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TRAFFIC ACCIDENT RESEARCH UNIT



DRINK-DRIVING PROPAGANDA IN SYDNEY, AUSTRALIA: EVALUATION OF FIRST STAGE, INFORMATION CAMPAIGN

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The Traffic Accident Research Unit was established within the Department of Motor Transport, New South Wales, in May 1969 to provide a scientific approach to the traffic accident problem.

This paper is one of a number which report the results of research work undertaken by the Unit's team of medical, statistical, engineering and other scientists and is published for the information of all those interested in the prevention of traffic accidents and the amelioration of their effects.

A handwritten signature in dark ink, appearing to read 'W. Butler', is centered on the page.

Commissioner.

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ABSTRACT

The NSW Government has provided heavy sponsorship through the Traffic Accident Research Unit of the Department of Motor Transport, of two drink-driving campaigns. The first, intended to increase public awareness, is the subject of this report. Evaluation of the second campaign, intended as a persuasive attempt at attitudinal change (the "Slob" campaign) will be the subject of a subsequent report.

The first-stage, information campaign had three objectives:

1. To increase awareness of the relationship between drinking and driving and serious traffic crashes.
2. To increase awareness of the Breathalyser legislation and the penalties contained in it.
3. To increase awareness of the amount of alcohol required to break the law.

The effect of the campaign was measured by controlled before-and-after surveys. After the campaign there was a measurable increase in knowledge in the areas defined by these objectives. More people knew that alcohol is an important contributor to serious crashes. More people knew that the legal limit is .08%, and that penalties for failing the breathalyser include 12 months licence suspension and a period in gaol, specifically six months. And more people know that six middies in an hour will bring the average man over .08%. With a few exceptions, the increases were uniform over the whole target audience, which was defined as the adult (17-69 years) Sydney community.

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INTRODUCTION

During October and November of 1973, the Traffic Accident Research Unit of the New South Wales Department of Motor Transport conducted an information-oriented communications campaign aimed at promoting knowledge of the drink-driving legislation. It was the introductory, first stage of a large-scale public education campaign on drinking and driving. This report describes the background to the educational effort, and the development and evaluation of the first stage.

Background

In 1968, legislation was introduced in New South Wales that prohibits a person from driving with a blood alcohol concentration of 0.08 gm/100 ml (.08%) or over. After an initial short-term impact, it became clear that this accident countermeasure was not having the intended effect on people's drinking and driving behaviour. Despite the introduction of the law, serious and fatal crashes which were known to be alcohol-related continued at an apparently undiminished rate.

In 1971 a community survey was taken in Sydney of drinking and driving behaviour and attitudes¹. Results of this survey suggested several reasons why the attempt to influence drink-driving behaviour through legislation had apparently been less successful than hoped. Three general findings of special relevance are summarised below.

1. At present, the male drinking driver has a very permissive social environment in which to operate.

There are clearcut norms existing in the community governing drinking and driving behaviour, and these norms are working to encourage driving after drinking rather than curb it. Driving after drinking is typical behaviour for men, but not for women. In certain sections of the population especially among young men, irresponsible drinking and driving is accepted as normal behaviour. Social sanctions are often non-existent.

At most they come into play only when a person is at an advanced stage of intoxication, and then only if the drunk man is a friend. The law says that a man should not drive with a BAC of .08% or more. But a large section of the public feels that safety to drive after drinking has little to do with blood alcohol concentration or even the amount of alcohol drunk, because of the large individual differences in capacity to hold alcohol. A belief commonly held is that a man is safe to drive provided he is not showing obvious signs of drunkenness, regardless of his blood alcohol level.

2. There is widespread ignorance of the facts on the relationship between alcohol and driving impairment.

This ignorance is clearly an important influence on social attitudes to drinking and driving. In particular, a sizeable proportion of men overestimate the maximum amount they can drink and still be safe to drive, as opposed to the amount required to reach the legal limit.

3. Knowledge and understanding of the breathalyser legislation is at a very low level in the community.

In particular, a large proportion of men underestimate the maximum amount they can drink and be below the legal limit. This ignorance is contributing to resistance and even hostility to the law, especially among young drivers. They see the law as being unrealistic. The deterrent effect of the law is further reduced by the fact that knowledge of penalties is at a low level.

These results indicated firstly that the major stumbling block to change lies in our present permissive social attitudes to drinking and driving. It is quite clear that to change drinking and driving practices we must first change the social attitudes which foster them.

Secondly, the results showed that to a large extent these social attitudes are based on ignorance. The authors of the survey report recommended an information-oriented public education campaign as the first step in the attack on social attitudes. They concluded on a cautious note:

"This knowledge gap needs to be bridged. An increase in public awareness of the facts of alcohol and driving impairment will not result in a dramatic drop in the incidence of alcohol-involved crashes in the community, with a mass rush to behave in accordance with the law. What it will do is to bring about a growth in social pressures to curb irresponsible drinking and driving. A better informed public will be more likely to provide social controls on drinking and driving that will reinforce existing legal controls. In the long term this should result in a change in customary behaviour relating to drinking and driving in the community."

On the basis of these survey results and recommendations, it was decided to launch a public education campaign on drinking and driving.

In the past, great amounts of money have been spent on traffic safety education campaigns which have had a negligible effect in terms of loss reduction or even measurable attitudinal or behavioural change. This is not surprising in view of the fact that the typical propaganda effort has been designed with very poorly defined objectives and with complete disregard for research evidence on the optimal conditions for successful communication. Generally there is no provision for scientific evaluation. In fact, in most cases it is not even known if the message reached the intended audience, let alone if it changed attitudes and/or behaviour. Often the target audience is not even specified. This does not mean that all attempts at public education should be abandoned. Research has shown that under certain conditions, attitudes and behaviour can change as the result of propaganda. However, great care needs to be taken in the design of such campaigns, to avoid the abovementioned pitfalls.

In a critical review of past campaigns, Avery² recommended that any traffic safety campaign undertaken in the future should conform to the following criteria -

1. Strong fear appeals should be avoided since they have been shown to be ineffective in bringing about a change in driving attitudes and behaviour.
2. The campaign objectives and target audience must be clearly defined before the development of the advertising material.
3. The advertising copy must be subjected to developmental research to ensure that the campaign will communicate clearly and unambiguously in line with the stated objectives.
4. The campaign must be scientifically evaluated to determine its effectiveness in achieving its stated objectives. As advertising campaigns involve considerable sums of money, it is very important to know whether a particular campaign is "effective" i.e. has achieved its objectives. If a campaign is not effective, the resources allocated to it could be directed to other areas.

In this context it was clearly important to conduct a research-oriented propaganda campaign which conformed to the above criteria, to determine the direction traffic safety campaigns should take in the future. Such a campaign would determine the viability of using traffic safety campaigns as a means of changing attitudes or simply as a means of communicating information.

The drink-driving public education campaign was devised, therefore, with two separate aims -

1. To increase knowledge, and if possible, change social attitudes to drinking and driving.
2. To determine the viability of using persuasive communications campaigns to change drink-driving attitudes.

Throughout the project strong emphasis has been placed on campaign evaluation. If the campaign failed in its aim to change attitudes then it would provide a convincing argument for abandoning or at least curtailing, the use of the 'persuasive' campaign as a drink-driving countermeasure. In this sense it was to be a 'test' campaign.

The campaign was to be conducted in two stages. The first stage was to be information-oriented. The aim was to communicate certain facts on alcohol and driving and the Breathalyser legislation. The second stage was seen as building on this foundation of new knowledge. It was to be a 'persuasive' campaign. Its aim was more ambitious - to change social attitudes to irresponsible drinking and driving. Because of the strong influence of social pressures on drinking and driving behaviour, it was assumed that if behavioural change was to occur, this would necessarily be as a long term effect of any change in social attitudes; in other words, behaviour would start to change only with the growth of social pressures against drinking and driving as attitudes became less permissive. Any such behavioural change, e.g. a reduction in the incidence of drunken driving in the community, should be seen as an indirect long term effect of the campaign and should not be its stated objective.

The development and evaluation of the information campaign only will be described in this report. A following report will describe the development and evaluation of stage two, the persuasive campaign*.

The Information Campaign

In a climate of such ignorance, the obvious first step was to inform - to create a well-informed public. The specific communications objectives were:

1. To increase awareness of the relationship between drinking and driving and serious traffic accidents.
2. To increase awareness of the Breathalyser legislation and the penalties contained in it.

