Transport Reform, Technological Change and Equity - Allies or Enemies?

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Abstract:

The improvement of the efficiency of our economy through transport reform is a worthwhile objective for the general community, but can be a slow process On the other hand, advantages obtained through technological change can often be reaped relatively swiftly   The benefits of these processes, when considered from the perspective of the total economy, or when calculated within the confines of the one enterprise, may be large However, the changes that occur during the processes of transport reform and technological change may have severe adverse impacts on others. This raises the question of the need for some balance between overall benefit and local equity This paper explores that balance in general, and in the particular context of the Central Industrial Area of Sydney where Sydney airport and Port botany are located

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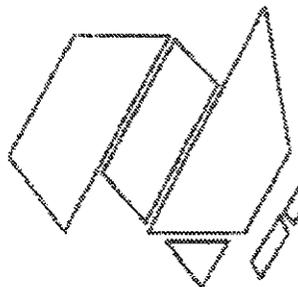
Introduction

As Australia's population continues to grow, and as our Western-style economy continues to evolve, there is increasing emphasis on transport. This occurs both in relation to transport guidance and management, and in relation the effect of transport on final product costs. The relationship between land use and transport systems has formed a basis of urban studies for many decades. Indeed traffic has been defined as "the joint consequence of land-use activity levels and transport capability" (Blunden and Black, 1984). Increasingly, however, a three-way interaction is requiring the attention of planners - that between land-use, transport systems, and the environment (both natural and built). In this interaction, any imbalances may cause inequity to one component or another.

In parallel with the growth in population and industrial and commercial activity, many significant technological changes have emerged and been applied in the transport field. As the transport industry has grown, the various transport modes have experienced varying levels of reform. The technological innovations and transport reforms have, over some time, resulted in changes to the balance between modes. The changing balance has in itself resulted in further changes to the ways in which goods are transported. The changes have led to both beneficial and undesirable consequences for sections of the community. Some of the changes are causing impacts on the community which raise concern about equity between industry and the community, or between a sector of the community and another. Some people who live near massive land-use developments or on emergent transport corridors may be subjected to severe impacts, while the general community enjoys the benefits of a greater diversity of products on offer, or cheaper products, or both.

This paper considers the question of equity in the community by considering the Central Industrial Area in the Botany-Mascot area of Sydney, which includes Sydney Airport and Port Botany. A map of the area is shown in Figure 1.

Technological Changes in Transport

Air Transport

Sydney Airport is Australia's major international Airport. It has been on its present site since 1920, four years before the first airline was launched, linking Sydney to Melbourne and Adelaide (Oppenheim, 1974). By 1970, about 4,200,000 domestic and international passengers used the Airport each year, and this increased steadily to nearly 14 million passengers in 1988 (Sinclair Knight/Bechtel Aviation, 1990).

