THE POWER AND INFLUENCE OF SOCIAL MARKETING IN THE EVOLUTION OF THE ENVIRONMENTAL CITIZEN

A thesis submitted for the degree of Doctor of Philosophy

by

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ABSTRACT

Anxiety among scientists has been growing over the past decade regarding the negative impact of environmental pollution on the planet. These concerns ultimately could have a bearing on the survival of mankind itself and include a warming climate, threats to the earth's ozone layer, an accumulation of greenhouse gases and the expansion of deserts at the expense of agricultural land. Scientific evidence is assembled daily confirming that the ongoing deterioration of the environment is beginning to have a negative effect on the earth's habitat.

Increased public awareness of these issues is leading to growing pressure on policy makers, especially national governments, to bring forward solutions but this is proving difficult due to the number of contributing factors involved. This thesis examines one aspect of human behaviour that is widely acknowledged to be a significant source of pollution: use of the private motor car. The car is now perceived as an everyday necessity for many people and this has brought with it ever-increasing levels of pollution.

While this behaviour can be tackled in a number of ways, this research scrutinises the capacity for a voluntary change in behaviour among private transport users. As part of this process the role and influence of social marketing is examined at work in the transportation sector. Based upon a qualitative study of a number of households, the empirical research specifically explores social marketing campaigns whose prime purpose was to induce voluntary behavioural changes among transport users. The study is specifically directed towards a major topic within the transport debate, the role of public and private transport. While weaknesses are identified in the campaigns, the research concludes that social marketing in itself cannot persuade people to make significant changes to their behaviour. Its value instead may lie as an effective channel of communication that can be utilised between private transport users and designated authorities.

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CHAPTER 1

INTRODUCTION TO THE RESEARCH

1.0 Introduction

> *'In mid-November 1953 a warm air mass, on its march to the Atlantic, glided to a noiseless halt over New York City, but New Yorkers enjoyed no immediate respite from their chilly autumn. The newly arrived warm air had come to rest high above the city streets, leaving a damp chilly gloom at ground level. Occurrences of this sort are called temperature inversions, and the appearance of this 1953 inversion in New York seems to have meant that about two hundred residents of the city would have less than a week to live' (Crenson 1971:1).*

Whilst it is acknowledged that the pollution cited in the above example originated from many different sources it was not until nine years later, in 1962, that a careful study of mortality statistics revealed that the dramatic build-up of air pollution was accompanied by an estimated two hundred deaths. Yet nobody either seemed to know, or more worryingly, even seemed to care as '*the matter was simply not important enough to deserve much attention*' (ibid:3). Nonetheless this example is a stark reminder of the potential dangers that exist when the quality of air becomes badly polluted. A report recently published by the Department of Health (DH 1998) on the effects of air pollution in the UK claims there is a direct link between poor air quality and premature deaths. Kenneth Calman, Chief Medical Officer, upon publication of the report commented:

> *'This is the first report that attempts to quantify the impact of short-term air pollution on the health of people living in the UK. It suggests that the deaths of 12,000 –24,000 vulnerable people may be brought forward and that 14-24,000 hospital admissions and readmissions may be associated with short-term air pollution each year' (Knott 1998:22)*

1.1 One Particular Source of Pollution

Transport exhaust emissions contribute significantly to occurrences of poor air quality. In 1995 the UK transport sector accounted for 25% of UK CO_2 emissions, a major contributor to global warming (Acutt 1997). Over the past thirty years there has been a significant increase in the use of private transport as the preferred mode of travel whether for work or pleasure. More than two-thirds of all journeys to work in the UK are now recorded as being made by car, up from about a half two decades ago (Levinson 1998). Aligned to this increase in car use has been a parallel increase in the numbers of vehicles maintained on the road network.

> *'The virtual explosion in the number of vehicles on the roads in the UK, and the distances those vehicles travel, pose a vital environmental challenge that requires strategic consideration by government, industry and the public' (CEST 1996:vii).*

It is estimated that between 1950 to 1990 the number of vehicles in use worldwide grew from approximately 75 million to around 675 million (OECD 1997). While this period coincides with an improvement in economic conditions enjoyed by industrialised countries, it could be speculated that the growth in car ownership figures was primarily linked to advances in prosperity, independence and security. However this shift in modal choice has created numerous problems for the environment.

> *'Motor vehicle use is now generally recognised as the source of more air pollution than any other single human activity' (Wiederkehr 1995:4).*

As the twenty-first century approaches there is little evidence to suggest that this phenomenon is about to decline. On the contrary, all indicators point to a protracted upswing in the utilisation of private transport over the coming decades with few ideas forthcoming on how this may be contained.

Nonetheless there have been ongoing attempts by policy makers to cater for this growth through expanding road construction programmes, improving the efficiency of traffic systems and encouraging the production of alternative forms of transport such as the

electric vehicle. Whilst these methods have proved to be successful in the short-term, there is now even greater concern among policy makers with regard to the environmental damage that may be caused by projected traffic volumes in the longer-term (Transport Research Laboratory 1995).

It is also important to observe that the private motor car is not just viewed as an indicator of mobility and prosperity in the industrialised countries. In underdeveloped countries where car numbers are still relatively low, such as China, India and Pakistan, it is estimated that the number of cars worldwide would triple if they were to attain the vehicle density of the United Kingdom. A corresponding increase in the consumption of fuel and the emission of pollutants would also occur as a result of such a dramatic upsurge in traffic volume worldwide (Hunecke & Sibum 1997). The European Transport Statistics for 1993 record the UK as having 408 passenger cars per thousand citizens with Italy having the highest of any densely populated country in the EU at 519 passenger cars per thousand citizens.

1.2 A Role for Social Marketing

> *'Altering consumption patterns is one of the greatest challenges in the quest of environmentally sound and sustainable development, given the depth to which they are rooted in the basic values and lifestyles of industrial societies throughout much of the rest of the world' (United Nations 1992:2).*

One consequence of the continued growth in the utilisation of private transport is that individual access to motorised forms of transport has emerged as an important icon of progress in modern democratic societies. Consequently the freedom of movement associated with access to this personal form of mobility is hard to suppress without fear of a backlash from users.

> *'Individual mobility is a cherished feature of the lifestyle in the economically affluent societies, satisfied by the ownership of one or more automobiles' (Bauer 1996:686).*

As a result national governments have been somewhat slow to challenge this behaviour and has sought to stay clear of any obvious assault (e.g. punitive restrictions on use) on those people who adopt private transport. Up until recently governments had instead diverted attention to the search for a technical solution as a means of reducing the negative environmental impacts of transport. The development of early warning communications systems on motorways alerting drivers of impending traffic congestion ahead is one of the more recent examples of this.

Nevertheless policy makers now accept that technical solutions will not be sufficient to stem the anticipated scale of environmental damage. Primarily this is because of an ever-increasing volume of traffic being recorded year on year. The recent developments in out-of-town shopping centres is one example that has created the necessity to adopt private transport in order to undertake the simplest of daily tasks, such as grocery shopping. Therefore, aside from governments applying the use of regulatory or fiscal instruments, what else can be done to try and stem this demand in the growth of the car as the primary mode of travel?

Attempts to modify people's behaviour lies at the heart of the theory of social marketing. In its formative years social marketing was primarily associated with problems directly related to health. While much of this focus continues today, there have been continuing attempts to broaden its applications into other areas such as the planting of more trees or getting householders to recycle more rubbish (Andreasen, 1995). The research presented in this thesis intends to broaden the scope of social marketing even further into the transport domain as it focuses on the behaviour of people as they decide which mode of transport to adopt for a specific journey. To assist in this objective use is made of social marketing material or collateral that was produced by organisations, public agencies and non-profit organisations (PAs & NPOs). These bodies all adopt social marketing techniques in their communication programmes on issues of public concern.

The thesis examines whether there are benefits to be gained from adopting the concept of social marketing in attempting to alter the behaviour of private transport users. Examining the effect of social marketing material, appropriate to this area of transport behaviour, on a number of people within the research site helps to achieve this. The

research endeavours to determine whether the social marketing collateral was successful, as perceived by the participants, in persuading them to utilise alternative forms of transport.

1.3 Research Objectives

This thesis is concerned with examining the degree of influence social marketing techniques can exert in developing the concept of the environmental citizen, i.e. in this case a user of transport who considers the environment when making travel choices. In particular the research scrutinises the decision-making process when selecting a mode of transport and attempts to gather evidence from people on what influences them as they make their own transport decisions. In order to gain a better understanding of this behavioural process, it was necessary to identify a target area in which detailed research could be conducted with a number of people who frequently make use of transport. The target area identified consisted of two parishes Gerrards Cross and Hedgerley: both situated within the boundaries of South Buckinghamshire District Council in the county of Buckinghamshire, UK.

The basic premise adopted in the research is that by applying the theory of social marketing, and utilising some of its recognised techniques, it is possible to exert considerable influence on peoples' decision-making processes when selecting a mode of transport. Social marketing is widely recognised as an effective method of developing interventions to facilitate social and behaviour change (Andreasen 1995). Such programmes as examined in this research are designed to influence the voluntary behaviour of target audiences and rely, to a large extent, on an assumption that if a behaviour merits change then it is incumbent upon society to help the change come about.

This change in behaviour may be partially brought about by the capacity of social marketing programmes to disseminate the necessary information critical to achieve a modified form of behaviour. The thesis sets out to *test the positive effects, if any, of such programmes and to investigate whether such approaches can contribute in the search for solutions to problems caused by transport related behaviour.*

The primary objective of this thesis is therefore to test four key hypotheses that form the basis of the overriding research question:

1. The use of the motor car as the primary mode of transport is continuing to grow.
2. This escalation in the use of the motor car is unsustainable and contributing to the deterioration of the environment.
3. Changing people's behaviour and attitude towards the motor car will assist in sustaining positive outcomes with the environment.
4. The concept of social marketing can play a central role in influencing peoples' behaviour.

The research attempts to acquire an understanding of people's desire to utilise the motor car as the primary source of transport. It then seeks to authenticate that there is a growing dependence on the use of the motor car for everyday journeys. An attempt is made to gauge from the participants whether this dependence on private transport is contributing to a decline in the quality of their lives, as perceived by them. Finally the research examines whether the behaviour of private transport users can be voluntarily modified. This is tested through examining the use of conventional persuasive tools, i.e. in the form of message appeals, as adopted in social marketing programmes aimed at the travelling public.

1.4 Structure of Thesis

Chapter Two presents a literature review of the most relevant material by first introducing the concept of social change programmes. It is clarified that the research topic comes under the umbrella of a social change programme. The concept of marketing is introduced and various definitions are examined before social marketing is chosen for further scrutiny. The role of risk communications is reviewed as part of this discussion. An outline of how risk is perceived by people within society is presented and two positions at opposite ends of the spectrum are examined in the context of transport.

Finally a number of implications are pulled together from previous social marketing research and presented for review.

Chapter Three sets out to achieve two goals. The first part of the chapter presents statistics that help to substantiate the growth in the use of private transport by the UK travelling public. These statistics confirm that the number of vehicles in use is rising year-on-year and some evidence is presented that this is also the case in the EU and the US. The second part of this chapter presents a brief overview of the environmental concerns arising directly from pollution generated by all forms of transport. An attempt is made to make a direct connection between these concerns and the specific use of private transport.

Chapter Four details the research methodology selected for this research. Initially a brief discussion is held on the merits of quantitative versus qualitative data. While both are recognised for their specific strengths this research primarily embraces the use of qualitative data collection instruments. A detailed description of the research site in the County of Buckinghamshire, i.e. two parishes named Gerrards Cross and Hedgerley, is presented. Statistical data on the make-up of each of the parishes, such as the number of clubs or societies actively running in each of the parishes, is also provided at this time. Finally the design of the research instruments is described in detail and broken down into two phases. Phase 1 adopts the use of focus groups as the instrument of data collection while Phase 2 adopts the use of diary panel analysis as its primary instrument.

Chapter Five presents a summary of the findings from Phase 1: the focus groups. The tapes from the group discussions, having been transcribed, are scrutinised in depth. This chapter presents many issues that are of concern to the participants and an attempt is made to cluster these issues into common themes.

The data collected from Phase 2, the diary panel, is analysed in Chapter Six. The accounts provided by the participants in the dairies are examined in detail. Specifically their direct experiences of alternative modes of transport are reviewed and linked together in an analytical framework.

The principal findings of the study are analysed in Chapter Seven. Chapter Eight looks at the major influences that were identified in the research as having a significant bearing on travel decisions. Finally Chapter Nine critiques the use of social marketing in this programme of research. It also presents a number of recommendations that may be of assistance to future research in this particular area of human behaviour.

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CHAPTER 2

Literature Review

2.0 Introduction

Fine (1990) described how the global economy could be divided into three sectors. The first is identified as the *commercial sector*, which consists of companies who trade for profit. The second is the *public sector* where public agencies can be found at every level whether they are local, regional or national. The third sector comprises of all other organisations that are not catered for in the other two sectors and they are generally known as *non-profit organisations*. Communication campaigns devised by public agencies (PAs), such as South Bucks District Council and non-profit organisations (NPOs), such as Friends of the Earth (FoE), have been selected to be at the centre of this research. This is primarily because these institutions share communication objectives, aligned with social marketing, that are normally viewed quite differently by profit oriented organisations in the commercial sector.

It is over the past decade that PAs & NPOs have begun to realise that they need to adopt new ways to communicate with their specific audiences. In the process many of them have identified the tools of marketing for such purposes. Marketing techniques widely used in the commercial world have proven to be successful in managing the behaviour of consumers. Commercial giants such as Coke Cola and Proctor & Gamble are two conglomerates that position marketing at the very core of their product offerings. In 1996 Coca-Cola spent $4.3 billion in direct marketing related activities, all of which was intended to promote their products to the consumer (Coca-Cola 1999). As a result of such commercial success many public agencies are beginning to consider that similar techniques should be capable of creating a demand for '*social products*' such as energy conservation, safe driving, recycling programmes and pollution reduction.

This chapter presents an overview of the theory behind the shift in marketing applications from the commercial to the social. It begins by looking briefly at what is meant by a

campaign of social change. The potential instruments that can be used in such campaigns lead us into the specific area of marketing. Various forms of marketing are examined before the focus is narrowed down into the area of social marketing. An attempt is then made to focus on the core area of interest to this research, namely the impact of social marketing programmes in persuading private transport users to reconsider their behaviour associated with mode selection. In order to position social marketing applications accurately, it is important to try and clarify the concerns that users of transport face everyday. The public's perception of risk is therefore of interest regarding concerns on matters of pollution. Finally some implications formulated from previous social marketing campaigns, and that may be of benefit to this current study, are reviewed.

It is proposed that the empirical data will be presented in Chapters Five and Six and linked together in Chapter Seven through an in-depth analysis of the recorded transport behaviour. The analysis will scrutinise the decision making process of individuals when choosing different modes of transport, whether it is public or private. The data will be drawn from an examination of the empirical material that was gathered between November 1996 and September 1997.

2.1 Social Change Programmes

Tackling environmental problems, in the majority of cases, involves some form of social change, i.e. changing the way individuals and extended groups lead their lives. Ongoing efforts are made in such change programmes to transform harmful practices into ones that are productive and beneficial in improving the quality of peoples' lives. But what is meant by the term 'social change' in the context of developing a communications campaign? Kotler & Roberto (1989) define such campaigns as follows:

> *'A social change campaign is an organised effort conducted by one group (the change agent), which intends to persuade others (the target group) to accept, modify or abandon certain ideas, attitudes, practices and behaviour' (p6).*

Zaltman & Duncan (1977) describe four major categories of change strategy that can be applied to social change programmes. Each one can be differentiated on a scale by the degree of personal freedom it offers the individual or stakeholder. At one end of the

scale lies the strategy of *power,* which resides disproportionately with national governments, companies and other institutions that possess the legitimacy, social power and resources to access the media. This strategy facilitates the change agent to apply the maximum amount of power necessary to ensure success or compliance with the particular programme. As a consequence of adopting the strategy of power the individuals' right to freedom of choice is minimised. The strategy of *persuasion* lies next on the scale. Raklow (1989) claims that the use of the word '*persuasion*' is increasingly out of fashion as it is too closely aligned to propaganda. Nevertheless the movement by public information officers to adopt everyday commercial marketing techniques would imply that the strategy of persuasion in the PA & NPO domain is still in its infancy. The 1986 AIDS awareness campaign is a good example of a social change campaign that adopted commercial marketing techniques successfully.

> '*Increasingly in the public sector, campaign planners use not only the language but also the technologies of marketing and advertising' (Pollay 1989:185).*

The third strategy is described as *normative-re-educative* and is based on the assumption that if the correct information is provided, then the rational thinker will comply and act accordingly. This differs from the strategy of persuasion in that it is much more freedom enhancing as it requires people to be convinced prior to the implementation of the strategy. It assumes that individuals are aware of the problem but simply lack awareness of the solution. Finally there is the *facilitation* strategy in which the individual is identified as ready for change. This strategy contends that the individual will offer minimal resistance and is willing to change but is just missing the right resources in order to enact the change. This strategy offers the individual the greatest freedom of choice when attempting to implement the social change programme.

The social change under discussion in this programme of research is a requisite shift in travel behaviour, yet to be defined, needed to provide the means for a reduction in the levels of vehicle pollution emissions. These pollutants are briefly described in Chapter 3. This programme of research examines social marketing campaigns that adopt the strategy of persuasion at the core of their message appeals.

Nevertheless any attempt to engineer change in society is a value-laden activity and one in which not everyone will agree upon the ends pursued or the means employed to achieve these ends (Salmon 1989). An issue that lies at the core of programmes encouraging social change is the fundamental tension between social control at one end of the scale and an individual's freedom of choice at the other end. As Kelman (1969) describes it, *'for those of us who hold the enhancement of man's freedom of choice as a fundamental value, any manipulation of the behaviour of others constitutes a violation of their essential humanity' (p583).* In order to lighten this tension, and to enable a campaign of social change to proceed, the particular issue of concern to be highlighted needs to be clearly identified and defined. It is important also that the majority of the targeted audience can identify with the issue to such an extent that they can accept it merits an intervention of some kind.

Kotler & Roberto (1989) develop five core elements that should be present in any social change campaign:

- *Cause: social objectives that change agents believe will provide a desirable answer to a social problem.* In this research the cause is identified as the excessive levels of pollutants being emitted by the transport sector and the damage this is causing the environment.
- *Change Agent: An individual, organisation, or alliance that attempts to bring about a social change and one that embodies the social change campaign.* This research examines the role of organisations, in the shape of *Friends of the Earth (FoE)* and Buckinghamshire County Council, and of alliances, in the shape of *Don't Choke Britain (DCB).* Participants in the research are not specifically examined as change agents in this context even though they represent an integral part of any social change campaign.
- *Target Adopters: Individuals, groups or entire populations who are the target of appeals for change by the change agent.* Target adopters vary from situation to situation and could be school children, commuters who reside in a particular area, or old-age pensioners to name but a few. The target adopters in this research are specifically identified as the individuals who have agreed to participate in the research and who reside in either of the two parishes.

- *Channels*: *Communications and distribution pathways through which influence and response are exchanged and transmitted back and forth between change agents and target adopters.* In this research this takes the form of posters, leaflets and video.
- *Change Strategy*: *The direction and programme adopted by a change agent to affect the change in target adopters' attitudes and behaviours.* This research makes no attempt to examine the entire strategy of any one-change agent. Rather it attempts to examine one component that can be applied across many different strategies, i.e. social marketing collateral in the shape of the message appeals utilised in this research.

Nonetheless evidence gathered over the past twenty years suggests that a significant number of social change campaigns actually accomplish little, if any, movement in the required behaviour (*ibid:5.*). It is also recognised that such failures can breed widespread cynicism among social reformers and citizens alike. Examining past campaigns in detail can help document the deficiencies that contributed to the failure of any campaign.

In the past these examinations have focused on questions of '*outcome*' rather than '*process*' (Devine & Hirt 1989). Adopting such an approach can limit the opportunity to learn from the campaign under investigation. Whilst it is possible to evaluate whether a campaign was a success or failure by examining the outcomes, it is not possible to examine conclusively why the campaign was a success or otherwise. It is important that campaigns should be examined in regard to the process that was adopted for each one. This would facilitate a review of how each programme was created as well as reviewing the reasons of its success or failure.

The most common deficiencies identified in social marketing programmes include; targeting the wrong audience; weaknesses in the message appeal, i.e. advertisement or leaflet, not being sufficiently motivating; the individuals or populations of interest targeted (the target adopters) not being offered a way to respond constructively; and finally not having a realistic budget in place for the campaigns. It is possible to address each of these weaknesses at the outset if the correct approach and appropriate methods are adopted for each campaign. Nevertheless, many campaigns have fallen short of their

goals because the target adopters and their needs were not well researched, the medium used to communicate the information was poorly chosen, or the budgets allocated were deemed to have been inadequate to mount an effective campaign.

The deficiencies described above are in the form of physical barriers that, while in place, can obstruct the free flow of information. Perfecting a social change programme is in many ways an attempt to eliminate the physical barriers.

> *'But even if these physical barriers to communications were known and removed, there would remain many psychological barriers to the free flow of ideas'*
> *(Hyman & Sheatsley 1947:412)*

The physical barriers therefore only impede the flow or supply of information. It is important, in order to improve the potential for success, to remove the physical barriers in order to expand audience exposure and ensure the information is absorbed. Hyman & Sheatsley (1947) refer to such obstacles as psychological barriers and conclude that their presence can result in failure for the campaign if they are not planned for. Psychological barriers can be broken down into five headings.

1.) *There Exists a Hard Core of Chronic Know-Nothings*:
Every individual acts differently upon receipt of information. Hyman & Sheatsley contend that a proportion of the population, no matter what the information relates to, will not become familiar with the subject in question. They are categorised as individuals who cannot be contacted through communication campaigns for whatever reason.

2.) *Interested People Require the Most Information*:
The importance of motivation when either learning or raising awareness is stressed as a key characteristic and therefore should be targeted accordingly. The core message of the campaign must resonate with the public's concern if there is to be any possibility of motivating a change in the present behaviour:

> *'The widest possible dissemination of material may be ineffective if it is not geared to the public's interests' (ibid:415)*

3.) *People Seek Information Congenial to Prior Attitudes*:

People tend to expose themselves more favourably to information that is agreeable with their past attitudes. The opposite is also held to be true, i.e. that people discourage or avoid exposure to information that is not in keeping with their attitudes. Therefore an awareness of how attitudes are formed is an integral part of understanding how decisions are ratified and behaviour may be modified.

4.) People Interpret the Same Information Differently:

Even though exposure may be universally dispersed among a target audience, it does not necessarily follow that a corresponding interpretation of the material will take place. People decipher signals and messages differently and there is no way of guaranteeing, regardless of how well a message is created, that people will interpret it with the same meaning.

> *'------it has been consistently demonstrated that a person's perception and memory of materials shown to him are often distorted by his wishes, motives and attitudes' (ibid:418).*

5.) *Information Does Not Necessarily Change Attitudes*:

Removing the physical barriers to the flow of information successfully does not guarantee any change in consequential behaviour.

> *'-----it is naive to suppose that information always affects attitudes, or that it affects all attitudes equally' (ibid:419)*

The role or presence of these psychological behaviours is often underplayed when social change campaigns are under consideration. The emphasis at that stage can be too focused on the general eagerness to simply distribute more information. However as campaigns managers have become more concerned with the psychological barriers they have begun to realise that they need to incorporate more sophisticated methods such as those adopted in marketing applications. Social change is therefore best achieved

through planned intervention and by employing methods that are based on marketing philosophy.

The underlying theme running throughout the literature is that knowledge, techniques, and technologies now exist to organise and implement effective social change programmes. What once was called "*information campaigns*" are now so closely linked to marketing that it is difficult to identify any significant areas of difference.

> *'In the realm of ideas and issues, as opposed to products, differences between marketing and public information truly become obscure. Massive public health interventions designed to eradicate AIDS, cigarette smoking or premature heart attacks, and sophisticated, multi-media efforts by political groups attempting to elect candidates and influence the social agenda can be labelled information campaigns or social marketing with equal validity' (Salmon 1989:8).*

One of the questions that should be asked of any research undertaken on such a sensitive subject is how the beliefs or attitudes are formed. Much of the existing consumer behaviour research (Foxall 1983) concentrates on the decision-making process rather than on the belief formation or value construction that also may play a central role in driving decisions.

Shaw and Clarke (1999) attempt to expand upon this topic by considering how belief formation is constructed within a group of ethical consumers. This exploratory research, consisting of focus group and questionnaire data instruments, produces interesting and complex insights:

> *'Existing consumer behaviour research has tended to focus on decision making to the neglect of the formative stages underlying actual choices. The irrefutable importance of these initial stages in decision making is evident from the factors outlined by the study as being influential to ethical beliefs' (Shaw & Clarke 1999)*

The central premise of the theory of reasoned action is that people make behavioural decisions on the basis of reasoned consideration of the available information.

'Humans are reasonable animals who, in deciding what action to take, systematically, process and utilise the information available to them. Thus, in the final analysis, changing behaviour is viewed primarily as a matter of changing the cognitive structure underlying the behaviour in question' (Fishbein & Ajzen 1975).

The theory of reasoned action could be regarded as a deliberative processing model, to the extent that behavioural decisions are seen to be the consequences of the person's systematic consideration and deliberation of the information available to him or her. People are assumed to act in a rational manner based on this theory.

Kippax and Crawford (1993) reject the premise on which the theory of reasoned action is grounded. Whilst they acknowledge the theory recognises the importance of 'significant others' they consider it does not go far enough to embrace the influence such social interactions have on the decision-making process.

> *'We maintain that an individual (or many individuals), on receipt of certain information, processes and makes sense of that information in interaction with other individuals. A common sense is reached. The model we advocate contends that a person's beliefs, attitudes and understandings are constituted in that person's talk with others and in their joint and co-ordinated activity. It is in terms of these shared understandings that the person will act' (Kippax and Crawford 1993: p255)*

In other words significant emphasis is also placed on the importance of the social setting that people find themselves in when they process their decision-making behaviour. How this setting can be of influence is important to observe when attempting to understand an individual's behaviour.

2.2 The Role of Marketing

Many marketing academics (Kotler 1979; Peattie 1992; Andreasen 1995) are of the opinion that the adoption of marketing theory in programmes of social change can enhance the potential for their success and, in many cases, is actually an integral part of their success. How can marketing theory therefore help foster a modified change in travel behaviour, particularly in regard to the adoption of private transport as the primary mode of travel? Before one can consider the answer to this question, an understanding of where this area of research lies within the general field of academic marketing needs to be considered.

Presently there are a plethora of marketing terms that could be used in reference to the research. Among the terms commonly used are ecological marketing, social marketing, sustainable marketing, environmental marketing and green marketing. Definitions of each are listed in the table below, which is preceded by a definition of marketing itself.

Marketing	'*Marketing is human activity directed at satisfying needs and wants through exchange processes*' (Kotler, 1980:10).
Social Marketing	*'It is the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programmes designed to influence the voluntary behaviour of target audiences to order to improve their personal welfare and that of their society' (Andreasen 1995:7).*
Green Marketing	*'The management process responsible for identifying, anticipating and satisfying the requirements of consumers and society in a profitable and sustainable way' (Peattie 1992:11).*
Sustainable Marketing	'*Marketing efforts that are not only competitively*

sustainable but are also ecologically sustainable'
(Sneth & Parvatiyar 1995:6).

Environmental Marketing

'Marketing activities that recognise environmental stewardship as a business development responsibility and business growth opportunity' (*Coddington 1993*:58).

Any of the above terms could be applied to the main theme of this research. In dealing with environmental issues Mackoy *et al* (1995) identify the three most common marketing approaches as shown in Table 2.1 below.

Common Approaches	Basic Goals of the Organisation	Organisational Strategy Adopted
Demarketing	Long-term Profits	Match demand with variable supply
Green Marketing	Maximum profits	Appeal to environmentally sensitive segment
Social Issue Marketing	Socio-political	Change attitudes and behaviour in *'socially desirable'* directions

Table 2.1 Approaches to Environmental Marketing. (Adapted from Mackoy, Calantone & DrOge 1995: 49)

Demarketing is a term that is not widely used in industry. Kotler & Levy (1971) define it as *'that aspect of marketing that deals with discouraging customers in general or a certain class of customers in particular on either a temporary or permanent basis'*. There are few occasions when industry is willing to accept a serious shortage of a product to such an extent that it will not attempt to offer an alternative in order to maintain demand. Yet there are some product sectors that have no direct substitutions readily available, e.g. petrol and diesel as derivatives of oil and used to power the internal combustion engine.

Demarketing is therefore normally applied in situations where the long-term demand for a product is expected to exceed an ability to supply and, as a result, the demand of the product must be managed (Peattie 1995). Electricity companies who encourage nighttime consumption of energy by offering reduced unit rates is an example of demarketing at work. During the day higher unit rates are charged as demand can approach, or even exceed, supply at certain times of the year. Governments that enforce tax increases on fossil fuels over and above the rate of inflation is another example of demarketing at work.

- Unlike traditional marketing that places more emphasis on the performance of the product when in use, green marketing places the emphasis on how products are produced and disposed of at the end of their life-cycle (Peattie 1995). However the primary goal of campaigns that adopt green marketing is still determined by their ability to maximise profit. Henion (1979) used the term '*ecological marketing*' to describe the role and importance of green marketing and considers green marketing as a subset of social marketing. He states that *'ecological marketing can be considered a marketing strategy for the environmental crisis. It is based principally on engaging the profit motive of producers of environmentally friendly products' (p34).*

Mackoy *et al* (1995) claim that any goal of social change can be addressed using marketing tactics and describe social marketing as one such approach. These authors go on to claim that organisations may wish to implement a behavioural change within a specific context when designing the social marketing campaign. Or they may try to change altogether the consumption culture associated with the particular product or behaviour of interest.

Social marketing campaigns are also normally associated with programmes that are non-profit and undertaken on behalf of non-profit entities. The other marketing terms discussed above, whilst maintaining due consideration for the environment, require profits to be generated by the entity regardless of the business sector in which they are competing. As a result communication objectives would differ significantly from those objectives adopted under a social marketing programme. Because of these disparities it is

appropriate to target social marketing for further analysis within the spectrum of transport behaviour.

The behaviour associated with choosing a mode of transport lies at the core of this research and improving the quality of the environment is already identified as the social concern. It is possible that this may be partially achieved by modifying or changing existing behaviours that are considered harmful to the environment, such as driving a motor car. Kotler (1972) paraphrases social concerns, in a generic way, as constituting the '*core product*' of non-profit entities such as Greenpeace, Friends of the Earth (FoE) or the government body, the Environmental Agency (EA). Bringing about life-improving social change is the challenge and goal of social marketing campaigns.

2.2.1 Social Marketing

But where does the term '*social marketing*' originate from within the marketing literature? It is claimed that social marketing first came about in the mid-1950's when Wiebe (1952) formally launched the field by asking; *'why can't you sell brotherhood and rational thinking like you sell soap'*? He was questioning why the marketing principles adopted in everyday commercial circumstances could not be used in other situations, especially in those where it may be particularly beneficial to mankind. Kotler (1979) argues that the objective of social marketing '*is not to maximise consumption, consumer satisfaction, or consumer choice. The objective is to maximise the quality of life*' *(p85).*

Social marketing in its own right has only become recognised in the past two decades.

> '*One major change involving marketing in the public arena has occurred over the past twenty years, and actually increased during the 1980s. This change is of great interest in marketing on behalf of not-for-profits and social causes. The increase in both the practice and study of what is called social marketing has broadened the definition of marketing and its impacts on behalf of society' (Greyser 1995:340).*

'The perception that marketing constitutes a proven and potentially very powerful technology for bringing about socially desirable behaviours is the engine motivating the growth of what might be called "the social marketing movement" over the past fifteen years' (Andreasen 1997:3).

