Attitudinal Differences between Respondents on Car Free Day 2001

FINAL - for Public Distribution

Prepared for the British Co-ordinator for European Car Free Day.

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BNR Consulting, 23 November 2001

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1. Introduction

European Car Free Day has been run in cities and towns throughout Europe since 1995 and aims to show people what their environment could be like if they were free from cars. The cities and towns involved close off sections of road to motor vehicles for the day to demonstrate how much cleaner, less congested and quieter local streets can be. The event also, hopefully, encourages people to think about their overall car use and look at selecting the appropriate mode of transport for a particular journey.

As part of Car Free Day 2001 in London a survey of participants was undertaken to gauge public reaction to the event. The basic analysis of the survey is reported elsewhere; but BNR Consulting undertook further analysis to look at the way attitudes varied according to the personal characteristics of respondents.

To encourage an effective switch from private transport (and in particular car) to other more sustainable forms of mobility, it is important to develop policies that are understood and therefore hopefully supported by most sections of society. This makes it interesting to examine the way in which attitudes vary with the personal characteristics of respondents, to see if there are significant variations. It is particularly important to investigate the attitudes of the car users within the sample as it is they who are being asked to change their behaviour.

In the following analysis the sample was segmented using the following variables:

- car driver
- age
- sex
- local resident/employee

Statistical techniques were used to examine the relationships between variables. The categorical nature of most of the data, meant that non-parametric tests (predominantly the Chi-squared test) were used for this purpose.

2. By Car Driver

For any reduction in traffic to take place, it is important to consider the attitudes of those who are the predominant cause. Such an insight may help develop effective policies to encourage car drivers to use other means of transport.

The survey was not expressly designed for this purpose and although one of the variables does allow us to determine those who are car drivers and those who are not, the results need to be treated with some caution. In particular the sample was taken mostly from the street in the area of the event: which is likely to mean that respondents were perhaps more sympathetic to car free policies, than the community as a whole. It is also a little unclear exactly how the phrase "car driver" relates to "car owner" - which would be a better measure for this type of exercise . Nevertheless some interesting insights emerge.

Table 2.1. shows respondents' opinions of the Car Free Day event. The small number of negative responses meant that a Chi-squared test was inappropriate and so a Mann Whitney U test was used which proved significant at 0.005 level. In general car drivers, while still positive about the event, were less so than non-car drivers.

Table 2.1. Do You Think European Car Free Day Event Is A Good Idea?

			Car Driver		
			No	Yes	Total
Good Idea?	V Good	Count	361	260	621
		% Within Car Driver	83.4%	75.6%	79.9%
	Q Good	Count	67	70	137
		% Within Car Driver	15.5%	20.3%	17.6%
	Not Good	Count	4	10	14
		% Within Car Driver	.9%	2.9%	1.8%
	V Bad	Count	1	4	5
		% Within Car Driver	.2%	1.2%	.6%
	Total	Count	433	344	777
		% Within Car Driver	100.0%	100.0%	100.0%

Table 2.2. shows another significant relationship (sig. 0.025). Car drivers seemed to think it less likely that the event would enable people to leave their cars at home.

Table 2.2. In Your Opinion, Do You Think This Kind Of Event Helps People To Leave Their Cars At Home?

			Car Driver		
			No	Yes	Total
Helpful?	Yes	Count	260	182	442
		% Within Car Driver	59.0%	52.6%	56.2%
	No	Count	101	109	210
		% Within Car Driver	22.9%	31.5%	26.7%
	Don't Know	Count	80	55	135
		% Within Car Driver	18.1%	15.9%	17.2%
	Total	Count	441	346	787
		% Within Car Driver	100.0%	100.0%	100.0%

Table 2.3. shows the differences in opinion with regard to the repeating of Car Free Day. It is clear that car drivers were significantly (sig. 0.000) less enthusiastic about a repeat event.

Table 2.3. Would You Like This Kind Of Event To Be Repeated On This Street?

