



CANADIAN PSYCHOLOGICAL ASSOCIATION

Section on Environmental Psychology

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.

Winter 2003

Message from the Editor

Kate Charles, PhD. kate.charles@nrc-cnrc.gc.ca

Welcome to a new year, and a new edition of the newsletter! I hope you all had a successful festive season, and are making the most of winter in your respective parts of Canada (and the world)!

Many of you will have received this issue of the newsletter via email, in PDF format. This method of delivery is a more cost-effective and timely way to distribute the newsletter, and future editions will also be sent out this way. We hope that you find this method of delivery useful and convenient – any feedback would be gratefully received.

If you did not receive the newsletter by email, but would like to do so, please make sure we have your current email details (CPA members can contact Sylvia Spallin, cpamemb@cpa.ca; BEING members please contact Mark Sandilands, marksan@telusplanet.net).

I hope you enjoy this edition of the newsletter. Contributions to future editions are most welcome, and can be sent to me at:

Kate Charles, National Research Council of Canada, Institute for Research in Construction, Building M-24, 1200 Montreal Road, Ottawa, ON, K1A 0R6.

tel: 613-991-0939 / fax: 613-954-3733

email: kate.charles@nrc-cnrc.gc.ca

New Members

Welcome to our newest members:

- Wojke Abrahamse
- Ben Barkow
- Catherine Beaulieu
- Maria Buse Thorne
- Clinton Marquardt
- Clare Porac
- Donna Reist

Message from the Section Chair

Jennifer A. Veitch, Ph.D., Jennifer.veitch@nrc-cnrc.gc.ca

A few years ago, *American Psychologist* published a 'state of the science' review of environmental psychology by Dan Stokols, which sparked a series of commentaries by other prominent environmental psychologists. "Is the glass half empty, or half full?" was the central question. Are we in decline, based on the small numbers of environmental psychologists employed in academic settings and the dearth of new positions? Or are we insidiously successful, having infiltrated many other departments and even some other domains within psychology?

I tend to the "half-full" side of the equation, and have seen good evidence this year of it. We have a joint CPA/Section Invited Speaker at the 2003 Convention in Hamilton, Dr. Gary Evans, who will speak on the

environments of childhood poverty. He's a cross-appointed professor, in Design and Environmental Analysis, and Human Development at Cornell. His most recent publications have been directed at developmental psychologists, introducing ideas about environmental quality effects on development. I'm hopeful that we will interest many other CPA convention attendees in this invited address because the topic is one that is both socially important as well as theoretically interesting.

Readers of the electronic discussion list will have seen a posting from me recently concerning an opportunity for public comment on the 2005 revision of the National Building Code of Canada. Although most sections of the code are technical in nature, underlying its provisions are decisions about what's important in buildings, and psychologists - environmental psychologists in particular - have something to contribute here, particularly in defining health and well-being. Here too is an example of our infiltration into unexpected areas! (If you missed the mailing, contact me and I'll send you information: jennifer.veitch@nrc-cnrc.gc.ca).

If you have examples of unexpected places where environmental psychology or environmental psychologists are found, please send them on to me. This could be the source of a novel convention session in a future year.

Meantime, please mark your calendars for June 12-14, 2003, in Hamilton, and take note of the convention programming described elsewhere in this newsletter. See you there!

Email Discussion List

In September 2002, we launched an email discussion list for the section. Since its creation, this discussion list has served as a useful communication tool for SEP and BEING members. The list is restricted to members of the CPA Section on Environmental Psychology, and BEING members, primarily to deter spammers. If you're not currently subscribed to the list, you can join by sending an email to the list's administrator, Jennifer Veitch – jennifer.veitch@nrc-cnrc.gc.ca. Alternatively, you can subscribe directly at <http://lists.cpa.ca/mailman/listinfo/enviro.cpa.ca>

To post a message to the list, send email to: enviro.cpa.ca@lists.cpa.ca

CPA Convention 2003

The 2003 CPA Convention, to be held in Hamilton, Ontario, is fast approaching. The Section on Environmental Psychology has sponsored two key speakers to appear at the conference.