The theory of social marketing rests heavily on the idea that if there are behaviours worth changing for the benefit of society then it is incumbent upon society to help bring about that change in behaviour. But what is meant, in the context of a social change programme, by the '*social product*'? In other words, in social marketing terms, what exactly is the '*product*'?

Before this is expanded upon it is important to draw a distinction between consumer decisions that may be either '*high-involvement*' or '*low-involvement*' in nature (Andreasen 1995). The commercial marketing sector has divided consumers' process of consideration into two categories, each one dependent on the level of involvement associated with the decision to purchase. Low-involvement decisions are categorised as those that require little thought or little consideration of the alternatives and are viewed as relatively routine and unimportant. Examples could include shopping for convenience food, buying petrol or going to the cinema.

High-involvement decisions are viewed as more important by the decision-maker and require more thought and a greater consideration of the alternatives. These decisions are often emotional and the decision process may be of a longer duration than those associated with low involvement. In a social marketing context these decisions could include practising safe sex, giving up smoking or visiting a drug rehabilitation centre. It is recognised that such behaviours, often the target of social marketing programmes, are harder to change than low-involvement behaviours that are more typically found in commercial settings (Rothschild 1979). This research is primarily concerned with examining behaviour that is associated with a variety of decisions of low and high-involvement. Examples may include whether to buy a car (high involvement) or whether to walk to the shop (low involvement).

2.2.2 The Social Product

Kotler & Roberto (1989) put forward the proposition that ideas and behaviours are the social '*product*' to be marketed and break them down into three categories as shown in Figure 2.1.

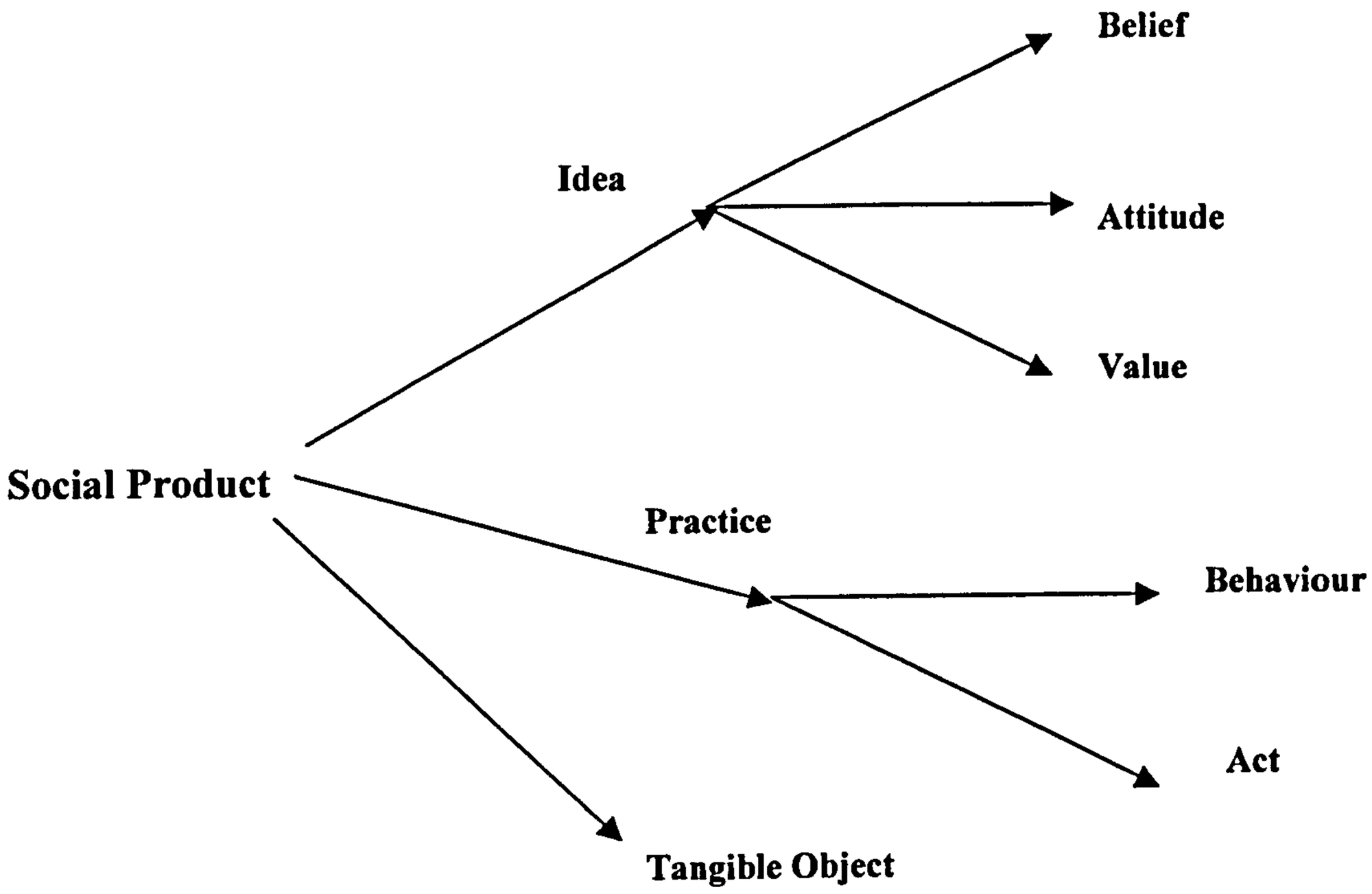

Figure 2.1 **Components of a Social Product** (Kotler & Roberto 1989)

One type of social product is an idea that can take the form of a belief, attitude, or value. Therefore the social product could be a *belief* such as *'excessive vehicle pollution can result in early death for those suffering from heart and lung problems'*. This statement was used in a leaflet produced by the *Don't Choke Britain (DCB)* campaign team in 1997. A belief is a perception that is held about a factual matter and does not necessitate an evaluation each time it is considered. Or it could be an *attitude* that needs to be marketed as part of the social programme. This could be exemplified in the statement adopted in a *Friends of the Earth (FoE)* leaflet. This states that *'Fear of traffic accidents is one of the main reasons parents have stopped allowing their children out to walk and cycle'* (1996). Attitudes are positive or negative evaluations of people, objects, ideas, or events. The product could also be a *value* that the campaign wishes to promote. Amnesty International, for example, is a worldwide campaigning organisation that works to promote the value of '*human rights*' as enshrined in the Universal Declaration of Human Rights. Values are overall ideas of what is right and wrong.

The second type of social product is identified as a social practice. It could be the occurrence of a single act such as contributing to a charity or receiving a vaccination. Or it could be the establishment of an altered pattern of behaviour consistent with the desired request. Giving up smoking is an everyday example of a practice that has received widespread attention in social marketing programmes over the past twenty years.

Finally the third type of social product is a tangible product. This could be in the form of a condom purchased and marketed as essential in reducing the spread of AIDS. Or a tangible product more directly associated with the research could take the form of a bike marketed as a pollution free mode of travel.

2.2.3 The Rationale behind Social Marketing

At this time it is important to clarify whether the rationale of social marketing is applicable to this programme of research. Smith (1997) develops four '*commercial technologies*' that can assist in determining whether a behaviour change can be brought about through the use of a social marketing programme. Each of these is examined with direct reference to transport behaviour:

Exchange Theory: A fundamental principle of marketing theory is that people will only give up one behaviour in exchange for another. The marketing question appropriate for this field of study is quite straightforward '*What requires the car-user to consider other modes of transport when choosing to undertake a particular journey*?'

Competition: This stems from the view that individuals are not competing just against ignorance or lack of information in regard to a specific choice, but against the existing behaviour through which the individual enjoys a number of benefits. Therefore it is simply not enough to remind, educate or raise awareness in order to change existing transport behaviour. The marketing question could be '*What are the benefits that you derive from your existing travel behaviour and can competing benefits be offered by the alternatives*?'

Segmentation by Lifestyle: This approach is regularly adopted when attempting to implement marketing solutions. The ability to group individuals into larger clusters of similar lifestyle characteristics is a very important component of any social marketing programme. The marketing questions may be '*What are the lifestyle characteristics that people share when selecting a mode of transport? How can they be identified to allow the marketer a better opportunity to influence them?*' Andreasen (1995) emphasises how social marketers must focus on changing groups of consumers '*not individuals and not mass markets, but carefully selected segments' (p12).*

Marketing Mix: Finally it is unusual to consider anything within the spectrum of marketing without recognition of the four P's, i.e. product, price, place and promotion. If transport consumers are going to consider changing from their existing product or service, e.g. their current mode of transport, then they will need to be able to consider new products or services. In the context of this research the new products on offer could include electric or fuel-cell vehicles while new services on offer could be mass transit systems recently developed in the locality. Commuters will also need such products and services to be offered at

the appropriate price. However the costs associated with changing a person's behaviour may not necessarily be measured only in monetary value. The costs could take the form of time spent away from home or the degree of inconvenience caused by the change in adapting to the new behaviour associated with the new mode of travel. Finally these audiences will need to be made aware of the new products or services on offer through a broad array of promotion techniques. The final marketing question might ask 'W*hat mix of travel-related products or services, their cost, access and promotion, is right for this particular audience with this behaviour and at this point in time*?' The social marketer recognises that the right kind of offering must be made readily available if there is any hope of achieving a change in behaviour.

The discussion above confirms that the proposed research is a programme of behavioural change that can be incorporated under the umbrella of social marketing. Nonetheless social marketing is still relatively new and this research attempts to expand the boundaries of social marketing into the transport sector.

One of the biggest problems facing the theoretical development of social marketing is the perception amongst practitioners that it is linked too closely with conventional marketing (Fine 1990). Many practitioners are of the opinion that the focus is too heavily weighted towards the '*marketing*' part and that applications used in a social context have simply had the '*social*' added to the title.

Also social marketing has become synonymous with advertisements that carry a social message of one form or another. As many communications programmes adopt advertising at the core of their strategy, a perception has evolved that social marketing is just more advertising but repackaged in a social setting. This is a mistake as social marketing is much encompassing than just advertising and it is an acknowledged means of developing interventions to facilitate social and behavioural change (Andreasen 1997).

'Social Marketing is about behavioural change. It is not about education and propaganda ----------although communication tools are often central to social

marketing programs, social marketing is much more than communications' (ibid.p5).

Middlestadt *et al* (1997) refers to the importance of involving behavioural scientists in designing social marketing programmes. More often, in cases where a behavioural change is required, social marketers are called in to develop and implement programmes that communicate an awareness of a particular issue to a target audience. Recent examples include making parents aware of the risk to a child's health from excessive exposure to sunlight or the generation of educational programmes aimed at informing teenagers of the dangers of smoking. By implementing the 'conventional approach' first, i.e. distributing information, there is the suggestion that the necessary change in behaviour will occur simply because the targeted audience has become more aware and informed of the specific issue.

However providing the relevant information is not always enough to convince people to change their behaviour. The key role for the behavioural scientist during the intervention process is to keep reminding programme managers to define the intervention objectives in behavioural terms: *What is it you want people to do?* It is a critical component of any intervention programme to begin with behaviour when setting the objectives of the campaign.

Devine and Hirt (1989) discuss how some theories of persuasion operate under the premise that the key to producing behavioural change is to first produce a positive change in attitude. The first of two models, the message-based persuasion model, is introduced where the attitude is initially targeted with message appeals, i.e. communications in some form. The objective of the message appeal is to persuade the individual to change their attitude to the object in question. It is by creating a positive change in relation to the attitude of concern that facilitates a change in behaviour. This model therefore proposes that there is a direct correlation between being able to create a positive attitude and then being able to observe a corresponding change in behaviour.

The second model is referred to as the behavioural-based persuasion model. This model attempts to get the target audience, at whom the campaign is aimed, to undertake the

behaviour first. Through the anticipated positive outcome of experiencing the behaviour directly will the positive attitude come about. This model submits to the thesis that by experiencing the behaviour first can serve as an important source of information upon which the attitude can then changed or modified.

Middlestadt *et al* (1997) extends this involvement of the behavioural scientists even further by advocating the adoption of design with determinants. This approach attempts to influence critical factors that are determinants of behaviour. Formative research is undertaken of the relevant target audiences and is used to identify the internal/external determinants of behaviour. Based on the availability of this data, intervention programmes can be designed which are more focused and effective. The intervention influences a behavioural determinant, which in turn influences the behaviour, which in turn influences the desired outcome.

INTERVENTION ⇒ DETERMINANT ⇒ BEHAVIOUR ⇒ OUTCOME

This approach increases the breadth of interventions that become available to the social marketer. The determinant approach to intervention design can be applied to cases involving the use of private transport and this may be best illustrated by providing a brief overview of one such example at work.

Case Study: '*Don't Choke Britain*' Campaign:

Don't Choke Britain (DCB) is a public awareness campaign that runs each year through the month of June and aims to cut traffic congestion by persuading car drivers to leave their cars at home when making certain journeys. Centro, the West Midlands Passenger Transport Executive, first launched it in 1992 as '*Don't Choke the City*'. Since then it has grown steadily: in 1996 over 140 local councils and voluntary groups staged events.

DCB is co-ordinated by the Local Government Association with support from the Passenger Transport Executive Group, the Department of Environment, Transport and the Regions, and the '*TravelWise*' Initiative amongst others. It has simple aims: '*less traffic congestion and less pollution, particularly in our cities. Anyone*

can take part, very simply by giving your car a holiday' (*DCB* 1997). Marketing material from this campaign is used later in the empirical research.

In behavioural terms, the goal of the campaign is to encourage, in particular, private transport users to adopt an alternative mode of transport during the month of action. Various events are scheduled in the programme to encourage this such as:

- **National Bike Week**
- **Walk to School Week**
- **Breath Easy Week**
- **Green Transport Week**

The behavioural determinant identified in the programme of events is the social norm of driving the children to school. Therefore the programme organisers designed the '*Walk to School Week*' as the intervention aimed at this particular action. The desired result is for people who participate in an event to thereafter consider that mode of transport, having had the opportunity to experience it at first hand, more readily in the future as against the conventional choice of the car. The significance of determinants allows social marketers to consider a greater number of intervention strategies that can address product, price, place and promotion, when conceiving campaigns aimed at changing car driver behaviour.

2.2.4 A Shift in the Marketing Paradigm

Sneth and Parvatiyar (1995) argue the necessity for a shift in the approach to marketing so as to facilitate the success of social marketing programmes. They identify two components, the first in regard to shaping customer needs and expectations and the second to providing customers with appropriate choices to meet these needs. This research primarily concerns itself with the first component, i.e. emphasising the necessity to adjust or modify the requirements of car drivers' needs or expectations.

Sneth and Parvatiyar (1995) maintain that it is critical for these two components of shaping needs and proving alternatives to occur simultaneously. The scope for

consumers to alter their thinking by becoming more environmentally conscious, in terms of their needs and wants, must be supplemented by the availability of new or improved products and services. Only then will it allow consumers the opportunity to alter their actual behaviour as a consequence. The choices offered should meet current needs without sacrificing the ability of society to meet its future needs, i.e. adhering to the principle of sustainability:

> *'The true socioecological product is one that becomes a consumer's first choice, since it meets his/her consumption needs along with his/her need for a healthy, sustainable physical environment. It is important to understand that customer needs are not, nor should they be, in conflict with environmental needs. In fact, the two needs occur concurrently. People need and want to coexist with nature' (ibid:7).*

In the transport sector this is proving difficult to achieve due to the nature of the car industry and its near total reliance on the internal combustion engine to power its product range. The question must therefore be posed: *Is it possible to communicate effectively to private transport users that their behaviour may be detrimental to the environment?* And, if successful in achieving this, is it possible for the campaign to go on and induce a voluntary change in behaviour to such an extent that car-drivers might begin to contemplate using alternative modes of transport? Over the past ten years this shift in behaviour has not materialised despite significant efforts by various organisations to make car-drivers more aware of the issues. Instead of observing a decrease in the use of the motor car over this period, there has not only been a continuous rise in its daily use but also a sequential rise in the levels of car ownership (Department of Transport 1996).

Whilst accepting the two component shift in the marketing paradigm identified by Sneth and Parvatiyar (1995), i.e. shaping customer needs and offering appropriate choices, it is important to be aware of a major obstacle that exists in the transport sector. The motor car has taken nearly ninety years to evolve to where it is today and it is not feasible to redesign this mode to become non-polluting in the short term.

> *'It can be expected that the fossil fuel internal combustion engine vehicle will dominate for about the next fifteen years' (IPTS 1996:5).*

As a result it is not possible to offer the private motorist comparable choices to the motor car that are pollution free and widely available. The alternative choices of transport on offer, such as the bus or train, will have to meet with what car-drivers, as rational consumers, may deem to be '*appropriate alternative choices*' to the motor car. This, in turn, implies that a greater reliance needs to be placed by social marketers on shaping customers needs and wants from existing transportation offerings. Informing private commuters of the potential risks they may encounter if they continue with their present behaviour is an important part of shaping customer needs.

2.2.5 The Communication of Risk

The effective communication of risk, a constituent of social marketing, is widely held to be a vital element in the success of social marketing programmes and can be defined as follows:

> *The flow of information and risk evaluations back and forth between academic experts, regulatory practitioners, interest groups and the general public' Leiss (1996:86).*

According to Fischoff the phrase '*risk communication*' was first recognised in 1984 (Fischoff 1995) and arose out of concern among researchers on the disparities of risk as understood by the experts, on the one hand, and by the general public, on the other hand. In the past twenty years there have been three phases in the evolution of this sphere of communications and Leiss (1996) presents an overview of the three phases. Phase 1 occurred approximately between 1975 and 1984 and is best summarised by the following statement:

> *'In order to function sensibly in a world of expanding opportunity, we must have the capacity to assess and manage risks at a very exacting level of detail; the*

scientific approach to risk management offers us an imperfect but indispensable tool for doing so' (ibid:88).

Leiss emphasises the growth of 'risk' as perceived by the general public. This was first communicated by focusing on the fine detail of statistical information in support of the claim. It was also during this period that the general public began to challenge the experts on the notion of risk. The public was slowly beginning to realise that the experts did not always have the right answers and, in some cases, had no answer at all. Many experts responded with open contempt to such challenges and Leiss (1996) identified this with what he termed the '*arrogance of technical expertise'*.

The action taken by the British Government in banning '*meat on the bone*' as part of their strategy to eradicating mad cow disease (Bovine Spongiform Encephalopathy - BSE) from the food chain could be construed as an example. While the public was generally aware of the degree of risk associated with consuming meat on the bone, a high percentage considered the probability to be so low that they discarded the threat of any consequences as trivial. This has given way to the view that 'the public' do not see risks in the same way as experts (Douglas, 1993).

Phase 2 took place between 1985 and 1994 and over this period it was recognised that it would be better to regard statements about risk as acts of persuasive communications, i.e. the message should try and persuade a change in a point of view or opinion. This should take into account two key factors: the characteristics of the audience itself and the intrinsic legitimacy of the audience's perception of the situation. Inherent within any communications strategy is trust in the message source and this period made good use of well-tested techniques that were deemed successful in commercial marketing applications. However there proved to be severe difficulties in transforming the marketing paradigm into the area of risk communication and these difficulties are best summarised by Slovic and MacGregor (1994):

'Although attention to communication can prevent blunders that exacerbate conflict, there is rather little evidence that risk communication has made any significant contribution to reducing the gap between technical risk assessments

and public perceptions or to facilitating decisions about nuclear waste or any other major sources of risk conflict. The limited effectiveness of risk communications efforts can be attributed to lack of trust' (p145).

Smith (1998) argues that the same holds true for organisations. Regardless of the latest quantitative analysis, which may help to fine-tune the probability of any occurrence, can strong messages really have the desired effect in changing behaviour if there is considerable uncertainty surrounding their accuracy? Smith claims not and that it is much more a matter of building trust between the various parties and states:

'Arguably, it is here that the process of risk communication, both internally and externally, has floundered. Effective risk communication is a function of building trust between the various networks within an organisation' (Smith 1998:29).

The breakdown in trust, as viewed in the area of risk communications, between the individual, society and its institutions had been partially brought about by the notion that science could provide solutions for all environmental problems (Beck 1992). However, as was becoming quite evident with cases such as BSE, scientists were struggling to provide answers to many of the newer problems facing society:

'People cannot easily judge between experts when these experts disagree with each other. The public, since the mid-1960's, has shown increasing distrust of experts and the institutions, private, academic or governments that employ them' (Breyer 1993:36).

The debate that centred on the "risk society", described later in this chapter, only confirmed that scientists were beginning to lose their authority in important areas of influence. As a result of such breakdowns between the scientific community and the general public more emphasis was beginning to be placed on the necessity for a level of '*trust*' to be built with the publics. This was to become a core theme of all future communication programmes and was directly confronted in the 1985 Royal Society Report, *The Public Understanding of Science*. This called for scientists to make a greater

effort in how they communicated with their respective audiences. The report offered scientists the following advice:

> *'Our most direct and urgent message is for scientists – learn to communicate with the public, be willing to do so, indeed consider it your duty to do so. It is clearly a part of each scientist's professional responsibility to promote the public understanding of science' (p24).*

The third phase is ongoing with the emphasis even more firmly placed on the responsibility of institutional risk actors, namely public agencies and industry leaders, to instil a high level of trust with their various audiences. Pollak (1996) suggests that risk regulators should be developing institutional arrangements that foster trust with the public and also creating mechanisms for providing concerned individuals with credible reassurance in whatever areas of risk those individuals, or groups of individuals, should face.

> *'Instead of lamenting the public's lack of trust in experts and politicians, it may be more fruitful to consider mechanisms for providing credible reassurance to the public at large. Economists, after all, do not lament prospective customers' lack of trust in second-hand car dealers; instead, they talk about guarantees and other ways of providing credible reassurance' (Pollak 1996:33).*

Irwin (1999) suggests the setting up of a small number of facilities with the intention of improving communication flow between scientists and the public. These include *science shops* which would encourage the immediate contact and direct exchange of information or *consensus conferences* which would enable members of the public to act as a 'lay jury' in consideration of important scientific topics. As he states:

> *'The challenge is to establish more useful methods of encouraging productive and effective knowledge transfer' (Irwin 1999).*

However this is where Irwin makes a significant divergence. While he fully agrees with more open lines of communication between scientists and the lay person, his primary

goal is to see that the information flow becomes more of a two-way street rather than only one-way as it has been for decades. He states:

> *'While prevailing models of scientific communication are basically one-directional (from the experts to the ignorant), two-way processes will be required in order to consider public criticisms and concerns about the current direction of scientific progress' (Irwin 1999).*

Irwin is calling for a wider acceptance and acknowledgement that the lay person has access to information that is critical in the search for environmental solutions and he refers to this openness of contact as a new social contract between science and its publics. He goes on, *'the issue is not primarily one of ineffective communications'*, but is more *'one of establishing decision-making structures ---------- that can only operate effectively if they draw in, rather than excluding, public voices'*. While there is an ongoing necessity to provide credible reassurance through the provisions of reliable information to the general public, there is also the recognition that the public, people who travel in this case, possess information that can make a significant contribution in the search for solutions. This point will be developed in some detail within the main empirical chapters of the thesis.

It could be surmised that the flow of such information from the public to the experts would be forthcoming if the public were aware of the environmental problems that lie ahead. So how is the public, as represented by the participants in the research, tending to view these environmental problems in the shape of new risks? And how do the participants regard the potential threats in the form of hazards?

Beck (1992) puts forward the idea that the transition from modernity to late modernity is one from an industrialised society to that of a risk society, i.e. the social production of wealth is accompanied by the social production of risks. In other words the greater threat of risks is to be expected from the way modern society has taken shape. He states:

> *'Risk may be defined as a systematic way of dealing with hazards and insecurities induced and introduced by modernisation itself' (p21).*

2.3 Risk Society and Ecological Modernisation

Whilst numerous perspectives are presented in the discourse on risk society, it is not an objective of this research to go into these discussions in great depth. Instead a brief overview of two opposing positions in the risk society debate is presented in order to enhance an understanding of risk in the context of the transport debate. As societies progress towards late modernity new social groupings based on the distribution of environmental risks are gaining prominence and two distinguished social theorists have been shaping their own perspectives regarding the theory of risk.

Ecological Modernisation (*EM)* originated in the 1980's through the work of Joseph Huber, the German sociologist. He expressed the view that environmental concerns can be easily accommodated within existing lifestyles, whether this is through adapting production processes or by slightly altering consumer lifestyles. The prime goal of *EM* is to harness the power of human ingenuity for the purposes of economic advancement together with environmental improvement. In essence it breaks with the idea that environmental needs are in conflict with economic demands. In the context of this research Huber might assert that the latest developments in transport technology would eventually provide the answers to the current problems.

Cohen (1997) suggests that there are four key elements within an organisation that need to be in place if *EM* is to be successful. The first introduces ecological criteria into the production and consumption process. This characteristic could be identified with the continuous development of the motor car, which is going through a step evolution in engine design from the conventional internal combustion engine to the new concept of electric powered vehicles. The search for a vehicle that can co-exist with the environment in a friendly way is the ultimate goal of car manufacturers (IPTS 1996).

The second element requires the implementation of anticipatory planning practice as modelled on the precautionary principle. *EM* accepts that environmental problems associated with today's lifestyles exist and submits, for example, that more long range planning be applied at the various stages of land development. It suggests that more consideration should be given to implementing controls, such as environmental audits,

before new developments like shopping centres obtain planning permission. Emphasis is also placed on the need to consider alternative modes of transport when new developments are in the planning process. In support of this some cities, such as Edinburgh, have recently provided planning consent for new dwelling developments with new conditions. Planning consent for the new dwellings require prospective tenants to enter into a commitment not to possess a car when living in the development.

The third element requires organisations to internalise the importance of ecological responsibility. This is an attempt to re-structure environmental problems so that they become an integral part of the way forward rather than a hindrance to continued success. Companies that follow this path will be at the forefront of new technology and will therefore obtain a competitive advantage in their particular market sector.

Finally, there is the necessity for government to devise regulations that promote innovation in the field of environmental technology. This can only come about once industry accepts that governments have the desire to punish those who transgress existing regulations on the environment. Weale (1994) summarises *EM* as a very positive approach when looking at environmental problems and goes so far as to state:

> *'Instead of seeing environmental protection as a burden on the economy, the ecological modernist sees it as a potential source for future growth' (p123).*

Beck, in his book *Risk Society: Towards a New Modernity* (1992), presents a different perspective and argues that environmental problems can only be accommodated through fundamental social and economic change. The transition for Beck from a modern to a late modern society is also a transition from an industrial society to a risk society in which hazards are continuously being produced on a regular basis. Industrial society and risk society are, for Beck, distinct social formations:

> *"The axial principle of the industrial society is the distortion of goods, while that of the risk society is the distribution of 'bads' or 'dangers" (p3).*

The underlying proposition of Beck's theory is that because of the strength in the economic success of industrialised societies, the degree of exposure to risk is becoming more prevalent across all sections of society regardless of class, *'poverty is hierarchic, smog is democratic'* (p.36). Beck also builds a strong case that these risks differ from risks of the early part of the twentieth century because they can induce systematic and irreversible harm while they remain undetectable to the senses. However he admits that the consequences of these risks are slowing becoming more visible to the general public:

> *'The latency phase of risk threats is coming to an end. The invisible hazards are becoming more visible ---------- instead they strike home more clearly our eyes, ears and noses' (p55).*

Blowers (1997) refers to the social change in *EM* as a '*moment of transition*' in which society will continue to move forward but with a watchful eye on the environment and with an awareness that changes need to occur as part of modernisation. There is no need to slow down the present pace of evolution. However the contrasting view, as offered by Beck, presents this period as requiring a '*moment of transformation*' in which everlasting damage will occur worldwide unless societies are willing to make immediate and dramatic changes in the way they interact with the environment.

Blowers goes on to argue that there are significant similarities between the positions as outlined by Huber and Beck whereas the main area of disagreement seems to centre on the question of timeframe. Huber is content with an incremental approach from the social structures in the search for solutions whereas Beck is promoting the call for immediate and urgent action. However the issue of time is perhaps the most fundamental of concerns as viewed by the public, many of whom might be influenced by the knowledge of an increased threat of more risks. How the general public establishes a timeframe of environmental concerns within their own frame of reference is open to question.

And yet it is these very same risks in the form of hazards that are progressively becoming more frequent worldwide. As a result it is no longer possible to assume that statistical models of weather events devised to forecast meteorological happenings once in a

hundred or five hundred years are accurate. The numbers, scale, frequency and impact of natural and human-caused disasters are mounting (Wijkman & Timberlake 1988).

This coincides with a continuing expansion of the earth's population and such growth, combined with acceleration in per capita consumption, is making it more difficult for the earth's ecosystem to survive. It is acknowledged that contemporary environmental problems are almost always anthropogenic in origin:

> *'It is the intervention, indeed the imposition, of human activities on the natural environment that results in the depletion of resources or pollution of ecosystems' (Blowers 1997:848).*

As the population of the globe continues to expand, and its spatial distribution is ever more focused on urban locations, it is forecast that disruption of the environment will persist through an increase in the number of natural disasters (World Commission on Environment and Development 1987; Burton *et al* 1993; McKenzie-Mohr & Oskamp 1995). Global population forecasts indicate a rise from 4.8 billion in 1985 to 6.1 billion by 2000, and to 8.5 billion by 2025 (United Nations 1995), increasing pressure on natural resources to provide for the consequential increase in consumption. The vast majority of the expected increase in population will occur in the developing countries where far fewer resources per capita are consumed. However as the economies of these countries expand their global environmental impact will accelerate sharply.

The emergence of this dilemma was formally recognised in the Brundtland Report (World Commission on Environment and Development 1987) which went on to recommend the establishment of a Global Risk Assessment Programme, the objectives of which were:

1) To identify critical threats to the survival, security or well-being of all or the majority of people, globally or regionally.
2) To assess the causes and likely human, economic and ecological consequences of those threats and to report regularly and publicly on their findings.

3) To provide an additional source of advice and support to governments and intergovernmental organisations for the implementation of programmes and policies designed to address such threats.
4) To provide authoritative advice and proposals on what should or must be done to avoid, reduce or, if possible, adapt to those threats.

It is the last objective that this research will attempt to add value to. The capacity or willingness of mankind to adapt their lifestyle so as to take into account predicted environmental hazards, and thereafter to contribute where ever possible towards a reduction of same, has yet to be seriously confronted. But as Durning (1992) concludes it is the survival of the planet that is at stake:

> *'If the life-supporting ecosystems of the planet are to survive for future generations, the consumer society will have to dramatically curtail its use of resources' (Durning 1992:25)*

2.4 Implications from previous Social Marketing Campaigns

It is important to present an overview of how successful, or otherwise, previous social marketing campaigns have been in helping to change people's behaviour. This section discusses some of the findings from different social marketing campaigns and presents important implications that could be beneficial to this study.

Since the emergence of the AIDS epidemic, a plethora of television and print health promotion messages have appeared around the globe directed at containing the spread of the AIDS virus. The primary aim of such campaigns has been to educate people about the facts and the myths of the disease, to offer advice and reassurance, and to influence the climate of opinion in relation to the disease. How successful have these campaigns been in conveying a message powerful enough to changes people's behaviour is a commonly asked question. Overall, ample evidence indicates that, contrary to conventional wisdom held in the mid 1980's, people will modify sexual behaviour in response to culturally appropriate risk reduction programmes incorporating the use of social marketing techniques (Reiss 1997)

Researchers have identified a number of interrelated factors that affect the way people use such knowledge to assess the costs and benefits of risky behaviour and how they may internalise the core messages. These factors cover a vast array of considerations with some of the more important identified as: how individuals may see HIV infection affecting them personally; do they perceive their own behaviour to be risky or do they have the skills necessary to negotiate safer sexual behaviour with partners? (World Bank 1997). One clear implication emerging from this research is that simply increasing awareness of HIV among the general public will not change associated high-risk behaviour enough to end the epidemic. In other words people who have become more knowledgeable about the negative consequences of such behaviour may still persist in risky behaviour (Ingham 1995).