This growth could not have occurred without gradual development of the Airport, including the runway extension into Botany Bay which was completed in 1972. But more important was growing world prosperity and the technological changes embodied in the development of large pressurised aircraft. In 1947, while Dr Bradfield was publishing the first master plan for Sydney Airport, the Lockheed Constellation was first flown in Australia. In 1959, the Boeing B707 reached Australia, popularising air travel on international routes. The Boeing B747 first flew in 1969. These aircraft are able to carry more than 400 people, or in cargo configuration a payload at take-off of 110 tonnes (UTA, 1989). The technological evolution of aircraft, in conjunction with strengthening and lengthening of runways and evolving with air traffic control technology, has enabled very large numbers of passengers to pass through airports for the same number of take-offs and landings.
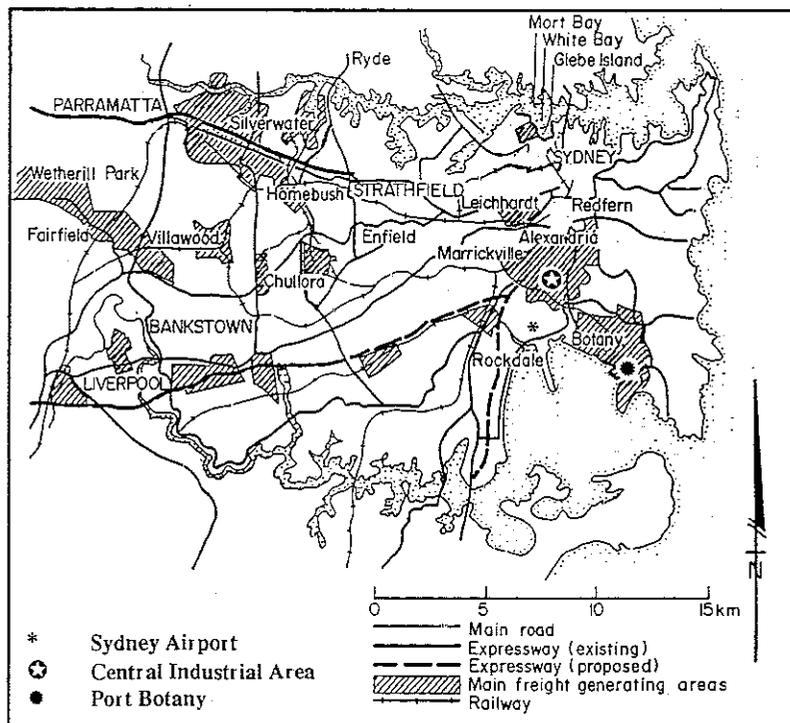

Figure 1: The Central Industrial Area within the Context of Inner Metropolitan Sydney
(After Rimmer and Black, 1982)

Whereas in 1971, Qantas operated twenty-one B707 and six smaller aircraft, by 1988 it operated twenty-five B747 and seven B767 aircraft (DoTC, 1971 and 1988).

The changes have not been without impacts. At Sydney Airport, growing numbers of aircraft landings and departures and the new B707's in the early 1960's "generated conflict with local residents who were bothered by noise" (Sinclair Knight/Bechtel Aviation, 1990).

In 1984, in response to continuing concerns about aircraft noise, regulations were introduced under the Air Navigation Act 1920 "requiring all new aircraft to be certificated to noise emission standards issued by the International Civil Aviation Organisation" (DoTC, 1990).

A noise reduction strategy, developed "in consultation with councils from areas surrounding the Airport" was announced to come into effect on 30 October 1988 (DoTC, 1989). This restricted movements between 11pm and 6am at Sydney Airport. Two noise measurement studies were begun and a curfew monitoring committee was established.

With the commitment to a Third Runway, there is again community concern about increased impacts due to noise. There will also be road traffic impacts in the area.

Studies associated with the Third Runway EIS indicated that, for 1989, the whole Airport generated 82,100 road vehicle movements per day (Sinclair Knight and Partners, 1990). This was predicted to grow to between 174,490 and 184,490 in the year 2010.

It appears that, to some extent, the increased road traffic which has been generated by airport growth over the last seventy years has been seen by the local community as a part of general traffic growth in the area, because concerns are generally focussed on aircraft noise.

Sea Transport

In 1788 Sydney was established as Australia's first European settlement. The main port facilities were in Port Jackson, but, as population and industry grew, Port Botany was identified in the 1960's as a suitable location for major port installations.

In 1969 a decision was made to establish a port at Port Botany, because of doubts about the capacity of Port Jackson. The rapid introduction of containers during the 1960's marked a technological shift in sea transport systems that revolutionised the movement of goods by sea. Between 1969 and 1979, the number of containers (TEU's or twenty-foot equivalent units) passing through Port Jackson annually grew from 11,290 to 349,337, while the number of registered waterside workers fell from 4,323 to 2,336 (Rimmer and Black, 1982). The number of containers passing through Port Jackson has since declined, while Port Botany has grown into a major container port, as shown in Table 1. In addition to the two container terminals, Port Botany also includes a bulk liquids terminal.

