

MANAGING THE OUTDOOR ACOUSTIC ENVIRONMENT

Public Lecture, the Chinese University of Hong Kong

Lecture Outline and Synopsis

NOISE is the most ubiquitous of urban pollution problems in developed economies and there are few outdoor places in cities where the sounds from road traffic do not set the background, or dominate the acoustic experience. Quite appropriately, we devote considerable attention to managing this pollutant of the acoustic environment. Noise is handled as a waste, a by-product of the transport systems - aircraft, road and rail traffic - industry and construction. Its management is by setting limits to human tolerance of environmental noise, by attempting to reduce the levels generated by the sources themselves, by devices to reduce exposure, or by insulating ourselves from outside noise within our buildings.

ENVIRONMENTAL agencies in many countries have mapped and modelled the extent of noise exposure, encouraged regulations for its control, and have developed prediction tools to assess the effects of future infrastructure and to examine the effectiveness of noise mitigation strategies. This has all been essential work in the management of the outdoor acoustic environment. But despite this effort, in most countries environmental noise is not high in the priorities - it fails to generate much political traction. Part explanation is that, despite knowledge of the extent of community noise exposure, management of noise is formulated around reducing human annoyance. While the effects of noise on sleep, on communication, on attention and learning, and on well-being, are well known, the scientific exposure-response relationships that we have had available to set limits on exposure, to assess the extent of the problem and the benefits to be derived from noise control strategies, are based on human annoyance. Perhaps not unreasonably, this sole focus on annoyance diminishes the problem in the eyes of decision-makers faced with a wide range of issues with which they must contend. However, based on a stress model of the effect of environmental noise, recent epidemiological evidence from Europe has been able to demonstrate a linkage between the road traffic noise stressor and its Environmental Burden of Disease, through cardiovascular effects. This will lead to being able to estimate the public health effects of road traffic noise comparable to the way we assess the public health effects of other environmental agents - and to a reassessment of priorities.

BUT there are dimensions of our outdoor acoustic environment beyond managing it as a waste. Should we perhaps perceive the outdoor acoustic environment as a resource as we do with other aspects of our environment—the waters in the streams and ocean, the atmosphere, the trees, wildlife, and the countryside as a whole? Perceiving the acoustic environment in this way provides a broader context for its management, and requires introducing the concept of *soundscapes*. Noise control is concerned with the sounds of discomfort - *soundscapes* with the sounds of preference.

THE lecture will discuss the ideas of *soundscapes* as a field of study – the analogy here is of course to *landscapes*. In the same way we study landscapes and how human development has changed these, we can study soundscapes, their value as part of the human experience, and the rapidity with which humans have changed these in the recent course of human history. We have become divorced from positive aural experiences outdoors—and perceive our cities largely through our visual sense. Just as we conserve and manage landscapes—both for human and for wildlife benefit—we could similarly choose to preserve and manage soundscapes that we consider important. Finally, we put considerable effort into landscape design in cities, in parks and open spaces, in areas of cultural importance, and in the countryside. We should not too easily dismiss the idea that we might, by analogy, choose, and develop the skills, to similarly engage in soundscape design in such places. While there may be restricted opportunities in dense cities such as Hong Kong to do this, they do exist.

THE ORGANISERS

THIS is a public lecture by the Chinese University of Hong Kong. The Hong Kong Institute of Acoustics (HKIOA), the Institution of Engineers - Mechanical, Marine, Naval Architecture and Chemical (HKIE-MNC) Division and the Hong Kong Institute of Environmental Impact Assessment (HKIEIA) are proud to collaborate this event.

THE SPEAKER

PROFESSOR Lex Brown is Wai Lun Visiting Professor of the Chinese University of Hong Kong. He served as Dean, Faculty of Environmental Sciences at Griffith University in Brisbane, Australia from 2003 to 2006. Born and educated in Australia, he received a Bachelor of Engineering (Civil, Hons) in 1968, a Master of Urban Studies in 1975 and a PhD in 1979 from The University of Queensland. As Dean, his responsibilities included the strategic development of research and the quality of teaching and learning. His Faculty consisted of three schools, nine research centres and other academic units with over 100 faculty and research staff. Prof. Brown was also the Head of the Australian School of Environmental Studies 1989 - 1994 and then Foundation Head of the School of Environmental Planning, innovatively training urban and regional planners within an environmental faculty, both at Griffith University.



DATE, TIME and VENUE

Date:26 February 2009 (Thursday)Time:6:00 to 7:30 pm (Refreshment at 6:00pm)Venue:Lecture Theatre of Olympic House, Hong Kong Stadium, So Kon Po,
Causeway Bay.

Fee, Certificate, Enquires and Registration

The public lecture is free of charge;

This public lecture aims at providing the local professionals of various disciplines with a structured lecture on "Managing Outdoor Acoustic Environment" and is supported by the Environmental Protection Department. Engineers, architects, planners, acoustic and noise control professionals, practitioners and academics are welcome to attend and share views.

Attendance certificates will be issued by HKIOA to the participants for counting in their CPD purpose. The public lecture information/registration form is also available from web site <u>www.hkioa.org</u> and <u>www.hkie-mmnc.org</u>.

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