It has therefore been suggested that social marketing programmes should be directed at interventions that address deeper issues of human behaviour rather than just providing more information on the topic of concern. It is considered that such an approach can

bring about additional behaviour change than that achieved by simply increasing access to information on the subject (Oakley, Fullerton & Holland 1995). These interventions can take many different shapes whether they are created through advertising or other forms of mass media. Alternatively they can be undertaken in a more focused manner including training and education programs conducted face-to-face.

One example of social marketing programmes being widely used internationally has been in the drive to increase the use of condoms as an effective barrier in the spread of HIV transmission. However it is acknowledged that people who are fully aware of the risks of HIV and of the protective benefits of condoms may not use them (Ingham 1995). The true cost of condom use is identified as not only including the price of the condom but also the potential inconvenience and embarrassment of obtaining and using one, and for some, reduced sexual pleasure. Policies that lower these costs, by lowering the price of condoms, improving their availability, and increasing their social acceptability, would be expected to increase condom use and reduce HIV intervention. Social marketing programmes promoting the use of condoms have incorporated such messaging with substantial evidence of success. As a result condom sales between 1991 and 1996 have increased dramatically in countries such as Brazil, Vietnam and Ethiopia (World Bank 1997).

Other areas of AIDS research have identified concerns that need to be taken into account when assessing the success of social marketing programmes. DiClemente & Peterson (1994) claim that the quality of assessing or measuring behaviour change in many areas of AIDS research is diminished by the limited use being made of experimental designs. This is partly caused by the difficulty in obtaining comparable control groups, impeding efforts to determine the impact of specific communication programmes on behaviour change. Also, the lack of controlled intervention trials limits the possibility of precisely identifying the components of intervention responsible for behaviour change.

DiClemente & Peterson (1994) identify another major limitation in the monitoring of people's behaviour in areas of high sensitivity. The near total reliance on the ability and willingness of participants to use self-completed reports as the accepted instrument of data collection can undermine the quality of the collected data. Self-completed reports

are intended to allow participants the freedom and flexibility to detail their own private behaviour at a time convenient to their lifestyle. However it is not possible to directly measure changes in HIV risk behaviour because of the difficulties involved in assessing privately occurring behaviour. Researchers, who adopt self-completed monitoring of risk behaviour, must be aware that the data may be inaccurate because of problems associated with recall or because the behaviour may be sociably undesirable and difficult to recount (Hingson & Strunin 1993).

Critics of behavioural approaches to HIV risk reduction caution that self-completed research data may not be of significant benefit to the public health debate on the topic (Carey 1999). It is therefore suggested that future efforts should attempt to demonstrate an empirical link between self-reported behaviour change and reduced incidences of HIV. Orchestrating a clinical trial with patients tested positive for HIV and comparing standard care to that supplemented with a state-of-the-science HIV risk reduction programme could provide persuasive material for subsequent media campaigns. At the same time longitudinal studies could attempt to evaluate self-reporting of sexual behaviour and biochemical markers of reinfection with STDs (sexually transmitted diseases) and new HIV infections.

Andreasen (1995) explores the use of social marketing programmes outside the broader scope of problems directly related to health and illness. He suggests that numerous target audiences, at which social marketing campaigns are specifically directed, may not move beyond the basic stage of 'precontemplation'. This is the first of five stages that Prochaska and DiClemente (1986) introduced as a stage model of behaviour stage. The model suggests that consumers move through five stages as they go from ignorance or indifference toward some important behaviour to becoming committed to it. The research undertaken by Andreasen (1995) indicates that people may not move beyond the first stage because the messages are too broad in scope and thus have little impact on those people who may be most receptive to change.

Research conducted by Orleans et al (1999) supports this claim with detailed empirical data. The research undertook an overview of the state of six lifestyle behaviours in the US, including tobacco use, alcohol abuse, drug abuse, unhealthy diet, sedentary lifestyle,

and risky sexual practices. Each of the behaviours was examined across a broad section of the population and an analysis conducted assessing the impact public information programmes had on changing each of the behaviours. McGinnis and Forge (1999) estimate that up to 50% of mortality from the 10 leading causes of death in the US is linked to these lifestyle behaviours.

This research identifies a number of key issues of benefit to the current study. Firstly it considers the development of tailored messages, targeting the individual and thus segmenting the populations of interest. Their findings place emphasis on the need to replace the 'one-size-fits-all' marketing messages that reach only a minority of motivated volunteers. The need to segment the population of interest into various groups, and the requirement to devise a programme specific to each group, is of paramount importance to the success of social marketing campaigns.

Secondly the research identifies that the six behavioural health risks are more prevalent among the most economically disadvantaged Americans, including low-income, blue collar, and ethic racial minority groups. More research is needed to clarify the factors underlying the relationship between socio-economic factors and behavioural risks in order to categorise effective and culturally appropriate social marketing interventions for reaching and assisting these segments of the population (Carey 1999). This represents further evidence in support of market segmentation.

Finally the research introduces an innovative idea by suggesting the need to develop intervention methods and social marketing programmes that can effectively address multiple health risks in the same individual. In particular, if such an approach can be co-ordinated and implemented at the macro policy level, there is the advantage that those engaging in healthy behaviour can enjoy working with the flow of societal influences instead of against them. This is helpful when social marketing campaigns attempt to overcome social attitudes that may restrict the prospect of gathering insightful research data.

Shrum et al (1996) broadens the sense of participation when they review the use of social marketing in the area of recycling. They claim that people who participate in recycling

programs are more likely to continue in the programme if they consider their actions make a difference. On the other hand people who feel powerless about what they can do, as individuals, are more likely to remove themselves or discontinue from the recycling programme. Shrum et al (1996) go on to suggest that social marketing programmes can help persuade people of how valuable their contribution may be, no matter how small.

Initially such campaigns could be implemented at a local level, updating the community on an ongoing basis of how the programme is performing. Specific information, for example, could be provided to the public on how well the recycling programme is doing based on monthly targets. Ellen et al (1991) agree that providing such feedback to the public can significantly reduce the feeling of impotence that individuals may have regarding their contribution to the problem at hand. They suggest that feedback can also be effective if it is provided at the regional or national level.

The points discussed above generate a number of interesting questions that will be further explored in the thesis. How important is the flow of information on topics of concern as people make behavioural choices? Can a direct link be made between the different levels of information people possess and any corresponding change in behaviour? These are but two of the questions that the empirical research will attempt to investigate in greater depth. Trying to understand why people undertake certain choices when contemplating a journey lies at the core of this area of research.

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CHAPTER 3

TRANSPORT STATISTICS AND ENVIRONMENTAL CONCERNS

3.0 Introduction

This chapter sets out to achieve two goals. Firstly it attempts to present statistical data supporting the hypothesis that the volume of car traffic has increased significantly over the past decade and continues to do so. Descriptions of recent trends between the various modes of transport adopted in the UK are provided alongside these data. The second part of the chapter presents a brief overview of the pollutants produced by the transport sector that lie at the centre of environmental concerns. This overview is important as it presents valuable information that explores the contribution of the transportation sector when considering sources of pollution.

Air pollution and cars were first linked in the early 1950's by a researcher from California who determined that excess traffic was responsible for the smoggy skies over Los Angeles (Cagin & Dray 1993). Ever since, there has been increasing concern about the negative consequences emanating from the growth in the use of the private motor car. This concern includes:

- Motor cars generate pollution emissions, the effects of which can be harmful both locally and globally. Emissions of carbon dioxide are now proven to be a cause of global warming while local pollutants are increasingly being connected with a detrimental effect on human health. Unhealthy air pollution levels plague virtually every major city in the world. This is largely because development and urban sprawl have created new pollution sources and have contributed to a doubling of vehicle travel since 1970.

- Transport is one of the most common sources of noise pollution. Noise affects activities such as communication, e.g. conversations in the immediate

vicinity of traffic, and sleep patterns that can induce psychological disorders (Barde & Button 1990). In countries aligned to the OECD (Organisation for Economic Co-Operation and Development) about 130 million people are exposed to what the OCED define as '*unacceptable*' noise levels caused by road, rail and air traffic (OECD 1988).

- The demands of road transport are presently absorbing the largest share of global energy production and the sector is identified as continuing to be the most rapidly growing area of energy consumption over the next twenty years (IPTS 1997:5).

3.1 Recent Shifts in Modes of Travel

> *'The car is synonymous with individual freedom as understood by our Western industrial society. Independent and free movement using an individual vehicle is considered nearly as a "basic" human right. This understanding is sharply illustrated by a slogan that was created some years ago in Germany to avoid a general speed limitation on the autobahns: free driving for free citizens' (IPTS 1996:7).*

This is the opening paragraph of a European Commission report entitled *The Car of the Future, the Future of the Car*, published in June 1996. It is evident from the title and the contents of the report that the car, in its present shape, is simply not going to go away. The second half of this century has seen an exponential growth in both the number and use of road vehicles, which parallels the rise in economic activity. Between 1950 to 1990 the number of motorised road vehicles on the roads grew from approximately 75 million to around 675 million worldwide. In OECD countries alone, total vehicle kilometres travelled by road vehicles increased from 3.2 trillion (a million billion) to almost 6.9 trillion between 1970 and 1990 (OECD 1997).

Latest forecasts for the UK predict that the rate of car ownership will double by the year 2010, see Figure 3.1. These forecasts also predict that more people are becoming reliant on the car as their primary source of transport. This is supported by the rise in the number of people fully licensed to drive a car. Between the periods 1975-76 and 1994-96

the number of licensed drivers increased by nearly 11 million to just over 30 million. The number of women holding licences increased by 100 per cent while the number of men increased by 30 per cent (ONS 1998).

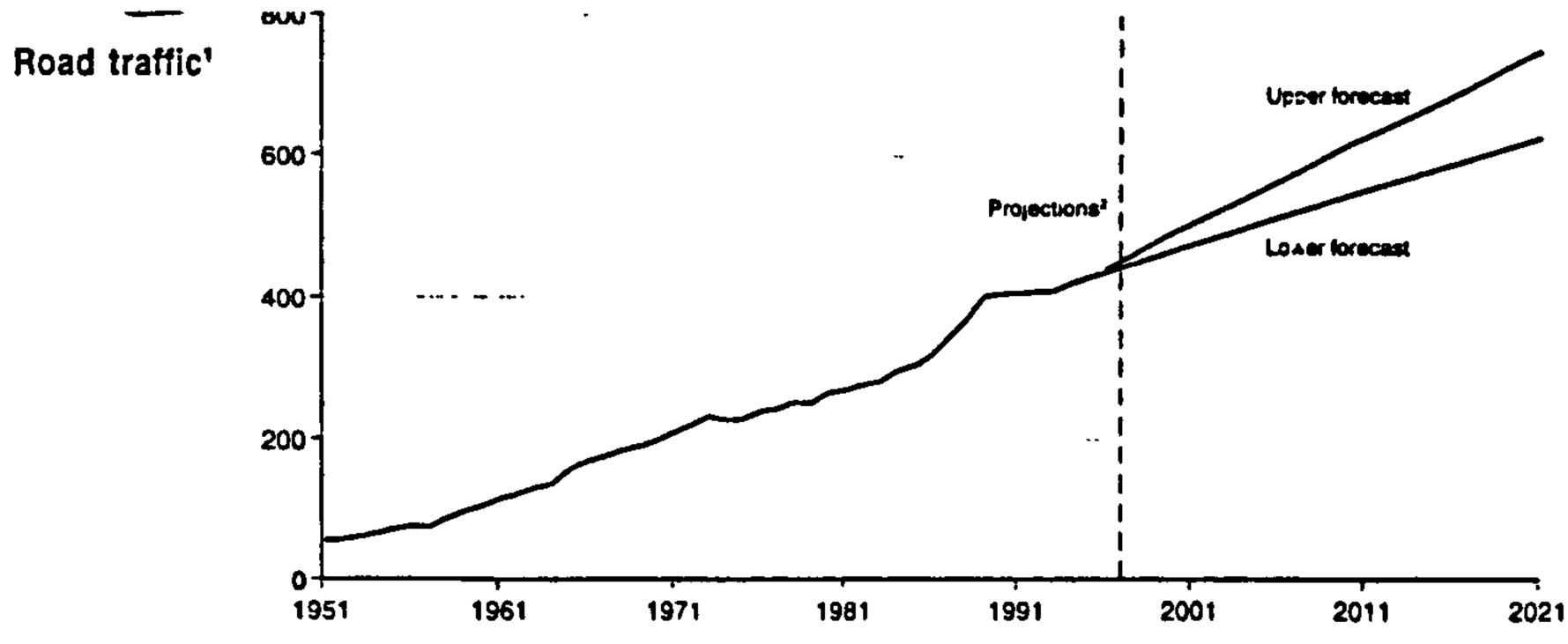
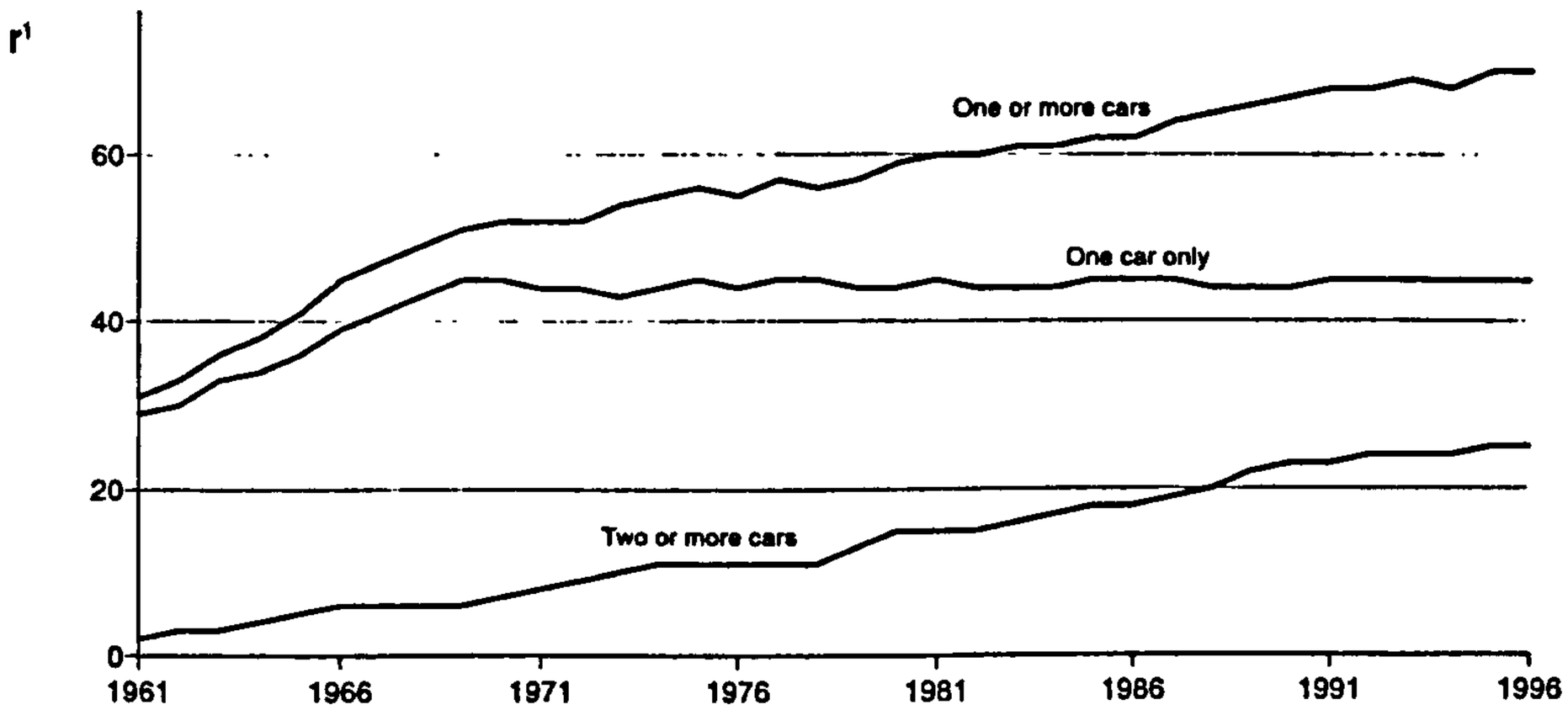


Figure 3.1. Vehicles: Motor Traffic Index (DoT 1996)

Another indicator of this growth is the increasing number of cars residing at each household, see Figure 3.2. Households who have regular use of one or more cars rose to 25 per cent of all households in the UK in 1996 (ibid.). More people in the households are making use of private transport and this is intensifying the demand for more than one car to be available for use per household.



1 Includes vans normally available to the household. See Appendix, Part 12: Car ownership.
Source: Department of the Environment, Transport and the Regions

Figure 3.2 **Number of Cars per Household** (ONS 1998)

The distance people travelled in the UK using all modes of transport multiplied by nearly two and a half times between 1961 and 1996 to over 700 billion passenger kilometres, see Table 3.1. Travel by car, van or taxi accounted for virtually all of the increase since 1961.

Great Britain — Billion passenger kilometres

	1961	1971	1981	1991	1996
Road					
Car and van[1]	157	313	394	582	620
Bus and coach	76	60	49	44	44
Pedal cycle	11	4	5	5	4
Motorcycle	11	4	10	6	4
All road	255	381	458	638	672
Rail[2]	39	36	34	38	38
Air[3]	1	2	3	5	6
All modes	295	419	495	681	717

1 Includes taxis.
2 Data relate to financial years.
3 Includes Northern Ireland and Channel Islands.
Source: Department of the Environment, Transport and the Regions

Table 3.1 Distance People Travel by All Modes of Travel (ONS 1998)

While private transport use has been rising, the use of public transport has fallen. The figures in this table highlight the decline in the use of the bus service, which dropped from 76 billion passenger kilometres in 1961 to only 44 in 1996. This represented a drop of some 40% over a period of 35 years. The rail service remained somewhat static over the same period.

The mode of transport people use to get to and from work does of course depend on where they live in relation to where they work. Over the past decade the average length of commuting journeys has increased by more than 25 per cent from 11.5 kilometres between 1985 and 1986 to 14.5 kilometres between 1994 and 1996. This would imply that people are becoming more willing to travel longer distances to their daily place of work.

Combined with the growth in car ownership is the increasing use being made of the car as the primary source of transport. Over the past twenty years there has been a significant shift towards the car, principally away from walking for short journeys of between one and two miles. This is borne out by the data contained in Figure 3.4. Research conducted by the Department of Transport (DoT 1996) has confirmed that 60% of car journeys were for distances of less than five miles.

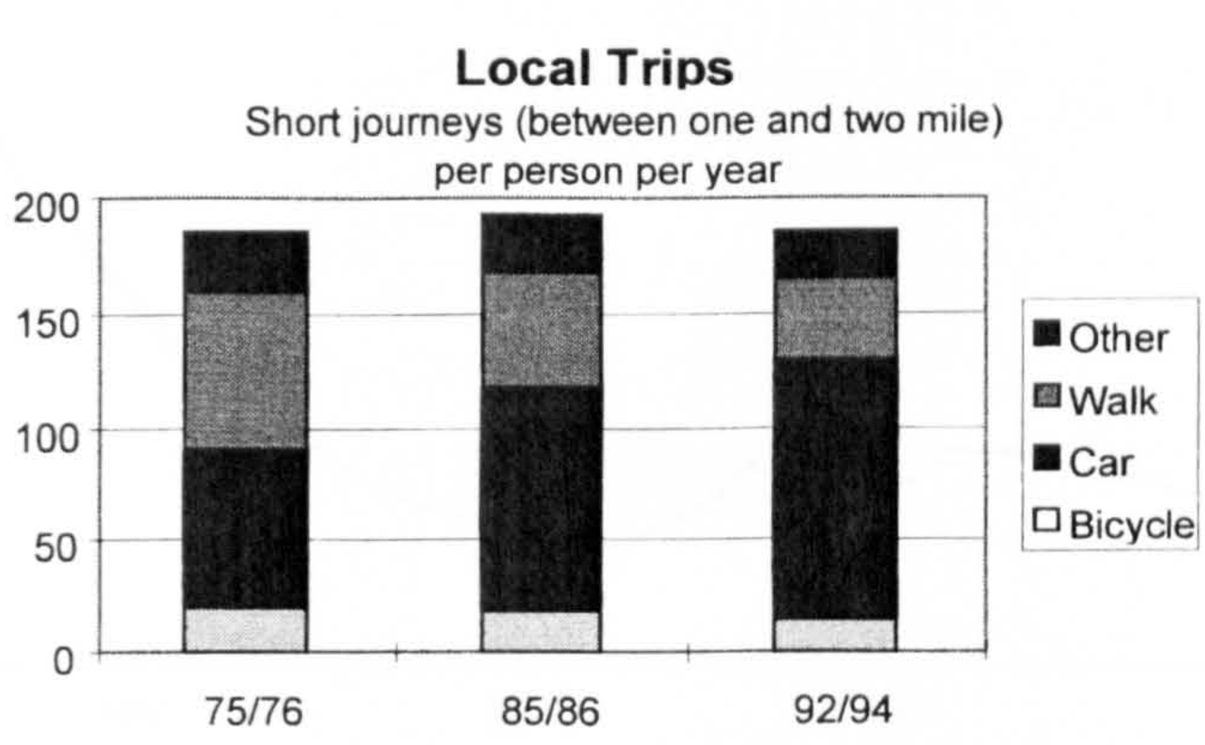
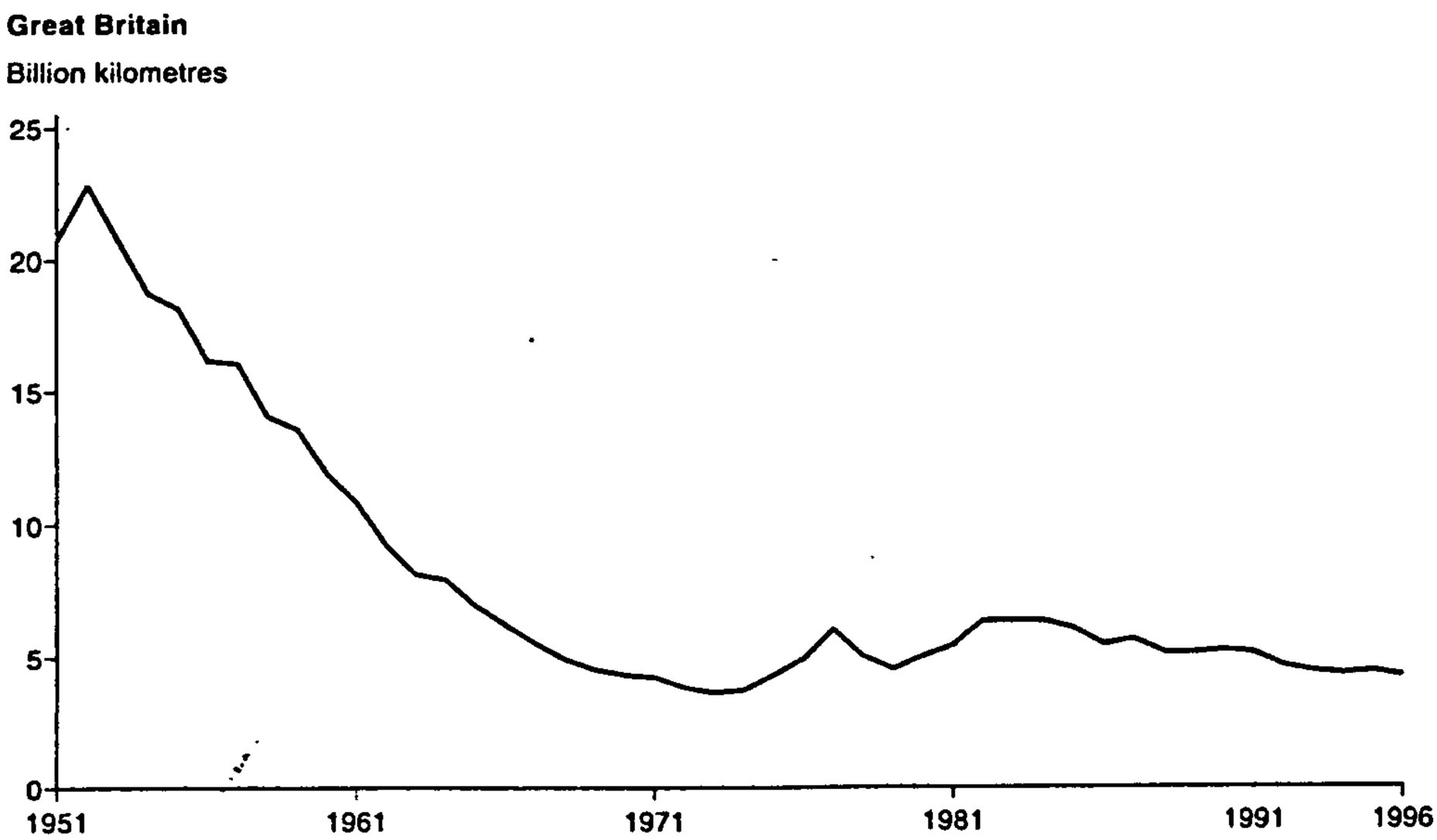


Figure 3.3. **Local Trips: Motor Traffic Index** (DoT 1996)

A number of people adopt alternatives to the motor car or public transport for their journeys and one such alternative is cycling of which there is a growing awareness, particularly as a local mode of transport. For short journeys the bicycle in many cases can serve as a good substitute for the car. However while this mode represented around a quarter of all road traffic in 1951, cycle traffic accounted for less than 1 per cent of all road traffic in 1996 (ONS 1998), see Figure 3.4. One explanation for a possible distortion in these figures could be that much of the distance travelled by bicycle is covered off public roads rather than on them, for example on bicycle paths. This form of bicycle traffic is not monitored as part of the above survey.



1 On public roads.

Source: Department of the Environment, Transport and the Regions

Figure 3.4 Road Traffic Statistics (ONS 1998)

Central and local government initiatives are continuing to support various proposals that are designed to encourage cycling by providing facilities such as cycle lanes and cycle networks. The National Cycling Strategy announced in 1996 that its goal was to double bicycle use in the UK by the year 2002. This goal was based on the 1996 figure of 16 bicycle journeys per person per year. The Millennium Commission has awarded funds to build a National Cycle Network which aims to cover at least 2,500 miles of cycle routes nationwide by the summer of the year 2000.

The growth of private transport is reflected in the traffic statistics of many different countries. In 1993 the car ownership rate in the US was over 500 cars per thousand population. The rate was 408 cars per thousand population in the UK, a slightly lower rate than the EU average (Euromonitor 1996). Whilst the major markets of the USA and Europe are near maturity it is likely, from the evidence of Table 3.2, that car manufacturers will now attempt to focus their expansion in developing countries, such as China.

Year	*Persons per vehicle 1980*	*Persons per vehicle 1990*	*Persons per vehicle 1993*
USA	1.9	1.7	1.8
Great Britain	3.7	2.9	2.9
Japan	4.8	3.5	3.0
Portugal	10.6	6.5	4.6
Australia	2.6	2.2	2.2
South Korea	152	20.5	10.2
China	16,500	882	517

Table 3.2. **Persons per passenger vehicle in selected countries**

*(*Adapted from *International Marketing Data and Statistics, 1996)*

Some queries may be raised on the accuracy of the above figures, as there are obvious difficulties in ascertaining the exact number of passenger vehicles in use worldwide. Nonetheless taking these figures broadly into consideration still demonstrates the maturity of the car market in the industrialised countries. More profoundly it indicates the potential market in underdeveloped countries for the large car manufacturers. This phenomenal growth in demand for the motor car has made the motor industry the world's largest single manufacturing activity employing, directly or indirectly, one in seven of the global work force. These jobs stretch from car production-line workers to car insurers to mechanics to road maintenance (Maxton & Wormald 1995).

The British Conservative Government of 1992-1997 adopted a transport policy promoting the widespread use of private transport. The new Labour Government has reviewed this policy and opened up the topic to public debate. In August 1997 an open invitation was issued to contribute to a discussion document, entitled '*Developing an Integrated Transport Policy*'. The Government issued a White Paper on transport policy, published in July 1998, and entitled '*A New Deal for Transport: Better for Everyone. The Government's White Paper on the Future of Transport*'. The White Paper set out '*to create a better, more integrated transport system to tackle the problems of congestion and pollution*' (DETR 1998).

All of this evidence reinforces the noticeable shift towards the use of private transport that has occurred over the past decade. And this shift has not only made it more difficult for the authorities but it has also produced an obstacle to what many transport planners see as a solution to environmental concerns, i.e. the concept of intermodality. In its broadest interpretation, intermodality refers to a holistic view of transportation in which individual modes work together or within their own niches to provide the user with the best choice of service (Feldman & Gross 1996). Operationally it means the ability of travellers to make convenient connections between different modes of travel at different locations along the route. A '*mix and match*' selection of various transport modes is considered a viable alternative to the ever-growing popularity of single occupant vehicles (Van der Loop 1997) and this topic will be revisited later in the research.

3.2 Environmental Concerns

Over the past decade the state of the environment has become an area of increasing concern to governments, societies and individuals at large. It is now more widely recognised that any deterioration in the environment could have consequential effects on mankind, either on a global, regional or local basis. As a result people are now being called upon more often by the authorities to help protect the environment, for example by purchasing unleaded fuel or by participating in recycling programmes.

In 1996 the Department of the Environment, Transport and the Regions carried out '*The Attitudes to the Environment Survey*' in the United Kingdom (DETR 1997). It reported that 88 per cent of adults in England and Wales were either 'fairly concerned' or 'very concerned' about the environment. It was disclosed that the issue of greatest concern to the public was the dumping of chemicals and sewage into rivers and the sea. Another issue identified as one of increasing concern was traffic exhaust fumes and urban smog. In the 1989 survey 33 per cent of respondents said they were very worried about this issue compared with 48 per cent in 1996. The British Social Attitudes Survey (BSA 1996) conducted in 1986 and 1996 asked adults in the UK about their attitude towards the countryside. One of the areas where people's attitudes had changed significantly over this period was in the area of road building. Seven out of ten respondents felt that providing more roads in country areas should be discouraged or stopped altogether in 1996.

A number of statements were presented to respondents in the 1996 British Social Attitudes Survey with regard to issues of transport. Details are provided in Table 3.3 overleaf. The responses provide some interesting reading and generally seem to suggest that more support should be provided for public transport, cyclists and pedestrians. Two statements, suggesting that pedestrians/cyclists and buses should be giver more priority in towns and cities even if this makes it more difficult for car drivers, received widespread support with a response rate of 64% and 60% respectively. The respondents also extended this support into the area of funding when they strongly disagreed with the statements that bus or train services that do not pay for themselves should be closed down, a response rate of 66% and 62% respectively being recorded.

These results are interesting because they make a very strong case for disciplining car drivers further in order to enable alternative modes to function properly and, in many cases, to enable them to survive.