* The persuasive campaign, which was much more heavily funded than the information campaign reported in this paper, became widely known as the "Slob" campaign.

3. To increase awareness of the amount of alcohol required to break the law.

Unless the information gap was bridged in these areas, it would be futile to expect people to change their drink-driving attitudes and behaviour.

Informing people is a relatively straightforward communication task. Persuading people to change their attitudes and behaviour is much more difficult to achieve and the effect is particularly hard to measure. A persuasive campaign could have little effect in a climate in which people are unaware of the facts about alcohol and traffic accidents, and about the Breathalyser laws and their penalties. If alcohol is not seen as being related to crashing, people would see no reason to change their drink-driving attitudes. Similarly, if people are unaware of the number of drinks it takes to exceed the legal limit, a campaign exhorting people to obey the drink-driving laws can have little success. If the information campaign succeeded in increasing community knowledge of the 'facts', a base would have been laid for future persuasive campaigns.

The information campaign did not set out to change behaviour or attitudes, although it may have influenced them indirectly. It would therefore be inappropriate to evaluate this campaign in those areas. As the objectives centred on increasing community knowledge, the only valid measure of its effectiveness was an increase in knowledge of the relevant information presented.

METHOD

The Campaign

The advertising agency, Hansen-Rubensohn-McCann-Erickson Pty. Ltd., was engaged to manage the communication aspects of the campaign. The major constraint placed upon the agency was to avoid the use of fear-arousing techniques that threaten loss of life, or injury, since strong fear appeals have been shown to be ineffective in bringing about a change in driving attitudes and behaviour².

Because the objective of this campaign was to raise the level of knowledge in the community at large, the target audience was defined as English speaking residents of Sydney aged 17-69 years inclusive.

The agency devised a six-week press and radio campaign based on the theme "The law is tough on drinkers who drive. It just isn't worth it". Each advertisement presented several of the following facts on alcohol, traffic accidents and the law.

Up to three-quarters of all serious crashes are alcohol-related.

It is an offence to drive a motor vehicle with a blood alcohol concentration of .08% or more.

It takes around six (10 oz) middies of beer in an hour (five nips of spirit, or five (4 oz) glasses of wine) to exceed the legal limit of .08%.*

- * The quantity of alcohol which brings a driver's blood alcohol concentration (BAC) to the legal limit depends on a variety of factors such as the amount of fat in the body, the amount of food in the stomach and so on. Thus, it is difficult to set a universal equivalent for the legal limit in terms of number of alcoholic drinks. However, a number of empirical studies have indicated that a BAC of .08% tends to be reached by the "average" male after roughly six 10 oz glasses of Australian beer, five 4 oz glasses of table wine and five 1 oz nips of spirits, in one hour.

Blood alcohol concentration (BAC) is measured on a Breathalyser machine, with the test being normally performed at a police station. A suspected drinking driver may be screened at the roadside by means of an Alcotest bag, before being breathalysed. Maximum penalties for exceeding the legal limit include a \$400 fine, six months in jail and up to 12 months suspension of driving licence.

The advertisements and a summary of the media schedule are contained in Appendix 1.

The final copy was tested in two group discussions to ensure that the campaign was communicating clearly and unambiguously, in line with the stated objectives. Minor modifications were made as a result of the communications test, before the campaign material was finalised.

The Evaluation

The 'before-after' measurement technique was used to evaluate the information campaign.

In the three weeks immediately before the campaign started, a household survey was conducted in the Sydney metropolitan area amongst approximately 1000 randomly selected men and women aged between 17 and 69 years inclusive. Those people who could not speak English, or whose English was so poor as to make the publicity difficult to understand, were excluded from the sample. The survey was designed to measure the level of knowledge before the information campaign of a number of facts on drinking and driving and the law.

A second survey, using an identical questionnaire, (see Appendix II) was conducted in the three weeks immediately after the campaign finished with a second comparable sample of approximately 1000 men and women.

To ensure matching, the before and after samples were drawn at the same time, with households in each sample being selected from the same areas in Sydney. The refusal rates were 13% for the before survey and 14% for the after survey, both low for surveys of this kind. A more detailed account of the sampling procedure used, and a full field report for both surveys is contained in Appendix III.

The effectiveness of the information campaign was assessed by looking at the difference in level of knowledge of the relevant facts in the 'before' and 'after' samples.

An assumption crucial to the comparison of the 'before-after' samples is that they are both representative of the same population. Both samples were examined for differences in the distribution of a number of important demographic variables: sex, age, driver status and drinking frequency away from home. Tables in Appendix IV show the 'before-after' differences in these variables. The before and after samples were identical in sex distribution. For both men and women, there were no significant before-after differences in age, driver status and drinking frequency away from home distributions. These results indicate that we are justified in assuming that the before and after samples came from the same population.

RESULTS

The questionnaire used in both surveys was designed to measure two types of dependent variable:

1. Crucial variables, or those directly related to the campaign objectives.
- and 2. Secondary variables, or those not directly related to the campaign objectives, but related to drink-driving attitudes of interest.

Only the before-after differences in crucial variables have been examined in evaluating the campaign. The following were considered to be crucial variables: knowledge of the role of alcohol in crashes, knowledge of the law, knowledge of the breathalyser, knowledge of penalties and knowledge of the amount of alcohol required to reach the legal limit.

It was required to test:

1. If there was a significant before-after change in each of the crucial variables, for men and women separately.
- and 2. If any such change was differential among age groups, driver status groups and drinking frequency away from home groups, for men and women separately.

A series of three-dimensional contingency tables were analysed, where the first dimension, I, was any of the crucial variables, the second dimension, J, was time (before and after) and the third dimension, K, was either age, driver status or drinking frequency away from home. Each table was produced for men and women separately. To analyse the before-after differences in any crucial variable, the χ^2 value for the IxJ interaction was examined for significance. The time x crucial variable breakdowns are presented here. The IxJxK interactions were examined to determine whether the change in a crucial variable over time varied with age, driver status and drinking frequency away from home. Where a significant interaction was found, the complete three-dimensional table is presented in Appendix V.

Table 1(a)

B/A	N (Males)	Alcohol as a factor in serious crashes (% of N)		
		Important, and major factor	Important, but not major factor	Not mentioned as important factor
Before	482	19	35	46
After	487	28	34	38

Table 1(b)

B/A	N (Females)	Alcohol as a factor in serious crashes (% of N)		
		Important, and major factor	Important, but not major factor	Not mentioned as important factor
Before	523	25	37	38
After	538	29	41	31

Note: Proportions will not always add to 100 because of rounding off of individual cell proportions.

Before-after differences in crucial variables

Knowledge of the role of alcohol in crashes

To find out whether people were aware of the extent to which alcohol is involved in serious accidents, the first question asked in the interview was: "What would you say were the three most important factors contributing to serious traffic accidents?" And then, "out of these, which do you see as the major cause?".

(Respondents were not aware at the start of the interview that the questionnaire was specifically oriented toward drinking, but only that their driving habits and attitudes to traffic safety were being examined). Tables 1(a) and (b) present the before-after differences in awareness of the importance of alcohol for both sexes.

There were significant before-after differences for both men ($p < .01$) and women ($p < .05$).

For men, 54% of the before sample mentioned alcohol as an important factor in serious crashes, compared to 62% of the after sample. The proportion of men who regarded alcohol as a major factor increased from 19% in the before sample to 28% in the after sample.

For women, 62% of the before sample mentioned alcohol as an important factor compared to 69% of the after sample. Thus there was a similar increase in knowledge for women, but women began with a higher level of knowledge than men. There was a smaller increase in the proportion of women who regarded alcohol as a major factor, from 25% in the before sample to 29% in the after sample.

The size of these before-after increases in knowledge did not vary over the different age, driver status or drinking frequency away from home groups, for either men or women.

Knowledge of the law

All respondents were told that there is a law in NSW about drinking and driving and were asked what it said. Responses were coded as correct if mention were made of it being an offence to

Table 2(a)

B/A	N (Males)	Knowledge of Law (% of N)			
		Correct	No drinking and driving	Legal Limit/ Breathalyser mentioned	Other/ DK
Before	482	31	24	31	14
After	487	31	23	31	16

Table 2(b)

B/A	N (Females)	Knowledge of Law (% of N)			
		Correct	No drinking and driving	Legal Limit/ Breathalyser mentioned	Other/ DK
Before	523	17	30	25	29
After	538	17	35	24	25

drive if the blood alcohol concentration exceeded the legal limit. (The actual wording of the law did not have to be accurate.)