			Car Driver		
			No	Yes	Total
Should Be Repeated?	Every Day	Count	95	48	143
		% Within Car Driver	23.1%	14.6%	19.3%
	Once Week (M-F)	Count	25	16	41
		% Within Car Driver	6.1%	4.9%	5.5%
	Once Week (W/E)	Count	115	77	192
		% Within Car Driver	27.9%	23.5%	25.9%
	Every 3 Months	Count	116	102	218
		% Within Car Driver	28.2%	31.1%	29.5%
	Once Year	Count	59	77	136
		% Within Car Driver	14.3%	23.5%	18.4%
	No Repeat	Count	2	8	10
		% Within Car Driver	.5%	2.4%	1.4%
	Total	Count	412	328	740
		% Within Car Driver	100.0%	100.0%	100.0%

No difference was detected in the belief that Car Free Day had reduced pollution levels, with 71.7% of all respondents suggesting that it would improve matters. There were also no differences in the perceptions of benefits in terms of: quietness (48.2% believed it to be quieter), those to pedestrians (62.9%) or to cyclists (43.4%).

The ability of the exercise to encourage individuals to try other modes did, however, show a significant difference (sig. 0.000). In table 2.4. 26.1% of car drivers believed this to be the case, compared with 15.3% of non-car drivers. This clearly illustrates the fact that car drivers have more choice about means of travel; but the low percentage figure, in a city with extensive public transport networks, is a cause for concern.

Table 2.4. I Can Try Another Means Of Transport.

			Car Driver		
			No	Yes	Total
Able To Try Other Modes	No	Count	375	258	633
		% Within Car Driver	84.7%	73.9%	79.9%
	Yes	Count	68	91	159
		% Within Car Driver	15.3%	26.1%	20.1%
	Total	Count	443	349	792
		% Within Car Driver	100.0%	100.0%	100.0%

Neither group considered the impact on local trade to be significantly different, with 33.5% of the total sample believing that there was a positive effect. There were also no significant differences detected in beliefs about stress levels (where 58% of the sample

considered it to be less stressful), or the friendliness of the atmosphere (76.9% considered it more friendly). It was considered safer by 48.6% of respondents and again no significant difference was detected.

Table 2.5. I Can Not Use My Car To Go To Work.

			Car Driver		
			No	Yes	Total
Cannot Use Car For Work	No	Count	434	334	768
		% Within Car Driver	98.0%	95.7%	97.0%
	Yes	Count	9	15	24
		% Within Car Driver	2.0%	4.3%	3.0%
	Total	Count	443	349	792
		% Within Car Driver	100.0%	100.0%	100.0%

The survey also considered the drawbacks associated with Car Free Day. One obvious downside for car drivers is the inability to use the car on such days. The survey question was framed in relation to work trips and the inability to use the car for such trips was mentioned by only 3% of respondents. The question was, however, phrased to look at the impact of the event today and not the impact of a Car Free Day in general. As the event was held on a Saturday, this figure would have been significantly deflated. There was no significant difference in the response of car owners and others. The question is also a little vague, as to whether it concerns travel to/from work or whether it relates to work related travel while at work.

Table 2.6. There Is Not Enough Public Transport.

			Car Driver		
			No	Yes	Total
Not Enough PT	No	Count	368	269	637
		% Within Car Driver	83.1%	77.1%	80.4%
	Yes	Count	75	80	155
		% Within Car Driver	16.9%	22.9%	19.6%
	Total	Count	443	349	792
		% Within Car Driver	100.0%	100.0%	100.0%

Concerns about the adequacy of alternative public transport were expressed by a significantly greater proportion of car drivers than others (sig. 0.0035). In table 2.6. these concerns were echoed by 22.9% of car drivers and only 16.9% of others. The low overall figure probably reflects the substantial amount of public transport available in the

capital compared to other areas of the country, where the lack of alternative transport is frequently used as the justification for car journeys.

No significant difference was recorded in respondents' views of the disadvantages for local traders: only 2.9% of all respondents considered this to be a problem.

Table 2.7. I Cannot Park My Car.

			Car Driver		
			No	Yes	Total
Worse For Parking	No	Count	433	323	756
		% Within Car Driver	97.7%	92.6%	95.5%
	Yes	Count	10	26	36
		% Within Car Driver	2.3%	7.4%	4.5%
	Total	Count	443	349	792
		% Within Car Driver	100.0%	100.0%	100.0%

Views on the increased problems with parking did show significant differences (sig. 0.000) between the groups: 7.4% of car drivers and 2.3% of non drivers mentioned this. The figure is again low, especially when the limited parking in London is considered. This problem may have partly arisen because it is not clear from the data available, whether the car driver had actually driven to the event - about which the questions were framed.

