INTRODUCTION

In a modern city a wide variety of transport modes are possible, ranging from foot and bicycle, through conventional trains, buses and cars to complex electronic systems like dial-a-bus and personalised rapid transport. Yet in most cities a single mode, the private car, is dominant. This can be seen by comparing the number of trips made by car and public transport, and also by comparing the relative expenditures on and the geographical scope of the different modes. In 1971 the number of private and commercial trips by car in Sydney was 3,400,000 per day and the number of daily public transport trips was 1,400,000. (1) Total expenditure on public transport in New South Wales for the year 1971-72 was $307 million. (2) Total government expenditure (local, state and federal) on NSW roads in that year was $257 million (3), and private expenditure on cars was about 2½ times that amount. Most public transport services are radial, into the city centre, and throughout the whole metropolitan area nearly all cross travel is by car.

The main object of this paper is to examine the causes of this dominance of the car in metropolitan transport. How was our transport system planned and developed? Who made the critical decisions and with what objectives? How did these decisions lead to the present condition of our transport? If we do not know the answers to such questions, it is very difficult to predict the way ahead for our transport system and to plan for any significant changes. I have not completed the intricate task of finding the answers. I hope, however, that this paper proves to be a beginning, and will open the way to further discovery.

THE PROMISE AND THE PROBLEM OF THE CAR

The popularity of the car springs from its promise of individual power, freedom and mobility. The car, according to its proponents, offers the best possible way of getting from any origin to any destination. John B. Rae, for example, writes that the car “offers individual, personal, flexible mobility, as nothing before it has ever done, and as nothing else now available can do”. Even more than this, “the road and the car together have an enormous capacity for promoting economic growth, raising standards of living, and creating a good society”. (4)

The reality of the car, however, has turned out to be different from the promise. Driving on many city roads, at almost any time of the day, is an exercise not in freedom but in frustration. The volume of traffic in Sydney and Melbourne is now such that congestion rather than mobility is the most striking characteristic of their transport systems. In this respect, their fate is the same as that of other great world cities, described as follows by Lewis Mumford: “Every metropolis that has encouraged the wholesale invasion of the automobile can bear testimony to its disintegrating effects,
expanding every year with the expansion of the motorcar and petroleum industries: stalled traffic, personal confusion and frustration, excessive noise, poisoned air, increased necessity to spend an undue proportion of the day in performing scattered functions that were once more adequately carried on without the aid of wheeled vehicles in a compact urban area.” (5)

Above all, we pay heavily for the car in human life and health. In 1971-72 in Australia 3,400 people were killed in car accidents and another 91,000 were injured. (3) Many of those injured were crippled for life and others will experience some degree of permanent suffering. A high price to pay for private door-to-door transportation, even if there were no other problems.

MAXIMISING THE NUMBER OF CARS

In seeking the causes of the dominance of the car it is natural to examine first the function of the large corporations that produce the cars. A primary objective of each corporation is to maximise its rate of growth. To do this, it aims to produce and sell as many cars as possible.

Throughout the 1910s and 1920s the foremost corporation was Ford. Henry Ford developed the technology of assembly-line mass production to turn out cars in increasing numbers. After the 1930s the main initiative shifted to General Motors, whose president, Alfred Sloan, aimed to further increase car sales by a strategy of planned obsolescence. Writer Emma Rothschild describes this as follows: “Sloan’s idea for upgrading consumer preferences was that automobiles should change each year, and should each year become more expensive. The rate at which people traded in their old cars would grow. Each year, the new-model cars would have more improvements added on, different engines, different styling, different comfort features”. (6) Through such methods, General Motors was able, from 1950 to 1970 to increase the number of cars in America nearly three times faster than the increase in human population.

These techniques of production and sales, developed in the US, were also applied at a later date in Australia, and are now widely used by car companies throughout the world. The initiative of the corporations in mass producing cars would, of course, come to nothing if this initiative did not meet a response within the community. Ford’s early spectacular successes show clearly that many people, initially from the well-off classes, enthusiastically identified with the myth of the car, i.e. its promise of individual mobility and good life. Thus consumers were readily found, and these enabled producers to press ahead. These owners of cars also naturally wanted good roads to drive on and readily approved of government expenditures to meet this need.

The growth in the number of cars in each city and state has always been followed by a growth in the network of roads. As cars increase, existing roads become inadequate and there is congestion. At the same time, as the city expands, new possible routes open up linking new starting and destination points. So pressure builds up from the car companies, from related industries, from the complex of urban businesses and from the owner themselves to continually expand and improve the road network. Government bodies thus feel road development as an important need, and respond with planning and expenditure.