Tables 2 (a) and (b) present the before-after differences in knowledge of the law for both sexes. There were no before-after differences for either men or women. In both the before and after samples, 31% of the men and 17% of the women gave the correct response.

Knowledge of the law did not change differentially over age, driver status or drinking frequency away from home groups, for either the men or women.

Knowledge of the Breathalyser

Those respondents who had heard of the breathalyser were asked: "What is it?" and "Where is it given?". The aim of these questions was to determine the extent to which people were confusing the 'breathalyser' with the 'alcotest', the device used for roadside screening only. Tables 3 (a and b) and 4 (a and b) present the before-after differences in response for both sexes.

There were no significant before-after differences in knowledge of what the breathalyser is for either men or women (tables 3(a) and (b)). While a large majority of men and women in both samples referred to the breathalyser as 'a blowbag' or 'balloon you blow into', only small proportions of both samples gave the correct response of 'a machine' or 'scientific instrument for breath testing': 13% of 'before' men and 10% of 'after' men, and under 5% of both 'before' and 'after' women.

Knowledge of what the breathalyser is did not change differentially over the demographic subgroups examined.

The before-after differences in knowledge of where the breathalyser is given were negligible, and not significant for either men or women. In the before sample, 44% of men said it was given at the roadside, 15% at the police station and 38% at both. The corresponding proportions for the after sample were: 42%, 14% and 39%. For women, 41% of the before sample said it was given at

Table 3(a)

B/A	N (Males)	What is the Breathalyser? (% of N)			
		Machine/ instrument	Blowbag (alcotest)	Breath test	Other/ DK
Before	471	13	67	6	14
After	475	10	74	6	10

Table 3(b)

B/A	N (Females)	What is the Breathalyser? (% of N)			
		Machine/ instrument	Blowbag (alcotest)	Breath test	Other/ DK
Before	514	3	70	8	18
After	530	4	76	6	14

Table 4(a)

B/A	N (Males)	Where is the Breathalyser given? (% of N)			
		Roadside	Police Station	Both	Other/DK
Before	471	44	15	38	3
After	475	42	14	39	5

Table 4(b)

B/A	N (Females)	Where is the Breathalyser given? (% of N)			
		Roadside	Police Station	Both	Other/DK
Before	514	41	20	32	7
After	530	41	23	31	6

the roadside, 20% at the police station, and 32% at both. The corresponding proportions for the after sample were: 41%, 23% and 31%.

Knowledge of where the breathalyser is given did not change differentially over the demographic subgroups examined.

Knowledge of the legal limit

All respondents were asked: "Can you tell me what the legal limit is?" (i.e. numerical value)*. Tables 5(a) and (b) present the before-after differences in knowledge of the legal limit for both sexes.

There were significant before-after differences for both men ($p < .01$) and women ($p < .01$). The proportion of men who gave the correct value of .08% increased from 35% of the before sample to 46% of the after sample. For women, the corresponding proportions were 13% and 23%, showing a similar increase.

The size of these before-after increases in knowledge did not vary over the different age, driver status or drinking frequency away from home groups for men. It did not vary over driver status groups for women. However, for women, knowledge of the legal limit changed differentially among age ($p < .05$) and drinking frequency away from home groups ($p < .05$). (Tables i and ii, Appendix V)

Women in the two youngest age groups (17-24 yrs; 25-39 yrs) showed a dramatic increase in knowledge of the legal limit, of approximately 20%, whereas the increase for older women (40-69 yrs) was a negligible 1%-2%.

Women who drank away from home most frequently (i.e. at least once a week) showed the biggest increase in knowledge, while those who drank away from home less than once a year or never, showed the smallest increase.

* Those respondents who, in the preceding question on the law, had made no mention of the legal limit were given this preliminary information: "There is now a legal limit on the amount of alcohol a driver can have in his blood."

Table 5(a)

B/A	N (Males)	Knowledge of legal limit (% of N)				
		.08	.8(or sim)	.05	Other	DK
Before	482	35	13	6	23	24
After	487	46	12	2	18	23

Table 5(b)

B/A	N (Females)	Knowledge of legal limit (% of N)				
		.08	.8(or sim)	.05	Other	DK
Before	523	13	7	6	21	53
After	537	23	8	2	22	45

Knowledge of penalties

All respondents were asked: "What penalties are there for people who fail the breathalyser test?" If they replied simply 'suspension', 'gaol' or 'fine', they were asked to specify the length of time for a suspension or gaol sentence, and the amount for a fine.

Tables 6-9 present the before-after differences in awareness of the penalties suspension, gaol and fine for both sexes.

Suspension

There were significant before-after differences in knowledge of the penalty of suspension for both men ($p < .01$) and women ($p < .01$). (Tables 6(a) and (b)) For men, only 9% of the before sample gave the correct response of '12 months suspension' compared to 17% of the after sample. The corresponding proportions for women were 4% and 12%, showing a similar increase to men.

The size of these before-after increases in knowledge did not vary over the different age, driver status or drinking frequency away from home groups, for either men or women.

Gaol

There were significant before-after differences in knowledge of the penalty of gaol for both men ($p < .01$) and women ($p < .01$). (Tables 7(a) and (b)).

For men, only 35% of the before sample mentioned 'gaol' as a penalty compared to 51% of the after sample. The proportion giving the correct response of 'six months gaol' increased from 7% of the before sample to 17% of the after sample.

For women, 22% of the before sample mentioned 'gaol' as a penalty compared to 38% of the after sample, an identical increase to that found for men. The proportion giving the correct response of 'six months gaol' increased from 2% to 7%, about half the corresponding increase for men.

Table 6(a)

B/A	N (Males)	Knowledge of suspension (% of N)							
		Not mentioned	<3 mths	3-6 mths	7-11 mths	12 mths	>12 mths	Variable	Unspe- cified
Before	482	30	5	9	2	9	3	21	21
After	487	26	4	10	3	17	7	20	14

Table 6(b)

B/A	N (Females)	Knowledge of suspension (% of N)							
		Not mentioned	<3 mths	3-6 mths	7-11 mths	12 mths	>12 mths	Variable	Unspe- cified
Before	523	40	6	7	2	4	1	17	23
After	538	39	3	9	3	12	4	14	15

Table 7(a)

B/A	N (Males)	Knowledge of Gaol (% of N)								
		Not men- tioned	<1 mth	2-5 mths	6 mths	>6 mths	Variable	Over- night	Unspe- cified	Other Statement
Before	482	65	1	4	7	2	7	3	12	0
After	487	49	3	4	17	4	7	1	16	0

Table 7(b)

B/A	N (Females)	Knowledge of Gaol (% of N)								
		Not men- tioned	<1 mth	2-5 mths	6 mths	>6 mths	Variable	Over- night	Unspe- cified	Other Statement
Before	523	78	1	2	2	0	3	4	11	0
After	538	62	2	4	7	3	4	3	15	1

The size of these before-after increases in knowledge did not vary over the different age, driver status and drinking frequency away from home groups for either men or women.

Fine

There were no significant before-after differences in knowledge of the penalty fine for either men or women. (Tables 8(a) and (b)) For men, the proportion giving the correct response of '\$400 fine' did increase from 3% in the before sample to 11% in the after sample, but the increase was not statistically significant. Between only 1% and 2% of women in both groups gave the correct response.

Knowledge of fine did not change differentially over age, driver status or drinking frequency away from home groups for either men or women.

Complete penalty

For each respondent the total response to the question on breathalyser penalties was coded for the number of elements (fine, gaol, suspension) given correctly, and this variable, called 'knowledge of complete penalty'.

Tables 9(a) and (b) give the before-after differences in this variable for both sexes. (Because of the small numbers who gave two or more correct responses, the categories had to be pooled for statistical analysis).

There were significant before-after differences in knowledge of the complete penalty for both men ($p < .01$) and women ($p < .01$). For men, 16% of the before sample gave one or more correct elements, compared to 30% of the after sample. Only 2% of the before sample gave two or more correct, compared to 11% of the after sample.