Table 1. Annual Container Movements, Port Jackson and Port Botany, 1982 to 1990. (TEU's)			
Year	Port Botany	Port Jackson	Total
1968-69	Nil	11,290	11,290
1978-79	Nil	349,337	349,337
1981-82	149,848	258,944	408,792
1982-83	200,880	170,887	371,767
1983-84	232,661	171,713	404,825
1984-85	268,098	192,727	460,825
1985-86	255,085	178,168	433,253
1986-87	Unstated	Unstated	Unstated
1987-88	265,094	181,878	446,972
1988-89	284,257	214,265	498,522
1989-90	320,037	210,969	531,006
Source: *Rimmer and Black, 1982*			
Maritime Services Board Year Books, Various Years.			

Pipelines play a significant role in transporting liquids out of the area, however, in 1986/87, 4.14 million tonnes were transported by road and rail out of which 75% were container goods (Gutteridge Haskins and Davey, 1988). Rail transported 25%, and road 75%. This represented 1,990 vehicles per day both ways on the road system on the average. Container goods represented 80% of the figure. The total vehicle trips from the port average 5,690 vehicles per day including employee trips, visitors and contractors. Apart from movements related directly to the Port, road vehicles also transport containers to and from industrial sites and transport terminals in the Central Industrial Area.

Predictions of future port usage indicate that container throughput at Port Botany will more than double (on a baseline scenario) to 1,042,000 TEU's by 2015, or (on a low growth scenario) to 861,000 TEU's by 2015 (MSB, 1992). Because of the geographic location, the bulk of these will be transported on just a few road corridors to the northwest, southwest and south.

Containers are a highly-visible cargo on trucks. The movement of vehicles transporting containers is of major concern to residents around the Port, and to the northwest and southwest from the Port. From the early years of operation of the Port, there was criticism of the impacts on land use on the hinterland, the effects on city design and the social disturbances to residents (Butlin, 1976). Recent counts on the two main transport routes showed that on Sydenham Road, a four lane road to the northwest, there were about 17% commercial vehicles and on Stoney Creek Road, a four lane road to the southwest, there were about 20% commercial vehicles. Both roads have extensive lengths of residential and retail land uses (RTA, May 1992).

Recent studies of total transport needs from the general Botany area to the northwest/southwest indicate that there is still strong local feeling about trucks moving into and out of the Central Industrial Area. In the Botany-West Transport Study (RTA, 1992), about 26% of individuals offering comments indicated a desire to see freight shifted off road and onto rail.

Transport Reform

Port Operation

At Port Botany, Australian National Line (ANL) and Container Terminals of Australia (CTAL) are the two operators of the two container terminals. Transport out of the terminals averages 25% by rail and 75% by road, as indicated above. Presumably the modes compete as best each can for a share of the transport market, however, the nature of the cargo, its ultimate destination, its urgency and the needs of individual importers dictate the mode choice just as much as cost, speed and reliability of transport.

The operation of the Port itself is increasing rapidly in efficiency. Through privatisation of non-core activities, overall MSB staff numbers have fallen by about 62% over the five years to 1992 (NSW Government, 1992). Vessel turnaround times have fallen from 61.1 hours in 1985/86 to 47.6 in 1991/92. These trends underly the expectation that the Port has the capacity to handle the growth which is expected at the Port. The reforms have improved Port efficiency, and have enabled greater numbers of containers to pass through the Port. On the truck routes leaving the area, there are increasing traffic pressures impacting on the local communities.

Air Transport

In October 1987, the Federal Government announced that it was giving three years' notice to terminate the two airlines policy after 30 October 1990. This was expected to encourage more competition and responsiveness in the industry, to facilitate a wider range of air fares and to promote industry growth (DoTC, 1990).

The extent to which these objectives are being attained is unclear. Deep and extended recession has had effects on the airline industry since 1990 which cloud the outcomes. However, the aim for growth in the industry reinforces the ground access pressures arising from air freight operators, travellers, meeters and greeters, and related industry, as well as noise issues from increasing numbers of aircraft movements.

Road Transport

A consideration of the regulation of road transport covers the time span from about 1930 to 1974 (BTE, 1982). In the 1930's the road transport industry was regulated to protect the railway system. Generally, the regulations prohibited the transport of certain goods by road outside urban areas, taxed road freight competing directly with rail, and applied a licensing system. In 1954, a major legal challenge upheld the constitutional freedom of interstate trade, freeing interstate road operators of most of the regulation, but upholding a "load tax" system for road maintenance. In 1974, intrastate road operators were also freed of most regulation, and a substantial increase in truck registrations occurred.