Great Britain Percentages

	Strongly agree/ agree	Neither agree nor disagree	Disagree/ strongly disagree	Can't choose/ not answered	All respondents
Many more streets in cities and towns should be reserved for pedestrians only	*68*	*16*	*11*	*5*	*100*
Cyclists and pedestrians should be given more priority in towns and cities even if this makes things more difficult for other road users	*64*	*16*	*15*	*5*	*100*
Buses should be given more priority in towns and cities even if this makes it more difficult for car drivers	*60*	*16*	*18*	*5*	*100*
Britain should do more to improve its public transport system even if its road system suffers	*58*	*19*	*16*	*7*	*100*
Car drivers still are given too easy a time in Britain's towns and cities	*29*	*26*	*37*	*8*	*100*
Local rail services that do not pay for themselves should be closed down	*13*	*17*	*62*	*8*	*100*
Local bus services that do not pay for themselves should be closed down	*12*	*16*	*66*	*6*	*100*

1 Respondents were asked how much they agreed or disagreed with each statement, on a 5-point scale ranging from 'strongly agree' to 'strongly disagree'.

Source: British Social Attitudes Survey, Social & Community Planning Research

Table 3.3 **Attitudes to the Environment Survey** (BSA 1996)

Environmental concerns are also an international issue. The Eurobarometer Survey carried out by the European Commission in 1995 (INRA 1996) found that eight in ten Europeans considered that protecting the environment and fighting pollution was '*an immediate and urgent*' problem.

3.2.1 Cars and Pollution

A brief overview is presented here to assist the reader in understanding the mechanics of car pollution and the actual pollutants cars dispense when in use.

3.2.1.1 Sources of Car Emissions

The power to move a car comes from burning fuel in an engine. The combustion process, an internal combustion engine burning hydrocarbon fuels, consists of igniting a mixture of fuel with the requisite amount of air. The pollutants appear as by-products of this combustion process (exhaust) and from evaporation of the fuel itself, see Figure 3.5 (EPA 1994).

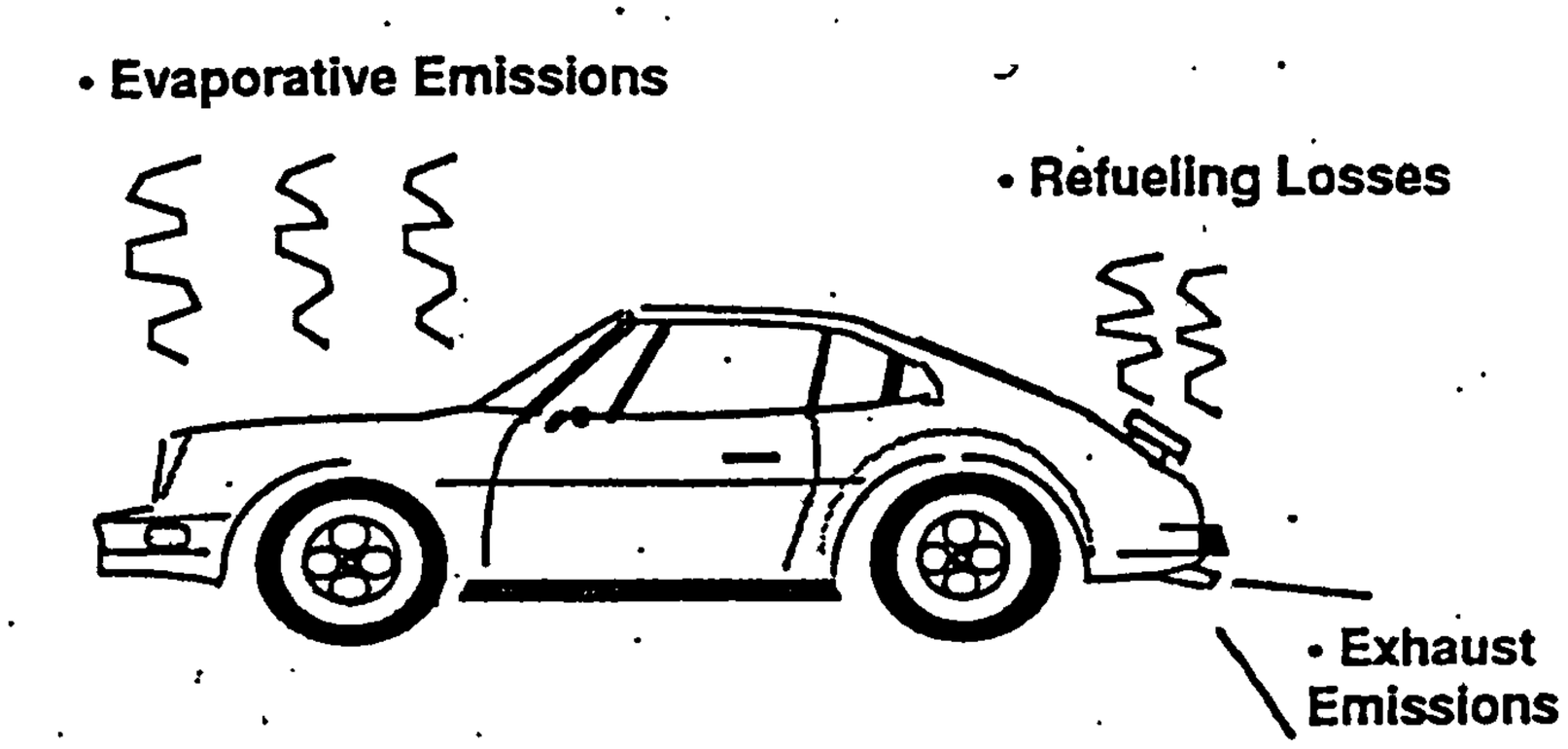


Figure 3.5 Sources of Car Pollutants (EPA 1994)

3.2.1.2 The Combustion Process

Petrol and diesel fumes are mixtures of hydrocarbons. Several different groups of pollutants are emitted in the process due to the deficiencies in running a car engine. Tail pipe emissions contribute greatly to levels of air pollution. The Expert Panel on Air Quality Standards (EPAQS), established in the UK in 1991, is the body assigned with responsibility for setting air quality standards. This Panel identified the eight most dangerous pollutants emitted by the road transport sector and regulated a standard of control for each. A brief description is provided below of each pollutant linked to exhaust emissions (DoE 1995).

Sulphur Dioxide (SO2): This is a colourless gas with a choking smell and is the major by-product of the combustion of sulphur contained in fossil fuels. UK road transport accounted for only 2% of 1995 emissions, similar to 1994 levels, whilst power stations account for some 67% of the total (DETR 1997).

Black Smoke and Particle Matter (P10): A fine solid particle found in the air or in emissions such as dust, smoke or smog. Road transport generated 50% of all 1995 emissions which was down from 58% in 1994, mostly due to the demise of diesel as a preferred source of fuel for car use (ibid.).

Nitrogen Oxide (NO_2): This is a brown toxic gas that reacts with other air pollutants resulting in increased levels of ground level ozone and smog. Transport accounted for 46% of all emissions in the UK in 1995, down from 49% in 1994 (ibid.).

Carbon Oxides: Carbon Monoxide (CO) and Carbon Dioxide (CO_2): These gases are produced by natural and anthropogenic sources and are colourless and odourless. Carbon Monoxide is produced by the incomplete combustion of carbon and is a toxic gas. In 1995, road transport accounted for 75% of all emissions, down from 89% in 1994. Carbon dioxide is the main greenhouse gas contributing to global warming and the threat of climate change (EPA 1993). In 1994, 149 million tonnes of carbon dioxide were emitted from UK sources.

Lead (Pb): Lead is identified as one of the most dangerous pollutants due to its harmful effect on people's health. This has resulted in a concerted effort by national governments worldwide to switch drivers away from leaded petrol to unleaded petrol since 1986. Enticing consumers with a tax differential that lowers the price of unleaded fuel at the pumps has helped to accelerate this switch. Sales of unleaded accounted for 68% of all petrol sales in the UK in 1996 (DTI 1997).

Volatile Organic Compounds (VOCs): They consist of a wide range of chemicals including benzene and 1.3 butadiene and are also a major contributor to the

creation of ground level ozone. In 1995 road transport accounted for 30% of total UK emissions, down from 33% in 1994 (DETR 1997).

Ground Level Ozone (O_3): This occurs naturally at ground level with no destructive effect. However in the presence of sunlight, NO_2 and VOCs it becomes a secondary pollutant creating what is commonly known as winter or summer smog. Increasing levels of smog are being recorded which affects human health and damages plants and crops (ibid.).

3.2.1.3 The Car's Impact on the Environment.

A motorcar has a measurable effect on the environment and this varies with each phase of the life cycle. There are three distinct phases, manufacturing, operation and end-of-life-cycle and Table 3.4, below, shows the broad environmental impact of these phases in the vehicle's life cycle.

		Manufacturing		***Operation***	***End-of-Life***
		Vehicle	**Fuel**		
Environmental					
	Noise	●		●	
	Global Warming	●	●	●	●
Air Quality	Acid Rain	●	●	●	●
	Process Pollution	●	●		●
	Exhaust Emissions			●	
	Evaporative Emissions		●	●	
	Wear Pollutants			●	
Conservation					
	Natural Resources	●	●		
	Energy	●	●	●	
	Recycling				

LEGEND

● = Negative Effect

Source: KRP

Table 3.4 ***Vehicle's Impact on the Environment at each Phase of the Life-Cycle (Maxton & Wormald 1995)***

It is evident from the information contained in this table that the environmental impact of a car is spread across its complete life-cycle. The environmental impact during its operating phase is discharged in the form of noise, exhaust and evaporative emissions, wear pollutants and energy consumption. These all affect to various degrees air quality, global warming, climate change and conservation. In certain circumstances, such as poor levels of air quality in urban areas, the vehicle is identified as the dominant factor in contributing to this problem. In others, such as acid rain, the vehicle overall is identified as a minor contributor.

3.2.1.4 Environmental Pollution Problems

Environmental problems originating from these sources of pollutants are on the increase and these problems can be divided into three areas of environmental concern: the greenhouse effect, ozone depletion and air quality.

3.2.1.4.1 The Greenhouse Effect

Motorised transport is the largest dispenser of greenhouse gases. The earth's surface is maintained at a temperature of 33 degrees centigrade higher than it would be if there were no naturally occurring greenhouse gases. In recent times a significant shift in the production and balance of greenhouse gases has been observed due primarily to increased levels of pollutants from various activities. This has created an imbalance, causing the earth's surface temperature to rise, resulting in the term '*global warming*'. The excessive levels of carbon dioxide present in the atmosphere absorb thermal energy that is normally radiated back to outer space. This in turn creates a blanket around the earth's surface trapping heat within the earth's atmosphere.

The largest contributor to the greenhouse effect is carbon dioxide (CO_2) of which road transport globally accounted for 20% of all emissions in 1995. This figure is not forecast to decline but rather increase over the next decade and this is an issue that has generated debate amongst policy advisers. The UK has been able to achieve high rates of reduction of CO_2 gas emissions principally due to the switch from coal to gas as an energy source for the generation of electricity. However other countries have been criticised for not implementing realistic targets of CO_2 reduction. John Prescott, Deputy Prime Minister,

has stated that the UK will reduce CO_2 emissions 20% by the year 2010, based on 1990 levels. He goes on to stress that

> *'We, the British Government, want to demonstrate that, if governments have the potential will, they can achieve this' (Clover 1997).*

As of November 1997, the rest of Europe is committed to a 15% reduction in CO_2 emissions by the year 2005. The US has stated that it will only cut its emissions to this level between the period 2008-2012, well behind the targets set by other industrialised countries. These issues are presently under international negotiation as a result of the International Global Environmental conference that was held in Kyoto, Japan, in early December 1997. However there is significant disagreement on major issues between the developed and under-developed nations of the world, particularly on those issues associated with targets being proposed for reductions in CO_2 emissions (ibid.).

Figure 3.6, below, provides some statistical evidence of what many scientists argue is global warming at work. Reviewing the average global temperature over the past 130 years suggests clear evidence of increasing temperature deviations since the middle part of the 20th Century. Globally, nine out of ten of the hottest years on record have occurred since 1983. Studies of this trend emphasise that such an increase in temperature is unlikely to be entirely natural in origin (ONS 1998).

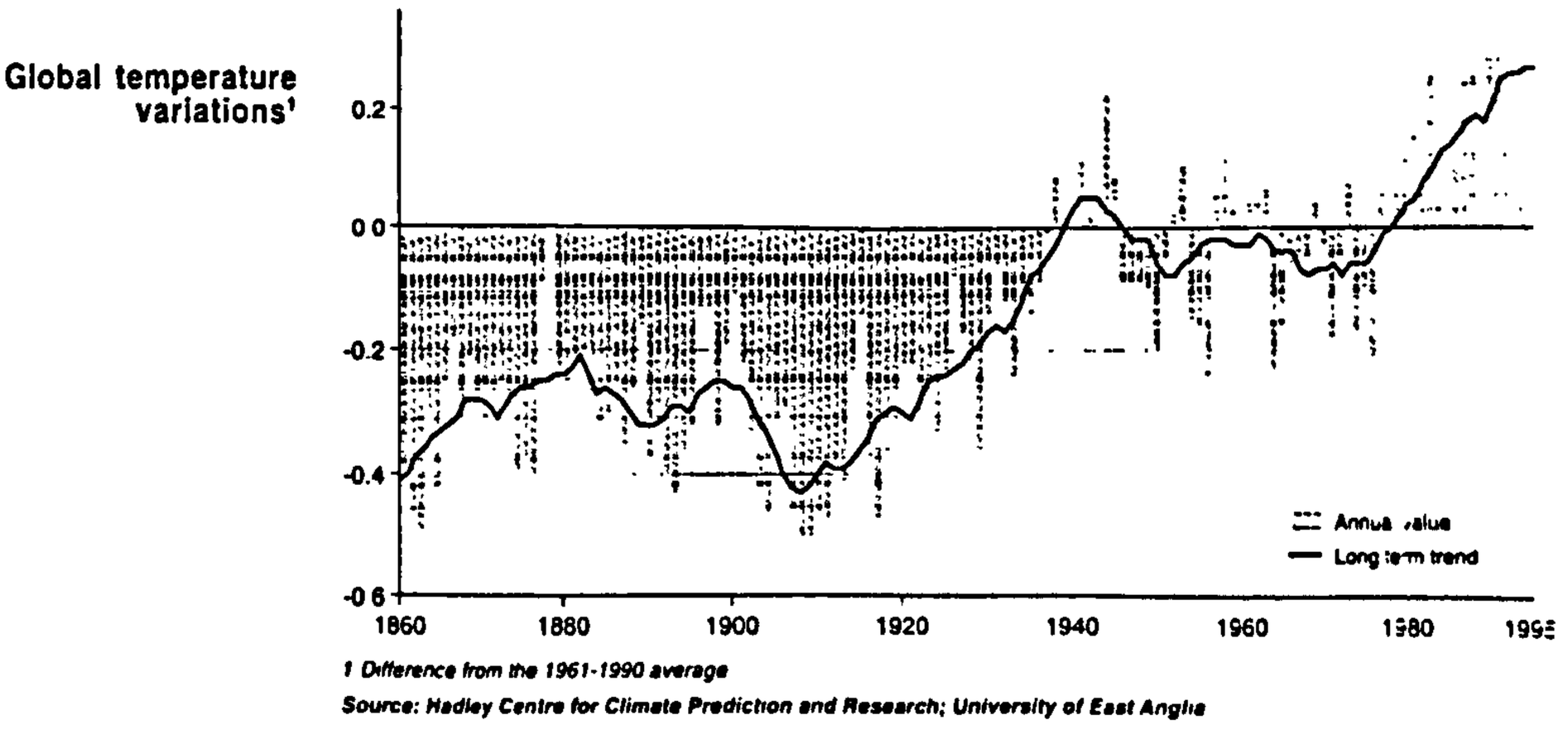


Figure 3.6 Global Temperature Deviations (ONS 1998)

3.2.1.4.2 Ozone Depletion

This environmental concern exists because of the depletion of the earth's protective ozone layer held in the stratosphere at a height of between 20 to 40 km above the earth's surface. The cause of this depletion is mainly due to the increased production of industrial gases that help to destroy the ozone layer. Depleting the ozone layer opens up holes that allow ultraviolet solar radiation to penetrate the atmosphere and reach the earth's surface, causing damage to human health and ecosystems. An ozone hole roughly the size of North America is occurring annually over Antarctica and the development of further and larger holes is of growing concern to scientists. Two of the resultant effects are increased rates of skin cancer and damage caused to food crops (Stanners & Bourdeau 1991).

3.2.1.4.3 Air Pollution

Finally air pollution, as discussed earlier, can cause environmental damage to wildlife, plantlife, buildings and watercourses. However, in its most potent form, it damages human health and is a major contributor to illnesses. It is interesting to observe the sources of air pollution between 1971 and 1994 as indicated in Table 3.5. Two of the major sources, namely industry and power stations, have been able to make significant reductions in the volume of pollution produced. The only source to show an increase over this is that of transport and the increase is recorded at over 57% of 1971 figures. This is significant given the efforts over the past decade to both inform and persuade motorists of the necessity to reduce their reliance on the motor car.

United Kingdom

Million tonnes

	1971	1976	1981	1986	1990	1991	1994
Industry[1]	72	64	52	49	47	47	46
Power stations	56	56	56	54	54	54	44
Transport[2]	21	22	23	28	33	32	33
Domestic	25	22	23	25	22	24	23
Other	-	1	3	2	2	2	2
All emissions	173	165	157	157	157	159	149

1 Includes commercial and public service, agriculture, refineries and other industry
2 Includes road and other.

Source: National Environmental Technology Centre

Table 3.5 **Carbon Dioxide Emissions** (DoT 1996)

3.3 Summary

This chapter set out to present evidence of the significant growth in the use of the motor car and statistical data in support of this is discussed. It is also suggested that the number of cars on the road are still increasing while, at the same time, the number of people making use of private transport is also on an upward spiral. Finally an overview of the pollutants produced by the transport sector is presented and the most harmful pollutants emitted by the motor car briefly described.

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CHAPTER 4

RESEARCH METHODOLOGY

4.0 Introduction

This programme of research set out to examine the framework of decision making when selecting a mode of travel. As such it needed to locate a sample set of people who travelled, in whatever capacity, and whose views could be sought on the subject of traffic congestion and pollution within their locality. Two parishes, namely Hedgerley and Gerrards Cross, were identified as the research site. A number of parishioners approached subsequently agreed to participate in focus group discussions. The narrative from these discussions was recorded on audiotape with the permission of each of the participants. This part of the research programme was identified as Phase 1.

Phase 2 of the research entailed an in-depth examination of the participant's travel behaviour. This was undertaken by recording their travel experiences as written text in the form of a diary. In this phase the participants were exposed to a number of message appeals. After these advertisements were viewed and alternative transport modes had been explored, the views of the participants were sought on whether any changes in travel behaviour had been observed during the period in question. This chapter now describes the methodology adopted to undertake this programme of research. It is divided into the following sub-sections:

1. Research Criteria
2. Description of Research Site
3. Research Methodology and Instrument Design
4. Research Timetable
5. Data Analysis

4.1 Research Criteria

There is no simple way of ensuring that the chosen methodology will guarantee the success of a research project. Research strategies differ widely dependent upon the particular situation, the type of data to be collected and the resources available to the researcher (Easterby-Smith et al 1991). The focus of the research was clearly directed at acquiring an understanding of why individuals, or households, choose a particular mode of travel for any specific journey. It is acknowledged, for the purposes of this research, that commuters identify the car as the primary mode of transport in use today.

As a first step it was important to consider whether the data collected should be quantitative, qualitative or both. A broad understanding of data collection methods was already available to the author of this work, as he had encompassed statistical techniques of analysis over the course of his previous academic studies.

However it can be somewhat misleading to try and reach a decision on whether to gather qualitative or quantitative data. While they are obviously different forms of data the literature considers that it is best to select either one or the other. This undermines the benefit of looking at the two methods objectively and observing how each may be appropriate to the research question in hand. In certain cases it may be beneficial to the study if a combination is adopted. As Dey (1993) explains:

> *'In suggesting that quantitative data deals with numbers and qualitative data deals with meaning, I do not mean to set them in opposition. They are better thought of as mutually dependent. Numbers depend on meaning, but in a sense meaning also depends on numbers' (p.28).*

The research emphasis was to acquire an awareness of the motivation that lies behind a person's thinking when choosing a mode of transport. This required a methodology with no restrictions or boundaries on the data to be collected but rather would allow an open forum for the participants to openly discuss the topic. It was essential for the success of the study that the participants were allowed to elaborate on their own experiences within their own frame of reference.

As Denzin (1994) writes:

> *'Qualitative research is more likely than quantitative research to confront the constraints of the everyday social world. They (the participants) see the world in action and embed their findings in it. Quantitative research abstracts from this world and seldom studies it directly' (p.5).*

Taylor and Bogdan (1998) phrase it slightly differently:

> *'Qualitative researchers develop concepts, insights and understanding from patterns in the data rather than collecting data to assess preconceived models, hypotheses, or theories' (p.8).*

Thus any notion of pre-determining the shape of the research to such an extent that the respondents had to remain within boundaries was an unacceptable limitation of the research design. Patton (1980) explains the significance of this:

> *'Another distinction sometimes drawn between qualitative or quantitative methods is that the former produces data that are freely defined by the subject rather than structured in advance by the researcher' (p.45).*

It was considered that the use of quantitative data alone would have implied a fixed process of data measurement and statistical analysis running through the research. In other words there would be little scope for individuals to express opinions that may be outside of a range of responses, as predetermined by the statistical approach. It was therefore decided not to employ quantitative methods as the primary source of data collection. However it was considered relevant, in Phase 2 of the research programme, to collect a small amount of background quantitative data on the sample set of households. Such data would be of assistance when considering issues of interpretation in the analysis chapter, Chapter 7.

The primary source of data collection chosen was therefore qualitative. This can take the form of words, statements, commentary or narrative. Dey (1993) stresses the benefits of qualitative data in association with meaning and writes:

> *'Whereas quantitative data deals with numbers, qualitative data deals with meaning. Meanings are mediated through language and action' (p.10).*

Bryman (1989) emphasises that qualitative research is not the same as quantitative research without the numbers. He noted:

> *'The emphasis upon the interpretations of the subjects being studied is probably its most central motif' (p.168).*

The essence of qualitative research is that it is diagnostic; it seeks to discover what may account for certain kinds of behaviour, in this case '*transport behaviour*' (Chisnall 1992). A major objective of the research was to obtain an understanding of what motivates transport users when selecting a mode of transport for a journey.

There are three broad types of qualitative research widely used in social marketing situations:

- Ethnographic studies
- Depth interviews, and
- Focus groups

Each of these can adopt different data collection instruments but all are carried out in close proximity to a local setting and are usually conducted over an extended period of time.

Ethnographic studies

This type of research is widely recognised for its ability to penetrate the target community in search of observations. As an anthropological technique, its broadest objective is to understand a total culture:

'Here the researcher tries to immerse himself or herself in a setting to become part of the group under study in order to understand the meaning and significances that people put upon their own behaviour and that of others' (Easterby-Smith et al 1991: 38).

This is achieved because part of the role of the researcher in this instance is to become immersed in the community associated with the topic of research. The recorded observations are either gathered as a participant observer where the researcher is visible within the community and plays an active role in its everyday function. Alternatively the researcher can be nonparticipant and attempt to be as invisible as possible when making observations within the community setting. Careful recording of many different facets of human behaviour is critical to the success of such studies. Social relationships, patterns of status, day-to-day events, norms, taboos, language and so on are recorded with particular care given to the description of local particularities.

It is recognised that ethnographic studies are intended to be descriptive in helping to understand the behaviour of interest. The task of the analysis within ethnographic studies is to reach across multiple data sources and to condense this into information meaningful to the further development of knowledge within the research topic.

Depth interviews

When a research project wishes to scrutinise individual behaviour rather than observing the culture at work, then the use of interview techniques may be more appropriate. Such interviews can be carried out on an individual basis or on small groups of people (known as 'focus groups').

Depth interviews can either be carried out in the home or the office, normally prearranged to suit the particular individuals, or at some location outside of the home such as in a shopping centre or in the form of a street-intercept. Research projects that require interviews to obtain responses with a high degree of structure, say by adopting questions that require closed answers, may require the use of questionnaires. However adopting questionnaires as a research instrument can limit the scope of response and is

more akin to a form of quantitative research. Nonetheless interviews can also be conducted as an open conversation, based around the format of a questionnaire, but care takes to be taken in considering how the data is recorded for further analysis. Open-ended questions can result in lengthy answers and there needs to be a mechanism in place to record accurately the detail of such responses.

Individual interviews are time consuming and costly due to the one-to-one nature of researcher to respondent. They also have limitations on the time respondents may be willing to spent answering questions and this is particularly true for interviews that are not prearranged with the intended respondent. However depth interviews afford the researcher more time and space than group discussions if the focus of the research needs to be redirected at any time in the course of the interview. Also responses may be prone to be more candid than those responses gained from group sessions due to the lack of peer pressure.

Focus groups

It is acknowledged that the crucial difference between depth interviews and group discussions, i.e. focus groups, is that in the former the main lines of communications are between interviewer and respondent, rather than directly between respondents themselves. The primary objective of the focus group is to generate narrative accounts, descriptions and stories of relevance to the topic from a group discussion. These accounts are taped and transcribed for detailed analysis later in the research programme. The response format is open-ended and respondents are encouraged to freely express their levels of awareness, specific beliefs, individual attitudes, opinions and aspirations (Kent 1993). Rubin and Rubin (1995) clarify the role of focus groups by stating:

> *'In focus groups the goal is to let people spark off each other, suggesting dimensions and nuances of the original problem that any one individual might not have thought of. Sometimes a totally different understanding of a problem emerges from the group discussion' (p.140).*

Group discussions can be daunting for certain people while possibly encouraging others at the same time to play to the audience. The role of the moderator is critical for the

success of focus groups. The moderator must ensure that the best conditions are in place in order to allow an open and frank discussion for all the respondents within the group. He or she should be able to make respondents feel relaxed in the setting and the moderators role should be so minimal as to make them unnoticed. Nonetheless the group environment can provide for open discussion across a range of attitudes, some of which may be further may be further developed in the course of the discussion.

Nevertheless there are obvious difficulties to be aware of when choosing qualitative research. Potter and Wetherall (1987) focus upon the use of language and observed that there are no mechanical procedures available to interpret the findings from an archive or transcript. Consequently labour intensity and the possibility of researcher bias are genuine concerns associated with this research methodology. Miles (1979) goes further and questions the validity of the method:

> *'The most serious and central difficulty in the use of qualitative data is that methods of analysis are not well formulated. For quantitative data, there are clear conventions the researcher can use. But the analyst faced with a bank of qualitative data has very few guidelines for protection against self-delusion, let alone the presentation of unreliable or invalid conclusions to scientific or policy-making audiences. How can we be sure that an 'earthy', 'serendipitous' finding is not, in fact, wrong?' (p.135).*

Another significant challenge to be considered when deciding to collect qualitative data is an awareness of the degree of competence required to analyse the data successfully. Working with qualitative data can result in researchers, especially first-timers, having sleepless nights. As Taylor and Bogdan (1998) explain:

> *'The reason why so many people find qualitative data so difficult is that it is not fundamentally a mechanical or technical process; it is a process of inductive reasoning, thinking and theorising' (p.140).*

The ability to analyse qualitative data cannot be packaged in a textbook or taught in a classroom. It can only come about through gaining experience by either reading relevant

studies of such work or through working closely with a mentor. You cannot subcontract out the process of analysis as '*data collection and analysis go hand in hand'* (ibid: p.141).

Alongside these difficulties is the problem of personal bias and interpretation. Taylor and Bogdan (1998) stress the necessity for the researcher to leave any personal baggage behind at the beginning of the research journey by observing:

> *'Qualitative researchers must attempt to suspend, or set aside, their own perspectives and taken for granted views of the world' (p.8).*

It is however very difficult for any researcher to leave aside personal beliefs and to undertake an interpretative approach that is free from all influence. This position is constantly under attack as described by Denzin & Lincoln (1998):

> *'--------there is no clear window into the inner life of an individual. Any gaze is always filtered through the lenses of the language, gender, social class, race, and ethnicity. There are no objective observations, only observations socially situated in the world of the observer and the observed' (p.24).*

Perhaps the final word in this section should be left to Dey (1993) who writes;

> *'In practice, research often allows a range of methods producing a variety of data. We would do better to focus on the data that has been produced, rather than implying rigid distinctions between styles of research and methods of data collection' (p.15).*

Dey (1993) is stressing the necessity to go out and gather data and from there to begin the analysis. He seems to be critical of the excessive amount of prescription in the area of research design and the rigidity that this can impose on the different methodologies. In many ways he is implying that there is no such thing as perfect research, regardless of methodology, but that the methodology is only one constituent in gathering the data. However this is not to undermine the importance of the role of the researcher. He or she

must, regardless of the methodology selected, collect the data to the best of their ability. Thereafter they must analyse the material in a reflexive and critical manner to guarantee an output that adds value to the subject of interest.

4.2 Description of Research Site

4.2.1 Justification for Site Selection

In the early stages of clarifying the theme of the research, it became clear that there would be a need for strong empirical research in order to test the key hypothesis. Deciding where this research should be conducted was an important step in the development of the research process. Nonetheless it should be remembered that this study was of an exploratory nature. Therefore it was not necessary to predetermine whether one site was more appropriate than another. It was of greater importance to the author that participants played an active role in sharing their thoughts and viewpoints on the topic of research.

The author was initially open to all ideas on where the research could be conducted and it was necessary to look at a cross section of locations ranging from inner city to rural. The author considered, regardless of location, that there was a requirement for the local council or borough to support the research. It was envisaged that permission would need to be sought to undertake the research from the relevant local authority. It was also proposed, at the design stage of the research, that the local authority would assist in gaining access to the local community for participant selection, i.e. any approach to individuals to participate in the research would be made jointly on behalf of Brunel and the local authority. This would help enforce the practical value of the research and hopefully assist those people approached in making a positive response to partake.

A smaller consideration in looking at research sites was how far they were from the Brunel Campus. The author intended to visit the location a number of times during the two phases of the research program. Consequently it was practical if the location could be relatively close in order to allow easy access for the author as the research progressed.

Based on these criteria a number of authorities were approached informally in December and January 1996. South Buckinghamshire District council responded positively to the approach. Consequently they were formally identified as a potential site in January 1996 when a meeting was held between the author and Bill Dawe, Directorate of Environmental Services, South Bucks District Council. This meeting was scheduled as exploratory but the full support of the Environmental Directorate was informally offered at this time in executing the research. However, while further canvassing of the area was required before any agreement could be formalised, it quickly became evident over a short period of time that this location was attractive to the author for a number of reasons.

1. The District was located on the outskirts of Greater London and many different forms of public and private transport were in active use.
2. A number of important motorways passed through or alongside the boundary of the District, indicating high levels of private transport use.
3. It was envisaged that there would be a large commuting population living within and passing through the area, as the location is approximately 30 miles West of the City of London.
4. Finally the research site was close to Brunel University and thus allowed easy access for the author to travel to and from the site.

The area known as South Bucks District, located in the southern half of Buckinghamshire County, was therefore confirmed as the research site in May 1996 and further meetings were arranged with senior personnel from the Environmental Directorate. These meetings specified the objectives of the research and clarified how continued contact would be managed with the District during the months of the research programme.

The area is under the control of South Buckinghamshire District Council whose administrative headquarters are based in Slough, see Figure 4.1 overleaf. South Bucks covers an area of 14,157ha and has a resident population of 62,482 people of whom approximately 48% work within the boundaries of the district. South Bucks is divided into twelve Parishes each of which has its own Parish Council. The District is mainly rural in nature with around twelve population centres, the main ones being Beaconsfield, Iver, Gerrards Cross and Burnham. There are approximately 487km of roads within the

District and the M40, M25 and M4 motorways all pass through the District (South Bucks District Council 1996).