Women showed a similar increase in the proportion who gave one or more correct elements, from 6% of the 'before' sample to 18% of the after sample. There was only a small increase in the proportion of women who gave two or more correct, from 1% of the before sample to 3% of the after sample.

Table 8(a)

B/A	N (Males)	Knowledge of Fine (% of N)						
		Not men- tioned	<\$100	\$101- \$399	\$400	>\$400	Variable	Unspe- cified
Before	482	30	15	15	3	1	16	20
After	487	28	14	19	11	3	9	17

Table 8(b)

B/A	N (Females)	Knowledge of Fine (% of N)						
		Not men- tioned	<\$100	\$101- \$399	\$400	>\$400	Variable	Unspe- cified
Before	523	41	14	8	1	0	8	29
After	538	40	16	14	2	1	4	23

Table 9(a)

B/A	N (Males)	Complete Penalty (% of N)			
		2+ correct	1 correct	All wrong	DK
Before	482	2	14	72	12
After	487	11	19	59	11

Table 9(b)

B/A	N (Females)	Complete Penalty (% of N)			
		2+ correct	1 correct	All wrong	DK
Before	523	1	5	78	16
After	538	3	15	62	20

The size of these before-after increases in knowledge did not vary over the different age, driver status and drinking frequency away from home groups for either men or women.

Knowledge of the amount of alcohol required to reach the legal limit

To find out if people knew the amount of alcohol required to break the law, all respondents were asked: "What is the largest amount the average person can drink and still be below the legal limit?" (in a one hour period, not taken with a meal)*. They were asked to answer separately for middies (10 oz) of beer, nips (1 oz) of spirit and glasses (3-4 oz) of wine.

Tables 10-12 present the before-after differences in response for both sexes.

Beer

There were significant before-after differences in knowledge of the amount of beer required to reach the legal limit for both men ($p < .05$) and women ($p < .05$). (Tables 10(a) and (b))

Among men, 25% of the before sample gave an acceptable response of 'five' or 'six' middies, compared to 30% of the after sample. However, this change is all due to an increase in the proportion of men saying 'six middies' from 10% in the before to 15% in the after sample.

Women showed very similar increases in knowledge. Among women, 8% of the before sample gave the acceptable 'five' or 'six' middies, compared to 15% of the after sample. This change is largely due to an increase in the proportion of women saying 'six middies' from 3% in the before to 8% in the after sample.

* The question asked for the largest amount the average person could drink and still be below the legal limit, and the publicity stated that around six middies in an hour gets the average man over the legal limit. This discrepancy may have caused confusion in respondents who had actually absorbed the 'six middies' from the campaign. If six get you over, then five is actually the largest amount to have and still be below. This meant that both 'five' and 'six' middies of beer, 'four' and 'five' nips of spirit, and 'four' and 'five' glasses of wine had to be accepted as the correct amount.

Table 10(a)

B/A	N (Males)	Number of middies of beer (% of N)					
		1-2	3-4	5	6	7-9+	DK
Before	482	12	40	15	10	4	19
				25			
After	487	8	33	15	15	7	21
				30			

Table 10(b)

B/A	N (Females)	Number of middies of beer (% of N)					
		1-2	3-4	5	6	7-9+	DK
Before	523	13	31	5	3	1	47
				8			
After	538	12	28	7	8	2	43
				15			

Table 11(a)

B/A	N (Males)	Number of nips of spirit (% of N)					
		1-2	3	4	5	6-9+	DK
Before	482	24	14	10	5	4	43
				15			
After	487	18	16	15	4	7	41
				19			

The size of these before-after increases in knowledge did not vary over the different age, driver status and drinking frequency away from home groups for men. For women, it did not vary over driver status and drinking frequency away from home groups. But there was a significant variation over age groups for women ($p < .05$) in the size of the knowledge increase. The youngest women (17-24 yrs), showed the largest increase in the proportion mentioning 'six middies'. while the oldest women (56-69 yrs) showed no increase at all in this knowledge. (Table iii, Appendix V)

Spirits

There were no significant before-after differences in knowledge of the amount of spirits required to reach the legal limit for either men or women. (Tables 11(a) and (b))

For men, 15% of the before sample and 19% of the after sample gave the acceptable response of 'four' or 'five' nips. The corresponding proportions for women were 9% and 11%.

This knowledge did not change differentially over age, driver status and drinking frequency away from home groups, for either men or women.

Wine

There was a significant before-after difference in knowledge of the amount of wine required to reach the legal limit for men ($p < .01$) but not for women. (Tables 12(a) and (b))

Among men, the proportion giving the acceptable response of 'four' or 'five' glasses of wine increased from 16% in the before sample to 21% in the after sample. This change was due to similar increases for both 'four' and 'five'.

Among women, 12% of the before sample and 13% of the after sample gave the acceptable response.

The size of the before-after increase in knowledge did not vary over the different age, driver status and drinking frequency away from home groups for either men or women.

Table 11(b)

B/A	N (Females)	Number of nips of spirit (% of N)					
		1-2	3	4	5	6-9+	DK
Before	523	23	11	8	2	2	55
				9			
After	538	17	15	8	3	2	54
				11			

Table 12(a)

B/A	N (Males)	Glasses of wine (% of N)					
		1-2	3	4	5	6-9+	DK
Before	482	18	16	12	5	7	42
				16			
After	487	12	11	14	7	9	47
				21			

Table 12(b)

B/A	N (Females)	Glasses of wine (% of N)					
		1-2	3	4	5	6-9+	DK
Before	523	20	13	9	3	3	52
				12			
After	538	17	14	10	3	5	52
				13			

DISCUSSION

Traffic safety education campaigns have a long record of failure in their aim to change attitudes and behaviour. However it has been argued that campaigns can communicate information. Driessen & Bryk (1973) in a recent brief review, conclude that "in general, public education campaigns do appear to educate to a measurable degree"³. It seems, however, that there is not a great deal of evidence to support their conclusion. While it is true that information campaigns have been followed by increases in public knowledge, rarely can an increase be attributed solely to the campaign. The British and Canadian drink-driving education campaigns are good examples. In October 1967, a mass media campaign was conducted in the United Kingdom to inform the public of the terms of a new drink-driving law. Sheppard (1968) reports on the before-after surveys conducted to evaluate the effectiveness of this campaign⁴. Results showed that by the second survey drivers' knowledge of many aspects of the law publicised by the campaign had increased. However Sheppard cautions that general conversation and free publicity generated by interest in the new law, probably contributed to the knowledge gain in addition to the paid publicity.

In Canada, similar legislation was introduced in December 1969. A government-sponsored publicity campaign was undertaken (starting three weeks before the law became effective) to inform drivers of the provisions of the new drink-driving law. Kates et al (1970) report on the evaluation of this campaign⁵. Surveys taken before and after the campaign showed that there was a measurable increase among drivers in knowledge of all the major provisions of the new legislation. As with the British campaign, it was impossible to separate out the effects of the paid publicity campaign itself from the effects of the general publicity surrounding the introduction of the new law.

To determine the effectiveness of the NSW drink-driving information campaign, three separate questions must be answered:

1. Was there an increase in community knowledge of the relevant information?
2. Was the increase in knowledge greater for some community subgroups than others?
- and 3. To what extent can the knowledge gain be attributed to the information campaign?

The first and second questions can be answered by examining the results from the before-after surveys. The third question relates to the possible operation of confounding variables during the campaign and survey periods.

Had community knowledge increased after the Information campaign?

Knowledge of many of the facts presented in the campaign had increased. Men and women interviewed after the campaign were more likely to be aware that alcohol is an important, and in fact, the major contributor to serious crashes.

Similarly, after the campaign, men and women were more likely to know that the legal limit is .08% and that the penalties for failing the breathalyser test include 12 months licence suspension and a period in gaol, specifically six months. It is interesting that the biggest increase recorded was in the proportion of men and women who mentioned 'gaol' as a penalty, regardless of the time period specified. The radio advertisements did not give prominence to this aspect, but two of the three press advertisements had visuals clearly depicting gaol scenes.

Men and women interviewed after the campaign were more likely to be aware that six middies of beer in an hour will bring the average man over .08%. Men only showed an increase in knowledge of the fact that five glasses of wine in an hour will bring the average man over .08%.

Clearly, knowledge of some of the facts presented in the campaign had not increased. There was no increase in knowledge of what the NSW drink-driving law states. However since this answer required a degree of verbal skill (more than in the other questions), the results may have reflected people's inability to articulate knowledge they had in fact absorbed.