The growth of road transport has greatly affected the whole physical structure of the city. Were it not for mechanised transport, most cities would be smaller and more compact. In the earlier part of this century the expansion of cities tended to follow railway lines or other public transport routes. More recently the car has led to a more uniform suburban dispersal. This dispersal in turn has increased the dependence of people on the car. So now many people have cars, not because they believe in the myth of individual power, but simply because public transport no longer meets their needs. In shaping the city, the car has made itself into a necessity.

The dominance of the car comes not only from the great expansion in the number of cars in the city but also from the simultaneous stagnation and decline in other modes of transport. The most economical means of short distance transport is the bicycle. It is moreover a very pleasant vehicle for healthy persons and, in energy terms, is by far the most efficient. Yet today in Sydney and Melbourne few people consider it safe to ride a bicycle in streets of fast cars. In the absence of legislation for bike lanes, the car has effectively squeezed out one of its main competitors.
Likewise public transport has declined. In Sydney and Brisbane one of the most vital modes of transport, the tram, has been eliminated. The numbers of passengers on trains and buses in Sydney and Melbourne are today substantially lower than in 1955. The reasons for this include the greater usage of cars and the change in the structure of the city. It is also a consequence of the relatively low priority given to public transport in government planning. As the use of trains, trams, buses and bicycles declines, our overall dependence on motor transport increases and the car tends to become more and more dominant with time. (7)

GOVERNMENTS GIVE PRIORITY TO ROADS

In the typical year 1971-72, the total expenditure in New South Wales on roads by federal, state and local governments was $257 million. (3) Of this, $74 million came from motor vehicle taxation and charges on commercial vehicles, $56 million from federal government grants, (8) and the rest from state and local government sources. During the same year, total expenditure on public transport in New South Wales was $307 million. The income from fares, freight, etc. was $303 million, leaving an operating deficit of $4 million. (2) So after deducting the amounts obtained directly from the users, it can be seen that the government bodies spend considerably more tax money on roads in New South Wales than on public transport.

Public transport and roads are, of course, financed in completely different ways, and the above figures do not give a completely adequate comparison. But in qualitative terms the picture is clear. New roads, including costly urban freeways, have been built; there have been definite improvements to road transport facilities, whereas public transport services have remained static or even declined.

Symptoms of the decline in the quality of train, tram, bus and ferry services have led to more and more people abandoning these services and
resorting to cars. Naturally, people tend to use whatever services are best provided for. So government priorities have been an important factor in reinforcing and intensifying the dominant role of the car.

Train and bus fares in Sydney are the second highest in the world. A fare rise on a given service can lead to an immediate drop in the number of passengers, as many people find that mode of travel no longer economical. Cut-backs in train, bus and ferry services in recent years in Sydney have had a demoralising effect on passengers. So has the unreliability of some train and bus services, arising from mechanical breakdowns and other factors. Signalman M. Mulheron writes: "Every day in the metropolitan area, trains are cancelled for one reason or another - and while many of the cancellations are caused by mechanical defects, it is also a fact that shortage of staff, particularly among guards, is a major cause". Thousands of people in Sydney suburbs know well the frustrating experience of waiting for buses that do not come or are packed too full to take any more passengers. In this way people are driven to buy cars.

SATS Examined

Let us examine now the rationale behind present government transport priorities. As the number of motor cars builds up, it is natural enough that government bodies will want to spend more on roads. What is not clear however is why they should at the same time allow the public transport systems to run down. For these, after all, retain a vital function in the city. To gain an insight into the underlying philosophy behind government planning, the Sydney Area Transportation Study will be considered. This is a typical metropolitan study, and its recommendations are to provide a basis for further transport development in Sydney.

A central feature of the study is the use of models to make traffic projections to the year 2000 and to analyse the consequences of these projections. Thus the study finds that between 1971 and 2000 the number of private motor vehicles in Sydney should increase by a factor of 2.5, the number of persons per vehicle should go down from 3.07 in 1971 to 2.03 in 2000, and the total daily vehicle miles of travel should increase by a factor of 2.2. The percentage share of public transport in work trips is predicted to remain roughly constant.

On the basis of these projections, SATS puts forward a set of recommended systems for highways and public transport.

The main feature of the recommended highway system is a vast "grid pattern" of freeways. This pattern incorporates in full the existing NSW government freeway plans, including the inner-city radial expressways to which there has been so much opposition from community groups and the federal government. There are to be 342 new miles of freeways and 150 miles of new major roads. With regard to public transport, the main recommendations are for some new railway lines and improvements to existing lines. The estimated cost of the highway and parking systems is $2,481 million and that of the railway, bus and ferry systems $1,492 million. (1) The ratio of expenditure for roads and parking to that for public transport is 1.7.

