Fraser University Gerontology Research Centre. Topics to be discussed include design for dementia, application of technology for home based long-term care, and universal design in the kitchen. As well, some macro, more policy-related issues will be discussed such as the role of assisted living in the Canadian context and what we really mean by aging-in-place. The presentation will conclude with a summary of four recent studies involving relocation of older persons.

2. Section symposium: May 31 (Fri.), 2002, 1 – 2:55 PM, in Room 215.

*New Directions in the Measurement of Environmental Attitudes*, presented by Robert Gifford, Luc Pelletier, Celine Blandchard, and Yoko Heath.

The papers to be presented include:

- New Directions in the Measurement of Environmental Attitudes
- Why Are You Doing Things for the Environment? A Measure of Self-Determined and Non Self Determined Motivation for Pro-Environmental Behaviors
- Why Do People Fail at Self-Regulating Pro-Environmental Behaviors? The Amotivation Towards the Environment Scale
- The Affective Dimension of Environmental Attitudes: Psychometric Properties and Some Correlates
- Initial Development of a Scale to Measure Attitudes toward Extreme Pro-Environmental Actions

*(The abstracts for this session will be in the next issue of the newsletter.)*

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3. Section symposium: May 31 (Fri.), 2002, 3 – 4:55 PM, in Room 214.

***Origins and Consequences of Environmental Satisfaction in Open-Plan Offices***, presented by Jennifer Veitch, Kelly Farley, Kate Charles, and Victor Cantano

*(Please refer to a later section for abstracts of the papers to be presented.)*

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4. Environmental Psychology Poster Session, 10:30am -12:30 PM, May 31 (Fri.), 2002, in Party Room.  
One submission was reviewed.
5. Section Business Meeting, May 31 (Fri.), 2002, 8:00 – 8:55 AM, in Room 205.

At this meeting, we shall elect the officers for 2002-2003, examine our financial health, and plan for the future. **Please start thinking about nominating yourself or someone to be next year's officers.** For our section to continue, we need you, old members and new members, to volunteer your talents, skills, and ideas.

### **?? ?A Tour???**

The Gerontology Research Centre at Simon Fraser University in collaboration with the British Columbia Institute of Technology's Technology Centre has built the **Dr. Tong Louie Living Lab**. It is a research facility for research and training activities that aim to improve the relationships between people and their living and working environments. For more information, visit their website at <http://sfu.ca/livinglab>

I would like to visit this Lab, and wonder if some of you are interested too. Please let me know if you do. If there is enough interest, I'll contact Dr. Gloria Gutman to see if we can arrange a visit during the Convention.

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### **Section Symposium Abstracts**

#### **Origins and Consequences of Environmental Satisfaction in Open-Plan Offices**

**Jennifer A. Veitch**, National Research Council of Canada, Ottawa ON (Moderator)

#### Abstract:

This symposium consists of three papers from an ongoing multidisciplinary project examining open-plan environments. The overall project includes experimental and computer simulation studies of the effects of open-plan office designs on lighting, acoustic, and ventilation conditions, and laboratory and field studies of occupant satisfaction with those conditions. The first two papers here are analyses

of data from a field study. In the first, the authors report the validation of measures of satisfaction with aspects of the physical environment, and their relationships to measures of overall environmental satisfaction and job satisfaction. The second paper reports analyses of the effects of workstation size, partition height, and presence of a window on the environmental satisfaction measures. The third paper reports results from two laboratory experiments on the effects of simulated ventilation noise used to mask speech sounds, one examining the effects of varying noise spectra on satisfaction with acoustic conditions and the other varying both spectrum and noise level. Finally, our discussant will provide commentary on the papers and their implications from an industrial-organisational psychology perspective.

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### **Environmental Satisfaction in Open-Plan Offices: 1. Scale Validation**

**Kelly M. J. Farley**, *Carleton University, Ottawa, ON*

**Jennifer A. Veitch**, *National Research Council of Canada, Ottawa, ON*

#### Abstract

As part of a larger project concerning the design and operation of open plan offices, a field study was conducted to determine the effects of open-plan office design (particularly workstation size and partition height) on the indoor environment and on occupant satisfaction with that environment. Data collected thus far represents the first portion of a pre-post renovation study of three government buildings. A 27-item questionnaire was administered to 419 government workers; it included 18 individual ratings of satisfaction with environmental features, a 2-item index of overall environmental satisfaction, and a 2-item index of job satisfaction. This paper reports analyses of the underlying factor structure of the 18 individual environmental features ratings, and of a model incorporating environmental and job satisfaction in

relation to these ratings. Exploratory and confirmatory factor analysis revealed the existence of three latent variables: Satisfaction with Privacy, Satisfaction with Lighting and Satisfaction with Ventilation. Subsequent structural equation modelling analyses provided modest support for a model in which the latent variables relate directly to overall environmental satisfaction, and in which environmental satisfaction directly relates to job satisfaction.