There was no increase in knowledge of the fact that the breathalyser is a scientific instrument or machine, and that the breathalyser test is given at a police station. Both before and after the campaign many people were clearly confusing the breathalyser with the alcotest, which is the simpler 'balloon' or 'blowbag' device used for roadside screening. This probably reflects the fact that more people in the community have been exposed to the screening test. But as well, it represents a failure in communication. One aim of the Information campaign was to make people aware that undergoing a breathalyser test was not just a simple procedure like receiving a ticket for a minor traffic infringement, but rather, a disturbing and humiliating experience. This message did not get through, possibly because the roadside alcotest was given prominence in both press and radio advertisements ('Blow in the bag').

There was no increase in knowledge of the information that failing the breathalyser test can result in a \$400 fine. (The increase which occurred for men was not statistically significant.) The suspension and fine penalties were given equal prominence in the advertisements and so there is no obvious explanation for the latter's failure to be communicated.

Information on the amount of wine required to break the law, was not successfully communicated to women. And neither men nor women absorbed the legal limit equivalent for spirits. These are not serious campaign failures. The 'six middies' was given considerable prominence in one press advertisement and the equivalent in beer was the first mentioned in all the other advertisements. The information on wine and spirits was of secondary importance, since beer is by far the most commonly drunk alcoholic beverage among men, and so is central to the drink-driving problem.

Was the increase in knowledge greater for some community subgroups than for others?

The target audience for the campaign was defined as English speaking residents of Sydney aged between 17 and 69 years inclusive. That is, men and women, drivers and non-drivers, people who drink away from home frequently, and those who rarely drink away from home, were all included. It is interesting to see the extent to which the

knowledge gains were uniform over the whole target audience or varied over community subgroups. Presumably greater gains might occur in groups where the subject of drinking and driving has greater salience.

The subject of drinking and driving should have similar salience for men and women, despite the fact that fewer women are drinking drivers. A woman can be exposed to the drink-driving problem by being married to or going out with a man who is a drinking driver.

In general, very similar knowledge gains were found for men and women. One important exception related to the amount of wine required to reach the legal limit, where only men showed an increase in knowledge. This was a surprising result, in view of the fact that women are predominantly wine drinkers. The increases in knowledge of alcohol as the major factor in serious crashes, and the 'six months' gaol penalty, although significant for both sexes, were much smaller for women.

For men, all increases in knowledge were uniform over the different age, driver status and drinking frequency away from home groups examined. None of the community subgroups showed greater knowledge gains than others.

A different picture emerged for women. Some subgroups showed much greater knowledge gains than others. Specifically, women aged under 40 years showed a very high increase in knowledge of the legal limit, whereas the increase for women aged 40 years and over was negligible. The under 25 year old women showed the greatest increase in knowledge of the 'six middies' legal limit equivalent, and women over 55 years showed no increase at all. Again, women who frequently drink away from home showed a greater gain in knowledge of the .08 legal limit than those who rarely or never do.

The age differences in knowledge gains for women show some interesting parallels with age differences found in drinking and driving behaviour. Women aged between 20 and 39 years are more likely to be drivers and drinkers than older women¹. They are also more likely to report driving after drinking than older women. In fact, very few women over 40 years are drinking drivers, and this may

be one reason for their failure to be affected by some of the campaign material. A more important factor is probably that the older women drink away from home less frequently and so are less exposed to the drink-driving problem.*

In summary it can be said that surveys of knowledge taken before and after the information campaign showed a measurable increase in community knowledge of the campaign's central elements. And, apart from the exceptions outlined, the increase occurred uniformly across the whole target audience.

This does not in itself show that the campaign was effective. The before-after increase in knowledge must be shown to be attributable solely to the campaign and not to changes in accompanying variables, such as enforcement activity and general traffic safety publicity.

To what extent can the increase in community knowledge be attributed to the information campaign?

This question relates to the problem of experimental design.

Ideally the design for evaluating a propaganda campaign should include the use of an external control group in addition to before-after measurements⁶. If a no-treatment control group is included, i.e. a group of individuals who are not exposed to the propaganda, then any before-after increase in knowledge that occurs in the experimental group, but not in the control group can be attributed to the propaganda. It is important that individuals be assigned randomly to treatment and control groups to reduce the likelihood that initial differences contributed to post-campaign differences. However this is not possible where whole communities are exposed to a public education campaign.

* In both the before and after samples a negative relationship was found for women between age and frequency of drinking away from home.

An alternative procedure is to use a control area or control city which is not exposed to the campaign. Such a control would need to be chosen very carefully, with a view to maximising matching in terms of before-campaign characteristics, and likely changes in enforcement levels, general traffic safety publicity or other factors that might affect the after-campaign measurement. Unless the campaign and control cities can be suitably matched, and control exercised over important contextual variables in both cities, then we will still be left with inconclusive evidence on campaign effectiveness. Any difference in knowledge gains between the campaign and control cities could not be attributed solely to the campaign.

A 1972 Canadian study attempted to evaluate a drink-driving communications campaign by use of a control city. The study clearly demonstrates the difficulties associated with this method of evaluation. The campaign was conducted in Edmonton, capital of Alberta, and the control city used was Calgary, 200 miles away, with similar population and socio-economic background. Farmer and Stroh reported on the results and claimed that despite negligible differences in knowledge gain and attitude change between the two cities, the campaign did in fact produce a behavioural change⁷. In Edmonton there was a significant reduction in the number of drivers with high blood alcohol levels following the campaign, but there was no significant reduction in Calgary. However, the results have been inadequately reported (e.g. no mention of survey refusal rates) and are open to other interpretations. The authors stated that the publicity generated by the before and after roadside surveys themselves was a significant influence on behaviour in both cities. Because this important contextual variable was not subjected to any sort of control, nor was its effect measured, the before and after change in Edmonton can not be attributed solely to the communications campaign.

Consideration was given to the use of a control city in the evaluation of the 1973 Sydney drink-driving campaign. There is no city in New South Wales that could meet even the minimum matching requirements of similar population and level of enforcement of drink-driving laws. Therefore this design was abandoned in favour of before-

after measurement in the campaign city only, with very careful control of contextual variables during the campaign and survey periods.

The Sydney information campaign differed from many similar overseas campaigns in one very important aspect: it was not run in association with any change in the law. It was aimed at promoting public awareness of legislation which had been introduced four years earlier. This meant that at the time of the publicity campaign and the before and after surveys, control could be exercised over possible confounding variables. During the six weeks the campaign was in progress and in the three weeks before and three weeks after when the evaluation surveys were being run, there was no change in the level of enforcement activity, and no general media publicity given to the breathalyser legislation or the drink-driving problem. In addition, no "newsworthy" crash occurred that might have focussed undue attention on any one particular aspect of traffic safety. With these variables held constant, any knowledge gain occurring could be reasonably attributed to the publicity campaign rather than any concurrent activity.

SUMMARY AND CONCLUSIONS

The information campaign had three stated communications objectives:

1. To increase awareness of the relationship between drinking and driving and serious traffic crashes.
2. To increase awareness of the Breathalyser legislation and the penalties contained in it.
3. To increase awareness of the amount of alcohol required to break the law.

After the campaign there was a measurable increase in knowledge in the three areas defined by these objectives. More people knew that alcohol is an important contributor to serious crashes. More people knew that the legal limit is .08%, and that penalties for failing the breathalyser include 12 months licence suspension and a period in gaol, specifically six months. And more people knew that six middies in an hour will bring the average man over .08%. With a few exceptions, the increases were uniform over the whole target audience.

These gains in knowledge, together with the fact that levels of enforcement activity and general media publicity remained constant, indicate that the campaign was successful. Its communications objectives were, for the most part, achieved. Many of the increases recorded were small. And so, although statistically significant, none could be considered dramatic on its own. Taken together however, they represent a sizeable increase in community knowledge about alcohol, traffic crashes and the law.

The information campaign has come a long way towards bridging the knowledge gap in the area of drinking and driving. However there is still a long way to go. Despite the gains, knowledge of many facts remains at a low level. As well, the knowledge gains recorded may be short-lived. It seems clear that a continuing informational activity will be needed to further increase community knowledge and to maintain it at a high level.