Road transport is an intrinsically competitive system. It has a low financial threshold for entry into the market and large numbers of owner/operators or small trucking companies vie for contracts. Improvements to the road system and the convenience and speed of door-to-door service have been the basis for a large and strong road transport industry. However, virtually unrestricted truck access to the arterial road system has in some locations generated conflicts between the road users and the adjacent land uses.

Rail Public Transport

In recent years, CityRail has implemented a staff reduction program, with a resulting 39% improvement in employee productivity over the four years to 1992 (NSW Government, 1992).

While these gains are worthwhile, patronage is relatively constant. It ranged between 242.6 and 251.6 million passenger journeys per year between 1987/88 and 1991/92. It has been at similar levels for more than a decade (NAASRA, 1987).

The city passenger rail system is operating close to its capacity, and the section of track between Sydenham and MacDonaldtown is at its practical capacity (Dennis Johnston and Associates, August 1991). Many people who live and/or work at a distance from railway stations find it unattractive to travel to work by rail, and as Sydney's growth spreads away from the existing rail lines, a greater proportion of travellers will utilise non-rail modes. There are about 88,000 jobs in the Central Industrial Area, and many workers currently drive to work there.

In the Central Industrial Area, a proposed City-Airport Rail Link will offer a new market for CityRail. It has the potential to divert some commuter trips from road to rail, and may thereby offer some relief to congestion in the area. It will offer no advantage, however, to freight, and so truck transport will remain a concern.

Freight Rail

Freight Rail, like CityRail, has been restructuring. Over the last four years, employee productivity has increased 56% (NSW Government, 1992). The National Rail Corporation was established in 1992, but its focus will be on interstate movements.

As with CityRail, the usage is relatively static, fluctuating between 13.6 and 14.2 billion net tonne kilometres between 1985/86 and 1991/92. However, by far the greatest part of freight moved comprises bulk goods (wool, wheat and coal) over relatively long distances in rural areas. Coal represented 80% of deliveries in 1990/91. Very little intra-urban freight goes via rail.

An average of about 9 trains per day move into and out of Port Botany, representing 25% of the tonnage transported (Gutteridge Haskins and Davey, 1988).

Competitive pricing (through improved efficiency) may attract a greater proportion of Port-related movement onto rail. It must be noted, however, that this represents a great challenge to rail. The road transport industry is intrinsically competitive, while the pace of reform in rail transport has been slow for many decades. Recent improvements are encouraging, but they are from a very low base of competitiveness.

Land Use Repercussions

In established areas, including as the Central Industrial Area, land use changes occur slowly.

The introduction of the Boeing B747 introduced cheaper travel and more passengers per plane over a relatively short period, and the Qantas fleet changed rapidly. While general cargo through Port Jackson increased from 5,430,000 to 8,854,000 tonnes per annum (ie, it nearly doubled) between 1969 and 1979, the number of containers (TEU's) moved grew from 11,290 to 349,337 (ie, it increased thirty-fold). (Rimmer and Black, 1982). These changes have led to large-scale airport-related land uses around Mascot, and freight handling land uses in the Central Industrial Area.

Fifty years ago, the Central Industrial Area was "by far the dominant site of manufacturing in Sydney" (Murphy and Watson, 1990). However, decline followed, with the area losing 60,000 "smokestack industry" jobs (one-third of the 1945 total) by 1971 despite a 40% increase in the area of land zoned for industrial purposes. There were many contributing factors to these phenomena. First, land in the area was expensive if expansion was required. Second, both workers and the markets were decentralising. Third, increasing road congestion decreased the area's attractiveness to industry.

Fourth, mechanisation and a move towards industrial buildings having only a single storey reduced job density per hectare.