There were significantly (sig. 0.024) different views between the groups with regards to pollution. Car drivers tended to have a less positive view of the impact on pollution, with 26.6% thinking it would not solve pollution; while only 19.9% of non car drivers thought so.

Table 2.8. It Does Not Solve The Pollution Problem.

			Car Driver		
			No	Yes	Total
Doesn't Solve Pollution	No	Count	355	256	611
		% Within Car Driver	80.1%	73.4%	77.1%
	Yes	Count	88	93	181
		% Within Car Driver	19.9%	26.6%	22.9%
	Total	Count	443	349	792
		% Within Car Driver	100.0%	100.0%	100.0%

As shown in table 2.9. a significantly (sig. 0.005) higher proportion of car drivers 11.7% considered the event to be just a publicity stunt, compared to non car drivers 6.1%.

Table 2.9. It Is Just A Publicity Stunt

			Car Driver		
			No	yes	Total
Just A Publicity Stunt	No	Count	416	308	724
		% within Car driver	93.9%	88.3%	91.4%
	Yes	Count	27	41	68
		% within Car driver	6.1%	11.7%	8.6%
	Total	Count	443	349	792
		% within Car driver	100.0%	100.0%	100.0%

Table 2.10 shows the views of the two groups with respect to limiting the use of cars. Car drivers are significantly (sig. 0.001) less keen on restrictions to car use. Even so it is interesting to see that the majority of car drivers strongly agree with the need to limit car use. There are, however, two caveats to this conclusion. Firstly, as mentioned previously, this sample is not likely to be entirely representative of car drivers within the community, which is likely to skew results in favour of alternatives to car. Secondly it is known that questions of this nature sometimes cause respondents to answer in a way that is socially responsible; rather than in a way that is entirely truthful (see, for example Oppenheim, 1966). It may therefore be that respondents are agreeing with policies of limitation during the interview, even if they do not entirely support such policies in reality.

Table 2.10. To Reduce Traffic And Pollution In London, Car Use Must Be Limited.

			Car Driver		
			No	Yes	Total
Car Use Must Be Limited	Strongly Agree	Count	320	215	535
		% Within Car Driver	76.2%	62.9%	70.2%
	Slightly Agree	Count	85	106	191
		% Within Car Driver	20.2%	31.0%	25.1%
	Slightly Disagree	Count	7	12	19
		% Within Car Driver	1.7%	3.5%	2.5%
	Strongly Disagree	Count	8	9	17
		% Within Car Driver	1.9%	2.6%	2.2%
	Total	Count	420	342	762
		% Within Car Driver	100.0%	100.0%	100.0%

Although the majority of both groups do not agree that car use in London will always be better than pubic transport; table 2.11 shows that car drivers are significantly (sig. 0.000) more likely to hold such a view.

Table 2.11. Using A Car In London Will Always Be Better Than Using Public Transport.

			Car Driver		
			No	Yes	Total
Car Will Always Be Better	Strongly Agree	Count	19	36	55
		% Within Car Driver	4.6%	10.5%	7.3%
	Slightly Agree	Count	56	76	132
		% Within Car Driver	13.7%	22.2%	17.6%
	Slightly Disagree	Count	105	99	204
		% Within Car Driver	25.6%	28.9%	27.1%
	Strongly Disagree	Count	230	131	361
		% Within Car Driver	56.1%	38.3%	48.0%
	Total	Count	410	342	752
		% Within Car Driver	100.0%	100.0%	100.0%

The majority of both groups believe that improvements in public transport are essential, even at the expense of road-space for private motorists. Car drivers are, however, significantly (sig. 0.000) less enthusiastic.

Table 2.12. It Is Essential To Improve Public Transport Even If, In Order To Do This, Motorists Have Less Space.