If government policy did in fact follow these recommendations, what might Sydney be like in the year 2000? With 342 new miles of freeways Sydney might look something like Los Angeles does today, an undifferentiated mass of houses, walled off into many-laned expressways, with ramps and viaducts, and with huge parking lots, all in an atmosphere pervaded by smog. SATS does in fact indicate that even with expensive pollution controls the levels of Nitrogen Oxides, the cause of photochemical smog, would be much higher than at present. But even with all these freeways, congestion would remain, as it does in Los Angeles even though two-thirds of its central business district are given over to the car. For more freeways attract more cars and further distort the transport system in favor of the car.

The recommendations of SATS follow directly from its traffic projections. But how realistic are these? Will the volume of cars continue to grow up to the year 2000? When fuel resources are taken into consideration, the answer is almost certainly no. Using the best available data, it appears that on present trends about half of the available petroleum reserves in the world will be used up by the year 2000. Long before that time supply will no longer be able to meet demand. We can then expect the price of oil to keep on rising, as it has been doing over the past few years, at least until it reaches the price of the next alternative source of energy, such as shale oil or synthetic fuel from coal. This fact will...
have a profound effect on the costs of the whole motor transport system, and will make electric public transport relatively more and more economical.

SATS discusses fuel supply very briefly, gives no figures, yet concludes optimistically that: "although fears have been expressed that reserves may be exhausted by the turn of the century, most forecasts predict a longer period before permanent shortages occur."

The energy problem is one central factor in the present world wide crisis in the car industry. This crisis is the result of other factors also that throw into question the whole future of the car. This will be discussed further.

Planners and Companies Share the Same Values

The fundamental assumption of the Sydney Area Transportation Study, namely that the growth of the car will continue according to its projection model, is therefore unsound. Though the faith of the planners in their model may be baseless, it is none the less unshakeable. Nothing can make them doubt the rosy future of the car. And from their basic assumption the whole set of recommendations follow, entailing as they do the continued dominance of the car right up to the year 2000. We may note too the near complete compatibility in the thinking of the planners on the one hand and that of the corporations on the other. The car companies aim to maximise the number of cars, while our official planners design a transport system in which road transport gets the highest priority. We have here an identity in the values shared by the two groups.

There is one further reason why governments give priority to road transport, and that is its effect on the growth of the economy. For every government, the increase in productivity is a basic objective. Now transport is one of the most vital sectors of the economy. In the USA it accounts for 20 per cent of the gross national product, (6) and the figure for Australia is probably of the same order. Furthermore, a transport system based on the car, by the very fact that it involves much higher levels of spending and higher levels of consumption of materials and fuel, contributes much more to the GNP than does a public transport system. The car in fact is at the very heart of a number of major growth areas, including the automotive, petroleum and construction industries.

STRATEGIES OF THE CORPORATIONS

Although there is basic agreement between the policies of governments and the goals of the corporations, the latter are far from complacent. All large corporations plan their futures systematically for years ahead, using the most up-to-date expertise in technology, economics and management. They leave nothing to chance. While they are pleased with the priority given the car in government planning in Australia, they are never satisfied with the actual amount of expenditure. They want the roads to receive even more. To ensure this they try to have an on-going influence on the details of government policy.

The main way the corporations try to influence governments is by the fostering in each country of a road lobby. This may be defined as an industrially based interest group, which exists to promote the construction of more and better roads and to minimise restriction on roads and road traffic. (16) The spearhead of the road lobby in Australia is the Australian Road Federation, which describes itself as "a federation of associations, companies, firms and individuals who have an interest in the construction, maintenance, or use of roads, and in the promotion of a constructive road transport policy in the national interest". (17) Its national council is made up of representatives of multi-national corporations and other large businesses. In 1973-74 for example, it consisted of representatives of General Motors-Holden, Ford, Esso, Shell, Mobil, BP, Total, Olympic Tyre, Goodyear, International Harvester, Caterpillar, Repco, Cement and Concrete Association, Construction Equipment Manufacturers, Australian Road Transport Federation, and also a few private individuals. (18)

The Australian Road Federation was set up in 1951 with the objective "to promote the interests on a national basis of those directly concerned with roads and road transport". It sees highway transportation as "a basic tool of industry and commerce" and roads as "a vital component of the industrial and commercial equipment of this nation". (17) One of the specific aims of the ARF, that it never tires of stressing in its quarterly publication "Road News", is the expenditure of more public money on roads. Its target is in fact a government policy in which all revenue obtained from petrol taxes is spent on building
roads. (Perhaps if we should ever have an alcohol lobby, this might urge that all revenue from beer taxes be spent on building more hotels!).

