

28th Australasian Transport Research Forum – Conference Report

1. Introduction

The Australasian Transport Research Forum (ATRF) is the premier conference in Australia for those engaged in transport research. It has been on the go since 1975, with gaps in the sequence in 1981, 1995 and 2000. Each year it is hosted by an appropriate organization in a different city. This year was Sydney's turn: the convener was Tim Raimond, Director of the NSW Government's Transport and Population Data Centre.

210 delegates were registered as the conference started, but only 163 chose to be on the delegates list that was circulated. Table 1 gives a breakdown of the listed delegates by function, Table 2 by location and Table 3 by gender. The three tables together will give an impression of domination by government personnel from all over Australia, with a balance between the genders which favours women more than is usual at transport conferences.

Table 1 Delegate Breakdown by Function

Academia	30	18%
Government or Qango	85	52%
Consultant	37	23%
Industry or Other	11	7%
TOTAL	163	100%

Table 2 Delegate Breakdown by Location

New South Wales	65	40%
Other Australia	71	44%
New Zealand	21	13%
Other Countries	6	4%
TOTAL	163	100%

Table 3 Delegate Breakdown by Gender

Male	109	67%
Female	54	33%
TOTAL	163	100%

2 Keynote addresses

The conference was opened by John Lee, NSW Director-General of Transport, who also gave a good overview of transport reform in NSW and in particular lamented the Commonwealth government's failure to display any interest in urban transport.

John Stott (Vice Chairman of UITPANZ and Executive Chairman of the NSW Transport Administration Corporation) then reviewed the "outlook for our cities in an age of oil depletion". From available scientific evidence he showed that the age of plenty is almost over as far as oil is concerned, and that the onus is on the planning professions to start

preparing our cities for a very different future now. His message was all the more devastating for the deadpan manner with which it was delivered, and in fact made many of the research concerns which were the subject of later presentations at the conference seemed trivial by comparison. However the general tone of the reception of John Stott's message was sceptical – “we've heard this sort of thing before and nothing happened”.

The second day started with Dr Karen Lucas of the University of Westminster (UK) describing the framework for social justice used in the UK to ensure that transport was delivered for social inclusion. A government department known as the Social Exclusion Unit was established to implement this (why not the Social *In*clusion Unit, somebody wondered). In the UK the emphasis seems to be on providing transport for the unemployed and those on low incomes, whereas in Australia probably older and younger citizens would feature more heavily.

The third day started with Professor John Pucher, who has just commenced a year's attachment to the Institute of Transport and Logistics Studies at Sydney University, talking about public health and urban transport (“A broader view of sustainability and how to make it publicly and politically acceptable”). He left the conference in little doubt of his enthusiasm for cycling and walking, his disappointment at what he had observed so far in Sydney, and his ability to talk under wet cement.

3 Paper presentations personally attended

Some 80 papers were presented in parallel sessions. All these papers (except the keynote addresses) were distributed to delegates on a CD (the 80 papers presented, plus the keynote presentations, will eventually be available on www.patrec.org). With the papers divided among three parallel sessions, it was not physically possible to attend all presentations and those papers whose presentations I did attend reflected my own interests. Presentations that particularly generated thought are described below.

Peter Hidas, *Modelling Individual Behaviour in Microsimulation Models*. Peter had done an initial comparison of the features available in the leading commercial microsimulation models – Paramics, Aimsun and Vissim. The purpose of the paper was to identify improvements which might be incorporated in the next generation of microsimulation models. NB microsimulation necessarily relies on modelling observed behaviour, ie it assumes the future continuation of past conditions.

Chris Wilson, *Buses and Trams and Traffic Modelling*. This was a description of microsimulation modelling done by MWT to assess whether various options for re-introducing trams to Sydney would still allow city traffic to flow. The effect of the options on passenger behaviour was beyond the scope of this work.

Andrew Allan, *The Use of 'Emergent Behaviour Systems' to Optimise Road Networks for Pedestrians*. The management of road systems is dominated by the need to cater for motorised traffic. One of the problems is that nobody knows how to cater for the needs of pedestrians. Treating pedestrian behaviour as an “Emergent Behaviour System”- which

was explained, basically it seems to entail observing what people actually do – could produce better road management techniques. (The use of Adelaide CBD pedestrians as a case study was perhaps not very useful – in central Adelaide pedestrians have been observed to wait patiently at a signalised intersection on a road completely devoid of traffic, until the automated “red man” signal turned green. This is unlikely to happen in bigger cities.)

Paul Tranter, *Questioning the Need for Speed: Can “Effective Speed” Guide Change in Travel Behaviour and Transport Policy?* “Effective Speed” is distance divided by time, but where time includes the time spent earning the money to pay for the journey as well as the time actually spent traveling. On this basis a small economical car is shown to be “faster” than a high-performance one, and spending public money to improve the slow modes is likely to be more effective than improving car travel. Paul argued that this concept of speed could be used effectively in travel behaviour change programs.

Jason van Paassen/Mark Olsen, *Visitor Flows Model for Queensland – A New Approach*. Mark and Jason presented a method for estimating the number of domestic visitors using Queensland’s roads. They did not consider whether the domestic aviation industry would have the capacity to deliver this number of visitors if aviation fuel became more expensive or scarcer nor whether a motoring holiday would seem as attractive in future if the price of petrol rose much higher than today’s level. “If you build it they will come” was the rather optimistic response to questioning about this.