CPA/SEP Invited Speaker

CPA and the Section on Environmental Psychology together have invited Dr. Gary Evans to give an address at the CPA Convention in Hamilton, Ontario, in June 2003. Dr. Evans is Professor of Design and Environmental Analysis and of Human Development at Cornell University. He is an environmental and developmental psychologist interested in the role of physical and social factors in the ecology of human development. His most recent publications have appeared in *Child Development*, *Developmental Psychology*, *Environment and Behavior*, the *Journal of Environmental Psychology*, the *Journal of Personality and Social Psychology*, and *Psychological Science*.



Dr. Gary Evans

The Environment of Childhood Poverty - Gary W. Evans, Ph.D., Cornell University

Twenty percent of children in North America live in poverty. The rates are much higher worldwide. Although it is widely accepted that poverty is inimical to children's development, why is this so? This talk will describe the physical and social conditions of poverty in North America, highlighting the confluence of risk factors present in low income families. I then briefly describe evidence that exposure to multiple physical and psychosocial risk factors may be an especially pathogenic aspect of childhood poverty.

SEP Keynote Speaker

This year's SEP keynote speaker at the CPA convention will be Dr. Ingrid Stefanovic, from the Department of Philosophy at the University of Toronto.

Sustainability and Sense of Place: Philosophy Meets Psychology - Ingrid Stefanovic, Ph.D. Dept. of Philosophy, St. Michael's College, University of Toronto

This presentation discusses some of the philosophical presuppositions of current attitudes to sustainability. It argues that decision makers frequently assume a calculative paradigm that restricts policies and programs to empirically quantifiable measures. The case is made that there are important connections between sustainable development and sense of place, and these connections can best be investigated through qualitative, phenomenological methods.

Environmental problems are frequently viewed as technical issues, requiring solutions such as energy-efficient automobiles or more effective recycling programs. As important as such alternative technologies will be to achieving sustainability, equally important challenges relate to redefining social institutions and modifying everyday patterns of living.

In the words of economist William Rees, "the need is for more appropriate philosophy than for appropriate technology." Philosophy and psychology both attend to human perceptions and modes of behaviour. The philosophical project is particularly interested to elicit taken for granted assumptions, value judgments and underlying paradigms that condition human behaviour.

A dialogue between environmental philosophy and environmental psychology becomes all the more pressing as we try to better understand and modify environmentally destructive behaviour and move towards a more sustainable future.

Research Activities

Robert Gifford, PhD., rgifford@uvic.ca

I am have just completed a CMHC project that examined the relationship between housing quality and children's socioemotional health.

The study examined the possibility that children's emotional well-being, manifested in the frequency of mild behavioural problems, might be associated with housing quality. Recent studies of low-income children in the US have reported such connections. This study examined Canadian children from households with a wide range of incomes in a medium-sized francophone city (Québec) and a medium-sized Anglophone city (Victoria).

Each of 95 children, aged 9-12, recruited from public schools in Victoria and Québec City were independently assessed on a standard behaviour problem inventory by their school teacher and one of their parents. Trained assessors visited the children's residences and rated them and the immediate neighbourhood on 245 physical features (e.g. exposed wiring, clutter, damaged walls or floors). The child's parent was also interviewed concerning a further 65 physical aspects of the child's residence that would not be noticed in a one-time walk-through (e.g. the frequency with which the sink drains clogged or furnace problems occurred).

The psychometric properties of the behaviour-rating instrument was examined and found to be excellent. Several indices of housing quality were created from the 310 items in the housing checklist and interviews.

The children, on average, were viewed by their parent and teacher as having a few mild behavioural problems, as expected for a group of typical children. The residences ranged from high quality and value to low quality and value. Thus, both the children and the residences varied across a wide but normal range of socioemotional health and housing quality.