THE WAY AHEAD

As popular resistance to the car increases in coming years and as it becomes increasingly difficult to keep up sales, what might we expect the corporations to do? To answer this we must understand the dynamics of corporate capitalism. By their very nature these corporations must expand. The drive to maximise their rate of growth and to maximise the extent of their economic empire is absolutely fundamental to them. Up to now they have sought to achieve this by maximising their sales and by working to ever expand the scope of the car in our transportation systems. But with the decline of the car, we may expect a change in their strategies.

In contrast with the line taken here by the ARF, the car industry in America has recently conceded that motor taxes can be used for purposes other than building highways, such as urban mass transit. In June 1972 the US companies participated in an exposition of different kinds of transport, called Transpo '72. Emma Rothschild records that "a company representative explained that GM's 'objectives for Transpo '72 are to demonstrate that GM is a total transportation organisation ... a producer of hardware that will meet the needs of any federal, state, or local transportation system that is planned'. Ford displayed a system of trolley cars built under government contract, and Henry Ford pronounced that 'entirely new public-transportation concepts' were urgently needed, and should be financed in part out of our Highway 'trust Fund' revenues. He said, 'today I am making the formal announcement that Ford is entering the public-transport-system business'." (6)

General Motors already has a planning team of systems analysts, economists and behavioral scientists. This team is compiling information about all American cities of more than 50,000 inhabitants, and has the largest data bank on urban information anywhere. (6)

Thus the way ahead, in the next decade or so, is becoming clear. In the immediate future we may expect that the car companies will continue to push the sale of cars in every way they can, including the production of more small cars as well as large ones. Then in the years ahead, as fuel and other costs rise, as pollution and congestion become intolerable and popular opposition becomes overwhelming, we will discover that, just as the oil companies are now becoming total energy corporations, the car companies will grow into total transportation organisations. So in this way their expansion can continue, and they can strive to dominate our total transportation to an even greater degree than they do today.

In their expanded role, the giant corporations will of course try to make mass transit itself into a growth industry, just as the car industry is today. And even if owned by the government, public transport will be heavily dependent on them, if it is they who manufacture the new vehicles and electronic systems and develop an ever more complex technology on which it is run. In this case we would be no better off than we are today. Just as the problem of traffic congestion is not solved by building more freeways, so also the solution to our total transportation problem cannot be a system that keeps growing in extension and complexity. This could only increase all the frustrations of urban living, and would moreover keep depleting our remaining energy sources (coal, uranium, etc.) at an increasing rate.

To find a solution to our transportation problem, we must abandon the goal of indefinitely expanding our transport facilities and our energy consumption. Instead we must set a limit, and within this limit plan for our basic transport needs. Components of a satisfactory system will include an adequate public transport network, bicycles, and also small electric vehicles for special purposes. Using this as a basis, there is great scope for flexibility and innovation. As expanding production in such massive and concentrated industries as the automotive is cut down, it will be possible for more people to work close to where they live. Such changes will greatly reduce the quantity of necessary transportation. In the system proposed here we would consume less mechanical energy, spend less time travelling and experience less frustration. What we lose in economic growth we would gain in freedom.

This kind of change, however, involves the removal of the control and influence of the corporations over our transportation. Instead it involves control by the people in the community. Needless to say, the corporations
THE DOMINANT CAR

will never consent to such a change and can be expected to fight in every way to retain their profits and their dominance. To break out of their hold and to begin to shape a humane transportation system, we must challenge their power. This is beginning to happen, as we build up broad-based movements in our cities to oppose the expansion of the car and the freeway, the instruments of their profit and power, and to press for better public transport to meet the needs of the community.

