

A submission to Sustainable Cities 2025, together with five attached documents, follows.

Introduction

Courtesy of an article this week in the Sydney Morning Herald, I have just become acquainted with your quite excellent discussion paper Sustainable Cities 2025. I too would like to see more nature and less automobile dependence in our cities, but alas present policy settings and the resulting behavioural choices seem to be taking us in the opposite direction. Starting with morphology and behaviour, this submission addresses what, in my view, are some key issues for achieving sustainable transport.

Morphology

The basic transport task in cities is two-dimensional, in that any pair of locations within a defined area can form an origin and a destination for a journey. Walking and cycling modes are naturally two-dimensional, but limited in realistic distance, and private cars/taxis form a natural two-dimensional extension.

Public transport, and particularly rail, runs as one or more inherently one-dimensional links. Even buses, where two-dimensional networks are possible in theory, run better as one-dimensional links due to gains in manageability and service frequency. The penalty, for two-dimensional coverage, is the "cost" of using separate links and the interchange between them that collectively form a network mesh.

Behaviour

Organisations and individuals experience both pecuniary and time costs, both having finite budgets, and consequently behavioural choices are made to maximise the utility of these budgets. Urban societies in western countries are becoming wealthier but time poorer, so time considerations are becoming more dominant. It is my view that the significance of time budgets, and their behavioural impacts, are generally under-recognised in transport economics considerations.

Time dominance conflicts with sustainable transport in two ways: the fastest mode tends to be chosen ahead of cost considerations, and, in the longer term, time savings from new infrastructure tend to be consumed in new travel. Urban expressways can be particularly influential in this regard, as the line-haul speed of such an expressway is often faster than line-haul rail, so public transport loses out even before the additional time penalties of multiple links and interchange are considered.

Comments

Transit Oriented Development, and Corridor Development, are development forms that complement the one-dimensional nature of (particularly rail based) public transport links, and are therefore more likely to result in lower levels of automobile dependence than other less structured forms. Such development also allows for the natural world alongside these corridors, providing for urban forests, high value agriculture, wetlands and related biological support services. In larger cities, a multi-centred form, with a mesh of interconnecting corridors between such centres, can still leave islands for the natural world.

Urban form prescription, however, needs to be complemented by behavioural influences. To date, parking scarcity, congestion and fare subsidies have been used to influence behaviour, but such measures are more about retaining patronage on existing (historic) corridors rather than helping to grow new corridors. In parallel with these measures, there are contrary influences that seek to provide more parking and to alleviate congestion by expanding the road network, and these seem to have led to more dispersed travel, declines in public transport use and greater public transport subsidies. Presumably, the trend to increasing, and by implication unsustainable, subsidies has led the NSW Government to initiate its public passenger transport inquiry.

It seems to me that a combination of development form, pecuniary costs and time costs imposed on both individuals and the community will be necessary to achieve sustainable transport within sustainable cities and their regions. To find the right mix within an increasing individualistic culture will be politically challenging to say the least.

Documents

I have expressed much of the above in two submissions to the NSW inquiry and its interim report. These documents, with some background articles from the International Association of Public Transport (UITP) which were referenced in my first submission, are now attached here for your information. I also commend to your Inquiry the Interim Report from the NSW inquiry which is web available.

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ADDITIONAL INFORMATION HELD BY THE COMMITTEE

ATTACHMENT TO SUBMISSION NO. 33

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