The number of children's behavioural problems, as measured by the combined assessments of the parent and teacher, were found to be significantly related to two indices of housing quality: the general condition of the residence's interior, and the general physical condition of the neighbourhood. Children in residences and neighbourhoods with more physical problems manifested more behaviour problems.

The implications of these findings, together with a number of specific suggestions for future research are offered, with the cautions that the suggestions are based on a study that could not draw causal conclusions, and should be replicated and expanded. Nevertheless, the study empirically demonstrates that there are statistically significant connections between housing quality and the socioemotional health of Canadian children.

Practitioner Activities

Ben Barkow, PhD., President, Behavioural Team, A Corporation, Toronto

dr.ben@bteam.com <http://www.bteam.com>

For the July 2002, World Youth Day (WYD) and Papal Visit in Toronto, I was assisting in crowd management and emergency planning. I was involved in reviewing the event plans, writing scripts for voice announcements, and otherwise consulting on

circumstances which related to human safety, event efficiency, and participant happiness. I was also present during the event, to observe, warn of emerging threats, and liaise with event staff.

Here, I've described some of the lessons learned from that event. Learning lessons inevitably means noticing shortcomings. There is no suggestion here that *all* or even *most* of these shortcomings could have been identified beforehand by the WYD organisation.

Background: The festive weeklong gathering of Roman Catholic youth from around the world was comprised of several massive gatherings at CNE Exhibition Place, along beautiful University Avenue, and in a derelict airstrip being converted to the federally sponsored Downsview Park. The crowds ranged from 200,000 to perhaps 800,000. The Papal Mass was the climax of the Pope's visit, with the over-night camping Pilgrims joined by the public on Sunday morning.

Ingress and Egress: An ingress of hundreds of thousands of people can easily deteriorate into severe participant discomfort and, if untoward crowd movement occurs, serious mayhem and death. WYD was committed to effective security checking of all individuals. Planning was based on an untested estimate of 30 seconds per person for a check of both bags/packages (through examination) and bodies (through electronic metal-detection wand). Paired-teams of parcel and wand checkers were placed at multiple gates.

To accurately plan throughput, you also need estimates of utilization (the percent of time checkers are actually checking a patron, rest break time, individuals who need exceptional amounts of time for checking, and related threats to efficiency). The number of gates and staff can be readily calculated, given a model of rate of arrival. For example, I estimated that Downsview would need an unachievable 1500 gates manned by pairs of checkers to manage a public arrival Sunday morning of 500,000 guests. The gating concept could have been readily mocked-up as a means of testing the speed of gating by experimental test ahead of time. This wasn't done despite the fact that there were substantial benefits possible to patron happiness, staff costs, life-safety, and security by empirically testing and fine-tuning the procedures.

In practice, it was observed that the length of time for a check was largely a function of the extent of the back-up of arriving guests...hardly a security-driven criterion! The extent to which these queues were challenges to good order determined speed of checking; in other words, security took into account what fuss might arise from delays that the waiting crowd might consider unwarranted and noxious.

On many occasions, the distribution of checking resources and the arrival of patrons were poorly matched. Even within local environments, the match was sometimes poor as peripheral gates were ignored while central gates were queued up. For example, pedestrians alighting from streetcars were poorly distributed among the three or four transit yard entrances at Exhibition Place. This was natural enough since the "behavioural architecture" featured the center entrance over the others. However, patrons could have been encouraged to use lesser-queued gates through PA announcements.

At Downsview, some egress (approximately 0.5% of the overnight Pilgrims) began on Sunday morning *before* the Papal Mass, as a result of adverse weather conditions. Had a substantial downpour occurred – as forecast – the fraction leaving would have been much higher and would have been far less orderly and perhaps would have swamped the meager transit service available at that point in time.