The ARF has been an extremely successful activist body. By 1966 it was claiming a number of successful promotional achievements, including: the formation of the Commonwealth Bureau of Roads; the exemption from income tax of federation membership fees paid by the automotive, oil and other industries; and a policy statement by the federal government that fuel taxation would not be increased. (17)

Perhaps the biggest success story of the ARF is the Prime Necessity National Roads Scheme. Last year the Australian government decided to press ahead with and fund a national road system, which had been urged by the ARF since at least 1971. In May 1974 in his annual report, the president of the ARF claimed that his organisation now has a special relationship with the government: "The recent acceptance of our special voice and of our plans, particularly the PNNR scheme, backs up earlier acceptance of our role by the Commonwealth Bureau of Roads." (19) When they formulated this scheme in 1971, the ARF sought the support of other road-oriented bodies and gave the proposal maximum publicity through public meetings, radio, press and TV. Throughout 1972 various newspapers, from the Morning Bulletin in Rockhampton to the West Australian in Perth, gave favorable publicity. The ARF approached parliamentarians and obtained favorable responses from top members of both parties. This intensive campaign eventually proved most fruitful. (20)

The president made it clear to his fellow members that their efforts could not stop there: "All this progress increases our responsibility and the need for increasing our vocal strength - to convince the politicians that there are votes in good road programs .... We need to re-convince some of our members that good roads are part of their own industry or business drive for greater productivity, efficiency and profit." (19)

As for urban freeways, the ARF has been lobbying for them since at least 1966. (17) In 1972 and 1973 it joined in the public controversy about freeways in Melbourne, especially through an article published in several newspapers putting the case for freeways. Road News, March 1974, states that 44 miles of freeways have been completed in our state capital cities, and also gives the figures for 29 American cities each with much more than this. Los Angeles is the highest with 370 miles. These figures, they consider, may help "counter the arguments by anti-freeway politicians that Sydney and Melbourne have already reached freeway saturation". It is not clear what the ARF regards as desirable target figures for Australian cities. In December 1974 Road News reported that the ARF is continuing its campaign for more freeway construction.

Causes of the Dominance of the Car; a Summary

It is now possible to sum up what has been found so far regarding the causes of the dominance of the car. These causes are complex, and much more needs to be said than is possible in a brief paper such as this. I have tried, however, to select some of the factors that are of most importance. These are as follows. The first initiative for the proliferation of cars in our cities comes from the motor corporations. These have always aimed to maximise the number of vehicles, through the technology of mass production and through their sales strategies. The buyers of cars have responded to this initiative of the companies and made the expansion possible. Government planners, believing in the inevitable growth of the car, have given priority to roads in their expenditure rather than public transport. The corporations, all the while through their intense activity in road lobbies, do all in their power to press for even more roads and freeways, so that the dominance of the car, along with their own growth and profit, is ever assured.

It remains now to consider the prospects of our metropolitan transport systems in the years ahead.

THE CAR IN CRISIS

At the end of 1974 we witnessed an acute sales crisis in the car industry in Australia. General Motors-Holden and Ford were left with stockpiles of thousands of cars they were
unable to sell, and GMH was threatening to dismiss 5000 workers. The same thing was happening all over the world. In the USA General Motors announced production cuts that would put 91,000 people out of work by the end of January. 33,000 American workers were laid off by Ford and 70,000 by Chrysler. Fourth-quarter 1974 car sales in the US were one-third less than fourth-quarter 1973 sales, and the industry had a 3-month stockpile of unsold cars.

The European car companies were also in trouble. Those in West Germany, Britain, France and Italy faced a 25 per cent drop in production. In West Germany, 110,000 workers were on short time and 60,000 were laid off. In Italy most workers were on a 3-day working week. In Japan, there was a 30 per cent drop in car production in 1974 - the world's largest. (21)

There are many factors behind this crisis. These include the recession and the rising price of oil. The price of fuel, I have already argued, must keep on rising in the years ahead. Perhaps the most important factor of all is the growing opposition among people, in many cities of the world, to the car and to the encroachment of freeways. In Sydney, for example, this opposition has found expression in the growth of resident action groups, in green bans, a save public transport group, large public meetings, and in the direct confrontation of last October at Ultimo. There have been cases in other cities, including San Francisco, Boston and Toronto, where freeways have been stopped and changes brought about in the priorities of the planners. There is a limit to the amount of irrationality that people will accept, and in the expansion of the car we seem to be fast approaching that point.

1974 may well mark the beginning of the decline of the car. However, that does not mean the decline of the multinational corporations that make the cars. After all, in 1973 General Motors reported the largest annual profit ever made by any company anywhere, namely $2.16 billion. (6) Also in Australia, GMH has done extremely well out of the crisis of last Christmas. By using the threat of mass unemployment, they obtained from the Australian government the exact concessions they wanted, including a large tax cut and the imposition of import quotas. So sales have been temporarily boosted and the danger from their Japanese competitors reduced. GM is still in a very strong position indeed.

REFERENCES:

13. SATS. Vol: 3, Ch. 10.
17. Roads to Prosperity. Melbourne, Australian Road Federation.