It was agreed in July 1996, following a meeting with the Directorate of Environmental Services of South Bucks District Council, that the two parishes, Gerrards Cross and Hedgerley, would be approached with a view to participating in the research. The two parishes were chosen primarily in order to provide access to an increased number of households over a greater area in the District. At no time in the research was there any consideration that some form of comparative study would be carried out between the responses gathered from each of the parishes. The research material collected from the site, consisting of two parishes, was to be analysed and reflected upon as one source of data.

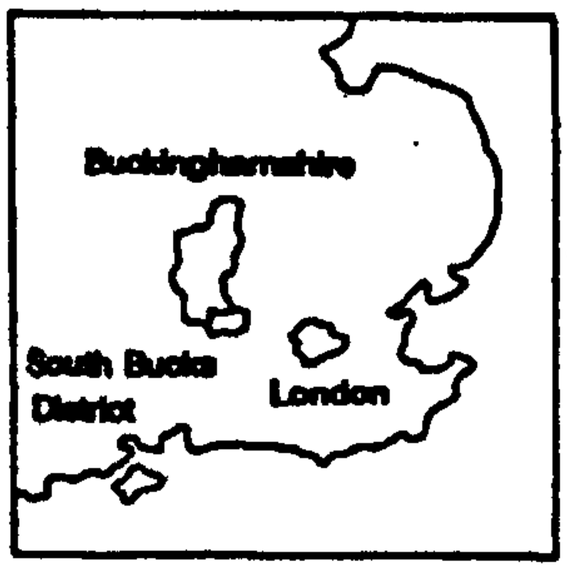
4.2.2 Description of Site

The parishes deemed to be most suitable and the rationale for their selection is now briefly described.

4.2.2.1 Hedgerley Parish

Hedgerley was selected as an example of a rural parish. The parish possessed historical research data accumulated in 1992 under the Village Appraisal Scheme. This background information provides an earlier perspective of the environmental issues in the parish and the results of this are briefly discussed later in the chapter. The parish also had a significant length of both the A355 and the M40, two major roadways, bordering its boundaries. It was considered that with such heavily trafficked routes nearby parishioners might be interested in discussing the importance of the research topic.

1.



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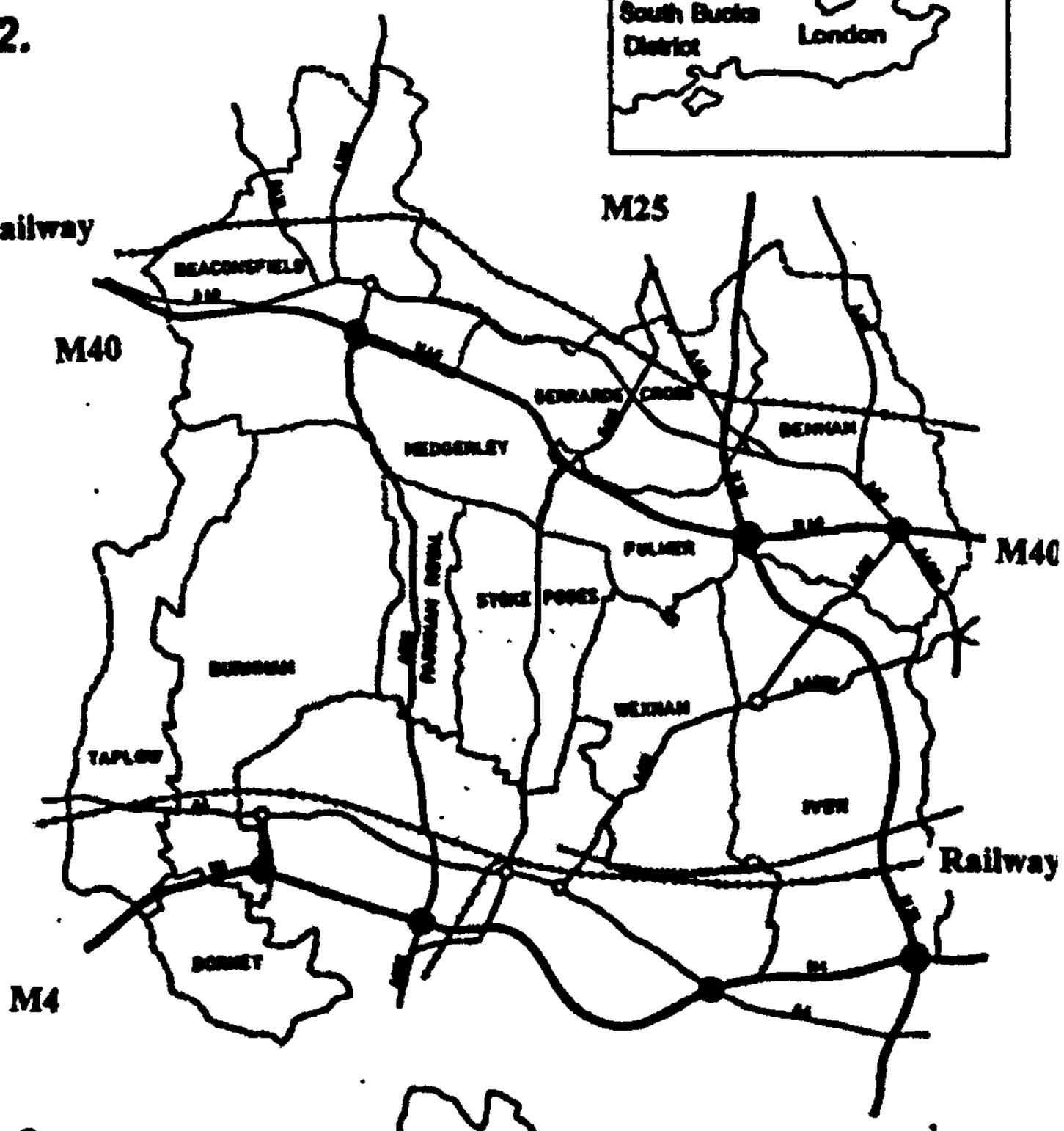

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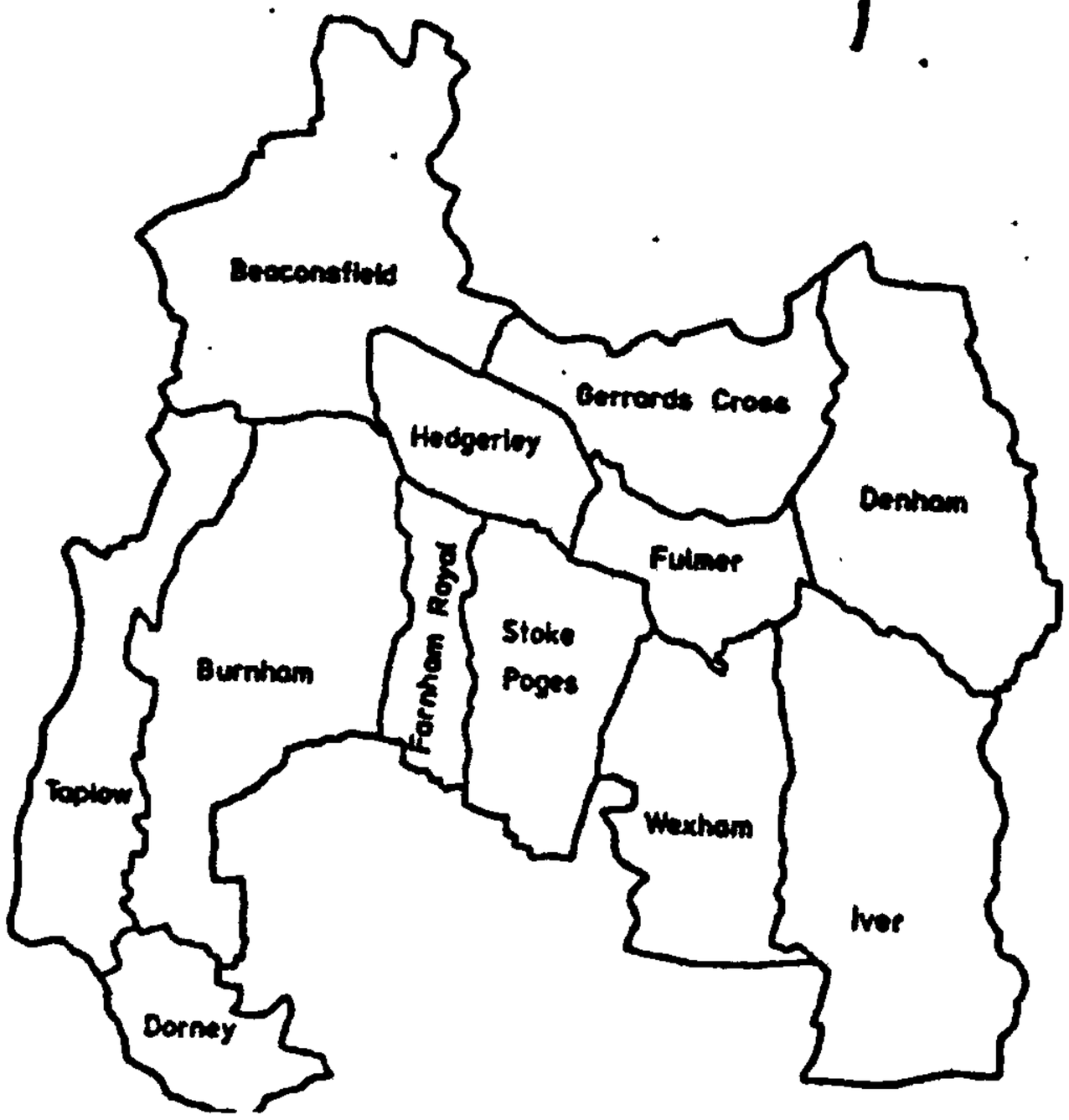

Figure 4.1 Map of South Bucks District Council

However it must be considered that the alternative modes of travel on offer may not, in themselves, be adequate enough to entice any changes in travel behaviour. At the same time it would be reasonable to assume that much of the required change in behaviour will have to come from people making use of transport modes already on offer, such as public transport (train or bus), cycling and walking.

The parish is situated in the south of Buckinghamshire on the eastern edge of the Chiltern Hills. It is within the Green Belt and most of the residents live in the village settlement while the remainder lives in scattered communities within a mile of the village centre. The 1991 census gives a total population of 865 people living in 340 households within the boundaries of the parish. These more or less coincide with the M40 in the north, the A355 in the west, Parish Lane and Collum Green Road in the south and the B416 in the east. The northern part of the parish is designated as an Area of Attractive Landscape (AAL). In addition there are two Conservation Areas located in the centre of the old village and in Hedgerley Green.

The parish is within easy reach of London and several large towns due to its proximity to motorways and trunk roads. A bus service into Slough is available and the village is within 15 minutes by car of two mainline railway stations, namely Gerrards Cross and Slough. Gerrards Cross station is located on the Chiltern Line and trains travel between London Marylebone and Birmingham Snow Hill. The train station at Slough is on the Thames Line where trains travel between London Paddington and Stratford-upon-Avon.

Hedgerley boasts a number of local clubs and societies, the names and membership numbers (1992) of which are listed below:

Hedgerley Women's Institute	26
Mothers Union	8
Hedgerley Historical Society	49
Hedgerley Conservation Volunteers	45
Hedgerley Scout Group	15
Royal British Legion	37
Hedgerley Youth Club	8

Hedgerley Evergreen Club	11
Guides and Brownies	10

These organisations provide the focal point for village interests and social activities. There are many sports facilities nearby but none in the village apart from a rugby pitch used by Farnham Common Sports Club. The parish has many good public paths that are popular with walkers and bicycle riders from inside and outside the parish.

It is worth noting that, while Hedgerley is located close to the M40, many of its inhabitants view it as cut-off from the surrounding and more densely populated areas, i.e. Beaconsfield, Gerrards Cross or Slough. There is a feeling among the inhabitants that the parish should remain isolated and somewhat rural in its setting. There is little scope for property development in the area and the rural setting is maintained as a matter of priority. The bus from Hedgerley services Slough train station but there is no public transport facility to Gerrards Cross from the village. The distance to Gerrards Cross or Slough is too great to walk and the hilly terrain makes it very difficult for cycling. Whilst the village is used as a cut-through by a small number of motorists, the density of car traffic passing through the village is deemed to be relatively light by the residents.

Summary of Findings from Hedgerley Village Appraisal

There is no record of a Village Appraisal having been conducted in Gerrards Cross and therefore this detail is only available for Hedgerley. This appraisal was undertaken by the Parish Council in 1992 and consisted of a questionnaire incorporating 59 questions. Altogether over 240 completed questionnaires were returned from 349 delivered to households, a 68% response rate. The questions covered topics ranging from the environment to roads and traffic and from social services to education. Some of the findings from this survey are presented below:

- More than 25% of adults resident in Hedgerley are retired. This is above the average of 17% for the South Bucks District.
- 87% of the households surveyed use one or more cars. A consequence of this is that over half the households never use a bus and only 15% use a bus frequently.

- Most households were concerned about the volume and speed of traffic through the village but wished to retain the rural character of the village.

Hedgerley has three shops, a newsagent, general store/sub-post office and a butcher. The survival of the village shops is constantly under threat because of supermarket developments nearby. 42% of households said they did most of their shopping in Slough as against 7.6% of those who claim to do most of their shopping in Hedgerley. Hedgerley is very proud of its rural character despite its proximity to heavily built-up areas and has won the accolade of '*Best Kept Village*' in Buckinghamshire on several occasions. The Parish Council claims to be dedicated to ensuring that this reputation be retained.

4.2.2.2 Gerrards Cross Parish

This parish is situated northeast of Hedgerley and is the second of the District's main urban areas. The parish was selected as one of the population centres within the district and recorded to have the highest proportion of two-car households in the UK. The A40, A413, M40 and M25 motorway all pass through the parish. Gerrards Cross has a train station situated in the centre of the town and large numbers of daily commuters travelling into and out of Greater London use this station. Property values are very high and density of population is below average for an urbanised area of London. However property development continues to be explored at every opportunity in the parish.

Gerrards Cross Parish covers some 6,480 hectares stretching from Tatling End in the east, North Park in the north, Bulstrode Park in the west and Dukes Wood in the south. The town of Gerrards Cross has a pleasant shopping centre with four car parks catering for most needs. There are good primary and private schools as well as good churches and chapels. The only cinema in the District is in the town. Gerrards Cross Common, situated on the edge of the town, is a pleasant recreation area with two ponds and children's play area for 3 to 10 years olds. There is also natural woodland on the Common.

Gerrards Cross has a Community Association based at the Memorial Centre. The Association comprises of over 50 local organisations and 1,100 individual members and

its purpose is to promote the well being of the community within the District. The trust deed of the Association states that its aim is *'to advance education, to provide a meeting place -------for recreation and social, moral, spiritual and intellectual development and to foster a community spirit'*. It attempts to realise these aims by making available accommodation for many thriving clubs and societies, by sponsoring new activities and running educational classes in partnership with Buckinghamshire County council.

There are a number of clubs and societies registered with the Association and below is a list of the main ones within Gerrards Cross (GX) with the 1996 membership numbers referenced where known.

GX Retired Men's Club	150
GX Squash Club	200
GX Memorial Centre Bridge Club	24
GX Centre Club (Drama)	15
The Chalfonts & GX Camera Club	50
GX Flower Club	77
GX Horticultural Society	100
The Royal British Legion	200
GX Short Mat Bowls Club	N/A
GX Chess Club	N/A

These clubs and societies along with many others form the core of recreational facilities within the parish. Two squash courts with changing rooms are available along with two outdoor tennis courts. A Youth Centre, housed in a separate building within the grounds, caters for groups of young people from 10 to 21 years of age.

4.2.2.3 Parish Liaison

Both parish councils nominated a council member to monitor the research and to act as co-ordinator with the researcher. In each case the person expressed an interest in the research topic. Judith Bell volunteered to act on behalf of Gerrards Cross and Norman Coombs on behalf of Hedgerley Village.

The co-ordinators were of invaluable assistance to the success of the research programme in a number of ways. In particular they bolstered communication with the local participants for the duration of the research. They facilitated easy access to the participants at all times and achieved a level of commitment from the participants that would not have been forthcoming if approached directly by the University. This point was confirmed by the high response rate obtained from the participants at the end of Phase 1. Out of thirty-four participants involved in the initial focus groups, thirty-one signalled further commitment to Phase 2 of the research programme, a success rate of 91%. The co-ordinators also played an important role in piloting the diary, described later in this chapter, prior to distribution amongst the households.

No problems were identified while working with the two individuals over the duration of the research programme and their role could nearly be described as assistant researchers. This is especially true of Norman Coombs who had previously acquired some experience in the parish designing and implementing the Hedgerley Village Appraisal.

4.3 Research Methodology and Instrument Design

The empirical research undertaken for this thesis was divided into two phases and encompassed a combination of focus group discussions and a diary panel survey. This was considered beneficial as Phase 1 enabled the researcher to acquire a detailed understanding of the parishes. The information thereafter would be used to improve the design of the methodology adopted in Phase 2. Such an approach facilitated an opportunity for the author to review the material gathered in Phase 1 and to apply any lessons learnt by enhancing the design of the data collection instrument adopted in Phase 2.

4.3.1 Phase 1: Overview

Focus groups were selected as the research instrument for Phase 1 of the research programme. This semi-structured approach provided a high degree of flexibility in how questions could be asked and how much probing could be undertaken thereafter. In this phase of the research it was critical for the researcher to secure an understanding of the

transport and environmental issues that were of genuine concern to the communities. It was determined that this could be best achieved in an open environment as this allowed the participants the room and freedom to point the discussion into areas they considered meaningful.

A more closed form of enquiry that restricted views to be traded across the floor would not have provided such an environment and would have limited the scope for open discussion. Therefore the use of depth interviews was considered inappropriate for this particular research project. Undertaking an ethnographic study was also deliberated upon at the design stage of the project. However the author considered the semi-structured approach of focus groups to be more conducive to the objectives of the research to hand.

4.3.1.1 Participant Selection

The procedure for selecting participants was imparted to the nominated co-ordinators. They possessed knowledge of the local community and were familiar with the people who might participate in a research programme over an extended period of time. This kind of sampling is often referred to as judgmental or purposive sampling; i.e. the sample elements are handpicked because it is expected that they can serve the research purpose (Churchill 1995). While there are obvious disadvantages associated with hand picking participants, this approach was deemed suitable for the following reasons:

1. It was emphasised, through written guidelines passed to both co-ordinators, how important it was for the selection procedure to be undertaken on an impartial basis (see boxed section of Appendix 2). This was important in order to recruit a cross section of the population of interest within the parish. It is not possible to clarify how broad a cross section the chosen participants represented. Nonetheless a wide spread in the ages of the participants was obtained with the youngest 14 years of age and the eldest 76 years of age. Of the 34 people who participated in the research 17 were female and 17 male, an equal split between genders. The researcher would conclude that the sample set was a fair representation of the parishes.

2. An objective of the focus group discussions was to acquire a better understanding of local pollution and congestion issues. It was determined that this would be best achieved by talking with a cross-section of the local population.

In order to make people aware of the topic under discussion a flyer entitled *Traffic Pollution and Congestion: What Are the Local Consequences* was passed to the co-ordinators for circulation in the parish (see Appendix 3). This flyer also identified the co-ordinator as the point of contact for further information on the time and location of the focus groups once finalised.

This flyer provided details of the topic to be discussed; i.e. the topic was not concealed from any potential participants prior to the discussions. Alerting participants to the topic prior to the meetings could result in contamination of some kind as it could lead to bias in the participants prior to the group meetings. The reasons for informing the participants about the topic prior to the meetings were two-fold:

- Firstly the co-ordinators expressed concern whether they would be able to recruit people to participate if they were unable to declare to prospective participants what the research was about.

- Secondly the request to participate was made on a voluntary basis, as there was no funds available to offer any kind of reimbursement to those attending. This was an area of concern to the author as incentives are a normal precursor for enticing adequate numbers of participants to focus groups. As a result exposing the topic was recognised as an inducement that would help to ensure adequate levels of participation within the groups.

4.3.1.2 Focus Group Discussions

Prior to commencement of the discussions, participants were informed that the data collected would be treated in confidence both during and after the research period. The focus group discussions took place in November 1996. Two focus group discussions were undertaken in each parish, i.e. four in total, lasting between ninety and one hundred and twenty minutes each.

The number of participants in each group is detailed in Table 4.1 below. Krueger (1994) and Malhotra (1996) submit that the venue for focus group discussions should be neutral in order to diminish any unforeseen outside influences. It was also important to locate a suitable venue that would enable easy access for the participants. Gerrards Cross provided the parish offices that were modern and warm. Hedgerley provided the local scouts hut for the first meeting and the parish hall for the second meeting. There was a nominal charge for the use of the scouts hut that was kindly funded from Hedgerley Parish funds.

	Hedgerley	**Gerrards Cross**
Focus Group No.1	9	10
Focus Group No. 2	6	9

***Table 4.1** Number of Participants in each Focus Group*

Altogether the venues were more than adequate. Light refreshments were offered to the participants as they arrived. This facilitated the opportunity for the moderator to meet each participant briefly and to make him or her feel relaxed in the setting. This also allowed a degree of 'small talk' that acted as an icebreaker before the discussions actually began.

Throughout the literature on focus groups there is emphasis placed on the role of the moderator, i.e. the interviewer or facilitator guiding the discussion (Chisnall 1992, Kruger 1994, Malhotra 1996, Churchill 1995). If the moderator does not fulfil his or her obligation properly then there is a possibility the results obtained will be weakened or they could even be fundamentally flawed. Mariampolksi (1984) emphasises the role of the moderator by stating:

> '*The nub of qualitative research and its claim to validity lies in the intense involvement between researcher and subject. Because the moderator can challenge and probe for the most truthful responses, supporters claim qualitative*

research can yield a more in-depth analysis than that produced by formal quantitative methods' (p. 21).

This was the first occasion that the author had undertaken the role of moderator. In preparation for this role an informal topic guide and script was developed (see Appendix 4). This allowed the moderator a degree of comfort while maintaining the flow of the discussions as the moderator could make use of the script at any time to facilitate continuity in the discussions. The obligation of the moderator to participate, yet remain neutral, can be difficult especially when points are raised in which the moderator may have a particular interest. There is also the concern of maintaining the momentum of the discussion while trying to keep brief notes and ensuring the tape-recorder is working. It is recommended to have the assistance of a second researcher who can perform certain tasks, such as note taking, in the background. This is not a requirement and it was not possible for the duration of this research.

4.3.2 Phase 2: Overview

It was considered that Phase 1 would enable the study to collect an invaluable amount of information regarding local transport and pollution concerns from among representative of the general population within the parishes. Gathering this information would provide the researcher with a detailed understanding of these concerns and associated issues. Prior to the focus group discussions there was negligible data to hand that highlighted any of the local concerns.

The primary objective of Phase 2 was to advance this knowledge further by securing more in-depth information of individual travel behaviour from directly inside a number of households. This segment of the research was intended to be a continuation of Phase 1 but endeavoured to transfer or relocate the research instrument inside the household for a short period of time.

4.3.2.1 Design of Research Instrument

There was a requirement to develop a research instrument for Phase 2 that would enable the respondents to easily document their travel behaviour. The design of this instrument

was critical, as the research required each household to maintain detailed entries of their travel behaviour. The research also requested the respondents to provide feedback on any change that they detected in their travel behaviour during the course of Phase 2.

In the early stages of designing the research instrument, meetings were arranged with the parish co-ordinators to consider what information could realistically be gathered from the respondents. The two co-ordinators were also acting in the capacity of respondents as they had both participated in the focus group discussions. Their input into the design of the research instrument for Phase 2 was invaluable.

The researcher met with the co-ordinators in the parishes and openly discussed possible formats for the research instrument. These discussions were greatly enhanced by the co-ordinators knowing the participants and, to some extent, knowing how far the participants could be pushed to stay engaged. Many different shapes of instruments were considered such as weekly meetings held in each parish or a form of weekly survey that could have been conducted by telephone. 'These instruments were discouraged on the basis that there was some doubt whether participants would facilitate such weekly intrusions over an extended period of time.

It was eventually agreed that a suitable research instrument for Phase 2 would be in the form of a '*diary*'. This, it was considered, would allow the participants enough flexibility to maintain an interest but yet not make too many demands on their time. It was important to keep in mind that households could drop out at any time and there needed to be an element of caution in the design of the instrument in order to minimise any dropouts. A suitable and workable layout for the diary was agreed and was piloted with the co-ordinators on a separate occasion before it was printed off for general distribution.

As this instrument was being considered the researcher visited with a number of organisations actively using social marketing campaign material at the time. Representatives from Essex County Council, Buckinghamshire County Council and South Bucks District Council were all met and informal discussions were held on the topic. It was also during these meetings that the message appeals were collected for use in Phase 2 of the programme.

4.3.2.2 Diary Survey

This approach to data collection originated through work undertaken by Brunswick (1944) who devised what became known as '*representative design*', a method that sampled the perception of individuals as they moved within their typical environment. It required the subject of research to be followed closely by the researcher during the period of observation. At predetermined times the subject was asked what their perception was of some feature in the surrounding environment. This was recorded either as audio or as written text and an attempt was made to minimise outside influences. Nonetheless the one-to-one ratio, of researcher to subject, required to administer this technique made it unattractive to consider for widespread use.

Over an extended period of time and through continuous modifications a form of diary survey emerged to facilitate similar settings for data collection. The method operated on the same principle as that of representative design but was self-completing, i.e. the responsibility for the completion of the diary lay with the respondents themselves. This method, while more open to misinterpretation by respondents due to the self-reporting nature of the research, was a positive development. However once the diaries are distributed few controls can be applied and this can lead to high incidences of feedback errors. Foote and Mayertoh (1962) maintain that if the structure of the diary is sufficiently simplified then it can be made to work successfully. It was with this in mind that efforts were made to shape the diary so that it was easy to follow and simple to complete for the respondents in this programme of research.

Diaries have the additional benefit of being able to record details about a specific behaviour at any given time in the day. This is one of their biggest advantages as they can record behaviour which is frequently repeated and which is unsuitable for recording in one-off questionnaire surveys. This was also a major justification for selecting the diary panel method of data collection for Phase 2 of this research programme.

Diary surveys however are not widely used for a number of reasons. These include the time it takes to gather the data and the cost of running such research programmes over extended periods of time. Kent (1993), in considering the overall layout of the diary,

refers to potential difficulties that can occur and that should be borne in mind at the design stage. Listed below are a number of these difficulties that could be encountered in this research:

- The diary-keeper forgets to enter details of a particular journey immediately after use. A certain amount of confusion may occur if the entry is made after an extended period of time.
- The diary is deliberately falsified by providing information that is not a true record of the journey
- The format of the diary confuses the respondents and entries are made that may not be wholly applicable to the topic of research

A total of twenty-four households agreed to partake in Phase 2 of the research programme and these were drawn from the original sample of thirty-four that had participated in Phase 1. At the start of Phase 2 it was required to meet with all the representatives from each of the households. This was necessary in order to explain what was entailed in Phase 2 and to pass over the research material, i.e. the diary and message appeals, required to participate. These meetings were held locally and those participants who could not attend were visited in their homes at a time convenient to them. A detailed description of the material passed to all the households is now provided along with a reference to the appendices.

4.3.2.3 Composition of Diary

In order to simplify the use of the diary it was considered appropriate to break the structure of the diary into three sections. This would encourage better completion rates among respondents whilst also enabling different kinds of information to be gathered from each section.

Section 1

The first section consisted of a short questionnaire requesting background details on the make-up of each household (see appendix 5). This questionnaire was to be completed at

the very beginning of Phase 2 when the respondents met with the researcher. The questionnaire took the form of a double-sided A4 page. On the front page eight questions, numbers 1 through 8, were formulated requesting information on the composition of each household. "*How many people are there in your household*?" and "*How many cars are there in your household*?" are two of the actual questions asked. This information would help the researcher develop an overview of each household.

On the second page was a detailed question, number 9, which sought the attitudes of the households on one particular issue. This question required the respondents to consider what actions they would deem appropriate for government to take in addressing the persistent use of private transport. A number of alternative policy actions were offered in the question and many of these were mentioned at some stage in the focus group discussions. The Likert scale, an attitude rating scale, was adopted for measuring the responses to this question. This scale allows respondents to indicate a level of attitude by checking how strongly they agree or disagree with carefully constructed statements. The statements included proposed action by government in the area of increased taxation, increased expenditure on public transport, further investment in 'clean technology', and greater penalties for those who pollute. Each respondent had to choose from five response alternatives: *very good idea, quite a good idea, neither a good nor a bad idea, not a very good idea,* and *a bad idea.*

Section 2

The first step in this section was for the respondents to fill out a one-week diary (see Appendix 6) cataloguing their typical travel journeys for the household. This was inserted in order to concentrate the minds of the households on their existing pattern of travel behaviour. At the design stage it was considered that if the households became more aware of their typical weekly journeys then they might be more disposed to alter them in the following weeks. This part of the diary also encouraged respondents to consider and report on alternative modes of transport that could have been adopted for these same weekly journeys.

The next step comprised of the main part of the diary (see Appendix 7) and was concerned with determining cause-and-effect relationships between a mode of transport

and the rationale for that specific modal choice. It was necessary for this part of the diary to be A3 in size as this would allow the respondents the space to expand on their thoughts. The diary was divided into three separate time periods and in each of these periods the household was required to open a sealed envelope that contained a message appeal.

The message appeals were deliberately chosen to represent the different media through whom the public was being targeted at that time. The agencies, i.e. the organisations that printed and authorised the use of these appeals, stated that the appeals were actively in use in locations across the United Kingdom and confirmed that they were to the forefront of current public information campaigns, i.e. in the early part of 1997. The objective of these campaigns was to raise awareness among the public of alternative modes of transport to private transport.

Sealed envelopes were supplied with the diary to each household and each envelope was labelled as follows:

- *Message Appeal Number 1*
- *Message Appeal Number 2*
- *Message Appeal Number 3*

Aligned to this part of the diary was an explicit request to each respondent representing the household. When the household opened a sealed envelope and viewed the message appeal contained therein, they were invited to comment to what extent the message appeal persuaded them to alter their travel behaviour at that time. If the comments were positive then the households were to proceed with undertaking the journeys. If the comments were negative to the extent that the message appeal had little or no effect, the household was still required to undertake three journeys without adopting private transport within a week. It was critical for the success of the research that the households experienced other modes of transport not normally viewed as everyday choices. Based on these direct experiences the respondents were encouraged to develop their thoughts and insights as written text in their diaries.

Each of the marked envelopes contained a different message appeal, one contained environmental literature, the second a professionally produced video and a third a number of posters. A detailed description of each message appeal now follows.

Message Appeal No. 1

Two versions (see Appendix 8) of this appeal were distributed in the envelope to the households, one aimed at promoting the annual '*Don't Choke Britain' (DCB)* campaign and the second published by *Friends of the Earth* (*FoE*).

Don't Choke Britain is a public awareness campaign that runs every year through June and over 300 local authorities take part in the 'month of action'. The campaign is also supported by a number of different organisations across the UK and for 1997 these included, amongst others, the Local Government Association, London Transport, British Chambers of Commerce, Dept. of Environment & Transport, Department of Health, TravelWise, and Transport 2000. The '*Don't Choke Britain 1997'* campaign had a simple aim: less traffic congestion and less pollution, particularly in the cities. It carried the following message:

> '*Don't Choke Britain 1997 has simple aims: less traffic congestion and less pollution, particularly in our cities. Anyone can take part, very simply, by giving your car a holiday. Don't Choke Britain invites you to find another way of getting around on at least one day a week during June. Take a bus or train, walk or cycle, or share a car – everyone can do it!'*

As part of this campaign, literature was produced and one such leaflet was incorporated into the research. This leaflet contained statistics about existing levels of car and road usage along with advice on what action could be considered to reduce effects of pollution. However its main message was to encourage participation in any one of the programmed events scheduled for June 1997 and thereafter to consider maintaining the resultant change in travel behaviour.