After the Mass, a successful egress of 600-700,000 guests took place in two hours. They were served by roads for pedestrian use only using a network of roads closed to private vehicle traffic, 200+ dedicated buses, largely on lanes reserved on city streets, enhanced service on the bus street grid, and a largely single-purpose subway line with two walk-in stations.

Addressing medical emergencies: In planning, the greatest medical concern was for dehydration. WYD management were altogether too shy in communicating basic useful information to guests. This included being taciturn about water and food information. WYD had wisely purchased very large stores of bottled water which were stored at the easily identified medical tents, located around the site. WYD management asked the medical staff not to begin to distribute water until told to do so. Most of the medical tents did, however, begin to distribute water to all that asked. That was their decision in light of being on the scene and sensitive to the health of the audience.

In preparatory walk-throughs of the Downsview site, the uneven character of the ground raised concerns about injuries to feet and legs. Some number of lower-limb strains were treated, possibly 20 in two days. This volume was less than anticipated by the planners, and may be due to some anticipatory grading done to parts of the site by a paving contractor. My impression is that more sprains were found at the hospital nearest the busiest entrance. This confirms the theory that people learn the terrain on which they are walking in their first encounters with the surface, and show accommodation to the surface after.

Often found were blisters on feet and toes due to Pilgrims walking long distances in minimal sandals. Medical staff had sufficient generic bandaging supplies to meet the need. But that is a lesson for future audience preparation.

Emergency planning: In a number of locations I specified “soft” fences which defined spaces but which in an emergency, could be knocked over without much force and, when down, would not present a tripping hazard. In practice, virtually all temporary fences failed to meet both of these criteria. Some were quite rigidly attached to the surface and some would not lie flat on the ground after being knocked over.

At Downsview, a permanent chain-link fence topped with strands of barbwire extended for most of the west perimeter. A substantial part of this fence and the part nearest to escape routes radial to the altar was submerged nearly its full height in a trench. Further camouflaging this barrier was tall grass, and the illusion of continuity arising from people sitting on both sides of the trench during the Mass. If an evacuation had been underway, thousands of people would have rushed for safety in that direction only to be trapped in the trench and against the fence. Upon discovery, the hazard posed by the fence was brought to the attention of WYD management. Given the short amount of time and the shortness of resources, management agreed to tie bright ribbons to the barbwire, thereby making the fence more conspicuous. Unfortunately, this was never done.

To keep Pilgrims uniformly distributed at Downsview, a system of areas called “pens” were created and each pen had a volunteer leader. The pens were demarcated by temporary barriers at each corner and by ropes supported by painted steel stanchions. The volunteers were to be trained in the plans of emergencies of various sorts. In practice, the audience were little inclined to remain in their pens, as readily foreseen by any psychologist. Rather, given a day’s and night’s time and with no competing activities to busy themselves, they migrated towards the stage/altar...of course. When I went looking for the pen leaders, they were nearly all vanished, unidentifiable, or otherwise inoperative for emergency needs. Due to the threat of rain, all available supports, barriers and especially the steel stanchions, were seconded for the building of ad hoc tents. Therefore, by Sunday morning, there were no pens, no pen leaders, and no emergency plan. For future events, realistic expectations for the behaviour of crowds and volunteers are needed.

Communication: In general, announcements designed for communication with the audience were inadequately used. These included urging guests to maintain hydration by drinking lots of water, the need to be prepared for sun exposure (fewer than half the audience or security staff had hats), rain exposure,

information about Pilgrim food distribution (which followed an unorthodox and unsound schedule), as well as the many necessary announcements indicating that management recognize emerging problems.

There was excess reliance on glossy and pre-programmed media. This is counter-productive practice from a safety point of view because it diminished the credibility of the source, not to mention leaving patrons without information that they were duly entitled to know.

