

# **SUSTAINABLE TRANSPORT AND SOCIETY - ATTITUDES TOWARDS THE USE OF CAR: A PILOT STUDY OF UTS STAFF ON BROADWAY CAMPUS**

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## **INTRODUCTION**

Traffic congestion in Sydney has trebled in the past 40 years and is likely to result in a grid-lock by the turn of the century if appropriate traffic reduction measures are not taken (Newman, 1994). Furthermore, urban congestion has long been a problem, and is a deteriorating one (Oluwoye, 1988). The worry of this problem is the increasing tendency towards inter-urban congestion on motorways and other major roads. There is also now a widescale recognition of some of the environmental problems caused by traffic; problems such as pollution and noise (Oluwoye, 1988; 1993; 1995).

In Australia, motor vehicles cause \$ 600 million worth of environmental damage in NSW each year (EPA, 1995). Road passenger transport currently accounts for about 60 per cent of the total carbon-dioxide (CO<sub>2</sub>) equivalent emissions from the Australian sectors. Most of this comes from cars, with only 1.8 per cent of transport emissions due to buses and 0.5 per cent to motorcycles. It should be noted here that the success of the alternative measures depends somewhat on the reactions of the public to them, which in turn depend to a large extent on people's attitudes towards their cars. These are the concerns of this paper.

## **PURPOSE OF THE STUDY**

The purpose of this paper is to discuss UTS car ownership trends and issues by analysing more attitudinal issues including UTS staff attitudes to congestion and the environment, stated changes in car usage as a result of changing scenarios relating to congestion and the environment, fuel and parking price increases and changes in public transport provision.

## **METHODOLOGY**

A survey of UTS staff on Broadway was carried out last year October 1996. The survey was conducted through the use of questionnaire mailed to 48 randomly selected UTS staff. A total of 29 questionnaires were returned which represents an overall return rate of 60.4%. It should be noted here that the randomly selected UTS Staff are not fully representative of total population of the UTS Staff. The survey was undertaken as a preliminary to a more detailed group discussion which would complete the findings of this survey. The intention of the survey is to give a broad understanding of people's attitudes towards their cars in order to gain some idea of the likely success of measures to dissuade people from their use.

The statistical procedures which was used in the analysis of the data are part of the integrated system of computer programs called Statistical Packages for the Social Sciences (SPSS). This is a unified and comprehensive system designed for the analysis of social science data that allows the researcher to perform many different types of data analysis. Furthermore, the data collected were then coded for computer analysis.

## **DATA ANALYSIS AND RESULTS**

### **CAR OWNERSHIP**

In the UTS staff survey the car ownership statistics were much higher than expected; 14% of the UTS staff sampled had no car, while 86% had one or more cars. Furthermore, it should be noted that the car is a product about which many people become very emotional. Breach (1989) reported that "the car makes more demands and inflicts more damage on our global habitat than any other commodity but it is universally the most desired artefact in the whole history of humanity" (p. 25). This might be a slight exaggeration of the truth, but it nevertheless represents the popular image of the car. In supporting Breach (1989), Marsh and Collett (1986) question that people even view the car as product.

From the above one can see that people have relationships with their cars but it is obvious that not everyone feels this way about it as we have seen, 14% of UTS staff have no car. The more essential they are claimed to be, the more difficult one can hypothesise it will be to induce people to reduce their mileage/kilometre or to give up their cars in the future.

37.9% of UTS staff with a car said that a car was essential to their lifestyle and that they would not want to be without one, 58.6% said they found their car useful, while 3.4% said that a car was luxurious to them and their is no need to have it.

A factor which could be hypothesised to influence the level of necessity attached to the UTS staff car is annual travel mileage. The majority of the respondents had a driving license. The proportion of UTS staff who view the car as essential increases as mileage increases from 27.6% of those who do less than 10,000 km a year to 72.4% of those who do above 10,000 km a year. Furthermore, whilst 7% of the UTS staff who do less than 10,000 km a year could be classified as uncommitted car owners.

### **WHAT ARE PEOPLE'S OPINIONS ON TRANSPORT ISSUES?**

83% of people said that they agreed with the statement 'Traffic is increasing so fast that existing road will not be able to cope by the year 2005.' The level of agreement (and concern) is indicated by the fact that 48.3% of respondents stated that they strongly agreed with the statement. The next question was to gain some idea of whether people blamed congestion on the number of cars on the road or on things beyond the drivers' control, such as the number of roadworks, the poor state of roads, etc. The statement used was 'it's not the drivers' fault that the roads are congested.' Overall the response to this question was positive, with 52% agreed compared to 48% who disagreed. The strength of agreement on this question was, however, much lower than on the previous questions.