Examples of programmed events included:

- ***National Bike Week:*** June 7th to June 15th 1997
- ***Green Transport Week:*** June 14th to June 20th 1997

  (Includes Car Free Day on the 17th June)
- ***Walk to School Week***: June 16th to June 20th 1997

The second leaflet published by the *FoE* in 1996 was entitled '*Cars Cost the Earth*' and was produced as part of the *FoE's* 25 years celebration. It was 20 pages in length and more detailed than the *DCB* leaflet described above. However the *FoE* leaflet differs in that it is stand-alone, i.e. it does not form part of or support any other event in the *FoE* calendar. The principal message it conveys is '*It is time to rethink the way we travel, to reduce the number of cars on the road and to improve facilities for alternative ways of getting about such as walking, cycling and public transport*'. The remainder of the leaflet provides statistics and discusses topics such as '*the race for space*' or 'cars *are bad for your health'* or '*wild places under threat*'.

Message Appeal No. 2

This appeal consists of a video (see Appendix 9) entitled '*There is Another Way: TravelWise*' which was produced in 1995 by Buckinghamshire County Council and is presented by the comedian, Bill Oddie. The video lasts approximately ten minutes and looks at traffic problems in the county of Buckinghamshire. Advice is provided on how to adopt a friendlier environmental mode of transport behaviour. Most of the video was filmed in locations across Buckinghamshire and this was considered beneficial if respondents, when viewing the video, identified locations that they were familiar with. This would further help in reinforcing the content of the message. This video formed part of the Buckinghamshire TravelWise awareness campaign that supports new policies initiatives on transport in the county.

Message Appeal No. 3

The final appeal took the form of a poster (see Appendix 10). A random selection of two posters from a total of four was chosen for each household. Each poster depicts a different theme and graphical imagery, in all cases photography, is used to emphasise or support the message content. The wording used in each of these posters is provided below.

Poster 1: ***Mummy, Why Do the School Run When We Can WALK?***

50% of all car journeys are less than 2 miles

Poster 2: ***Daddy, What Did You Do In the War Against POLLUTION?***

Cut car use, cut car pollution

Poster 3: ***Get Home With Your Eyes Closed*** (take the train)

Cut car use, cut car pollution

Poster 4: ***When You Leave Your Car At Home, You Can Really Motor*** (by bike)

Cut car use, cut car pollution

These posters were designed by Essex County Council as part of their TravelWise public information programme and were widely displayed on buses throughout the County.

Section 3

A number of participants agreed to meet together when they returned their completed diary material. A total of eleven people participated in two sessions, one each in Hedgerley and Gerrards Cross. The turnout at these meetings was below that of the previous discussions but this was anticipated. The research was ten months old at this stage and it was evident that some households were content to see the programme coming to an end. These discussions were recorded for transcription.

The discussions took the shape of reviewing Phase 2 and they allowed the participants the scope to expand or develop common themes that emerged in the completed diaries. The discussions were structured, unlike the focus group discussions, under a number of headings that the moderator had devised. These headings could best be summarised as follows:

- *Problems Encountered During the Research Period*
- *Analysis of panel discussions*
- *An Overview of the Response to the Message Appeals:*

No. 1: Leaflets

No. 2: 'South Buckinghamshire Travel' Video

No. 3: Posters

- *Did the experience encourage new travel behaviour?*

Each one of these headings was opened up for further discussion during the meetings.

4.4 Research Timetable

It was accepted at a very early stage of the programme that the research would be best divided into two phases, Phase 1 for the focus groups and Phase 2 for the diary panels. The timetabling of the focus groups did not cause any difficulties as the participants were flexible. Accordingly the focus groups were scheduled to take place on selected dates in November 1996.

	Methodology	*Timetable*
Phase 1	Focus Group Discussions	November 1996
Phase 2	Diary Panel Survey	July to Sept 1997

Table 4.2. **Research Timetable**

The execution of the diary panel research was more difficult to timetable due to the complexity of conducting research over an extended period of time. Careful attention had to be paid to the format of Phase 2. It was considered that if the format were simple to comply with then there would be less chance of any households withdrawing from the programme. It was acknowledged that some households would likely withdraw at some stage from further participation in the programme. However it was imperative at the design stage to focus on this concern and to do everything possible to minimise the chance of any such withdrawals. A flexible timetable would play an important part in helping to achieve this objective.

Therefore, in order to encourage better continuation rates among the participating households, an extended period-of-time was proposed for Phase 2. It was decided that a ten-week period would be made available by which time the diary survey should be

completed by all of the households. This period was to begin on the 1st July 1997 and to end on the 14th September 1997. To comply with the research objectives each household was required to record approximately four weeks of travel behaviour from the ten-week period. The four weeks of recorded material were made up of the one-week diary of typical travel behaviour recorded at the very beginning followed by any three weeks of subsequent travel behaviour recorded in association with the three message appeals.

This notion of offering an extended period of time from which to undertake the research was considered advantageous for the households. This flexibility enabled families to better plan their participation as, for example, some may be taking holidays during the period. It was therefore simple for them to block out unsuitable weeks yet still have the freedom to complete the research at a later date. It was agreed that the collection of the diary material would take place in mid-September 1997 and two dates were arranged for the respondents to gather at the parish offices. It was at these two meetings that the post-diary discussions would take place.

4.5 Data Analysis

A review of the data collected in both phases is presented in Chapters 5 and 6 and an analysis of the data is summarised in Chapter 7. The presentation of qualitative data can be undertaken in a number of ways. The data was gathered in an attempt to comprehend different events in the understanding of people's attitude and behaviour towards public and private transport. Therefore a discursive approach to reviewing the data will be adopted.

However it may be prudent for new researchers in the area of qualitative analysis to adopt, or even use as guidance, some form of analytical framework or model through which they can conduct the analysis. As mentioned earlier in this chapter there is no mechanical process available that allows this to be a simple undertaking. This author adopted the '*framework*' concept (Ritchie & Spencer 1994) for this research programme. This is an analytical process that involves a number of distinct though highly interconnected stages. It was developed for use with 'applied' qualitative research through its requirements to meet specific information needs and its potential for

actionable outcomes. The five key stages to qualitative data analysis involved in the 'Framework' concept are:

Familiarisation
Identifying a thematic framework
Indexing
Charting
Mapping and interpretation

These five stages can act as a pathway for the analyst to refer to during the ongoing analysis of the data. Constantly working and reworking the data by sorting, sifting and charting will enable the analyst to be creative and imaginative yet still maintain control of the material. These stages can be presented in a number of different ways and include familiarisation, cataloguing, conceptualisation and linkages amongst others.

Ritchie & Spencer (1994) remark:

> *'---although systematic and disciplined, it (the 'framework') relies on the creative and conceptual ability of the analyst to determine meaning, salience and connections. Real leaps in analytical thinking often involve both jumping ahead and returning to rework earlier ideas' (p.177).*

Green (1998) describes how methods of evaluation are nearly always adapted based on the audience the research is aimed at and states:

> *'Different evaluation methodologies are expressly oriented around the information needs of different audiences, from the macro programme and cost effectiveness questions of policy makers to the micro questions of meaning for individual participants' (p.375).*

4.5.1 Description of Methodology

The following is a practical description of the framework approach that was conducted over the course of Phase 1 and 2 of the programme.

Phase 1

Once the focus group were completed the cassette tapes were handed over to a professional transcriber who converted the narrative to text. As each focus group was completed in turn the researcher took the opportunity of listening to the tapes in order to become familiar with the setting and the atmosphere. Between the home, office and car the tapes were played numerous times. This was an invaluable exercise prior to receiving the transcripts as it helped to get a feel of the issues as well as an understanding of the individuals involved in the group. After each of the focus groups notes were also compiled detailing some of the main events of the evening as well as a full table layout of where everybody sat.

Once the written transcripts had been received a period of about six weeks was allowed to peruse the text with the tapes running and where necessary changes were made to the transcripts. This was necessary at times when it became difficult for the transcriber to interpret events from the tape. And yet it was obvious what had occurred if one had been present. Another problem that occurred and required some corrections were errors of name association, i.e. the wrong person named for saying something. Again this was easy for the researcher to correct. This was the only difficulty for the person transcribing the tapes.

When the researcher was familiar enough with the tapes and text, it was decided to begin scrutinising the text in detail and begin to identify a thematic framework. This was undertaken using a colour-coding system as a form of indexing. In each focus group themes were identified and traced by marking the conversation with the same colour throughout the body of the text. This was a very efficient means of scrutinising the text, as it was easy to make connections and offer up specifics in support of common themes.

Overall the initial run at this work took between six and nine months. It was then necessary to design the research method for Phase 2 and it was important to take into account the early information that had been gleaned from the focus group.

Phase 2

This phase began by collecting a small questionnaire completed by each of the participants. This questionnaire was designed to provide statistical data on the make up of the households, helping the research present a better picture of the research area. This information was of value in attempting to visualise the daily life of the participants in both parishes.

When the diaries were collected informal focus groups were conducted with participants that decided to attend that evening. Tapes from these focus groups were transcribed as in Phase 1 and put into hard copy. They were then analysed in tandem with the diary material as these discussions were primarily about the participants experiences when they were completing the diaries. The diaries were also examined in detail to try and ascertain the nuances between family members when making certain journeys. They were also scrutinised to try and uncover what the reaction was when a specific message appeal was opened in front of all the family members. As previously explained, the diary instrument comes with limitations on how much information can be assembled from given situations. As they are self-reporting one is restricted to the information that the participants are prepared to provide. No other controls are possible.

Once this material was exhaustively examined the results of the diary panel material were manually cross-checked with the data acquired from the focus groups. It was at this time that the author began to chart out and map the story lines that existed between the focus groups and the diaries. This was also an important step as it provided the researcher with the opportunity to look at what somebody may have said in the focus group and see then how they may have acted in the diary panel.

On an ongoing basis for the past two years this material has been revisited time and time again. Whether it was to check a name or whether to confirm another link in the notes,

the availability of such a rich amount of research data has made this thesis an interesting work to complete.

4.6 Summary

In summary the research methodology selected for this work, as with every piece of research, is open to question. Withstanding elements of doubt nagging at the back of the researcher's mind, the methodology was formatted and adopted for the field. As Dey (1993) states:

> *'Data are not 'out there' waiting to be collected, like so many rubbish bags on the pavement. For a start, they have to be noticed by the researcher and treated as data for the purposes of his or her research. 'Collecting' data always involves selecting data, and the techniques of data collection and transcription (through notes, tapes, recordings or whatever) will affect what finally constitutes 'data' for the purposes of research' (p15).*

It was with this in mind that the two-phase approach was adopted with the consideration that it would offer the best results. Now it was time for the researcher to take the methodology to the participants, exploring all avenues for data that would assist in better understanding the issues of transport behaviour.

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CHAPTER 5

PUBLIC PERCEPTIONS AND ATTITUDES:

PHASE 1: FOCUS GROUPS

5.0 Introduction

What are the everyday issues that confront people when undertaking journeys and how do these issues relate to problems of traffic congestion and pollution? Also how do people perceive such problems in relation to their everyday lives? For instance do they associate travel behaviour with any factors that help to cause such problems? And finally do people view their individual travel behaviour as contributing to the problems? These are just a few of the questions considered in this chapter. The focus group data is scrutinised in order to help position these issues within the cognitive framework of the individual and that of the community inside which he or she resides.

5.1 The Participants and the Parishes

Before these issues are reviewed it is appropriate to summarise the degree of attachment participants felt for their respective parish, or the lack of it, as the case may be. This is important because throughout the discussions there seemed to be in place a very strong bond between the participants, as residents, and their respective parishes. Such insights can enable the reader obtain a better picture of the research setting where the participants lived and travelled in and out of as part of their daily lives.

Throughout the discussions the participants disclosed many examples of fondness for the parish and the surrounding locality. This topic was initially prompted because of the opening question that the moderator posed to each individual in the focus groups. The purpose of this question was to allow the participants to settle in easily to the surroundings of the group discussion.

The question stated:

Moderator: *Could we begin the discussions by asking everyone to tell us one good and one bad thing about living in your parish?*

The responses offered in reply to this question were very complimentary of both parishes and included:

Gladys (F65/h): *Countryside and scenery, walks. Pleasant area. Nothing really bad.*

Judith (F60/gx): *Very happy to live in Gerrards Cross. Very convenient and no major complaint at the moment.*

Katherine (F35/gx): *Good things are a lot of green spaces and trees.*

Dawn (F37/h): *Lots of good things about it. Nearness to open space, easy to reach country or other towns.*

Caroline (F16/gx): *Area is very nice to live in and get to know people in the area through lots of activities.*

It is obvious that the participants enjoyed living in this location and yet it was unexpected to receive such a small amount of negative feedback about the area. Some of the participants went so far as to express sorrow for those outsiders whom they believed could not afford to purchase a property in the area. Nonetheless it was noticeable that the older participants expressed a greater degree of fondness for the area.

The younger participants, those mainly in the 14 to 25 year old age range, voiced a desire to socialise outside the parish or, in some cases, to move away from the area altogether. Some of the these comments included:

Rachael (F16/h): *My friends do not come here (Hedgerley) as half of them do not know this place exists.*

Giles (M26/h): *Best and worst thing about it is being a small village, very intimate, but all my friends and myself have itchy feet for the bright lights. Even though they have all travelled away they promise to return.*

The area, Hedgerley in particular, is too quiet as it has no social life for them. It is also too cut off from the nearby locations that have any kind of nightlife. Families with children, the middle aged and the elderly, roughly classified from 26 to 75 years of age, hold the opposite view. They were extremely happy and content to live in the parish and expressed no desire to move whatsoever. They commented as follows:

> Jim (M75/h): *Lovely village (Hedgerley) and even though I was brought up as a Scot I would not go back to Scotland'*
>
> Linda (F41/h)*: Lovely place to live, see rabbits!*

Overall the participants confirmed that both parishes were considered good locations to reside in. No serious problems were raised with either parish and many of the participants genuinely struggled to recount anything that they disliked about the area. The author of this work was struck by the level of commitment to the area as expressed by the participants during visits to the parishes. However this feeling may only exist among the small number of people participating in the research and it may not be the view held by the majority of the people living in the parishes.

5.2 An Investigation of the Topics

Once the opening question had been posed the focus group discussions proceeded in a semi-structured fashion. The discussions lasted between ninety minutes and one hundred and twenty minutes each and the participants were encouraged to discuss whatever topic they thought appropriate to the theme of the research. Each of the parishes raised topics specific to their locality and while clear differences arose among the participants, there were also a number of issues on which there was considerable consensus. These areas of disagreement and consensus are of primary importance to the research.

5.2.1 Public Transport:

Even though public transport was not widely adopted by the participants the topic still generated a great deal of interest during the group discussions. An early point that became evident in the discussions was the different uses that participants made of the bus

and train service. The bus service was primarily used for short local trips and, in many cases, such trips were to the local train stations at Gerrards Cross and Slough. The train service meanwhile was identified more as an intermediary or long haul mode of transport with the most frequent destination mentioned by participants being London. Gerrards Cross participants have immediate access to both the bus and train service, i.e. they are within walking distance for all concerned. Whereas the bus service is the only form of pubic transport that services the residents of Hedgerley.

Many of the participants regarded public transport as a public facility and as a result considered that the service should be easily available to the public at a cost deemed reasonable. They put forward in the discussions that this was no longer the case and that the present situation had left them somewhat isolated in their communities and unable to travel freely without access to private transport.

In the discussions it was primarily the bus services that came in for heavy criticism. The train service did not receive significant airtime and this may be because the majority of the participants only made occasionally use of the train service and that was normally into London.

One of the first stories to stand out when reviewing the transcripts is recounted by John when he describes his family's efforts to utilise the bus service for an everyday journey and he recalls:

> John (M59/gx): *My experience of buses. When my daughter took her A levels I was determined not to get her a car and that she should use public transport because if you don't use it, it will die out. We live quite close to a bus stop and she works in the Bank. Each morning she would catch the bus to the Bank. If the bus driver felt like turning up, he would; if not, he would come up from Chalfont St. Peter round the top here and down missing out Gerrards Cross completely because he was late. This is a young girl in her first job relying on the bus and wanting to make an impression and do the right thing. Eventually I was forced to buy her a car because of the buses being unreliable. That was my only experience*

with buses. I don't use them nor do I agree with cars. I walk. After six weeks she either got the sack or bought the car'.

This event covers many of the issues raised regarding the bus service. Perhaps one of the most important is the issue associated with timetabling and whether the buses would either run to the scheduled timetable or even run at all. This was the issue that received the most commentary when discussing the bus service and it seemed to discourage many of the participants from using the service as a result. Another participant seems to go further with his criticism:

John L (M65/h) '*Not being hypocritical but I do love public transport and I would love to have a bus service that you could rely on. If I knew at half-past-ten, at whatever bus stop, that I could stand and get on a bus I would do so. It amazes me, I am not dependent on buses, but for those who are with those little timetables I don't know how they manage. People who run bus services must need their heads examining. They do everything to discourage people being able to use a bus, partly because they do not run the buses on time. If they have a big glass board on a bus stop but taking up about that space of the board (identifying a small space) is a little timetable with such small print that even with my glasses on I cannot read it. And not only is it in such small print but it is so difficult to interpret. Why don't they have on bus stops: buses from here go to x, y, and z in great big print every so often'.*

This description of the problems experienced at the bus stop was not unusual in the discussions. However the participants still expresses a willingness to use the service if only it could be enhanced to guarantee a better service than what is presently available.

One clear consequence of this lack of reliability is the mention of the Tracy Trust bus service. This is a private bus arrangement that was set up by a legacy from the Tracy family to Hedgerley Village. It is charged with providing a weekly transport for senior citizens to and from the village. Presently the Tracy Trust arranges for two buses a week to depart Hedgerley on a Tuesday and Friday at 10.00am. The buses normally travel to Slough but on alternative Fridays travel to Uxbridge. They allow passengers up to three hours shopping on each trip. While this type of arrangement is enjoyed by the senior

citizens it must in some way undermine the number of passengers travelling on the public bus service. It would be only reasonable to therefore assume that this private service could affect the profitability of the public service provided by the bus company.

The younger participants, those under 17 years of age and not eligible to drive, tended to criticise the Bus Companies inability to comply with the timetable as well and this was supported by many of the other participants. It was common they said for the management of the bus companies, or the drivers themselves, to remove scheduled buses from the timetable without any prior warning. Such actions taking without due consideration for the passengers can only lead to further decline of the services due to diminishing demand.

It was also noticeable in the discussions how unaware participants were of the routes on offer from the local bus service. Aligned to this some of the participants seemed to have difficulty understanding how they could make use of the bus as a mode of travel. A case in point is the comment made by Beryl who, while she admits she does not use public transport, is of the opinion that there should be a better bus service. However, even if there was a better service, she is unsure whether she would make use of it. Her comments went as follows:

> Beryl (F60/h): *I think I would like a better bus service but I am not convinced that I would use it. But I think the theory is there should be a better bus service. It is not reliable it is expensive.*
> Giles (M26/h): *Infrequent is a good word for it.*
> Moderator: *Is that service to Slough?*
> Beryl (F60/h): *Yes. I think that is the first place to go so you can get to the train.*

Beryl seems to be somewhat confused. She believes there should be a better bus service than the one that is presently provided. However she then stumbles and qualifies the remark by confirming '*but I am not convinced that I would use it*'. An assumption could be drawn from this that no matter how good the bus service becomes there is no guarantee that the private transport user will automatically consider switching to forms of public transport.

If this assumption is taken further then the onus will always be directly on the bus companies to improve their standard of service in the face of criticism from members of the public. However these same members of the public, as represented by the participants, readily admit that no matter how good the bus service becomes, they still have the right to continue using private transport. Is the poor quality of the public transport system the real reason for non-use? Or could it be that private transport is the only choice they are prepared to consider but have difficulty in admitting it. There is a sense of doubt with Beryl's argument that she is ever likely to adopt public transport over that of her existing private transport arrangements, regardless of how much the bus service is improved.

Malcolm, who does not drive and only uses public transport, summarises this lack of familiarity very well and his comments go as follows:

> Malcolm (M45/gx): *Getting round London is generally pretty easy. Places like Harrow are pretty grim. Rural public transport here (in Gerrards Cross) is not good. It possibly is less bad than one actually thinks. The trouble is in a sense that car drivers and non-car users, I suspect both, tend to ignore buses. For example if I were to go to Bletchley I would naturally go through London by rail whereas it is possible to get to Bletchley from here by bus. But it would not occur to me to even check the timetable for that because it is much easier to do it by rail. So that one ignores the fact that the bus service is less bad than it first appears. Having said that it is still not good and particularly bad in the evenings. It must be really bad for younger people.*

Malcolm states clearly that the choice of the bus service is not positively placed in the decision framework of individuals' when choosing a mode of transport. In the example quoted above Malcolm, a seasoned public transport user, does not even consider the bus for the journey to Bletchley (from Gerrards Cross). His modal choice for the journey was to adopt the train service primarily because of his knowledge of the services available. The train was considered preferable even though the bus service may have taken a more direct route and may have been possibly cheaper. However Malcolm is unaware of the

bus schedules and seems somewhat confused of where he could locate this information easily. It would also be fair to surmise that if Malcolm were a car owner then it is most likely that the car would have been his selected mode of transport for the journey to Bletchley.

But Malcolm pinpoints the core of the issue when he states, '*It possibly is less bad than one actually thinks*'. He reinforces this with '*So that one ignores the fact that the bus service is less bad than it first appears*'. What exactly does he mean by this? Is he saying that the bus service is a much better service than we are led to believe? What Malcolm seems to be emphasising here is that the bus service, whilst recognising it has problems, still does provide a daily service to thousands of commuters across the UK. Nonetheless it is difficult to explain in this research how such a poor perception of public transport was constructed among the participants. The focus group discussions presented numerous examples however of the bus service being criticised by everyday users.

It was interesting to note how these views were reinforced by participants who did not possess first hand information about the service, i.e. their comments were based on past experiences or on second hand information such as accounts from other people who use public transport. How much emphasis should be given over to such views in the research? Are they of any more value than those direct accounts presented by seasoned public transport users? It must be assumed that these views are important, as it is not possible to discriminate between people's thoughts on public transport based on how recently they undertook a journey on the service. Their impressions could be well founded and be of further value when analysing the data.

Second hand criticisms of the bus service were observed emanating from a small number of the participants in the focus groups and whilst they expressed strong views regarding the bus service they could provide little, if any, direct experience of using it. Nevertheless the criticisms were presented in such a forceful manner that the moderator understood the impressions were based on occasional use of the service. This was not necessarily the case.

An example is provided during a discussion of the cost of the bus service:

David (M63/h): *What does it cost to get from here to Slough?*

Jim (M75/h): *£2.15 I think it is, single.*

Linda (F41/h): *My goodness.*

Mark (M17/h): *£4.30 return and you cannot get a return ticket.*

Jim (M75/h): *Yes, you cannot get a return.*

Mark (M17/h): *I have to catch the 8.00am bus to Slough for College and they won't let me get a return ticket. That is £4.30 a day there and back. I think that is wrong*

Moderator: *Can I ask what is the travelling time to Slough?*

Jim (M75/h): *About 20 to 25 minutes travelling time but only about 5 to 6 miles away.*

Mark, a 17-year-old student, who uses the service on a daily basis to get to college, provides the detail of the cost for the bus journey from Hedgerley to Slough. He also confirms the fact that you cannot purchase a return ticket on this route and is obviously very knowledgeable about the bus service. However none of the other participants are aware of the bus fare for the journey so it is reasonable to assume that they do not use the route or the service with any degree of regularity. Jim, an outspoken critic of the bus service throughout the discussions, when asked about the fare is indecisive and states a fare with uncertainty. The research noticed how hesitant Jim was in providing this answer which was unusual. Up to this point Jim has come across as very informed and knowledgeable of the problems with the bus service.

Shortly after the above comments were made Jim, in describing what is good and bad about the area, goes on to direct very sharp criticisms at the bus companies:

Jim (M75/h): *I know there is difficulty between 'bottom' and 'top' (referring to the bottom and top of the village) but unfortunately the bus companies rule the roost. I mean London Country came out here which they had no right to come out here as they put all the little buses off the road which used to run between Burnham and Slough and such like. Then London Country buses sold out to this*

so-called Beeline and all the others lines and they've just made codswallop of the whole set up. They just take things off.

The sixties and over age group are very fortunate because through the Tracy Trust we have two buses a week (Tuesday and Friday) to Slough for the pensioners. But that does not help our young friends really who haven't got a car and have got to try and use public transport, which I think is pretty dreadful. There has never been one for years now on a Sunday and there is none out on a Sunday. And the last bus into the village is at 7pm at night. The bus service is one of the big headaches. But it will never improve and in fact I think it will go the other way myself, personally. I think they will get fewer as they feel, you know, justified in running them. That is the way it goes.

Jim's criticisms seem to stem from when the buses were privatised. Local bus services were deregulated in October 1986 with the aim of promoting competition. One effect of the changes in ownership was that funding for 'cheap fares' policies pursued in some areas was no longer available, as most services were provided on a purely commercial basis after deregulation. It is conspicuous from Jim's comments that he begins his criticisms with '*the bus companies rule the roost*'.

This could be interpreted as direct criticisms of the control private bus companies have over the services they now provide. The participants were of the opinion that the privatised bus companies placed too much emphasis on the number of passengers travelling on each route in order to justify the continued operation of these routes. They suggested that previous bus operators, dating back to the 1970's and early 1980's when the buses were publicly owned, divided the priority more equally between the social responsibility of providing a transport service and that of making a reasonable return as defined by the government of the day. The participants were of the opinion that this priority had shifted significantly towards profitability since privatisation had taken place.

Jim does go on to briefly mention how *'London Country sold out to this so-called Beeline and all the other lines and they have just made a codswallop of the whole set up'*. He clearly disagrees with the way the bus companies operate the service into Hedgerley.

Katherine from Gerrards Cross, who briefly mentions the issue, supports this particular view by stating:

> Katherine (F35/gx): *Public transport has diminished. Since deregulation of buses I think it has diminished quite a lot.*

Nonetheless Jim's criticisms do not seem to be associated with recent experiences acquired from utilising the buses and he admits that he uses mostly private transport. It is acknowledged from data already gathered that the majority of participants have access to private transport and adopt it as their primary, in some cases as their sole, mode of transport. However the criticisms levelled at the bus service throughout the discussions were very strong indeed.

And yet it is not possible from the research data to present any detailed information on how these negative impressions of public transport came to be formed. It would have benefited the research overall if these particular attitudes or impressions could have been analysed in greater depth to help understand further the issues at play. But an understanding of their existence is critical as these impressions can be assumed to be deeply embedded in the cognitive framework of the individuals concerned. As a consequence they may not be easily influenced or modified.

5.2.2 Security and the Formation of Insecurities

Participants also identified security as a key determinant when considering public transport as a mode of travel. In many cases this concern for safety was mentioned in regard to other members of their immediate families, mostly females or children, who occasionally use public transport. However these expressions of concern had nothing to do with the direct use of the public transport itself. They were directed more at the potential for such incidents to occur while waiting at bus stops or, for example, during a walk home in the evening from the train station. At no point did the narrative refer in any way to dangers associated when actually travelling on public transport itself.

One of the first examples on this topic in the discussions was with reference to the sense of security around children and schools.

> Nan (F64/gx): *Yes I think security is an issue as with youngsters today you think twice before letting them walk to school with the things you hear happening.*
> Jonathan: (M35/gx) *Absolutely. When I went to Gayhurst School there was a footpath goes along the cutting by the main road and the boys used that morning and afternoon. Now that would be regarded as extremely dangerous because you don't know who is down there and there is nowhere to run. It is like walking down a road and being able to knock on someone's house and say that someone is following me.*

The concern about security is raised and the element of fear is amplified '*with the things you hear happening*'. This is expanded upon when it is described how the school is situated near the main road where '*you don't know who is down there and there is nowhere to run*'. This language can only instil fear and as a parent you are loathe to ignore such hidden warnings for the safety of your children.

Many of the comments made by female participants displayed a sense of vulnerability when they travelled alone and feared for their personal safety. Some examples were provided:

> Judith (F60/gx): *As for the security issue that of course changes. Indeed I have walked along Marsham Way in the middle of the day for a pint of milk and I haven't seen a soul from leaving my house. It takes 12 minutes to walk into the centre and I haven't seen a soul on the way back. Frankly if there had been any problem I would have been isolated.*

> Rosie (F14/gx): *With our age group there have been rapes on Marsham Way. I think that shook the people who lived around here. They couldn't believe it. Gerrards Cross would have been the last place they thought this could happen. So suddenly the idea of going to the cinema in the evening stopped and we went to the afternoon performance instead because of the walk home in the daylight.*

These two examples illustrate the concerns of female participants when walking to the village in daylight hours and yet have no direct connection with issues of public transport. Nonetheless such stories instil a degree of fear and can as a consequence reinforce the necessity for private transport as one means of providing security when travelling on short local journeys.

Later on in the discussions Judith provides us with a glimpse of why she expressed concern about shopping for a pint of milk in daylight hours by stating:

> Judith (F60/gx): *There is a security point especially in the evenings when things are getting dark. When our daughter was living at home 15 years ago she was attacked walking home in the twilight. That of course is one of the dilemmas because of the nature of the housing, there is usually a very long front garden, houses are a long way apart, street lighting is relatively poor. Neither my husband nor myself now would contemplate walking home from the station in the evenings. The morning is fine but not later in the evening.*

It is evident that this experience has made both Judith and her husband more aware of their personal security and wary of walking anywhere after sunset. The anonymity of the '*attacker*' is maintained as we are not told if anybody was caught for these offences. We are left thinking that the person who committed these crimes is '*out there*' and is still a danger to the public.

Desmond, in recounting another incident, expanded on this topic by identifying the type of individual who may be responsible for such attacks. He states:

> Desmond (M65/gx): *We chose Gerrards Cross because at that time I was travelling a lot and the access to Heathrow and London with the frequent train service and only 25 minutes to West End by car in evening for the theatre. As was said before cycling on the common is popular and I do it regularly. But I see where a man of 60 years was mugged on the common last week and had his wallet taken by some youths. There is always a number of youths on the common in the*

evening. Probably for the young people Gerrards Cross lacks an activity club. Entertainment for young people here is lacking.

He makes a connection between the mugging incident and '*wallet taken by some youths*'. He offers no explanation of his description of the assailants as '*some youths*'. What age were they? How were they dressed? We can only assume from his comments that the mugging was committed by '*some youths*'. But Desmond goes further by stating immediately that '*there is always a number of youths on the common in the evening*'. Now it is possible to believe that any youth on the common could be the attacker. Desmond goes even further by continuing '*Probably for the young people Gerrards Cross lacks an activity club*'. The '*youths*' suddenly have become '*young people*' and the assumption is that they are from Gerrards Cross as they are lacking an activity club. The anonymity of the attacker is still in place. Therefore it would be unwise not to contemplate any young person on the Common as a potential assailant at any time of the day.

The generation of fear or the creation of insecurity can also be connected with the comments previously made by Gemma when she stated '*-------there have been rapes on Marsham Way*'. The research was informed of one such attack in the past but it was implied that more might follow judging from the fact that the assailant was not apprehended.

Monitoring the theme of security is very important as it has a strong bearing on the way people consider various modes of transport. The narrative above provides examples of how people can construct insecurities. Thereafter vulnerable situations can be created in their own minds. Once these insecurities have been constructed people are deemed negligent if they do not follow a course of action that enables them to avoid the consequences. Jonathan qualifies this by stating:

Jonathan (M35/gx): *All sorts of things are different on a broader scale. The aspect of security and fear of strangers while in the 60's you would be out walking on the Common with friends. No fear of anyone attacking you on the*

Common. Coming home everyone had his or her backdoors unlocked and you could walk into somebody's house. Now that simply would never happen.