Behavioural Team have been applying psychology for over 25 years including ensuring that facilities, communications, and operating concepts lead to safe and happy occupants. I’ve been involved in projects in this area for the National Research Council, Transportation Association of Canada, SkyDome, CBC Headquarters, CN Tower, Canadian Museum of Civilization, World Trade Center, airports, and stadiums.

Online Resources

United Nation’s Environmental Programme (UNEP)

This website - <http://www.unep.org/> - contains detailed information about the UNEP’s activities, and includes links to international initiatives such as International Earth Day (April 22, 2003), and World Environment Day (June 5, 2003).

In January 2003, the UNEP issued a press release detailing how psychologists are being enlisted to help market sustainable life-style changes. Follow the links to Media Room > Press Releases > ‘Marketing cool lifestyles key to selling clean and green products’, for more information.

Landcare Research – Collaborative Learning for Environmental Management

This website - <http://social.landcareresearch.co.nz> - provides information, frameworks and processes that can be used by those wishing to more effectively engage different groups of stakeholders in research and development initiatives for environmental management.

Project for Public Spaces

This website - <http://www.pps.org> - provides information about the work of Project for Public Spaces, a non-profit organization that aims to create and sustain public places that build communities.

Recent Publications

The latest issue of the Journal of Environmental Psychology – vol. 22, no. 4, December 2002 – contains articles on responses to urban environments, energy conservation interventions, waiting room environments, environmental effects on meta-motivational state and arousal, interior design preferences, children's place preferences, and environmentally friendly behaviours.

The most recent issue of Environment and Behavior – vol. 35, no. 1, January 2003 – is a special issue on environmental cognition, space, and action.

The previous issue of Environment and Behavior – vol. 34, no. 6, November 2002 – includes articles on environmental attitudes, pro-environmental behaviour, landscape perceptions, enclosure in urban settings, environmental socialization, preference and perceived danger in field/forest settings, environmental responsibility, and motivation for energy conservation.

A recent issue of Ergonomics – vol. 45, no. 14 – contains a number of articles on the use of subjective rating scales. Although the focus of discussions is on ergonomics, these articles provide some interesting commentary on objective vs. subjective methodologies.

New Books

This announcement appeared on the Environmental Psychology in the UK's (EPUK) email discussion list:

During the 1980's, the environmental psychologist, William Holly Whyte, undertook a study of New York's plazas, starting a mini-revolution in urban planning and design. The study '*The Social Life of Small Urban Spaces*' had considerable influence in the UK and US in the field of urban planning.

Out of print for six years, Project for Public Spaces has acquired the rights to reprint the book and video. Holly Whyte was both our mentor and our friend. We have continued his work over the last 25 years.

Many people remember seeing the video and book 20 years ago – we'd like to get the message out that both are now back in print. Both are excellent as teaching resources:

http://208.45.47.25/Publications_Videos.htm

Harriet Festing, Project for Public Spaces

Future Conferences

Work, Stress and Health: New Challenges in a Changing Workplace - The 5th Interdisciplinary Conference on Occupational Stress and Health: 20-22 March 2003, Sheraton Hotel, Toronto, ON. Organised by the APA, National Institute for Occupational Safety and Health, School of Business of Queen's University. For further information, contact Wesley Baker, 202-336-6124 / fax 202-336-6117 / wbaker@apa.org

Health and the Built Environment: 25 March 2003, New York Academy of Medicine, New York, NY. Organised by the New York Academy of Medicine, Center for Disease Control and Prevention, National Center for Environmental Health, Milbank Memorial Fund, Mailman School of Public Health. For further information, see: www.nyam.org (under 'Events'), or contact Gary Reed at 212-822-7219.