The third statement sought to elicit people's attitudes to the problem of traffic and the environment and said 'Traffic fumes are a major contributor to acid rain and other environmental harms.' 93% of respondents agreed with this statement, 41% strongly agreed. In fact, only 7% disagreed with the statement. In UK LBRT survey 42% of car users said that pollution and noise caused by traffic was an important issue and 26% were dissatisfied with what the council were doing about it. A further study of the London area carried out by the Metropolitan Transport Research Unit (MTRU) in 1989, of 1426 respondents, 17% of the 82% who said they would like to see a reduction in traffic in London gave fumes as the reason why.

## HOW WOULD PEOPLE REACT TO CHANGES IN THE CONDITIONS AFFECTING TRAFFIC?

The above discussion establishes that UTS staff are concerned over congestion and the environment. The next step was to discover whether they would be willing to take voluntary steps to alleviate the problems. In order to do this questionnaire contained a list of possible scenarios and asked to say whether they would (a) give up their car (b) use their car less (c) make no change (d) use their car more, as a result, the following paragraphs analyse the responses to these questions.

The first scenario posed was that traffic congestion doubled journey times. The majority (69%) of the respondent said that they would use their car less. 17.2%, however said that they would give up their car, and 13.8% said that they would make no change.

The second scenario was that it was proved that car fumes seriously damaged the environment. In this case, 69% said they would use their car less, 20% said they would give up their car and 10.3% said they would make no change their car usage.

The next scenario presented was that the price of fuel increased to \$1.50 a litre from a then current price of 0.75¢/litre. In this case the majority (69%) stated that they would use their car less, 6% said they would give up their car and only 3% said they would make no change to their usage.

Next, two public transport scenarios were posed. The first was that fares were substantially reduced. In this situation, 69% of people said that they would use their car less, 21% said make no difference to their usage and 3% said that they would give up their car usage.

The second public transport scenario was that services became frequent and reliable. Under these circumstances, 72.4% people said that they would use their car less, 10.3% said they would give up their car and 17.2% said that it would make no difference to their car usage. These results are very similar to those obtained by Gallup Survey in UK, who found that 41% of people would use public transport if it were fast frequent and available even if it costs a good deal more than it does now.

The final scenario was that car parking charges. The majority of UTS staff (respondents) 62% said that this makes them reduce their car usage. 31% said that this would make no difference to their car usage and 6.9% said they would give up their car. It may be hypothesised, however, that frequency of car use may affect people's sensitivity to changes in traffic conditions.

Table 1: Change in use of car, by frequency of driving

	Percentage starting response to change	
	Daily	At least once a week
• Traffic congestion increases doubling journey times	52	79
• Cost of fuel increases to \$1.50 a litre	45	66
• Public transport fares reduced substantially	55	62
• Public transport services become frequent and reliable	59	66
• Car fumes seriously damaged environment	69	76
• Parking charges double	48	66

Hence, it may be hypothesised, however, that frequency of car use may affect people's sensitivity to changes in traffic conditions. This in fact was the case. For each of the scenarios above, people who use their car daily were more sensitive to the proposed changes than those who used their car less frequently. Table 1 above shows that 52% of those who used their car daily said that they would not change their car usage if congestion double their journey times compared to 79% of those who used their car less frequently. The findings reveal that the cost of using it is a more powerful motivating force than commitment to the car. In economics parlance, frequent car drivers are more price inelastic with respect to the costs of motoring.

It could also be hypothesised that those people who considered a car to be useful to their lifestyle would be less sensitive to the adverse changes in driving conditions than UTS staff who thought it was essential.

Table 2: Change in use of car, by attitudes towards car

	Percentage starting response of change	
	Car essential	Car useful
• Traffic congestion increases doubling journey times	38	41
• Cost of fuel increases to \$1.50 a litre	52	66
• Public transport fares reduced substantially	45	59
• Public transport services become frequent and reliable	38	55
• Car fumes seriously damaged environment	41	55
• Parking charges double	52	66

Finally, one might expect people car sharing would be less sensitive to changes in driving conditions. Again this was so, except in the case of public transport fares reduced substantially and services become frequent and reliable, as is shown in Table 3.

Table 3: Change in use of car by car sharing

	Percentage starting response to change	
	Car sharing	No sharing
• Traffic congestion increases doubling journey times	52.0	48.0
• Cost of fuel increases to \$1.50 a litre	52.0	44.8
• Public transport fares reduced substantially	31.0	69.0
• Public transport services become frequent and reliable	34.4	65.5
• Car fumes seriously damaged environment	62.0	37.9
• Parking charges double	51.7	48.3

This suggests that in order to reduce the predicted traffic problems, the most effective policy, leaving aside direct restrictions on car usage (which were not considered in this survey), would be to increase the direct costs of motoring.