David Bray, *Improving Economic Evaluation of Urban Transport Projects in Australia*. David presented an argument for the use of variable-demand matrices in the assessment of urban road projects, rather than fixed-demand matrices (essentially because the addition of a major infrastructure project could affect travel patterns and mode choice). In my opinion the use of variable-demand matrices is already standard practice for public transport infrastructure evaluation.

Frank Milthorpe, *A Comparison of Long-Term Sydney Travel Forecasts with Actual Outcomes*. The Sydney Area Transportation Study (SATS) was conducted in the early 1970’s. Frank used the extensive study documentation of the time to address the question “how good were the SATS forecasts”. After coping with various definitional difficulties, his conclusion was that, while the study was perhaps over-optimistic with regard to population growth (because the decline in household size was under-estimated), the travel forecasts were not far off the mark.

Gary McGregor, *Improving the Process for Public Transport Patronage Forecasting*. Gary and co-author Tim Raimond had interviewed a number of stakeholders (of all types) and had identified two areas of concern: the accuracy of forecasts, and the robustness, transparency and credibility of the forecasting process itself. Five broad sources of risk were identified: bias, project definition, market research and input assumptions, the modelling method, and communication/understanding. There was fairly general support from stakeholders for the preparation of forecasting guidelines.

Tim Raimond, *Four Wheel Drives in Urban Areas: Who Uses Them and Why?* An interesting attempt to make use of the mountains of data available at TPDC but never analysed, for want of resources. Definitional problems (what exactly IS an urban 4WD) were sidestepped.

Tony Brennand, *The Western Corridor Transportation Study – A Bold New Step in a Brave New World or Traditional Transport Planning Recycled?* The “Western Corridor” belongs to Wellington in New Zealand. This presentation described the way in which the NZ Land Transport Management Act (2003) had altered the legislative and procedural environment for transport planning in Greater Wellington. Objective analysis of options was not in dispute but when value judgements had to be applied to the various performance measures, consensus broke down. This is not the first place where this has happened!

Stuart Clement, *From Chaotic Road Traffic to Cooperative Opportunistic Percolation Using Cellular Automata*. Driving behaviour in third-world countries does not conform to the regulated and largely predictable behaviour assumed by first-world microsimulation models. This was an interesting effort to model such driving behaviour by, essentially, the genetic algorithms of a few years ago. (In Jakarta several years ago I observed such behaviour: the traffic seemed to keep moving, without accidents, although any Australian-trained driver would have been reduced to a gibbering wreck!).

Alan Parker, *Uncontrolled Oil Dependence is a Threat to National Security That Could Destroy the Economy and Increase CO2 Emissions*. The title was a fair summary of the presentation. Alan did observe that there was no mention of peak oil at the conference between the first keynote address and himself as the “tail-end Charlie” at the end of proceedings, and (not unreasonably in my view) questioned why this was so.

4 Other papers

With hindsight, there were some presentations that I had to miss that may also have been very interesting:

Neil Douglas, *Estimating the Passenger Cost of Station Crowding*. This paper is a description of some SP modelling work and won the John H Taplin prize for the best paper presented at ATRF.

Paul Mees, *Too Good to be True? An Assessment of the Melbourne Travel Behaviour Modification Program*. Paul questioned whether the remarkably effective results reported for TravelSmart programs were what they seemed, due to the presence of “artifacts” distorting the results. He made a number of recommendations as to how to reduce or eliminate the influence of these artifacts.

Alan Perkins, *The Full Impact of Transport and the Built Environment on Greenhouse Gas Emissions, and the Influence of Urban Form*. This was a noteworthy attempt to take a whole-of-life look at total emissions from the housing and transport sectors, including

embodied energy as well as operational energy. No existing model was available for use and Alan and his co-author used a variety of sources, Among other things they found that the total life cycle delivered energy consumption for urban fringe development was 234 GJ per household p.a., compared with 109 GJ for inner city development. Energy consumption per household in the fringe development was higher for all of the life cycle components – travel, vehicles, roads, appliances and dwellings.

Grace Corpuz/Annette Hay, *Walking for Transport and Health: Trends in Sydney in the Last Decade*. Grace and Annette used data from 1991 and 2001 to demonstrate that trends in transport behaviour in Sydney over this period were contrary to the aspirations of public policy on health. Walking to childcare or education were particularly badly affected. Exploration of the travel data suggested ways of targeting future campaigns to increase walking,

John Goldberg, *Toll Road Operations in Australia: A Critical Examination of the Financial and Economic Realities*. John is a well-known critic of private sector toll road operations as practiced in Sydney and it would have been interesting to be taken through some fairly complex financial arguments in the paper which apparently showed that the Infrastructure Borrowings Tax Offset Scheme (IBTOS) is more critical to project profitability than the actual traffic volume or the level of toll.

Tony Richardson, *TravelSmart and TreeSmart: Alternative Ways of Reducing Greenhouse Gas Levels*. This paper showed that there are some non-transport ways of reducing greenhouse emissions (eg by planting more trees) and that the TreeSmart programs of tree planting and carbon sequestration maybe much more cost-effective than the TravelSmart programs of travel behaviour change.

5 General

ATRF concluded with an improvised session led by Professor Tony Richardson, using some techniques developed by Edward de Bono to identify new topics for research.

The 28th ATRF had produced some very interesting ideas and if the 29th next year (in Brisbane) maintains the standard it will be well worth attending. The theme that dominated this year's conference was clearly Travel Behaviour Change (18 papers out of 80). Next year may see more research into peak oil, social inclusion and public health if the messages of this year's keynote addresses find their target.

NB peak oil, travel behaviour change and public health feature in three of the six position papers already published by the National Committee on Transport (Engineers Australia) and a further paper on social inclusion is in preparation.