EDRA 34/2003: The 33rd Conference of the Environmental Design Research Association – People Shaping Places Shaping People: 21-25 May 2003, College of Architecture & Landscape Architecture, University of Minnesota, Minneapolis, MN. For further information, see: www.telepath.com/~edra/edra342003callforpapers.pdf or contact the EDRA Business Office, 405-330-4863 / <http://home.telepath.com/~edra>

Canadian Psychological Association (CPA) 64th Annual Convention: 12-14 June 2003, Hamilton Entertainment and Convention Facilities Inc, Hamilton, ON. For further information, see: www.cpa.ca/hamilton/ or contact Marlene Kealey at 1-888-472-0657 ext 23 / 613-237-2144 ext 23 / mkealey@cpa.ca

3rd Environmental Psychology in the UK (EPUK) Conference: 23-25 June 2003, Scott Sutherland School, Robert Gordon University, Aberdeen, Scotland. For further information, see: <http://www.envpsy.org.uk/EPUK/index.html>

Design and Health – 3rd World Congress and Exhibition (WCDH2003): 25-29 June 2003, Montreal, QC.

Sponsored and organised by the International Academy for Design and Health.

For further information, see:

www.designandhealth.com/images/WCDH2003.pdf

American Psychological Association (APA) Annual Convention: 7-10 August 2003, Toronto, ON.

For further information, see:

<http://www.apa.org/convention>

Royal Geographic Society Annual Conference: 3-5 September, 2003, London, UK.

Including a one-day session on 'Sustainable development and governing of rural and urban areas' organized by the Planning and Environment Research Group and Rural Geography Research Group of the Royal Geographical Society-Institute of British Geographers (RGS-IBG).

For more information, see: www.ex.ac.uk/ebrg

Methodologies in Housing Research Conference: 22-24 September 2003, Stockholm, Sweden.

Organised by the International Association of People-Environment Studies (IAPS), the European Network on Housing Research (ENHR) and The Royal Institute of Technology (KTH) in Stockholm.

For further information, see: <http://www.iaps-association.org/PaperCallFinal.pdf>

Deadline for abstracts is May 1st 2003.

Job Opportunities

Doctoral Student in Evacuation Simulation, Fire Safety Engineering Group (FSEG), University of Greenwich

The Fire Safety Engineering Group (FSEG) of the University of Greenwich, with financial support from the Society of Fire Protection Engineers, is embarking on a research study into the impact of external influences - such as signage systems - on evacuation behaviour. FSEG wish to recruit a PhD student who will undertake this research over the next three years.

The Project: As part of this research, the doctoral student will develop theoretical models to describe the impact of external stimuli on evacuation behaviour. These models will be derived from extensive research into the available literature as well as from targeted experimental trials. Visit our web site at <http://fseg.gre.ac.uk/fire/positions.html> for further details.

FSEG: The Fire Safety Engineering Group of the University of Greenwich is one of Europe's leading centres of excellence concerned with Computational Fire Engineering. It is also one of the largest university based groups dedicated to the modelling of fire and evacuation in the world. The award winning team of specialists that make up FSEG consist of fire engineers, mathematicians, behavioural psychologists, and software engineers. Visit our web site at <http://fseg.gre.ac.uk> for details.

Further details and applications to: Dr Steve Gwynne, FSEG, University of Greenwich, Old Royal Naval College, 30 Park Row, Greenwich, SE10 9LS, U.K. Phone: +44 (0)20 8331 5847 Email: s.gwynne@gre.ac.uk Web: <http://fseg.gre.ac.uk/fire/positions.html>

Submissions

Submissions - including notices of upcoming events, calls for papers, commentaries, short articles, book reviews, recent publications, teaching, research and practitioner news - are all welcome. Send submissions to Kate Charles (see contact details on p.1).

Deadline for next issue: May 20th 2003.

Membership

Membership of the section is only \$5/yr and includes three newsletters and access to the new section email discussion list. To join, CPA members can contact Sylvia Spallin: cpamemb@cpa.ca. Non-CPA members can become associate members through the Behaviour-Environment Interest News Group (BEING) – contact Mark Sandilands: marksan@telusplanet.net