Since the early 1970's a variety of factors have been at play. First, de-industrialisation has led to a sharp acceleration in the decline of job numbers in the Central Industrial Area. Second, there has been a very substantial expansion in domestic and international air freight forwarding, and airport-related uses. Third, there has been a substantial acceleration in the storage, distribution, wholesaling and specialist freighting activities associated with Port Botany. Fourth, between 1981 and 1986 the deregulation of financial markets, reduced controls on foreign investment, reduced protection levels for manufacturing and a recession led to the loss of 51,686 manufacturing jobs in all of Sydney. The impact on the Central Industrial Area was more severe, as its share of jobs in Sydney fell over the five years to 1986 from 20.7% to 15.5%. These factors resulted in an expanding industrial area, but fewer jobs per hectare.

Land use changes are continuing. Airport-related uses, for example, are growing, as any casual observer can see in the tourist hotels, airline service and aircraft maintenance industries which are appearing in the area. The multi-storey tourist complexes and light industrial firms are bringing new types of job, and new job densities, into the area. Manufacturers who have scope to move are still considering and/or acting on that course of action (Denis Johnston and Associates, June 1991). When a manufacturer moves, the broad effects are to re-orient heavy vehicle trips to greenfield sites in western and south-western Sydney, with a possible increase in smaller vehicle movements between western suburbs and inner suburbs and possible relocation of some transport operators. The vacancies left as manufacturing moves out are very attractive to other industries. The area's close proximity to the CBD, three universities, Port Botany and Sydney Airport makes it unique. For many industries, it will continue to be desirable to be located in or near the Central Industrial Area, and in many respects it is necessary to foster this in the city's planning.

Geographical Constraints

The Airport, Port Botany and the Central Industrial Area are shown in Figure 1. In Australia's largest city, the Airport and Port facilities are essential items of infrastructure. The Port cannot realistically be relocated to another city without major adverse effects in relation to employment and business. While a commitment has been made to the long-term development of a second international airport at Badgery's Creek in Western Sydney, the present Airport at Mascot in the Central Industrial Area will continue to be the main Airport for decades. Nearby investment and jobs in airport-related and tourist-related industries make that position inevitable.

The Issue of Equity

The technical assessment of benefits and costs recognises that the benefits and the burdens flowing from projects may fall on different sectors of society. In general, attempts are made to mitigate the adverse impacts or to compensate those affected, while allowing the general community (or the shareholders) to reap the benefits. The environmental legislation requires that cumulative impacts be taken into account.

For developments of a modest scale, or for developments at greenfields sites, the management of impacts is generally (but not always) straightforward. Massive developments generate larger-scale or wider-ranging impacts, especially when their location is adjacent to large residential areas. When several massive developments are located near one another, the impacts are compounded. Redevelopment in the Central Industrial Area, including Sydney Airport and Port Botany has the potential to cause significant adverse impacts unless these impacts are skillfully and sensitively managed. The Central Industrial Area is located on a peninsula with Botany Bay to the south, the Pacific Ocean to the east, Sydney Harbour to the north. Traffic is of concern in some areas adjacent to the Central Industrial Area, but it is also of concern to those people who live on or near the prime arteries leading out of the Central Industrial Area to the northwest and southwest.

Road traffic is a concern in many parts of Sydney, however, in this case the location of two massive developments, Sydney Airport and Port Botany, in the Central Industrial Area focusses attention on them. Aircraft noise from growing numbers of landings and departures affects a further group of residents whose homes are under the flight paths of the existing runway and the proposed Third Runway. Some people living under the flight path also experience impacts from heavy road vehicles.

How much of a burden should these groups be expected to bear so that the community (these groups plus everyone else) will benefit by cheaper goods, more reliable service, better access to international travel, and opportunities for employment? This is a most difficult political question. It is clear that as a society we vote with our feet in purchasing cheaper products of a given quality. We do enjoy opportunities for flying holidays. Job creation is a prime concern with about one million people currently unemployed. Nonetheless, many people do find it most convenient to live close to the Central Industrial Area with its proximity to the CBD and the beaches and the city's waterways.