### **Environmental Satisfaction in Open-Plan Offices: 2. Workstation Characteristics as Predictors**

**Kate E. Charles & Jennifer A. Veitch**

*National Research Council of Canada, Institute for Research in Construction, Ottawa, ON*

#### Abstract

Open-plan offices appear to be a flexible and cost-effective approach to office design. However, surveys reports consistently find that open-plan office occupants experience a lack of privacy, increased interruptions, and unfavourable ambient conditions. Understanding the influence of open-plan workstations on occupant satisfaction might lead to improvements in their design, to mitigate such problems. This paper is the second in a series of reports of a field survey of physical conditions and environmental satisfaction in three public sector office buildings. The data are from time 1 in the pre-post renovation study. This paper reports analyses of workstation characteristics (workstation area, minimum partition height and windows) as predictors on four environmental satisfaction measures (satisfaction with privacy, ventilation and lighting, and overall environmental satisfaction). Hierarchical regression analyses revealed that workstation area was positively related to satisfaction with privacy; windows were positively related to satisfaction with lighting and negatively related to satisfaction with ventilation; and minimum partition height was negatively related to overall environmental satisfaction. Results are

discussed in relation to the favourable workstation characteristics observed in the current sample, the effects of alternative workstation characteristics and personal and organisational factors, and the potential mediating role of physical ambient conditions.

### **Masking Speech in Open-Plan Offices: Noise Level and Spectral Composition Effects on Acoustic Satisfaction**

**Jennifer A. Veitch, John S. Bradley, Louise M. Legault**

*National Research Council of Canada, Ottawa*

#### Abstract

A lack of privacy and distractions from others' conversations are among the most common complaints about open-plan offices. Ventilation-type sounds, depending on their spectrum and level, can mask speech sounds, but little is known about relationships between the acoustic conditions created by such sounds and occupant satisfaction with those conditions. Two within-subjects experiments were designed to meet this need. Participants experienced 15 different simulated ventilation noises in combination with simulated telephone conversations, and provided ratings of their satisfaction with each noise condition. Experiment 1 examined the effects of 15 different simulated noise spectra. Experiment 2 was a 3 x 5 factorial within-subjects design having three noise spectra at each of five A-weighted noise levels, for a total of 15 different noise conditions. Experiment 1 revealed that acoustic conditions with relatively more high-frequency sound are less satisfactory, despite their good speech masking qualities. Experiment 2 revealed that although increasing the loudness of the sound can improve speech masking, the improvement is less for noise spectra that are poor at speech masking. Furthermore, sound levels above approximately 45 dB(A) are too loud. The results of the two experiments provided guidance for identifying acoustical conditions likely to prove satisfactory to occupants.

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## **Getting to Know You.....**

Let me start the ball rolling...

### **Cheuk F. Ng**

I have been a member of the Section since the mid-80s and the Chair and newsletter editor for four years. So I am eager to pass on the torch to someone else.

Born and raised in Hong Kong, I came to Canada in 1978 with great enthusiasm to pursue my undergraduate studies in the frigid, peaceful, and sparsely populated Manitoba. This new life experience and my previous work experience in real estate appraisal sparked my interests in environmental psychology. I continued on with my graduate work at the University of Victoria under the mentorship of Professor Robert Gifford – a familiar figure to many of you.

As I move on in my career, my teaching interests have cut across several applied, non-clinical areas of psychology. My research interests remain in the environmental, social, and cross-cultural psychology areas.

My early research was in noise and privacy in the office. After several years' tour of the country as a nomadic, junior academic, I joined Athabasca University – that specializes in distance education -- and moved to the cottage country outside Athabasca, a town of 2,000. Suddenly, I had little exposure to noise, not even the din of students in the hallway. "What do I do now," I asked myself.

Drawing on my experience as an immigrant, I have become interested in how newcomers relate to their new physical environment. I am now conducting a research project entitled The Integration Experiences of Immigrant Seniors in collaboration with four researchers from U. of Alberta and U. of Regina and funded by the Prairie Centre of Excellence for Research on Immigration and Integration. My

component of the project focuses on housing and neighborhood issues.

I taught environmental psychology at St. Thomas University, and have developed course materials for a course entitled *Psychology and the Built Environment* at Athabasca University.

**Don Mazer** is the first Coordinator of a new program in Environmental Studies at the University of Prince Edward Island. This is a broadly interdisciplinary, systems-oriented program that encourages addressing ecological issues across the curriculum, and includes courses from 14 different departments and four faculties. His course in ecopsychology is included in this program. For more information: [mazer@upei.ca](mailto:mazer@upei.ca).