At this stage we should not look for any effect from an informational campaign beyond a growth in community knowledge. Changes in attitudes and behaviour will come only very slowly as an increasing number of informed people begin to put pressure on others to drink and drive responsibly.

The second stage of the drink-driving public education campaign, an attempt to change attitudes more directly, through a 'persuasive' media campaign, will be described and evaluated in a following report.

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APPENDIX I

PRESS AND RADIO ADVERTISEMENT AND
MEDIA SCHEDULE SUMMARY



One more for the road.



Nothing's going to happen to me.



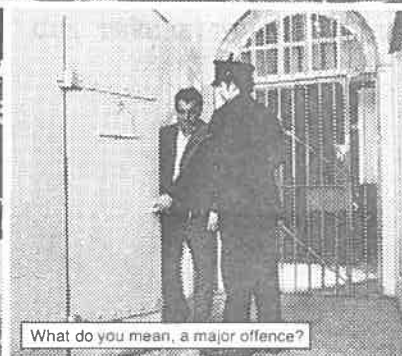
But I've only had six middies.



Would you please breathe into the bag, Sir?



The crystals were green, Sir.



What do you mean, a major offence?



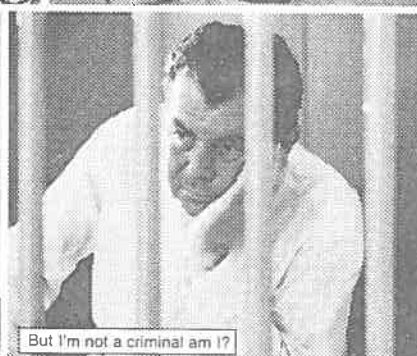
The Breathalyser doesn't lie. You're above .08%.



Would you please remove your belt and shoelaces, Sir?



I'm going to be a little late home, dear.



But I'm not a criminal am I?



But my job depends on my having a licence.

Six middies for the experience of a lifetime.

It is a major offence to drive or attempt to drive a vehicle with a concentration of alcohol in the blood of .08% or more (around six middies in an hour, 5 nips of spirits or five 4 oz glasses of wine), or refusing to submit to a breath analysis. The maximum penalty of the law, for driving when on the .08% limit or over, is a \$400 fine, plus six months in jail and disqualification from driving for one year.

**The law is tough on drinkers who drive.
It just isn't worth it.**

The law is tough on drinkers who drive.

It just isn't worth it.

It is a major offence to drive or attempt to drive a vehicle with a concentration of alcohol in the blood of .08% or more (around six muddies in an hour, 5 nips of spirits, five 4 oz glasses of wine), or refusing to submit to a breath test.

You can be stopped by the police at any time for any ordinary driving error. They may ask you to take an alco-bag test. If the indications of this test appear positive, they will ask you to accompany them to the nearest police station where a scientifically accurate analysis of your blood alcohol content will be taken with a Breathalyser. If this proves positive you will be charged.

The maximum penalty of the law for driving when on the .08% limit or over is a \$400 fine, plus six months in jail and disqualification from driving for one year or more.



Would it have happened if I'd been sober?

It has been found that, in up to three quarters of all serious crashes, the driver or drivers have been drinking alcohol.

Even a minimum amount of alcohol in the blood affects the ability to drive. It is therefore a major offence to drive a vehicle with a concentration of alcohol in the blood of .08% or more (around six middies in an hour, 5 nips of spirits or five 4 oz glasses of wine), or refusing to submit to a breath analysis. The maximum penalty of the law for driving when on the .08% limit or over is a \$400 fine, plus six months in jail and disqualification from driving for a year or more.

**The law is tough on drinkers who drive.
It just isn't worth it.**





HANSEN-RUBENSOHN-McCANN-ERICKSON PTY. LIMITED

RADIO COPY.

CLIENT: Department of Motor Transport,
Traffic Accident Research Unit.

KEY NO: 1

ANNOUNCER:

Did you know that as little as six middies of beer in one hour or 5 nips of spirits or five 4 oz. glasses of wine could bring the amount of alcohol in your blood to .08%. And that's the limit of the law when you're driving a car. And the penalties for driving on .08% or over can be a \$400 fine plus six months in jail and disqualification for a year. .08%. The law is tough on drinkers who drive. It just isn't worth it.



HANSEN-RUBENSOHN-McCANN-ERICKSON PTY. LIMITED

RADIO COPY.

CLIENT: Department of Motor Transport.
Traffic Accident Research Unit.

KEY NO: 2.

SFX: .08% (with echo)
.08% (with echo)

ANNOUNCER: Hard over effect.

.08% is the figure to remember if you've had around six middies in one hour or 5 nips of spirits and you're still driving your car. .08% means you've too much alcohol in your blood to drive well and if you're stopped by the police, you've had it. A \$400 fine, plus six months in jail and your licence taken away for a year.

The law is tough on drinkers who drive.
It just isn't worth it.



HANSEN-RUBENSOHN-McCANN-ERICKSON PTY. LIMITED

RADIO COPY.

CLIENT: Department of Motor Transport.
Traffic Accident Research Unit.

KEY NO: 3.

The law is tough on drinkers who drive.
Why? Because in up to three quarters
of all serious road accidents the drivers
have had a drink. And so the penalties
for driving when on the .08% limit, or
over can be tough too. Up to \$400 fine
plus six months in jail and your licence
taken away for a year. And it doesn't
take many beers to break the law.
Around six middies or 5 nips of spirits
or five 4 oz glasses of wine in an hour
could get you to .08%.

The law is tough on drinkers who drive.
It just isn't worth it.



HANSEN-RUBENSOHN-McCANN-ERICKSON PTY. LIMITED

RADIO COPY.

CLIENT: Department of Motor Transport.
Traffic Accident Research Unit.

KEY NO: 4.

The whole commercial is a series of sound effects. Squealing of brakes. Droning of police siren. Voice of the officer. Little bits of conversation over:

"Would you breath into this bag, please sir."
Jail house noises. "You're allowed to make a phone call."

Court noises: "Court will be upstanding".
"John/Henry Simmonds, the court finds you..."

Over all this, the announcer will intone:
.08%....08%....08%....08%.....etc.

If you drive with more than .08% alcohol in your blood (around six middies in an hour or five nips of spirits) you're breaking the law. The law is tough on drinkers who drive. It just isn't worth it.



HANSEN-RUBENSOHN-McCANN-ERICKSON PTY. LIMITED

RADIO COPY.

CLIENT: Department of Motor Transport.
Traffic Accident Research Unit.

KEY NO: 5.

If you've had around six middies in an hour or say five nips of spirits and you're driving, remember this: any alcohol affects the ability to drive well. Everyone knows this....especially the police. And so the breath squad is out in force tonight looking for the slightest of driving errors.

If you are stopped, breathalysed and you're found to have more than .08% in your blood (around six middies in an hour), you could get a \$400 fine, plus six months in jail and your licence taken away for a year.

The law is tough on drinkers who drive.
It just isn't worth it.



HANSEN-RUBENSOHN-McCANN-ERICKSON PTY. LIMITED

RADIO COPY.

CLIENT: Department of Motor Transport.
Traffic Accident Research Unit.

KEY NO: 6.

Newsreader reads: This week in Sydney, 235 people were convicted of driving under the influence of alcohol. The maximum penalty for this major offence is a \$400 fine, six months in jail and disqualification from driving for one year. Most of the defendants were convicted upon the evidence of the scientifically accurate Breathalyser which found them all above the permissible .08% limit of alcohol in the blood.

The police breath squad will be out in force tonight as usual in all areas.

The law is tough on drinkers who drive. It just isn't worth it.

MEDIA SCHEDULE SUMMARY

The media selected were:

1. Daily Press - which gave an initial (unduplicated) reach of 83% of all Sydney males and 80% of all females.
2. Radio - which built up frequency and allowed additional impact with youth and motorists.

This combination enabled a much greater concentration to be achieved than would have been possible had television been used as one of the media. The greatly increased cost of using television would have resulted in a much thinner spread than that achieved.

The press and radio campaigns were presented in two bursts:

8th October - 26th October, 1973
12th November - 1st December, 1973.

The press schedule comprised full page advertisements in the three Sydney tabloids (the Sydney Daily Telegraph, Sydney Daily Sun, Sydney Daily Mirror) and identical sizes in the Sydney Morning Herald and The Australian. Two insertions per week for a 6 week period were placed in the four Sydney papers, with the N.S.W. edition of the Australian running at one per week. As well, there was one advertisement placed in the monthly, The Open Road, to provide direct exposure to the motorist.