Change

The scale of changes proposed at the Airport and Port are daunting to many of us. According to one psychologist "one of the things we know about human beings is that, in general, they are resistant to change. Even when there are small interruptions to the rhythm and pattern of daily life, most people experience mild tension or irritation.... The story of Australia between the early seventies and the early nineties is the story of a society which has been trying to cope with too much change, too quickly, and on too many fronts" (McKay, 1993). While his comments are not in the context of the Central Industrial Area with its particular changes, the general human response to change is relevant. It is a prime factor affecting peoples' attitudes.

A cross-section of about sixty people were invited to participate in the Botany-West Transport Study. During a workshop, they were asked to describe the type of Future that they would like to live in, or one that they would envisage as being a likely Future that may emerge over the next couple of decades based on their own assumptions about emerging trends. From the comments and discussion, five Futures were identified (RTA, January 1992). These were, in no special order:

Ecologically Sustainable
Economic Development
Status Quo
Economic Stagnation
New Equity

The Futures show how people within the group were thinking about the future for the area. It is interesting to note the New Equity Future in particular - this is a call for "a new deal" for those who are experiencing the direct effects of a major industrial area. The report states that "this Future recognises that the Study Area has State and National industrial significance. Industrial activity in this region decreases local environmental and social quality. This Future corrects this regional inequity".

To quote further from McKay (1993), he suggests that to some people "... the most attractive slogan of all is this, 'The only constant is change' ... and ... the most appropriate response to that is simply to react and adapt to every new event with no underlying sense of vision or purpose beyond a constant willingness to experience the new". However, there are many others who see that as a shallow response. They wish to develop a system of ethics, values or morality in which there is a coherent philosophy or ideology. This would be a framework which enabled large developments to be planned and implemented in a way which attempted to address the question of equity more comprehensively than in the past.

Complexity

Alongside the question of change stands the question of complexity. At the micro level, many local people may be concerned whether a traffic engineer can adequately understand or address the impacts of a massive traffic generating development at several hundred nearby intersections. How reliable are projections a couple of decades into the future? At the macro level, technical specialists may be concerned how to convey meaningfully to several hundred thousand residents a clear idea of the impacts (whether great or small) of a project. What does a noise level of 60dBA L_{eq} (24 hours) mean to an "average person"?

When several impacts are identified, the issues are even more difficult to discuss. If a road widening is being considered, what has the least impact - widening on one side by taking parkland but increasing noise levels to the residences on the other side, or widening on the other side by demolishing dwellings but leaving the parkland with higher noise levels?

These issues are difficult enough, but a further level of complexity occurs when a range of Authorities become involved. Consider the interactions which are involved in considering a new underground rail link in the Mascot area - what is the attitude of shopkeepers (Community Sector A) and industry (Community Sector B) to the provision of a new, privately owned (Private Organisation C) railway (Authority D - CityRail) serving Sydney Airport (Authority E - Federal Airports Corporation) thereby requiring total revision of existing bus routes (Authority F - State Transit Authority) and impacting of traffic generation and patterns (Authority G - Roads and Traffic Authority). Of course, there are many other organisations which also have a critical role in this question - Police, Department of Transport, Department of Planning, Local Government. And also there is the local and the wider community.

On a wider canvas, Sydney's population of about 3.7 million is expected to grow by about a further million over the next couple of decades. While there will be infilling in existing residential areas, as well as urban consolidation using initiatives such as redevelopments like townhouses, it is clear that whole new cities of several hundred thousand people will emerge west of Parramatta. The rapid growth (that is, change) and the impacts of these developments indicate that questions relating to the city's continuing evolution will become even more complex in future. Innovative and competitive public transport will be required in many areas to serve those who are disadvantaged (such as the very young, the elderly, the poor and those who do not hold a drivers licence). Innovative and competitive freight operations will be required to keep down the price of products and to control social and environmental impacts (equity).

Back to the Tribe

The lesson of the past is that the world does not stand still. In future, we can expect more technological change, more pressure for transport reform. Population growth will continue to be fuelled by both natural growth and immigration. People will want continual environmental improvements, but only at prices which are seen as acceptable.