It is in the face of these insecurities, for both individuals and for members of their respective families, that participants began to introduce words such as "*artificial bubble*", "*isolation*", "*insular*" and "*capsule*", all of which could be constructed as denoting some form of retrenchment into smaller groups. Some of the participants are of the opinion that, due to a rise in the numbers of insecurities or threats, more families are retreating into their own space as they have better control of their surroundings. It is implied that an integral component required to enable this lifestyle flourish is the availability of private transport as the normal everyday mode of transport. A shift is identified in the positioning of the family and the car is confirmed as the adaptable artefact that facilitates this evolving lifestyle. What exactly does this mean? One interpretation could be that the motor car has become an everyday '*appliance*' that is enabling families to retreat more into their own space and yet, at same time, enabling the household to venture out to fulfil specific needs whenever required. The school run could be construed as an example of this as participants view it as quite recent in origin.

Malcolm develops this point most succinctly in quite a long extract from the discussions:

Nan (F604/gx): *What worries me is going by car all the time, these children who don't have any exercise at all. Those who don't go to aerobics or run around the football pitch. They are going to be very unfit.*
Malcolm (M45/gx): *It is part of a general tendency, which has been going on for some time, where people live in a sort of, it isn't, I mean it is real but people have seen it in the past as being an artificial bubble throughout. Which is one of the reasons why town and shopping streets and whatever generally look much tattier than they did in photographs of say about 1900. Because people actually have much better lives but the better lives are in safe, encapsulated places which they control, their homes, their cars, where they go for sport or whatever.*
And everything else, what we actually see from out of the window of the car or the train or the bus or whatever, actually becomes increasingly seedier and more

unpleasant in appearance and consequently more frightening. And people then stop using it even more and become even more encapsulated.
Whether that's actually a bad thing, other than pollution effects on people, is I mean I think it is a bad thing aesthetically and I don't drive either and it is a bad thing in the sense that if public transport declines it is bad for me. But in practical terms it probably makes life nicer for most people. We tend to see the past as being nicer as it looks nicer in pictures. But perhaps it was always invariably much worse. And being carried in a car, to someone, may seem anti-social and abnormal to us if we think of the way people lived in the past but it is probably, actually more pleasant than the way everything was, say, in the 1950s.
John (M59/gx): *Pleasant for whom, pleasant for the individual or for society as a whole?*
Malcolm (M45gx): *Pleasant for the individuals and possibly, I am arguing against myself here as I am not sure I believe this, possibly a less dangerous society than we think. I mean a lot of things that we would assume will happen, like more traffic leads to more accidents, in fact isn't necessarily the case. Much more people were killed by those cars in the 1930s than are now and there were fewer cars then and they drove at much greater speeds. Now cars move relatively slower and are much safer. The trouble is it causes pollution and marginalises the people who don't drive and it is hideously unaesthetic. It creates ugly towns and even ugly countryside. Whether, in practical terms, it is worse than what looked nicer but actually had higher fatalities.*
Katherine: (F35/gx) *I think it bad for society now because we are just isolating and we are encouraged to be in these little families isolated away from people. We don't interact with the larger members of society.*
Malcolm (M45/gx): *But you were just saying that you do interact because of cars and things. I agree with you but I think possibly that is a perception coming from a certain generation.*
Katherine (F35/gx): *Thankyou.*
John: (M59/gx) *I think Gerrards Cross is a particular difficult example because there is so much affluence here. I have lived here for 20 years and 2 months and I have worked in Woburn Green which is not a million miles away and which is a much poorer area. I have been there for six months and I know more people in*

Woburn Green in six months than I know here. Most of these people have been here and I know some of the faces but most of you I don't know. I do take part in things in Gerrards Cross. In Woburn Green people do tend to walk and take the buses. When you walk around Woburn Green they will talk to you. They don't talk to you because they know you but because that is the way they are. If you walk around Gerrards Cross most people won't talk to you because they are used to this car mentality and they are used to getting into their insular little capsules and going from place to place.

Malcolm introduces this segment nicely and develops a difficult theme very articulately. He proposes that while looking out from this artificial bubble one can surmise '*in practical terms it probably makes life nicer for most people*' not having to interface with those parts of life that you don't trust or have faith in. He suggests it is at this moment in time that you peer through the windows of whatever mode of transport is carrying you to view the scene in the distance. A greater sense of security is achieved by travelling in this '*artificial bubble*'.

Taking this situation to the extremes, this scene could be depicted as one driving through Gerrards Cross and looking out to see '*youths hanging around on the Common*' and the feeling of security associated with sitting in this '*artificial bubble*' known as the car. Or could this symbolism be applied even further by the parent participating in the school run with the child neatly wrapped up in the back seat of a Sport Utility Vehicle (SUV) looking out of the window.

John interrupts and asks a very pertinent question about whether this view, as seen from the bubble, is more pleasant for the individual or for society at large. Malcolm struggles to give a definite answer but eventually seems to side with the individual gaining more comfort than the surrounding society. In other words, whilst the family unit may be happier and feeling more secure in leading a more encapsulated lifestyle, society may become unhealthy and suffer as a result. Katherine rebuts this notion of comfort for the individual and the household and claims that it is bad for society if these '*little families isolated away from people*' are allowed to flourish without '*interact (ing) with the larger members of society*'.

John brings this segment to an end by drawing on a direct experience. When he worked in Woburn Green he claimed people in the village would '*talk to you*' and they tended *'to walk and take the bus*'. Whereas he is of the opinion that living in Gerrards Cross '*most people won't talk to you because they are used to this car mentality and they are used to getting into their insular little capsules and going from place to place'*. John is very critical throughout the discussion of what he sees as the excessive affluence evident in Gerrards Cross and is trying to provide supporting evidence for the notion that insularity of the family from the wider society does also occur in Gerrards Cross. How this form of isolation can be determined is not clearly evident in the research. John though adopts his own criteria by recounting how he has lived '*here (Gerrards Cross) for over 20 years'* and yet there are a lot of people he does not know even though he does '*take part in things in Gerrards Cross'*. He rests his case by looking around the room at his fellow participants and admitting '*I know some of the faces (here) but most of you I don't know'*. He finds this unacceptable having lived in Gerrards Cross for such a long period and offers this example as conclusive evidence to confirm his point.

The issue of security was raised in another context during the discussions regarding the long-term nature of environmental concerns. One of the participants likened the environmental problems to the view of a cliff edge in the distance and introduced it as follows:

> John L (M65/h): *I am always a pessimist but I feel it is okay at the moment. We are okay here but projecting it 10 or 20 years ahead, we are going to reach an untenable and impossible situation. It is like being a mile from the cliff edge, walking towards it. You have no worries. Maybe a quarter of a mile, no worries but as you go on getting nearer you have to alter course. I don't know how far we are from the cliff edge but we are going to go over it unless we do something.*

This segment is interesting for a number of reasons. Firstly many of the participants in the group agreed with this analogy and therefore, by implication, are accepting in some way, that environmental problems lie ahead which could have serious consequences. Secondly it is disclosed that there is no grasp whatsoever of how far into the future such

problems may occur. Nonetheless the participants seem somewhat convinced that such problems will not occur during their lifetime.

Later on the cliff edge is revisited and the journey to its edge is contrasted with the passing on of different generations. In other words the desired change in behaviour is so pronounced that many consider it to be up to the next generation to enact the change. The journey towards the cliff edge will then be slowed down dramatically.

However John L throws out this thought when he states: *I think the culture change is more difficult and you were saying it would have to be triggered by the visible appearance of the cliff. I don't think this is enough. I think we would happily walk over the cliff.* He believes it will take much more than simply waiting for the next generation to be born before the appropriate course of action will be taken. He considers the upcoming generations will be as demanding for access to private transport and it is too simplistic an approach to assume any differently. Nobody in the group comes up with a solution as they all agree the cliff edge gets nearer and nearer.

5.2.3 Class Structure and Mode of Transport

Malcolm introduces the consideration of class and suggests that this may influence the decision process when selecting a mode of transport. He considers that the insularity of the family could be closely linked to the emergence of a greater numbers of families striving to become middle-class. In this research Gerrards Cross is viewed as middle to upper-class and Hedgerley as middle-class from the composition of households living in the two parishes. The major factor that Malcolm puts forward for this growth in the middle-classes is the breakdown in existence of the local community structure. As Pat pitches in '*To a certain extent there is a level of community that is missing and that was there thirty years ago. I think there is less sense of community than when I first came here but it is latent'.*

Malcolm continues that the car allows people to travel further and to visit people they would not have been able to visit easily years ago. Whilst he does not get the opportunity

to expand upon his comments further he does stress that the car is only one of the factors associated with the growth of the middle-classes. His comments go as follows:

> Malcolm (M45/gx): *One might argue that although the cars exacerbate the problems associated with becoming more insular, it is actually true to say that that is part of the process of becoming middle-class. And people in Gerrards Cross naturally are or have become middle-class and generally people in the country are becoming progressively more middle-class. It is not just because of cars although that may well be part of it. It is also because middle-class people do not usually belong to communities. Usually their friends are those met at University or work with and come from a wide area. And so they tend to meet people at focal points.*
> *In a sense, in a much larger way, middle-class people are rather like very young people in Gerrards Cross now whose friends would come from a young persons perspective quite a long way away. And they would meet specially rather than a working class terraced community in 1890s where people actually walked round to each other next door or constantly met at the shops.*

Desmond stretches this argument further about the bus service as he contemplates the idea that there may be a subtle connection between the social structure of a household and the various modes of travel that the household chooses to adopt. He claims that the bus has a social stigma attached to it that would cause certain people not to use it in any circumstance. The narrative goes as follows:

> Desmond (M65/gx): *There is a social aspect to it, as well you know. The train is accepted to be something that a businessman will travel on. But a bus is not! Social pressure, yes. I have used the buses as a matter of fact and as Christine says you have got to look at the timing. I was doing an evening course in Amersham but I looked at the timing and was able to do it on the bus. Sometimes if I was going to Slough, or something like that you know, I would walk up here to Packhorse if I were getting the train from Slough to Reading. It is a matter of timing. There is the element of convenience as you have a certain amount of waiting time. Instead of a car where you leave 5 minutes late and get there nearly*

on time. I think there is a social aspect to it and I don't know whether other people would agree with that but the bus is very much down market.

AGREEMENT BY THE GROUP OF PARTICIPANTS

Sheila (F57/gx): *Here, yes but not in London.*

Desmond (M65/gx): *Yes not in London, I agree.*

Sheila (F57/gx): *Why should we dislike getting on the bus here. I never use a bus here, but I use the train all the time. But I use buses in London without thinking.*

Judith (F60/gx): *It is not so much that it is down market it is simply that it is a very poor service.*

Desmond clearly puts it to the group that the bus service, as a mode of transport, is down market. It is discernible on the audio tape that, whilst there is agreement with the statement, the response is slow in coming. This could be interpreted as reluctance on behalf of the participants to admit having such an opinion in a public forum.

Sheila follows this with a very interesting point. Why are people willing to catch a bus in London without a thought yet will shun doing so in Gerrards Cross? She posits that there is anonymity with whatever mode of transport you select in London and so one would be unconcerned with choosing a bus. However Gerrards Cross is small in comparison without the same feeling of anonymity and, based on Desmond's point, being recognised could deter local people from using the local bus service. The question is left unanswered by the group but it could be viewed as adding weight to Desmond's contention that certain modes of transport carry with them a social stigma. Judith nevertheless interjects because she believes that the bus service is not used, as it is simply not good enough. She objects that it has anything to do with social compliance and, upon reflection, she supports the view that if the bus service were improved there would be a corresponding increase in the number of Gerrards Cross residents making use of the service.

5.2.4 Congestion

The issue of congestion was raised without any sense of urgency. In fact Hedgerley village is '*congestion free*' judging from the comments of the group with one participant

going so far as to state '----*we don't know what traffic congestion is really. If we see a queue of five (cars) we think it is awful*'.

The congestion issue was raised also in the Gerrards Cross discussion groups where there are six schools in the locality. Congestion was identified as being particularly evident between the hours of 0830 to 0930 in the morning and 1530 to 1630 in the afternoon with the picking up and dropping off school children. This results in local traffic problems and *'some of the roads are at a standstill because of all the schools'*.

Two segments of narrative are provided below that clearly express the concerns of parents on this issue:

> Sally (F43/h): *Another element here and I work in a local prep school is the security element. Children are brought to school and collected. You don't see any of them walking or catching buses. You think of your own youth when you went to get buses everywhere.*
>
> John T (M34/h): *That is changing.*
>
> Sally (F43/h): *Yes, it really has. If you get caught in a school run at the wrong time it causes a lot of traffic.*

And

> Katherine (F35/gx): *Traffic is more an issue because the more cars that are on the road, the bigger heavier lorries, the less you feel you want to let them walk to school. It is a vicious circle. It is statistical safer now to be driven to school rather than walking except, of course, for those who cannot afford or do not own a car.*
>
> Simon (M14/gx): *When I first started school my mum used to walk me to school because she wouldn't drive. But when we got two cars I used to get driven to school. It was quicker I could get up later in the morning and also it meant you didn't get cold. Walking is not as attractive an option.*

These situations are contrasted with what it was like in '*your own youth*' and how everybody then either walked or took the bus to school. Now it is deemed to be safer and quicker to go by car and other alternatives such as walking or cycling are not considered

in any depth. The narrative moves on towards discussing possible solutions to the problem of congestion or, at least, attempting to reduce its consequences.

Christine describes how one of her children attends Mill Lane School and how it is situated in a cul-de-sac right next to a busy cut-through road used by commuter traffic. The school has attempted to put in place a route that vehicles with school children must follow in order to drop off their children safely. This requires a voluntary compliance in order to be successful. She explains:

> Christine (F36/gx): *The School has devised a plan where one goes along one-way, a bit like a frying-pan, turn round and park ONLY on the side coming backwards. If people park both sides no one would be able to move. It works fairly well except for people who decide not to go into that road and they will park on Mill Lane and certainly at school picking-up time Mill Lane is completely solid. And in fact it gets to the point where no-one can get in or out of this school road, no-one can get one way or other along on Mill Lane either.*

Christine confirms that the school, of which she is a Governor, is trying very hard to control this issue but that *'people do tend to bring their cars even if they live around the corner'*. She goes on to describe how there was a recent attempt to have a walk-to-school week some six months ago. However on the first day a passing car knocked down a child from the school and, as Christine recounts, '*after that we all got back into our cars again'*. This reaction could be interpreted in a number of ways. Parents may not view the school-run as just a convenient lift to school for the children but, and maybe more importantly, as a means of affording the children a higher degree of physical protection than cycling or walking. The previous discussion on SUVs could be used to reinforce this point even further. However it is interesting to see how the efforts made by the school to organise a walk-to-school week backfired so quickly because of the injury caused to the pupil who got knocked down by a car.

Katherine in the previous segment went so far to state that *'it is statistical safer now to be driven to school rather than walking'*. This comment is phrased in such a way that it would lead people to believe that this statistic is based on detailed research. While it is

not possible in the research to scrutinise the detail of this remark, it is interesting to consider what impact such statements can have on the parents of school going children. Should they now be required to take extra precautions in delivering their children to school? Does the security offered in the form of the car fulfil this requirement? There is no conclusive evidence provided in the discussions to support answers to these questions. However it is evident from the comments made that there has been a shift in concern over the past decade with regard to the safety of children when away from the parental home. The journeys children make to and from school greatly contribute to the levels of these concerns.

5.2.5 Noise Pollution and the Generation Gap

The issue of noise pollution is also mentioned in the discussions and traffic on the motorway networks is an evident source of many concerns. The contrasting reaction to this issue among the participants is quite stark when broken down by the different age groupings. The segment below provides evidence of disquiet expressed by the majority of participants, those over 35 years old, and the more relaxed response to this issue by the younger participants. The narrative reads:

> Katherine (F35/gx): *Noise is terrible now. Constant with motorways.*
> Simon (M14/GX): *I can't say I have noticed it. Living with it all our lives we just don't notice it.*
> Caroline (F16/gx): *I can't say I notice it.*
> Guy (M63/gx): *There is never silence. Do you not notice it if you go off somewhere into the country? You don't even have to go very far, only 15 miles out towards Aylesbury and stand still somewhere.*
> Simon (M14/gx): *I guess it doesn't occur to me. I can hear it when people point it out and say listen. The only thing I notice is at 10.30, the plane going past at night. That is about the only one I actually notice. When people point it out you can hear the A40 and you can hear the motorway from Dukes Wood.*
> Nan (F64/gx): *Youngsters are used to noise more than we were.*
> Caroline (F16/gx): *I love walking on mountains and you get away from absolutely everything. You come back to here and yes, there is a difference and yes, you can*

hear the difference but you accept that mountains are very quiet and that the urban area is going to be noisy with cars.

The response by Simon and Caroline to the issue of noise is quite sedate. Despite clear references to motorway noise they simply respond '*I can't say I notice it*'. They are not in any way disputing that there is a noise concern but, putting it quite simply, the noise is not disturbing to them and therefore not an issue of concern. Delving deeper they explain that they have become accustomed to noise as part of their way of life. '*I guess it doesn't occur to me*' suggests Simon in all sincerity when questioned further. Nan abbreviates the contrast between the age groups when she states '*youngsters are used to noise more than we were,*' a comment which the group supports. Caroline concludes this segment succinctly when she states that '*you accept that mountains are very quiet and that the urban area is going to be noisy with cars*'. By implication the younger generation seem to accept the issue of noise as an everyday part of normal life. When they are in urban areas they accept traffic noise as a natural consequence and if it were any different they would find it abnormal. In other words they seem to be accepting one of the constituents of urbanisation, i.e. increased traffic and the consequential outcomes, as a normal part of their everyday way of life.

The point of interest here is the difference in perception of the noise issue across the age spectrum within the groups. The younger participants, referring to the younger generation, seem to have a different understanding of what they expect to grow up with compared to the older participants, i.e. the older generation. The older participants seem to be striving for a lifestyle that they enjoyed years ago and that they have fond memories of. The issue of noise is the first real point of disagreement in the discussions and it is the first that highlights a significant difference between the participants.

Another issue raised in the discussion that emphasised the generation gap was associated with the topic of drinking-and-driving and how the attitudes of the younger generation compared with those of their parents. John L, a father of three grown up girls, believes that the attitude of the younger generations is much less tolerant of non-compliance in such areas. He is suggesting that significant changes in human behaviour, especially

those that are deeply entrenched, can best come about through the emergence of the next generation. He comments:

> John L (M65/h): *It has taken a whole generation and my children don't do it* (drink and drive). *They think I'm a fool if I do and tell me so loudly. It has taken a whole generation to get that cultural change. They just do not drink if driving and will have an orange juice instead. My generation would have just laughed at you for having an orange juice. It is more a generational thing.*

In another group Gary tries to put the whole conversation on pollution into context. He claims people must accept Gerrards Cross for what it is now as this is the reason his family decided to settle here. If people want to try and turn back the clock then, he suggests it may be necessary for those people to '*move out to the wilds*' as he puts it. Another reference to what could be termed 'a rural way of life'.

This is very much a continuation of the points made by Simon and Caroline above. The younger generations are making no attempt to look backwards so that they can recover a lifestyle that they never experienced. Yet they do acknowledge it as a lifestyle that brought happiness to their parents or grandparents. The younger participants in the groups express no patience with discussions related to the past and see it of little value to their role in the future. They just seem to be more eager to move on from where they are today and look ahead to tomorrow. Gary develops this point very well as he explains why he is happy with present day Gerrards Cross and the segment goes as follows:

> Gary (M32/gx): *I am not trying to say there is not a problem because there is a problem. But there is a certain amount of noise we can expect around here and we can expect pollution because of the amount of cars. Maybe we need to think of the big picture in that what sort of life do we want to live here. If we don't want this sort of connected life then maybe we need to move out to the wilds. One of the reasons I live in Gerrards Cross is because I can get to a lot of places easily. That is a benefit to me. Years ago the Old Denham to Watford Road used to be a hideous road, people got killed on it regularly. The M25 put paid to that.*

> Guy (M65/gx): *You are quite right as we have sort of debated within the family if whether we would like to move off somewhere else, somewhere nice and remote and quiet. But decided we prefer it here noise and all.*

The response by Guy is extremely interesting and it should be noted that there is a generation gap between Guy and Gary as this may help explain the divergence of opinion. Nonetheless Guy and his family have discussed how much Gerrards Cross has moved on and, with that in mind, debated moving away to '*somewhere nice and remote and quiet*', namely a rural setting. They've realised that they cannot change Gerrards Cross back to where it once was and, based on that acknowledgement, they '*prefer it here noise and all*'. It can be assumed that Guy's family, having discussed the options, must now accept more readily the changes occurring in Gerrards Cross even though they may still disapprove of them. They have looked at the '*big picture*' as Gary suggests to decide '*what sort of life do we want to live here*' and have made the conscious decision to stay in Gerrards Cross.

Reviewing this discussion it could be interpreted that Gary presents a view that is more understanding of the transition from '*old*' to '*new*'. As a thirty-five year old male he seems to be caught somewhere in the middle between the older and the younger generations as represented by the group participants. He empathises with what is missing for the older generation but at the same time comprehends what is there for the younger generations that are coming up behind. Putting it another way it could be said that Gary is caught somewhere in the middle of the shift from rural to urban.

5.2.6 The Threat of Urbanisation

This topic is discussed by the Hedgerley focus groups who allude to those families that move into Hedgerley village and then '*shut themselves away*' as they put it. It is noticeable though how Hedgerley participants introduce the dichotomy of rural versus urbanisation in their metaphorical response to the situation. They perceive the arrival of families who shut themselves away as a step towards the urbanisation of Hedgerley. These families have no interest in the community and just want to live there because it is a convenient place to travel to work from. The segment goes as follows:

Dawn (F37/h): *I think along with John perhaps the adverse is the people coming in who do shut themselves away increasingly, I think, behind walls that they build where they would have a nice beech hedge and it's becoming urbanised. I suppose that is it really that it is becoming urbanised. Of course cars and the speed of the cars but it is very difficult to say things against life in Hedgerley.*

Moderator: *Do you notice people becoming more insular in the last 5 to 10 years!*

Dawn (F37/h): *Oh definitely. Yes. I think people do move in and they immediately start increasing the size of the house, what with sons and daughters, the population grows. Young people find it hard pressed to buy anything in the village because they are being so extended as John says they are becoming commuters' homes now. And as I say they don't think of putting a hedge where they can put a brick wall and lights. They are really town people. That is why they come.*

The symbolism is taken further by referring to the construction of the wall or the erection of the security light as another sign of urbanisation encroaching on the village. This is set against the conventional rural boundary of *a 'nice beech hedge'*. Comments were directed at various intervals throughout the discussions at the excessive use of security lighting in use across both parishes. The association made between the families who shut themselves away and the fact that '*they are really town people*' is a strong indicator that the participants would like a continuation of the status quo. Hedgerley village is very defensive of its status as a rural community so close to London. They do not want the village to move away from its rural setting and thus become urbanised. They identify that this can happen in one of two ways, either through what they perceive as the wrong kind of people moving into the village or through erecting artefacts of conventional urbanisation as represented by traffic lights or traffic-calming measures.

The Hedgerley groups identified certain artefacts that they believe signal the oncoming of urbanisation towards their parish. In two of the segments it is suggested that if drivers were just more considerate then there would be no need to consider such measures. The first segment goes as follows:

Linda (F41/h): *Talking about parking I find where I live in Copses Way, I come into Gregory Road, I have to turn right in Copses Way and there are always cars parked here. So I am on the wrong side of the road basically and if someone comes out very quickly from Copses Way.*

Jim (M75/h): *Which they do!*

Linda (F41/h): *Which they do!*

Jim (M75/h): *There are one or two who come out of there a bit smartish!*

Linda (F41/h): *I know. I would love sleeping policemen down there I tell you.*

Beryl (F60/h): *Now that is ridiculous. It is a no-through road and we are asking for sleeping policeman. That is how inconsiderate we are.*

Linda (F41/h): *No. No. It is not at all.*

Beryl (F60/h): *Oh it is. It is just ridiculous.*

Linda (F41/h): *Come on Beryl. That slope coming down from your house down. That is quite bad.*

Norman (M65/h): *Yes but there is no need to drive quickly as you only have 200 yards to go.*

Linda (F41/h): *I agree but I am only thinking of my children who might be in the front garden when some fast car is coming down.*

It is interesting to observe the contrasting viewpoints when faced with driver behaviour that is deemed to be socially unacceptable, i.e. speeding in a residential zone including a cul-de-sac. The first thought by Linda is to install sleeping policemen at this location as a physical deterrent to high speeds. Some participants viewed sleeping policemen as artefacts associated with urbanisation as they are normally utilised as speed control devices in areas with high densities of population and heavy flows of traffic. However this suggestion is immediately attacked by Beryl who says '*that is ridiculous*' and is a sign of '*how inconsiderate we are*'. She considers that placing sleeping policemen on this particular roadway is simply going too far with the use of deterrents. She insists that a slight variation in driver behaviour would suffice and resolve this concern.

The second segment also contemplates the role of the considerate driver when looking in greater depth at traffic calming measures and goes as follows:

Moderator: *Is there no place for 'consideration' in driver behaviour?*

Jim (M75/h): *Consideration is gone.*

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Mark (M17/h): *I think that would be a shame though as I think people should be more considerate. I think it would be a shame to put in some of these bollards or sleeping policemen as it is like an eyesore. No one wants bright orange bollards in the road. Fair enough it might solve the problem but in a way it is a shame.*

Giles (M26/h): *But at what sort of price?*

Mark (M17/h): *It would be like modernising Hedgerley.*

Norman (M65/h): *You would be getting into the urbanisation of Hedgerley*

There is clear resistance to any suggestion of erecting brightly coloured bollards as calming measures on the approach roads to the village. The first comment refers to '*modernising Hedgerley*', which is quickly followed by '*getting into the urbanisation of Hedgerley*'. The participants perceive these devices as visually intrusive and that they take away from the rural setting so closely cherished by the people of Hedgerley.

While this group expresses no support for formal mechanisms of controlling traffic speed, such as speed reduction bollards, they seem content to apply informal mechanisms. A segment of the focus group discussions examined voluntary enforced restrictions placed on certain vehicle movements through Hedgerley village. Mechanics, while test-driving new cars belonging to a local garage, were identified as contributing to the problem of speeding in the village. Nevertheless Jim, a retired resident, goes to great lengths to explain how contacting the garage manager can put a stop to this traffic passing through the village. The segment of the focus group discussion goes as follows:

Linda (F41/h): *The only think I find a nuisance is the traffic problem but you probably want to go on to that later on. Well just the speed of cars through Hedgerley. I am a driver and would not say that I doodle along but I do feel in the Narrows it is very dangerous and I use this four times a day as I go to Gerrards Cross everyday.*

Sally (F43/h): *A lot of people use it as a cut through and a certain garage on the Farnham Common use it to test drive their cars and they speed through those Narrows.*

Jim (M75/h): *They are not supposed to be on it actually and if you can recognise it and report it to Haymill Motors, the chap can be stopped.*

Linda (F41/h): *I have done a few times but it still seems to go on!*

Moderator: *On what basis may I ask Jim could it be stopped?*

Jim (M75/h): *The Manager there, who is Mr. Paul Whitehouse, is quite strict about their mechanics using it so if people know and get the car number they can report it to him and he (the mechanic) can definitely be stopped.*

Giles (M26/h): *You do see it used regularly. You see the brand new plastic covers on the car seat when I am on Parish Lane*

Jim (M75/h): *As I say if you can get the number of the car and ring Mr. Paul Whitehouse, I can assure you that he does deal with it!*

David (M63/h): *Do they have a nominated test route?*

Jim (M75/h): *Well they are not supposed to come down the Narrows and through this Village. They are supposed to go back out onto the Beaconsfield Road and go down that way. But you see they go along the Beaconsfield Road to the sawmill, turn round, and steam along that bit of straight and through the Narrows, cutting a little piece out by doing that. But they are not supposed to come through the Narrows or through the Village*

David (M63/h): *What about Andrew Hill Lane?*

Jim (M75/h): *I don't know anything about Andrew Hill Lane but I don't suppose they are even supposed to be there actually. Seriously. But I can assure you that Mr. Paul Whitehouse will deal with it because he is quite strict about it.*

Jim confirms the existence of this informal understanding that only he seems to be aware of judging by the surprise reaction from other group participants in the room. Jim tells the group participants that the garage in question has given an undertaking not to drive any of its vehicles through the village. No evidence is provided to explain how this agreement came into place or whether it is actually still in force. Jim is very persistent that if such trips are reported to the garage then it is possible to have them stopped. The

emphasis is placed on self-policing this agreement by reporting any occurrence directly to the garage.

The same focus group participants later on in the discussion provide another example of enforcement by the locals. This example however differs from the previous one because they wish to see an official statute of the traffic regulations observed. The discussion at this point is centred around road-widening work on the M40 and the location of the site offices on the northern boundary of the parish. The narrative goes as follows:

> Linda (F41/h): *Amazing thing the other day, one of their lorries was going down the Narrows and I was meeting it. I had to back right back.*
> Jim (M75/h): *They are not supposing to be using that!*
> Giles (M26/h): *They are not allowed to go through there. Yes all the signs say:* 'Stop: No Construction Traffic'.
> Jim (M75/h): *You get the number and report it.*
> Linda (M41/h): *I'll get the Company, I suppose, really.*

It was confirmed that signs had been erected to inform construction traffic that it should not travel down the Narrows (the northern approach to Hedgerley village). The discussion focuses on how to report the vehicle and the driver involved but there is some confusion in agreeing who this incident should be reported. Linda concludes by confirming that it may be best to approach the company that owns the lorry. In these two examples there is strong support expressed by the participants for self-policing the flow of traffic through the village. Where the participants believe there is abuse in the use of the roadway for purposes they consider inappropriate then they assume they are entitled to try and put a stop to it.

5.2.7. Safety

The topic of safety was viewed with importance during the discussions and it may be best to break this topic into two sections. Firstly the issue of safety was associated when actually travelling inside a mode of transport, such as a car, bus or train. This is referred to as a closed mode of transport. Then there was the issue of safety when travelling

outside of a physical compartmentalised mode of transport, such as when walking or cycling and referred to as an open mode of transport. Each section is discussed in turn.

5.2.7.1. Safety Associated with Closed Modes of Transport

The issue of safety regarding different closed modes of transport was discussed but not in any great depth. Many of the participants considered the motor car was continuing to make significant advances in the provision of safety control features and they cited examples such as side air-bags and anti-braking systems (ABS). It was agreed that the inclusion of such safety features as standard items even on the most basic of cars was an added incentive to purchase. However the participants did not consider this was a contributing factor when scrutinising the increasing demand for private transport. In other words while these features were deemed to be beneficial for car owners they were not considered to be so essential as to undermine their purchase or subsequent use.

> David (M63/h): *I recently purchased a vehicle that has computer chips controlling the deployment of the air bags. However while it may offer me a greater sense of safety and it was nice for me to purchase I still would have bought the vehicle regardless.*

The recent surge in demand for sports utility vehicles (SUVs) that was raised by the participants could be construed as an even further example. The mention of these vehicles was first introduced to the discussion in regard to the issue of congestion as they were criticised due to their large size. John identifies the surge with his comments:

> John (M59/gx): *It is the normal practice that any adult member of the family, provided they are not disabled or have epilepsy or something like that, has a car. Because it is an affluent area and people just expect to get to 17, pass your test and get a car. That has happened. I mentioned earlier that I have four children. Eighteen and nineteen years ago, I mean I have always taken them to school and always walked and we do now. The majority of people walked. Ten years ago you could say it all changed and the majority came by car.*
> *Now something even stranger has just happened us recently is the women who are taking their kids by car to school, which are the majority, they are not just taking*

their little cars now as they have all now have these great big wagons. When you go down Moreland Drive, which is a small road Mill Lane, they have all got these long SUV drive things, these great big long space things. If I say they can't drive them it sounds as though if it is being an anti-feminist thing but it is not.