### **Dr. Kate Charles**

I would like to introduce myself as a new section member and a relative newcomer to the field of environmental psychology. My background is in I-O psychology: I completed my PhD, focusing on semi-autonomous teamworking, at the Institute of Work Psychology, University of Sheffield, UK. I became interested in environmental psychology during my PhD studies, partly through personal experiences but largely because of the organisation where I collected PhD data. The employees of this organisation make photographic film; in order to protect this light sensitive product, much of the manufacturing process has to be undertaken in complete darkness. Although not the main focus of my PhD, I was fascinated by this environment and how it influenced employees' work experiences and their relationships with team members. At around the same time, a network of researchers and practitioners interested in environmental psychology was founded in the UK (EPUK) and I attended their first conference, at London Guildhall University in 1999. I enjoyed the wide range of research topics presented and decided that I would like to become more involved in environmental psychology.

I moved to Canada in 2001, to take up a NSERC postdoctoral fellowship in environmental psychology at the National Research Council of Canada's Institute for Research in Construction; recently I was hired to stay on as a research officer.

Currently, I am working on a multi-disciplinary project on cost-effective open-plan environments (COPE), which aims to develop a decision tool for the design, furnishing, and operation of open-plan offices that are satisfactory to occupants, energy-efficient, and cost-effective. My work on this project has included a literature review on the relationship between outdoor ventilation rates and occupant satisfaction, and field data analysis on the effects of workstation area, partition height and windows on occupant satisfaction.

So far, I am enjoying living in Canada and find the snowy winters much easier to deal with than the British rain.

**Cecile Lacombe** is an architect who has been working for 10 years in France, and is now in a PhD program at U. of Laval. Cecile's interest is in children's environments. E-mail address: [cecile.lacombe@arc.ulaval.ca](mailto:cecile.lacombe@arc.ulaval.ca)

## **Upcoming Conferences**

1. The Second EPUK (Environmental Psychology in the UK) Conference will be held 25-27 March, 2002, at the University of Surrey, Guildford, Surrey, England. To register, please send an e-mail to Patricia Yehia ([p.yehia@surrey.ac.uk](mailto:p.yehia@surrey.ac.uk)).
2. The Annual Meeting of the Canadian Acoustical Association will take place in Charlottetown, Oct 9-11 2002. Papers in environmental acoustics are welcome. Visit web-site at <http://caa-aca.ca/PEI-2002.html>. For more information, contact Annabel Cohen at [acohen@upei.ca](mailto:acohen@upei.ca).

## New Publications

1. Kidner, D.W. (2001). *Nature and psyche*. Albany: SUNY Press. (recommended by Don Mazer)
2. *The Handbook of environmental psychology* (2<sup>nd</sup> ed.), edited by Robert Bechtel, R. and Arza Churchman, is available from Wiley Publishers (www.wiley.com). ISBN: 0-471-40594-9

The Handbook contains four sections: Theories, Methods, Applications, and Future directions in environmental psychology.

### Theories:

- The new environmental psychology: Human interdependence paradigm (T. Garling, et al.)
- Environmental science, environmental behavior and theory (M. Bonnes)
- Environmental Anthropology (E. Liebow)
- Environmental Sociology (R. Dunlap)
- Healthy design (R. Lawrence)
- Restorative environments (T. Hartig)
- Context in the study of environment: Behavior relations (S. Wapner & J. Demick)
- Ecological psychology: Historical contexts, current conception, prospective directions (A. Wicker)
- Links to urban planning (A. Churchman)
- Environmental psychophysiology (R. Parsons & L. Tassinari)
- Spatial structure of environment and behavior (J. Peponis & J. Wineman)

### Methods

- Applications that have made a difference (R. Gifford)
- Experience sampling (M. Csikszentmihaly & J. Hektner)
- Methodology for collaborative planning (L. Horelli)
- Meta analysis (A. Stamps)
- Behavior based interventions for environmental protection (E. Geller)

- Structural equation modelling (V. Corral)
- CPTED (R. Taylor)
- Environmental conflict and its resolution (T. D'estree, et al.)
- Behavioral based programming (B. Hershberger)
- Phenomenological methods (C. Grauman)