The radio schedule was as follows:

Each week, on each Sydney station, 15 x 30 second spots went to air. Six different messages were used in rotation. Placement was in the 'drive' (4 p.m.-7 p.m.) and 'night' (7 p.m.-10 p.m.) areas on Thursdays and Fridays, and in the afternoons (12-6 p.m.) on Saturdays. The same weight was extended to 2KA Katoomba to ensure coverage of Sydney's far western suburbs. Weekly reach estimates for the radio campaign averaged 50% among all adults with a build-up to 70% among 18-24 yr. olds.

The approximate expenditure on media placement and production of advertisements was as follows:

Press	\$60,000
Radio	\$14,500
Agency Service Fee	\$ 3,500
Production	\$ <u>4,000</u>
Total	<u>\$82,000</u>

APPENDIX II

QUESTIONNAIRE

TRAFFIC SURVEY

SYDNEY SEPT. 1973

ENSURE INTRODUCTION COMPLETE & CONTACT RECORD FILLED OUT

ASK ALL RESPONDENTS:

People often have different opinions on what causes serious traffic accidents.

Q.1a What would you say would be the three most important factors contributing to serious traffic accidents?

1.
.....
2.
.....
3.
.....

Q.1b Out of these, which do you see as the major cause?
(Record number of the above factor, Q.1a)

.....
.....

Q.2	Do you hold a current driver's/ rider's license?	YES	01
		NO	02

Q.3	How many cars or other vehicles are normally run by members of your household (company cars included)?	ONE	01
		TWO	02
		THREE	03
		FOUR	04
		FIVE OR MORE	05
		NONE	06

SHOW CARD 1

Q.4a How often would you have an alcoholic drink such as beer, wine or spirits away from home?

- 3+ times/day 01)
twice a day 02)
once a day 03)
nearly every day .. 04)
3-4 times/week 05)
1-2 times/week 06)
2-3 times/month ... 07)
About once month .. 08)
Less than once)
month, but at least)
once year 09)
Less than once year
or never 10 Ask Q.4b

Go to Q.5

CIRCLE ONE ONLY

IF LESS THAN ONCE/YEAR OR NEVER

Q.4b Do you ever have an alcoholic drink?

- Yes 01)
No 02) Go to Q.7

Q.5a What is your usual beverage - is it beer, spirits or wine?

- BEER 01
SPIRITS 02
WINE 03

CIRCLE ONE ONLY

Q.5b If you personally were going to drive, what is the largest amount of your usual alcoholic drink you could have and still be safe to drive?, i.e. in a 1 to 1½ hour period and not taken with a meal. (Not that you necessarily would drink this amount)
If beer: How many middies?
If spirits: How many 1 oz nips?
If wine: How many 3-4 oz glasses?

- ONE 01
TWO 02
THREE 03
FOUR 04
FIVE 05
SIX 06
SEVEN 07
EIGHT 08
NINE OR MORE 09
NONE 10
DON'T KNOW 11

Q.6a The last time you had more than this amount to drink, away from home,

Where were you?

(PROBE FOR DETAIL, e.g. IF "FRIEND'S"

ASK: WAS IT A PARTY?)

.....
.....

Q.6b How did you get home?
(PROBE FOR DETAIL, e.g. if "CAR", ASK: DID YOU DRIVE YOURSELF
OR DID SOMEONE ELSE DRIVE?)
.....
.....

ASK ALL RESPONDENTS

Q.7 I'd like you to tell me if you AGREE..... 01 Go to Q.8
agree or disagree with the DISAGREE 02 Ask Q.7b
following statement.
It's all right to drive when you
have had too much to drink.
CIRCLE ONE ONLY

Q.7b Do you agree or disagree with AGREE 01 Go to Q.8
this? DISAGREE 02 Ask 7c
It's all right to drive when
you have had too much to drink,
provided you take it easy and
drive slowly.
CIRCLE ONE ONLY

Q.7c Do you agree or disagree with AGREE 01 Go to Q.8
this? DISAGREE 02 Ask 7d
It's all right to drive after
drinking, provided you can
hold your alcohol.
CIRCLE ONE ONLY

Q.7d Do you agree or disagree with AGREE 01 Go to Q.8
this? DISAGREE 02 Ask 7e
It's all right to drive after
drinking, provided you've had
only a couple of drinks.
CIRCLE ONE ONLY

Q.7e And this one, do you agree or AGREE 01 Go to Q.8
disagree? DISAGREE 02 Ask 7f
You should never drive after
drinking?
CIRCLE ONE ONLY

IF RESPONDENT DISAGREED WITH ALL THE ABOVE STATEMENTS (Q.7a-7e)

Q.7f Would you give me your opinion on drinking and driving in general?
.....
.....
.....

Q.8 These next few questions are mainly about the laws on drinking and driving. We've found that a lot of people don't know much about them.

There is a law in N.S.W. about drinking and driving. Can you tell me what it says? It doesn't have to be the exact wording of course.

PROBE: Anything else? OR IF "D.K.": Just anything you know about the drinking-driving laws.)

.....
.....
.....

Q.9 Can you tell me what the legal limit is? (i.e. numerical value).

(IF NO MENTION OF LEGAL LIMIT, OR PRESCRIBED CONCENTRATION OF ALCOHOL IN Q.8 ABOVE, BEGIN THIS QUESTION WITH:

There is now a legal limit on the amount of alcohol a driver can have in his blood. Can you tell me etc?)
(record).....
.....

Q.10a	Have you ever heard of the	YES	01 Ask Q.10b
	breathalyser?	NO	02 Go to Q.11
		NOT SURE	03 Ask Q.10b
	CIRCLE <u>ONE</u> ONLY		

Q.10b What is it? (PROBE)
.....
.....

Q.10c Where is it given?
.....
.....

SHOW CARD 2

Q.11a Can you tell me if you agree or disagree with the following statement?

AGREE	01
DISAGREE	02
UNDECIDED	03
DON'T KNOW	04

The Breathalyser is a fair test of the amount of alcohol in a person's blood?

CIRCLE ONE ONLY

Q.11b Do you agree or disagree with this statement?

AGREE	01
DISAGREE	02
UNDECIDED	03
DON'T KNOW	04

The Breathalyser is a fair test of whether a person is safe to drive after drinking.

CIRCLE ONE ONLY

SHOW CARD 3

Q.12 When can the police request a driver to submit to a breath test to determine his blood alcohol concentration (i.e. under what circumstances)?

If you're seen driving away from pub or club ..	01
After an accident	02
If you're driving in a "suspicious" manner	03
If you're pulled up for a traffic offence	04
Other	05

CIRCLE ALL MENTIONED

Q.13 What penalties are there for people who fail the Breathalyser test?
(Probe for specifics, i.e. if "suspension" or "jail", ask "How long?", if "Fine", ask "How much?")
.....
.....
.....
.....

		Q14a	Q14b	Q14c
		BEER	SPIRITS	WINE
Q.14a	What is the largest amount the <u>average</u> person can drink and <u>still be below the legal amount</u> i.e. in a 1 to 1½ hour period, not taken with a meal?	ONE	01 .. 01	... 01
		TWO	02 .. 02	... 02
		THREE	03 .. 03	... 03
		FOUR	04 .. 04	... 04
		FIVE	05 .. 05	... 05
	How many <u>middies</u> of <u>beer</u> ?	SIX	06 .. 06	... 06
		SEVEN	07 .. 07	... 07
Q.14b	How many bar tots (1 oz nips) of <u>spirits</u> ?	EIGHT	08 .. 08	... 08
		NINE OR MORE	09 .. 09	... 09
		NONE	10 .. 10	... 10
Q.14c	How many <u>glasses</u> (3-4 oz) of wine?	DON'T KNOW ..	11 .. 11	... 11
	CIRCLE IN APPROPRIATE COLUMNS			

ALL RESPONDENTS, EXCEPT FOR NON-DRINKERS (SEE Q.4b)

Q.15	What is the largest amount of your <u>usual</u> alcoholic drink that is, (state type of drink from Q.5a) - <u>you</u> could have and still be <u>below the legal limit</u> , i.e. in a 1 to 1½ hour period, not taken with a meal?	ONE	01
		TWO	02
		THREE	03
		FOUR	04
		FIVE	05
		SIX	06
		SEVEN	07
		EIGHT	08
		NINE OR MORE	09
		NONE	10
		DON'T KNOW	11
	If <u>beer</u> : How many middies?		
	If <u>spirits</u> : How many 1 oz nips?		
	If <u>wine</u> : How many 3-4 oz glasses?		