In the foreseeable future, it is difficult to envisage any massive shift away from the private vehicle, although there must be further significant gains in certain areas such as fuel efficiency and emission control. It is also hard to envisage any significant decline in Port Botany, especially with the current steady decline of the facilities in Sydney Harbour. Sydney Airport is expected to grow for several decades before Badgery's Creek Airport is developed to a significant size. In these circumstances we are left with the equity issue of those who live near the developments, or suffer the impacts on transport routes leading out of the area. To address the issues adequately, there is a need for dialogue amongst all of the players who are involved in them. In the 1960's we were warned by Marshall McLuhan, then a controversial futurologist, that we were living in a "global village" (McLuhan, 1967). Now, in the 1990's, Hugh McKay is offering a similar comment about the inner needs of Australians to work together. He informs us that "It is no accident that the resurgence of interest in values and morality coincides with a desire to recreate a *sense of community* within Australian Society" (McKay, 1993). It is no longer appropriate for specialists to exercise their skills in isolation from the community - people want to have a say. He cites the success of Ian Kiernan's 'Clean Up Australia' campaign, starting in 1989 as 'Clean Up the Harbour' in Sydney and now going not just national but international, as evidence that Australians are prepared to co-operate with each other for projects of mutual benefit.

Authorities around Australia are finding a similar phenomenon in respect of planning exercises. Early efforts of publishing leaflets inviting people to write in and "Have a Say" are giving way, in respect of a range of projects, to highly structured community involvement programs.

The RTA has identified a range of ways of involving the community:

◆ Informing the community - simple information, such as traffic changes at certain locations, is conveyed to the public via advertisements or leaflets.

◆ Community Involvement - involving the community through questionnaires or an opportunity to write or telephone their views to the Authority.

- ♦ Community Participation - community representatives participate, via a committee or workshop structure, in project development, in many cases sharing in the definition of the study process and appointment of consultants

- ♦ Community Ownership - the community needs to actually "own" some initiatives, such as the commitment to drink-driving regulations and other road safety measures.

All of these approaches have been or are being used in various cases by the RTA. Each has its own features and strengths and weaknesses, and may be applied in appropriate circumstances.

But "the community" is a very rubbery concept. It includes local people, but it also includes business and industry, bicycle and pedestrian representatives, "green" groups, public transport advocates, Local Government, various Government authorities and other groups.

According to McKay "any development of an ethical framework depends upon the numbers of the group having a sense of *belonging* to the group. Personal relationships are the medium through which ethics, ideals, values and virtues are transmitted and shared". He suggests we are going "back to the tribe" in developing ways of co-operating to address complex questions. This does seem to be the case in community involvement programs for road planning.

In the transport context, it is therefore clear that the current tentative steps have arisen as a result of such community convictions. Equity can be addressed through *integrated transport planning*, where various Authorities work intensively together towards an optimum transport/land use/environment (or equity) outcome, and through *community involvement*, where Authorities work with a cross-section of "the community" towards an optimum equity outcome.

Conclusion

Transport reform is being driven by a competitive urge to make industries more efficient. Technological change is being driven by the timeless urge of building a better mousetrap. Sydney's population expansion is something to which we are contributing as our families grow. These factors all have serious repercussions in terms of overall community impact and equity. They are potentially "enemies". It is easy to be trapped into seeing many of the impacts in isolation, however, we ought, as a society, to define a vision of our common future, in which we do all share in jobs and wealth-generation without tolerating serious adverse impacts to localised sectors of society.

The attainment of this complex objective requires great skills from within the planning professions, and a willingness to share knowledge and ideas, and to compromise, on all sides. Technology, reform and equity can then become "allies".

There is evidence that, through integrated transport planning and community participation, this process has the potential to offer solutions. There is also evidence that the community is ready and willing to participate meaningfully with the planning professions in the process. Let us not blindly follow the quest for transport reform and technological change without regard to the equity of the various communities of which we are part.

Abbreviations

BTE	Bureau of Transport Economics
CBD	Central Business District
CIA	Central Industrial Area (Botany/Mascot/South Sydney)
DoTC	Department of Transport and Communications
EIS	Environmental Impact Statement
MSB	Maritime Services Board
NAASRA	National Association of Australian State Road Authorities
RTA	Roads and Traffic Authority
TEU	Twenty-foot Equivalent Unit

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