### Applications

- What environmental behavioral researchers can do to make a difference (F. Kuo)
- Ethical issues in environmental psychology (L. Rivlin)
- Cruise the Internet (D. Stokols)
- Emerging theoretical and methodological perspectives on conservation behavior (J. Vining & A. Ebreo)
- Noise and mental health (A. Bronzaft)
- Contaminated environments (M. Edelstein)
- Environmental psychology in museum, zoos and other exhibition centres (S. Bitgood)
- Wayfinding (J. Carpmann & M. Grant)
- Geographic Information System (R. Golledge)
- Women's issues (K. Franck)
- Environments for aging (K. Day & M. Calkins)
- Work environments: The changing workplace (J. McCoy)
- Policies that make a difference (L. Kruse)
- Climate, weather and crime (J. Rotton & E. Cohn)
- Children's environments (K. Korpola)
- Environmental management (E. Urrutia)

### Future Directions

- Transactionally-oriented research: Examples and strategies (I. Altman, et al.)
- Personal space in a digital age (R. Sommer)
- Learning from POEs (C. Zimring)
- Clinical approaches to environmental behavior (K. Anthony)
- The history and future of disaster research (L. Peek & D. Mileti)
- Community planning (E. Wiesenfeld)
- On to Mars (R. Bechtel)

3. *The Cognition of geographic space* is written by Rob Kitchen and Mark Blades and published by IB Tauris Publishers, New York and London.

In this book, the authors synthesize ideas and empirical findings from a number of disciplines, including psychology, to provide a critical assessment of how we think about and behave in geographic space. They detail the current state of cognitive mapping research, and put forward a new conceptual model of cognitive mapping.

4. *The Handbook of Environmental Sociology*, edited by Riley E. Dunlap and William Michelson, and published by Greenwood Press, is now available from the publisher at <http://www.greenwood.com>. (ISBN 0-313-26808-8)

This Handbook is designed as an overview of the first quarter century of American environmental sociology. It has 16 chapters:

- Environmental sociology: An Introduction (R. E. Dunlap, W. Michelson, & G. Stalker)
- Sociological theory and the built environment (F. H. Buttel & C. R. Humphrey)
- Theory and the sociological study of the built environment (W. Michelson & W. van Vliet)
- Socio-behavioral qualities of the built environment (S. Ahrentzen)
- Macro-environments and people: Cities, suburbs, and metropolitan areas (D. Popenone & W. Michelson)
- Designing the built environment (L. Kilmartin)
- Rural environments and agriculture (A. E. Albrecht & S. H. Murdock)
- Energy, society, and environment (L. Lutzenhiser, C. K. Harris, & M. E. Olsen)
- Natural hazards and disasters (J. M. Nigg & D. Mileti)
- Technological hazards and disasters (S. Kroll-Smith, S. R. Couch, & A. G. Levine)

--Risk, technology, and society (T. Dietz, R. S. Frey, & E. A. Rosa)

--Human dimensions of global environmental change (T. Dietz & E. A. Rosa)

--Social impact assessment and technology assessment (by K. Finsterbusch & W. R. Freudenburg)

--The environmental movement in the United States (A. G. Mertig, R. E. Dunlap, & D. E. Morrison)

--Environmental concern: Conceptual and measurement issues (R. E. Dunlap & R. E. Jones)

--Environmental sociology in non-academic settings (B. A. Payne & C. Cluett)

5. The following EP-related papers recently appearing in a special issue of the *History and Philosophy of Psychology Bulletin*. Malhi, Holton, Knapik, Regehr and Warren are all students at the U of Calgary; Botschner is at Guelph University:

**Rogers, T. B.** (2001). Nature at the borders: Exploring alternatives to mainstream psychology's problematic approach to environmental concerns. *History and Philosophy of Psychology Bulletin*, **13**(2), 2-4.

Malhi, R. (2001). Culture and Nature in the Mesopotamian Epic of Gilgamesh. *History and Philosophy of Psychology Bulletin*, **13**(2), 5-9.

Holton, T. L. (2001). The World Around Them: The Changing Depiction of Nature in Owl Magazine. *History and Philosophy of Psychology Bulletin*, **13**(2), 10-15.

Knapik, M. (2001). The Way of the Tiger: Conceptualizations of Nature in Poetry by Children. *History and Philosophy of Psychology Bulletin*, **13**(2), 2-4.

Regehr, C. G. (2001). Shooting From the Lip: Empiricist Accounting in a Debate Concerning Elk Hunting. *History and Philosophy of Psychology Bulletin*, **13**(2), 21-25.

Warren, J. R. (2001). The Evolutionary Myth of 'Bi-Polar' Bears. *History and Philosophy of Psychology Bulletin*, **13**(2), 27-33.

Botschner, J. V. (2001). Comment of Rogers et al: Transdisciplinary psychology and social transformation. *History and Philosophy of Psychology Bulletin*, **13**(2), 33-35.

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Please send any information about conferences, publications, teaching and research ideas, brief reports on conferences attended, etc. to me at:

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