ALL RESPONDENTS

SHOW CARD 4

Q.16	People have different attitudes and opinions about drinking and driving. Here are two common opinions. Can you tell me which of these is <u>closest</u> to what <u>you</u> believe?	You can't set a standard "safe" limit for everyone when it comes to drinking and driving, because everyone's capacity varies	01
	CIRCLE <u>ONE</u> ONLY	No matter what the individual differences in capacity to "hold" alcohol, no-one is safe to drive if his blood alcohol concentration is above the legal limit	02

Q.17a Do you think the Breathalyser is still being used? YES 01 Go to Q.17b
NO 02 Ask Q.18
DON'T KNOW 03 Go to Q.17b

IF YES, OR DON'T KNOW, ASK:

Q.17b How much is it being used, MORE THAN 01
"more than", "less than" or LESS THAN 02
"about the same" as when it ABOUT THE SAME 03
came in? DON'T KNOW 04

CIRCLE ONE ONLY

ALL RESPONDENTS - CLASSIFICATION DATA

Q.18 SEX MALE 01
FEMALE 02

Q.19 Do you have a current driver's/ YES 01
rider's licence? NO 02

SHOW CARD 5

Q.20 Would you tell me which of these 17-24 01
age groups you are in? 25-39 02
(IF REFUSES AGE, INTERVIEWER 40-55 03
ESTIMATE, AND MARK "E") 56-69 04

SHOW CARD 6

Q.21 Would you tell me how far PRIMARY 01
you've gone with your HIGH SCHOOL (no Int/SC) 02
education? Which of these HIGH SCHOOL (Int/SC) . 03
have you completed? LC/HIGHER SC 04
UNIVERSITY (NO DEGREE) 05
CIRCLE THE HIGHEST UNIVERSITY (DEGREE) .. 06
COMPLETED POST GRADUATE 07
OTHER 08
NOT STATED 09

Q.22 Could I have your name?
(Record)

CLOSE INTERVIEW AND
THANK RESPONDENT

APPENDIX III

SAMPLING PROCEDURE AND FIELD REPORT FOR THE 'BEFORE' AND 'AFTER' SURVEYS.

Both surveys aimed to get approximately 1200 interviews amongst English-speaking householders in the Sydney Metropolitan Area, aged between 17 and 69 years inclusive. A multi-stage probability cluster sampling procedure was used to select respondents. A total of 240 starting points, drawn from 60 primary sampling units within 15 strata in the Sydney Metropolitan Area provided the basis for sampling. Households were selected from blocks drawn from complete CD listings of dwellings. And interviewers were given the actual address of households to call on. To ensure matching of the before and after samples, households in each sample were selected from the same 'block', (but at no stage were interviews sought in adjoining households).

Six, seven or nine householders were selected (one per household) from each starting point, with no replacement of households lost through refusal, non-contact, ineligibility (due to age or language) or vacant dwelling. Up to three call backs were made to obtain a completed interview.

Selected household outcomes for both surveys are summarised below.

Outcome	Before	After
Completed interview **	1019	1032
Incomplete interview	4	1
Non-contact	261	300
Refusal	184	224
Ineligible	224	244
Vacant dwelling	68	74
Selected Households (N)	1760	1875

Outcome rates were as follows -

Rate	Before	After
Response rate	69.4%	66.2%
Refusal rate	12.5%	14.3%
Non-contact rate	17.7%	19.2%
Ineligible rate	12.7%	13.0%
Vacant dwelling rate	3.8%	3.9%
Ineligible/VD rate	16.5%	16.9%

Both the before and after surveys fell short of the target of 1200 completed interviews. In the 'before' survey this was for two main reasons. Firstly, there were more ineligibles and vacant dwellings than expected. A sample of 1760 households had been drawn to allow for an ineligibility/vacant dwelling rate of roughly 10-12%. The actual rate was 17%. Secondly, widespread blackouts caused by power strikes during the interview period, resulted in an inflated refusal and non-contact rate, with householders being unwilling to open doors and interviewers unwilling to make first calls, during the blackouts. Because the interview period was strictly limited to three weeks by the start of the campaign, these non-contacts and refusals could not be followed up.

In the 'after' survey the household sample was increased to allow for the 17% ineligible/VD rate found in the 'before' survey. However, the 'after' survey period coincided with pre-Christmas activities and holidays and so refusal and non-contact rates were higher than expected.

* "Block" here is used in the technical sampling sense of a collection of dwellings. It may comprise part of a street block, a complete street block, or more than one street block depending on the number of dwellings involved.

** The total number of completed interviews in each survey includes a small number of invalid interviews (14 in before sample; 8 in after sample) i.e. interviews with the wrong respondent. These invalid interviews were not included when results were reported and analysed.

APPENDIX IV

BEFORE-AFTER DIFFERENCES IN DEMOGRAPHIC VARIABLES

The sex distribution of the before and after samples

B/A	N	SEX (% of N)	
		Male	Female
Before	1005	48	52
After	1024	48	52

The age distribution of the before and after samples
for males

B/A	N	AGE (% of N)			
		17-24	25-39	40-55	56-69
Before	482	19	38	29	15
After	487	16	35	28	21

The age distribution of the before and after samples
for females

B/A	N	AGE (% of N)			
		17-24	25-39	40-55	56-69
Before	523	19	32	30	20
After	538	16	32	32	20

The driver status distribution of the before and after samples for males

B/A	N	DRIVER STATUS (% of N)	
		Driver	Non-driver
Before	482	85	15
After	487	86	14

The driver status distribution of the before and after samples for females

B/A	N	DRIVER STATUS (% of N)	
		Driver	Non-driver
Before	523	55	45
After	538	56	44

The drinking frequency away from home distribution of the before and after samples for males

B/A	N	DRINKING FREQUENCY AWAY FROM HOME (% of N)				
		Each day	1-4/wk	2-3/mth	1-12/yr	Never
Before	482	19	41	9	19	12
After	487	18	37	8	19	17

The drinking frequency away from home distribution of the before and after samples for females

B/A	N	DRINKING FREQUENCY AWAY FROM HOME (% of N)				
		Each day	1-4/wk	2-3/mth	1-12/yr	Never
Before	523	1	22	12	39	25
After	538	5	21	13	35	27

These two categories were pooled for statistical analysis.

APPENDIX V

THREE-DIMENSIONAL TABLES YIELDING SIGNIFICANT (I×J×K) INTERACTIONS

Table (i): Knowledge of legal limit x B/A x Age for females

Age	B/A	N (Females)	KNOWLEDGE OF LEGAL LIMIT (% of N)			
			.08	.8(or similar)	.05/other	DK
17-24	Before	99	15	3	32	50
	After	88	35	8	26	31
25-39	Before	166	13	8	31	49
	After	171	31	9	24	36
40-55	Before	155	11	10	23	56
	After	169	13	9	28	50
56-69	Before	103	13	6	22	59
	After	109	14	3	18	65

Table (ii): Knowledge of legal limit x B/A x Drinking frequency away from home for females

Drinking Frequency away from home	B/A	N (Females)	KNOWLEDGE OF LEGAL LIMIT (% of N)'			
			.08	.8(or similar)	.05/other	DK
> 1-4/wk	Before	124	17	10	33	40
	After	139	30	12	22	37
1-36/yr	Before	264	11	6	30	52
	After	255	23	8	24	46
< 1/yr or never	Before	133	11	7	16	66
	After	144	15	3	28	54

Table (iii): Legal limit equivalent in middies of beer x B/A x
Age for females

Age	B/A	N (Females)	NUMBER OF MIDDIES OF BEER (% of N)					
			1-2	3-4	5	6	7-9+	DK
17-24	Before	99	13	44	12	3	2	25
	After	88	17	34	5	10	5	30
25-39	Before	166	15	33	4	3	1	45
	After	171	18	31	9	7	3	32
40-55	Before	155	12	26	4	3	1	55
	After	169	8	30	7	8	1	47
56-69	Before	103	11	20	3	6	0	60
	After	109	4	17	7	6	3	64