## HOW DO WE DEAL WITH CONGESTION?

From the above one can see that UTS staff are quite aware of the probability that congestion will become an increasingly important problem in the future and that although there might be some voluntary restraint as congestion increases it will not be sufficient to have much effect on its level. The next question is to see what measures, if any, people would support to reduce it. A set of alternative options about how to deal with this problem, specifically in city centres, was therefore presented to the respondents to elicit their opinions on which, if any, they would support. In response to each option they were asked to say whether they strongly supported it, supported it, were neutral about it, disagreed with it or strongly disagreed with it. The six policy options were not supposed to cover every alternative possible but to cover the most frequently advocated ones. The options were:

1. Building new roads to increase traffic capacity.
2. Improving bus and rail services to provide an attractive alternative to the car.
3. Encouraging people to walk and cycle instead of driving by providing more pedestrian and cycle routes.
4. Ensuring much stronger enforcement of parking controls.
5. Reducing congestion by charging drivers to enter busy city areas.
6. Banning cars from central areas except drivers with special permits (for residents, disabled people, etc.).

The most popular option, as shown in Table 4, was option 2, to improve bus and rail services. This was supported by 96.6% of respondents including 82.8% who strongly supported it. The second most popular option was providing more pedestrian and cycle routes.

The Gallup survey in UK, concerned with traffic growth generally and not congestion in cities specifically, discovered that options which found most favour with their respondents were subsidising public transport (favoured most by 69% of respondents) and building more roads (33%). In the MTRU survey, the most popular option was to reduce the road-space available to cars by providing more bus lanes and giving more space to pedestrians and cyclists (strongly supported by 42% and supported by 23% of their respondents). The findings of the Lex (1989) survey also confirmed improvements in public transport as the most popular measure (supported by 59% of respondents) to deal with traffic congestion.

At the other end of the range in this survey, the most unpopular option, and the only option where those who disagreed equal to those who agreed was option 1, building new roads.

Table 4: Policy Options

	Strongly support	Support	Neutral	Disagree with	Strongly disagree with
• Building new roads	20.7	20.7	27.6	13.8	17.2
• Improving bus and rail	82.8	13.8	-	-	3.4
• Encouraging walking and cycling	69.0	24.1	-	6.9	-
• Enforcing controls	58.6	27.6	10.3	3.4	-
• Charging drivers to enter busy city areas	58.6	13.8	6.9	17.2	3.4
• Banning cars from central areas	51.7	24.1	3.4	17.2	3.4

## WHAT HOPE FOR THE FUTURE?

One can see that in general, UTS Staff have said that they are somewhat willing to use their car less but not give up their car, and that this is particularly so for those people who are frequent users of the car. It seems that the more UTS Staff use their cars to Broadway, the greater the level of attachment they feel for them and less willing they are to do without them.

From the above discussion, one can see that UTS Staff considered themselves to be willing to respond to the needs of the future and would be willing to use their car less for the sake of either the environment, the community, the future of their children, or a mixture of three. At this stage, findings on this appear to be mixed. Linking answers to questions about the environment, for instance, the results reveals UTS Staff were concerned that traffic fumes damaged the environment.

## **SUMMARY AND CONCLUSIONS**

Generally, peoples' dependence on their cars is illustrated by the fact that 38% of UTS Staff in the survey perceived a car to be essential to their lifestyle and a further 58.6% found their car useful that would not want to be without one. It is interesting, however, that there is still a core about 3.4% of the respondents said that a car was luxurious to them and their is no need to have it.

Most people especially UTS Staff recognised that there were many problems associated with traffic. Eighty-three per cent of repondents, for instance, agreed that existing roads would not be able to cope with the increase in traffic forecast to occur by the year 2005. Ninety-three per cent also agreed that traffic fumes were a major contributor to environmental problems. Thus, there appears at least to be recognition of the problems caused by traffic. Doing something about it, however, is another matter.

When presented with hypothetical future transport scenarios, mostly of a positive nature, there was some evidence to suggest that people would reduce their car usage but would not give up their car.

The policy implication is that in order to restrain traffic voluntarily, there will have to be financial penalties attached to driving. The impact of this would obviously depend on the scale of penalties, but given only moderate penalties, alone, these may not have a substantial effect on vehicle usage because it would have least effect on those who do the most kilometre. Coupled with the income distribution problem, it appears that voluntary restraint through the pricing mechanism may not be the best way to deal with the situation. Some measure of direct control may also be needed, depending on the level of traffic reduction required.

When asked about measures to deal with congestion problem in city centres, UTS Staff were most favourable about options which did not involve them in spending money.

Thus, overall, the impression gained from the results of this survey is that congestion and other traffic related problems are set to increase and that there will be some voluntary reduction in traffic as the problems intensify. However, the level of attachment of most people to their car is such that it will take some positive action from outside to force any real reduction in traffic, and that this positive action will have the most impact if it hits people's purses directly.

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