			Car Driver		
			No	Yes	Total
PT Must Be Improved Even At Car's Expense	Strongly Agree	Count	329	224	553
		% Within Car Driver	81.6%	65.3%	74.1%
	Slightly Agree	Count	63	91	154
		% Within Car Driver	15.6%	26.5%	20.6%
	Slightly Disagree	Count	9	17	26
		% Within Car Driver	2.2%	5.0%	3.5%
	Strongly Disagree	Count	2	11	13
		% Within Car Driver	.5%	3.2%	1.7%
	Total	Count	403	343	746
		% Within Car Driver	100.0%	100.0%	100.0%

3. By Age

Responses to four statements (referred to as the "four statements" in the remainder of this document) were compared by age group. The large number of categories in this variable meant that Spearman's rank correlation, rather than the Chi-squared test was used as a measure of association. The only statistically significant relationship, at the 0.05 level, is that between the age of the respondent and the views on the need to improve public transport - even if their is reduced space for motorists. In this case the negative correlation suggests that older people were more likely to support a policy restricting road-space for cars.

Table 3.1. Correlations between Policy Statements and Age (Spearman's rho)

		AGE
Do You Find The Amount Of Car Traffic In London A Problem?	Correlation Coefficient	-.035
	Sig. (2-Tailed)	.378
	N	618
To Reduce Traffic And Pollution In London, Car Use Must Be Limited.	Correlation Coefficient	-.078
	Sig. (2-Tailed)	.054
	N	617
Using A Car In London Will Always Be Better Than Using Public Transport.	Correlation Coefficient	-.023
	Sig. (2-Tailed)	.572
	N	607
It Is Essential To Improve Public Transport Even If, In Order To Do This, Motorists Have Less Space.	Correlation Coefficient	-.090
	Sig. (2-Tailed)	.027
	N	605

4. By Sex

Responses to the four statements have been compared for both male and female respondents. There were significant (sig. 0.005) differences between the groups' responses on limiting car use to reduce traffic and pollution, with males appearing to be more in favour.

Table 4.1. To Reduce Traffic And Pollution In London, Car Use Must Be Limited.

			Sex		
			Male	Female	Total
Car Use Must Be Limited	Strongly Agree	Count	283	252	535
		% Within Sex	74.5%	66.0%	70.2%
	Slightly Agree	Count	77	114	191
		% Within Sex	20.3%	29.8%	25.1%
	Slightly Disagree	Count	10	9	19
		% Within Sex	2.6%	2.4%	2.5%
	Strongly Disagree	Count	10	7	17
		% Within Sex	2.6%	1.8%	2.2%
	Total	Count	380	382	762
		% Within Sex	100.0%	100.0%	100.0%

Responses on the other three statements (Car will always be better, public transport must be improved - even at car's expense and whether is traffic a problem) did not show significant variation between sexes.

5. Local/Non-local

Responses to the four statements were compared between those people who had a local connection (either by being a local resident, or associated with a local business) and those who did not. Comparisons with respondents' knowledge of the event were also made.

None of the responses to the four statements: is traffic a problem, car use must be limited, car will always be better, or public transport must be improved - even at car's expense showed any significant relationship with respondents' local connections.

Not surprisingly knowledge of the day's event was significantly higher amongst locals, with nearly 80% being aware of the event; compared to just under 56% of non locals. The knowledge of Car Free Day itself showed a similar pattern, with locals being significantly more aware (68.6% of locals and only 42.4% of non-locals).

6. Conclusions

Although the survey was not explicitly designed for this form of analysis some interesting insights have emerged from it.

As would be expected car drivers were less enthusiastic and more sceptical about the event: they were also less keen on a repeat event. For example, a significantly higher proportion of car drivers considered the event to be just a publicity stunt, compared to non car drivers. Car drivers also tended to have a less positive view of the impact on

pollution, with 26.6% thinking it would not solve pollution; while only 19.9% of non car drivers thought so. Concerns about the adequacy of alternative public transport were expressed by a significantly greater proportion of car drivers.

Car drivers appeared to be significantly less keen on restrictions to car use. Although the majority of both groups do not agree that car use in London will always be better than pubic transport; car drivers are significantly more likely to hold such a view. The majority of both groups believe that improvements in public transport are essential, even at the expense of road-space for private motorists. Car drivers are, however, significantly less enthusiastic.

Investigating the effects of age and sex on attitudes proved to be less productive.. A negative correlation suggested that older people were more likely to support a policy restricting road-space for cars and males appeared to be significantly more in favour of limiting car use to reduce traffic and pollution.

7. References

Questionnaire Design and Attitude Measurement (Heinemann Educational Books, London 1966) Oppenheim A.N.