Katherine (F35/gx): *It is true, isn't it?*

John (M59/gx): *They can't drive them. And why they need the things I just don't know. It seems that, because of the affluence we have around here, there seems to be a little bit of keeping up with the Jones and you just find, I mean two years ago the type of cars you find at our school wasn't there and now they are there and that creates considerable difficulty.*

Katherine (F35/gx): *I think they feel safer, don't they. That's it.*

John is strongly of the opinion that there is little need for these vehicles other than as some form of fashion statement. It is interesting though to observe how his criticisms are levelled. He continually refers to the drivers of such vehicles as being female and then proceeds to query their driving skills with comments like '*they (women) can't drive them*'. He goes on to defend these comments by stating '*it sounds as though if it is being an anti-feminist thing, but it is not*'! One might question the degree of impartiality in his criticisms of SUVs. How many of his criticisms about SUVs are indirectly aimed at '*women drivers*'? How does he know women cannot drive? And if the drivers were male would he have adopted the same critical approach?

Nonetheless other participants support the contention that purchasing a SUV is partly a fashion statement and that this is part of the reason for the increased numbers of SUVs around Gerrards Cross. The safety component and the protection offered in such large and strong vehicles are also mentioned as reasons why SUVs are purchased.

Guy, in considering the growth of such vehicles, blames recent legislation enacted by the government. The legislation he refers to was actually forged to increase the safety and security of people riding in vehicles of all kinds. He explains:

Guy (M63/gx): *Safety legislation has brought the seat belt laws into force and this has caused us to get these people carriers. When we had 5 children we were*

quite happy to cram them into a small saloon, plus the dog. Nowadays you are not allowed to do it so big families are forced to use these carriers. The same legislation has forced that.

Another participant mentioned the benefits of these vehicles for activities associated with leisure and gave an example of towing a boat. This point gets little support, as the participants don't see any parishioners making significant use of these vehicles for leisure purposes. Gary then raises the point that vehicles in general are getting bigger:

Gary (M32/gx): *Not sure why they are a big issue really as usually people carriers are no bigger than estate cars and in many cases smaller in actual length.*
John (M59/gx): *But in general people who used to go to school would go in small cars.*
Gary (M32/gx): *If you look at all the cars on the road now nearly every car is bigger than its predecessor used to be.*

Gary does not make an issue of defending the larger vehicle and seems to be simply stating what he believes to be a fact. It is only later on in this segment of the narrative that Gary acknowledges that he himself owns one of these larger vehicles, a people-carrier. While this is a larger vehicle than a car he believes it was a necessary purchase to improve the quality of ride for him and his family.

The bus service was complimented as having an exemplary record for safety. None of the participants could recount any accidents that involved the bus service with injuries to passengers. On the contrary the comments were favourable and included:

Judith (F60/gx): *The buses in general do not speed and are courteous on the road around this parish. I believe the Bus Companies put all new drivers through quite a rigorous system of testing before they let them take the road. This is only right.*

The train service was also complimented for its general safety record but participants admitted that they knew little of the safety procedures in operation on the railways. This

was an item that they understood was regulated by government legislation and this enabled the participants to express a high degree of approval and confidence in the service.

This discussion suggests that the participants do not rate safety to be of high concern when choosing their respective mode of transport. On the contrary they seem to consider that any chance of an accident occurring to them is pretty remote when making their everyday journeys. This was not the case when the participants discussed their personal safety when travelling outside compartmentalised modes of transport, in an open mode of transport.

5.2.7.2. Safety of Open Modes of Transport

This section refers to any mode of travel where the person is exposed to a greater risk of injury because there is no physical protection provided. Examples of open modes of transport could include cycling, walking, horse-riding or skateboarding. During the discussions it became evident that many of the participants were fearful for their safety when adopting any of these particular modes specifically on the roads. This fear was expressed regarding the use of these modes whether for leisure or other purposes such as going to the shops, work or school. Three specific modes were described in the focus groups as being in regular use across the research site.

The first and most popular mode referred directly to people walking on the road. In many cases these people were walking on roads that had no footpath installed as this is common in rural areas due to the number of roads. The participants were clearly uneasy when out walking in such instances and they referred to some factors that helped generate this unease. Some participants very quickly raised the lack of street lighting in Hedgerley as a source of concern.

> Giles (M26/h): *When the cars are speeding they have so little time to see you as it so dark in the lower part of the Village. There should be more street lightening provided and we have said this many times before to the District Council. They say they never have the money and that there are greater priorities. Wait till somebody gets killed!*

Another factor that was mentioned was the narrow country roads. This meant the margin for error was significantly reduced when pedestrians were on the roads as there is little place accessible for them to step off the roadway. Some of the participants talked about moving on to the grass verge every time a car passed by.

> Mark (M17/h): *Oh when you go outside the Village the roads gets so narrow. There is barely enough space for two cars to pass eachother let alone have room for people out walking. And yet the cars will not slow down. They seem to think that the road is for them only and that all pedestrians are a nuisance.*

Another view was the inconsiderate approach that drivers have on the road for anybody that may seem to get in their way of a quick journey. This case was well put by Hilary who recounted:

> Hilary (F31/h): *I walk a good deal and I walk around the village and have had a few narrow escapes. There is no excuse for it. It is just people (drivers) do not want to get over for pedestrians. Pedestrians are a damn nuisance. Drivers would rather run them down than put on the brakes. And I think a lot of this is caused by frustration because there are so many other road users. So if you improve our public transport you would have fewer cars, more room to manoeuvre and less frustration.*

However some of the participants were also very critical of pedestrians themselves and claimed that many of them took little caution when deciding to go out during hours of darkness. These criticisms varied from not lighting-up at night by not wearing reflective clothing to help drivers see them better or by not carrying a torch. Some of the participants recalled instances when they were nearly involved in accidents with pedestrians. One such account was described in vivid detail as the participant in question was driving the vehicle involved. This account went as follows:

> Sally (F36/gx): *I was driving home from work late one evening at about 8.30pm. I was coming into the Village via the Narrows and I was not going fast. I would*

honestly say that I was doing about 35mph. I came around a corner and ahead of me were three teenagers on the roadway. They obviously had been playing or something because they were not paying attention to the road. I caught them off guard and had to swerve and hit the brakes. They jumped to the side of the road and that helped. But they were all dressed in black and it was nearly impossible to see any of them. But what really scares me is that if I had hit them then it would have been me blamed for speeding or whatever. I agree pedestrians must be worried on the road but they must also take special care of how they use the road.

Another participant referred to the use of the bike as an open mode and he claimed cycling was like playing a daily game of Russian roulette with motorists. This participant cycled regularly and confirmed that he could never relax when on the bike. He went on to say that not only did he get threatened many times by irate motorists but that he could also not trust them for their driving skill. He cited the use of the car indicator as being a perfect example and described how drivers misuse it.

Giles (M26/h): *What I find very frustrating is trying to read drivers' intentions. The car indicator is meant to signal a car's next move. In my experiences you can place very little faith in watching indicator lights. The indicator may be on to either signal a true intention in change in direction or it may be on by accident giving everybody who sees it the wrong information. However the worse situation is when it is not used at all and drivers make direction changes that were totally unexpected. As a result I never accept the intention of a driver based on whether their indicator is flashing or not.*

The participant who rode out horses in the area and travelled on the roadway between the stable and the Common cited another example of why she was uneasy. She expressed serious concern of the dangers involved when drivers drove fast or possibly too close to the animals. Occasionally she had horses bolt because of the fright and she was always on guard for her safety when travelling on the road. She confirmed that she takes great care when taking the horses on the road and believes she is a very responsible rider.

The topic of safety is of interest to the research. The participants are describing how safe they feel when they travel in closed modes of transport. And yet this is not to say that people's safety is not put at risk because there always is the possibility that one may be involved in a car, train or bus accident. However the degree of risk seems to be acknowledged as tolerable by the participants as there was no mention of dissent that too many accidents were taking place. As a consequence a greater degree of comfort must be felt from this feeling of safety. However the opposite seems to be true when travelling in any of the open modes of travel. Constant fear abounded among the participants when they recounted how they made use of these modes. As a result it was accepted that these modes would be chosen less frequently because of the fear for the individual's overall safety. In this part of the discussion it was surprising how much the closed modes of transport infringed on the open modes of transport when relating to the problems of safety. In the main this point suggests that people may be passively encouraged to adopt a closed mode of transport partly for safety reasons. Could this be driving people away from the older and more traditional open modes of travel and into the closed, and in particular, into private transport?

But what can be done, if anything, to discourage such a shift in behaviour? One such attempt would be to try and make the open modes safer to adopt. More local and central transport policy makers are trying to incorporate this by providing a safer means for using bicycles for instance. This has meant a recent surge in the number and length of bicycle lanes that are being planned and made available for use. These lanes help to dramatically reduce the dangers associated when cycling on the open road. Another attempt could take the form of making drivers of closed modes of transport more aware of the concerns of pedestrians. Examples of this could include public information programmes on drink and driving, speeding or advising drivers to take extra caution when travelling near schools or children's play areas.

5.2.8. Starting Younger and Driving Longer

A number of observations were raised on this topic, each one looked at from a different angle. It concerns the age at which people begin to drive and the age at which people maybe should stop driving. A number of the participants were close to bordering the

driving age of 17 years of age. Their perception was that they would begin to drive immediately after their seventeenth birthday providing adequate support by their parents was forthcoming. Rosie, a 14-year-old participant, has a brother who has just turned 17 years of age and now has his own car for school. She states:

> Rosie (F14/gx): *Our family has three cars now that my brother drives and I think that is a bit unnecessary as he could carry on getting the bus. He is 17 years of age and just passed his test. He drives to school at Wycombe. It is the natural thing and seems to be the accepted thing to do.*

This example explains how some school-going children view it as quite normal to drive to school each morning. Judith adds weight to this when she states that '*most young people reaching 17 years of age in the parish (Gerrards Cross) have a motor car*'. The older participants appeared a bit shocked at the normality of this conversation and that these children would actually drive to and from school each day. One of the participants questioned how such young people become aware of the need to drive at such an early age. Rosie answered this with a lot of conviction by stating:

> Rosie (F14/gx): *As soon as my brother was 17 years he and all his friends are out with their parents looking to buy a car. It didn't really matter that much to him until he turned 17 years and then all the car brochures came out and the information was quickly digested. All his friends had passed their test and had got cars. The car manufacturers target you at 17 years. And because when you get into 6th Form in Grammar School you have to pay for bus passes and the amount they charge is really heavy. Easier for my parents to give him the money so that he could pay for the petrol. So, in a way, it is about the same money wise. Except it is more comfortable to take the car than taking public transport that sometimes does not turn up.*

Many of the participants express surprise that car manufacturers would target such a young age group as she described with information on new vehicles. Some participants claimed it was because these teenagers lived in Gerrards Cross and that the car companys' market research would identify this as a wealthy area. As a result there may

be a greater chance that parents would purchase vehicles for their children when they come of age. A further point she slips in is how comparable it is in cost between adopting public transport and putting petrol in the car. Rosie makes no allowance for the capital cost of purchasing the vehicle, the insurance costs or the maintenance costs. She just equates the money you pay at the pump for petrol against the fare you would pay the driver on the bus service. The participants accepted that many people are inclined to tolerate more, or in some cases be totally ignorant of, the hidden costs of running a private vehicle. And yet they complain regularly about the daily running charges incurred such as petrol costs or toll charges. Judging from Rosie's comments it could be said that the conditioning for such thinking could start at a very early stage.

One of the other participants asked off Rosie whether her brother gave a lift to any of his friends when driving to school. Rosie responded very quickly *'Oh yes his friends go with him. Suddenly he was quite popular and there is no way some of the boys will take the bus now'*. So there is a domino effect evident in this one example of a boy getting a car for school. Now we are told there are two, or maybe three, other boys who have been able to give up public transport by sharing a ride in this car. It can be assumed that those boys will also become conditioned by the benefits of using private transport at such an early age. It is likely that this will have long term consequences for them when faced with choices of transport selection later in life.

How much of a change is evident in these examples from the average driving age of previous generations? The older participants were of the opinion that more younger people are not only getting behind the wheel earlier but are beginning to have access to a car at an earlier age. The example above refers to a situation where the parents of the teenager bought the vehicle. In Hedgerley another example was recalled where one of the participants, a sixteen-year-old male, had saved some £2,000 already towards the purchase of a car. It could be concluded from such information that there will be a growing number of younger teenagers driving and owning their own vehicles in the coming years.

Later in the discussion Jim recounted an experience which contrasted starkly with the about conclusion and the narrative went as follows:

Jim (M75/h): *May I say something on this. As I am 76 years old I have to renew my licence every three years (anybody over 70 years must comply with this order). Last year I got a letter and it said 'would you consider selling your car and putting the money in the bank and start using taxis'. Now that to me is downright cheek.*

David (M59/h): *That was the Dept. of Transport*

Jim (M75/h): *Yes*

David (M59/h): *The DVLA (Driver Vehicle and Licensing Agency)*

Jim (M75/h): *Yes. Over 70 year old drivers, get them out of the way by getting them to consider selling the car.*

Giles (M26/h): *That is terrible.*

Jim (M75/h): *That is an absolute fact. It keeps that shower in a job up there as they have to do something to justify their existence.*

Judging from the above discussion there would seem to be an official policy in place that actively encourages drivers over the age of 70 years to reconsider their use of the car. However such an approach was roundly criticised by all of the participants. Jim, in particular, was very insulted by such a suggestion and he was adamant that he would continue using his car as long as he has the good health to drive it. But to have an official body such as the DVLA to suggest another course of action for him was offensive.

So what seems to be happening regarding the general age of drivers. The research suggests that there is a expansion in the number of drivers appearing on both ends of the age scale, i.e. more 17 years olds are driving and those drivers over 70 years are continuing to drive as long as their health permits. But this evidence would seem to contradict the suggestion made earlier in the research that it is up to the next generation to alter their behaviour if environmental problems are to be solved or at least be contained. The evidence gathered in the focus groups would not support this suggestion. On the contrary the evidence suggests that as cars become more easily attainable then younger people will fit easily into the targeted audience. And yet there is no obvious way that this upswing can be slowed down without discriminating against a section of the driving population. There is no evidence to suggest that there is any public support behind

considering such a move. The car should be available to all those who are of the legal age to drive and who are of sufficient health to take control of a vehicle.

5.3 Summary

One of the primary objectives of the focus group discussions was to enable the author to collect relevant research data. This would allow the author to become better informed of the issues relating to transport and the environment that were of specific concern in the parishes. This chapter recorded many of the issues participants believe to be at the core of the transport debate. However it is interesting to observe how much negativity lies in the issues discussed; nearly all of which are aimed at the alternative modes of transport to the private motor car. Nonetheless the points raised are at the centre of the individuals' considerations when developing a pattern of travel behaviour. As a consequence these points need to be well understood before any attempt can be made to break this pattern down in order to introduce a new consideration of travel behaviour.

The chapter also provides background information for the design of Phase 2 of the research programme, i.e. the diary panel. The material collected by adopting this research instrument is analysed in the following chapter.

CHAPTER 6

PUBLIC PERCEPTIONS AND ATTITUDES

PHASE 2: DIARY PANEL

6.0. Introduction

The data from this phase of the research project were collected from the participants during mid-to-late September 1997. A detailed account of these data is now presented. The data is broken down here into three sections:

- *Section 1*: Household Questionnaire Results
- *Section 2*: Examination of Diary Material
- *Section 3*: Post Diary Panel Discussions

As described in Chapter 4 each respondent was requested to complete a short questionnaire prior to participation in Phase 2. It was envisaged that the information gathered from this survey would help develop a coherent picture of each household. The results of the survey are presented in Section 1. Of the twenty-four households that completed the survey, twenty-one number households returned the diaries for inclusion in Section 2, i.e. diary analysis. One household made contact to confirm that they were moving from the area and could no longer participate in the research. No information is available on why the other two households decided not to participate further in the research.

Of the twenty-one households that returned their diaries, two households did not provide sufficient information in the diaries to enable examination and were excluded from participation. Consequently diaries from nineteen households are examined in Section 2 of this chapter.

It should be borne in mind when examining the diary data that there might be questions where only a percentage of the nineteen households will have experimented with

particular modes of transport. For example not all households experimented with the use of buses and therefore the sample size for this question is less than nineteen.

Section 3 of the chapter incorporates the post-diary panel discussions that were taped and transcribed for analysis. These discussions took place in mid September 1997 when a number of the respondents agreed to meet when returning their diary panel material. A total of eleven people participated in two sessions, one each held in Hedgerley and Gerrards Cross. The remaining respondents returned their material directly to the University either through a third party or through the postal service.

6.1. Section 1: Household Questionnaire Results

6.1.1. Questionnaire Analysis

Twenty-four households responded to this survey. Questions 1 and 2 required general background information such as an address and are not discussed here. Question 3 explored how many people resided in each of the households and the results are shown in Table 6.1 below. A total of 73 people of all ages resided in the twenty-four participating households.

Number of People in Households	*Number of Households*	*Total number of people*	*Percentage Distribution*
1	1	1	4%
2	8	16	33%
3	5	15	21%
4	9	36	38%
5+	1	5	4%
Total	24	73	100%

Table 6.1: *Number of People Resident in each Household*

Question 4 requested respondents to estimate the number of cars normally in use in each of the households. The results are shown in Table 6.2. A total of forty-five number vehicles are in use across the twenty-four households. Only one household did not

possess a car while eighteen households, 76% of the total have access to two or more cars. This is significantly higher than the national average that was recorded at 24% of households in 1994.

Number of Cars in Households	*Number of Households*	*Total number of Cars*	*Percentage Distribution*
0	1	0	4%
1	5	5	20%
2	14	28	59%
3+	4	12	17%
Total	24	45	100%

Table 6.2: Number of Cars in Use in each Household

The responses to question 5 make it possible to break down the car ownership figures between those vehicles that are privately owned and those that are company owned. The breakdown is presented in Table 6.3 below.

Privately Owned Vehicles (Number)	*Company Owned Vehicles* (Number)
39 (87%)	6 (13%)

Table 6.3: Breakdown of Ownership between Private and Company

The answers to question 6 make it possible to probe deeper at the age range amongst the sample set of 73 people. The age ranges are divided into two, those who are adults, i.e. greater than 18 years of age, and those of school or college going age, i.e. between the ages of 4 and 18 years. None of the primary respondents acting in the research on behalf of the households was under 14 years of age.

It is estimated that 53 are adults from the sample population of 73 people living in the twenty-four households while the remaining 20 are of school going age. The research was informed of one student at school who was the sole user of a car, i.e. his parents bought it for him. It is therefore reasonable to extrapolate from these figures that 54 people in the survey are eligible to drive. Based on the details obtained in question 4 there are a total of 45 vehicles available for them to use and it is possible to therefore confirm that there is 1 vehicle for every 1.2 people of driving age in the selected sample of households. No information was gathered on the actual number of adults who hold current driving licences.

The purpose of question 7 was to establish if any other modes of transport, aside from private transport, were adopted on a daily basis in the household. The answer to the question, which is divided into four parts as each part relates to a separate mode of transport, is presented below. The question read as follows:

> *Question 7*: Does any member of your household make use of the following modes of travel in their everyday or weekly transport journeys?'

Bus/Train

Many of the comments referred to the train and bus being used for school or for work related journeys. However it is interesting to observe that 50% of households reported that they make no use whatsoever of public transport at any time during the week.

This observation also correlates with the high percentage of two car households already identified within this location.

Yes	*No*
12 *(50%)*	12 *(50%)*

Table 6.4: **Public Transport** (bus/train)

Bicycle

A number of households adopted cycling but not enough information is provided to examine what journeys the bicycles are used for. Based on comments provided in the

questionnaires and alluding to this topic in the focus group discussions, much of the cycling seems to be for leisure purposes.

Yes	*No*
14 *(58%)*	10 *(42%)*

Table 6.5: **Cycling or Motor Cycling**

Walking

This was cited as a common mode of travel for short journeys judging from the number of positive responses received. References were made in the questionnaire relating to the walk to school, to the train and to the shops. A small number also mentioned walking for leisure purposes. It is not possible to discuss the distances walked or the number of walks taken by any of the households.

Yes	*No*
16 *(67%)*	8 *(33%)*

Table 6.6: **Walking**

Car-Sharing

Finally car-sharing as a mode of travel was recognised by some nine households, 38% of the total sample. Some of the applications described were for work related journeys but the majority was drawn from recreational examples such as going to the Theatre.

Yes	*No*
9 *(38%)*	15 *(62%)*

Table 6.7: **Car-Sharing**

Question 8 attempted to measure the householder's level of awareness as to whether their particular behaviour contributes to the deterioration of the environment. A specific reference was made in this question to the direct connection between transport and pollution. The question asked:

Question 8: Do you believe members of your household contribute in any way to the deterioration of the environment, with specific regard to pollution issues associated with transport?

The results are detailed in Table 6.8 and the majority of households accept that they do contribute in some way to the deterioration of the environment through their transport behaviour. However some 32% of the households consider that no part of their transport behaviour could be interpreted as detrimental to the environment. This perception would seem to be fundamentally flawed as the majority of the households utilise motorised transport of some form or another. This is not to ignore the fact that public transport is also a source of pollution. One household was categorised as not applicable as it did not maintain a private mode of transport.

Yes	*No*	*Not Applicable*
15 *(64%)*	8 *(32%)*	1 *(4%)*

Table 6.8: Contribute to Environmental Deterioration

Question 9 offered the respondents a number of policy actions that could be contemplated by government in this area of public concern. Each respondent was asked to tick one box from across the category scale from a '*very good idea*' to '*a bad idea*'. The results are detailed in Table 6.9 below with the number of respondents who ticked the boxes followed by the percentage of the total in brackets.

Approval Rating ***Policy Actions***	***Very good idea***	***Quite a good idea***	***Neither a good nor a bad idea***	***Quite a bad idea***	***Very bad idea***
Development of public transport to reduce road usage and congestion	18 *(75%)*	6 *(25%)*	0	0	0
Increased taxation on private transport, e.g. road tolls	1 *(4%)*	7 *(29%)*	6 *(25%)*	3 *(12%)*	7 *(29%)*
Development of traffic Management schemes, e.g. car pooling or park-and-ride schemes	9 *(38%)*	9 *(38%)*	2 *(8%)*	2 *(8%)*	2 *(8%)*
More communication with individuals on how to change transport behaviour	7 *(29%)*	15 *(63%)*	1 *(4%)*	1 *(4%)*	0
Tougher regulations on private and commercial pollution from vehicles	11 *(46%)*	9 *(38%)*	2 *(8%)*	1 *(4%)*	1 *(4%)*
Investment into 'clean technology' to replace combustion engine, e.g. electric vehicles	15 *(63%)*	5 *(20%)*	3 *(12%)*	1 *(4%)*	0

Table 6.9: Policies on Offer to the General Public

A large amount of information is embodied in this table of results and it is appropriate to break down the results for each of the policy actions with a brief reflection.

Firstly a total of 18 respondents (75%) believe the development of public transport to reduce road usage and congestion is a very good idea whilst the remaining 6 respondents (25%) believe it to be quite a good idea. There is significant support throughout the research for the continued improvement of public transport services. The respondents express the belief that such improvements would make a meaningful contribution towards reducing the problems of road congestion.

However only 1 of the respondents (4%) favours increasing taxation on private transport users. Ten respondents (41%) believe this to be not *a very good* or *a very bad idea*, a somewhat impartial stance. There is unwillingness amongst respondents to pay any more taxes for the use of private transport. It is not possible to deduce specific reasons why this may be so. However in the focus group discussions the respondents did express annoyance that they were already highly taxed in this area. They mentioned that existing taxes on private transport, such as fuel and road taxes, were not spent on transport related projects but instead diverted to fund other spending items by the Exchequer. A lack of support is clearly evident for any further increases in taxing the motorist. Nonetheless the respondents added that this policy would receive more support if guarantees could be provided that revenue streams from this source would be specifically targeted at projects that helped alleviate current traffic problems.

A total of 18 respondents (76%) believe it a good or quite a good idea to develop traffic management schemes such as car-pooling or park-and-ride schemes. The respondents seem to be in support of local and central government introducing more creative initiatives to entice them to leave their cars at home or at designated parking facilities.

While 22 respondents (92%) are of the opinion that it would be a good idea to have more communication on how to adopt new or how to alter existing transport behaviour, there was much disagreement in the focus group regarding what constituted appropriate '*communication*'.

Some 20 of the respondents (84%) wish to see tougher regulations in place to deter excess pollution being emitted from both private and commercial vehicles. And finally 20 of the respondents (83%) would like to see more investment in the area of '*clean technology*', and that this technology should be incorporated into new cars at the earliest possible opportunity. The respondents cited catalytic converters or electric powered vehicles as examples of clean technology in an everyday setting.

6.1.2. Overview of Questionnaire Findings

The data from this questionnaire allows a more detailed picture of the households living in each of the two parishes to be presented.

- The households generally are heavily biased towards the use of private transport as evident by the high car ownership figures, 76% of the households possess two or more cars. Of the total number of vehicles in use across the households some 87% of this number are privately owned.
- Cars are used for a variety of everyday purposes and this can range from the school drop-offs and pick-ups, travelling to and from work to the everyday chores of shopping.
- The responses confirm that the majority of households use little public transport while 50% state they make no use whatsoever of public transport. The one exception was the train service from Gerrards Cross and this public service is widely used by the people of the area. The train service available from Slough was scarcely mentioned in the research.
- Despite low levels of public transport usage, the majority of respondents support continuous improvements being made in the public transport system as a means of reducing current levels of car use.
- A third of the respondents consider they do not contribute to the deterioration of the environment in any way based on their travel behaviour.
- The majority of respondents claim to be in favour of receiving more information on the subject of transport behaviour, especially information connected with how this behaviour may be detrimental to the environment.

- Finally a similar majority of respondents stated that they could not accept taxing the private motorist any more as part of the overall solution.

6.2. Section 2: Examination of Diary Material

6.2.1. Introduction

A review of the findings is presented for each of the three message appeals adopted in the research programme. The message appeals selected were chosen from a number of appeals actively running at the time across the United Kingdom. This review is followed by an analysis of the journeys undertaken by the respondents in Phase 2. It was considered that the experiences encountered by householders adopting new modes of transport would be of interest. It was anticipated that these experiences, recorded as written accounts in the diaries, would be a source of enriched data.

It should be borne in mind that the diaries were presented as text and that each diary was to be filled out anonymously on behalf of the household. The format of the research also requested that the same individual acting for each household complete the diaries. It was considered that this would reduce potential errors and facilitate a reporting consistency throughout the diary. However this format did not allow protracted conversations to be examined that may have taken place prior to diary entries.

6.2.2. Message Appeals Findings

Message Appeal No. 1 consisted of a leaflet explaining problems of concern to the environment linked to excessive use of transport. Two versions of this appeal were distributed with one aimed at promoting the annual '*Don't Choke Britain Campaign*' and the second published by *Friends of the Earth* (*FoE*). The comments received on both leaflets were generally discouraging and the respondents offered numerous reasons for such responses.

The '*Don't Choke Britain*' (*DCB*) leaflet received widespread criticism directed at what respondents referred to as the 'flawed design' of the artwork. In particular the front cover

is criticised for confusing the message the leaflet tries to convey and the comments included:

- *Don't Choke Britain suffers from a rather garish front cover that at first sight suggests that ferry boats, kites and trains do something unpleasant to young children.*
- *Publicity material was not well designed!*
- *I particularly dislike the 'Don't Choke Britain Campaign' leaflet. Bad colours, bad presentation on cover and totally alienating. I would not have bothered to read it if I had not been doing the research.*

These comments implied that the visual component of the leaflet was not only poorly received but, to some extent, turned people off before they even began to interpret the message. An observation was also made by some respondents that pollution in no way affects their way of life or affects the villages they reside in. Two respondents were dismissive of the idea that words such as '*smog*' or '*choke*' could be associated with Gerrards Cross or Hedgerley. The remarks made included:

- Unaware of the campaign in June. 'Choke' or 'smog' isn't even relevant to Hedgerley!
- *I found the 'Don't Choke Britain' leaflet very confusing as it was not easy to see new message. Better to keep it simple. There is no smog in Gerrards Cross!*

No evidence was presented during the discussions to suggest that these localities experienced smog on any given day. However many people are of the belief that smog is clearly visible to the naked eye and it could therefore be surmised that the respondents in question may have made their statement on this basis alone. They cannot see it and it therefore it must not exist. Specialist information provided in the message appeal literature does state '*-------the highest levels and worst effects of ozone (the main ingredient of smog) are commonly seen in more rural areas, some distance downwind from the main (ozone) sources of pollutants*'. Therefore it is clear that smog could descend on places such as Hedgerley and Gerrards Cross even though they are relatively rural in location.

It is also worth considering whether these observations could be identified with the issue of urbanisation as raised in Chapter 5. Could the use of the words 'smog' or 'choke' bear any relationship with the oncoming of what some perceive as the urbanisation of the parishes? This denial could also be interpreted as a rejection that urbanisation is anywhere nearby.

Friends of the Earth intended their leaflet, entitled '*Cars Cost the Earth*' to be more informative than the *DCB* leaflet as it incorporated 20 pages of information. It would be reasonable to assume that the leaflet's prime objective was to inform people of the issues to hand. However judging from the comments made below the leaflet was viewed as confusing and did not achieve this objective:

- *Too much varied information to take in. Could have been better if they concentrated on a few main points.*
- *Message too aggressive. Do not feel sympathy to FoE organisation.*
- *Interesting but too negative in just pushing pollution issue. If my car is wrong then what about big business, worst pollutants.*
- *Informative leaflet but not high impact. Wouldn't get me to change much. It might prod me to not leave the car idling in the drive when the heater warms up but I will probably still do those short quick trips by car when necessary.*
- *Too complicated a message. One page of one simple message would be effective. Only the very keen would read this!*
- *Nothing new in this material and some of the points made are arguable!*

The criticisms could be broken down into the following elements. Firstly the depth of information in the leaflet caused problems. The respondents emphasised that the message could have been transmitted in a smaller space and would have been '*better if they concentrated on a few main points*' or *'only the very keen would read this'*. Allied to the depth is the divergence of the message. This caused confusion and respondents commented '*too much varied information to take in*' and '*too complicated a message*'.

Another element to be aware of is the animosity that exists from sections of the population to organisations such as *FoE*. The arguments presented by *FoE* are not particularly well received by a number of respondents and some consider that these organisations have no authority to lecture them on their way of life. This is supported by comments such as '*Message too aggressive. I do not feel sympathy to FoE organisation'.*

Message Appeal No. 2 consisted of a video entitled '*There is Another Way: TravelWise*' which was produced in 1995 by Buckinghamshire County Council and presented by Bill Oddie. Advice is provided throughout the video on how best to adopt a more suitable mode of travel behaviour that better serves the environment.

The format, i.e. the video, was strongly endorsed by households as a very effective means of transmitting the message and was supported by comments:

- *Video was good and put over with a sense of humour, which helped.*
- *Certainly made me think about opportunities to change. Given my travel profile however the only opportunity I have to change are trips to GX or church. Both of these I change when time permits. The pace of life demands at least reasonably fast transport times. Public transport isn't an option. Why isn't there a train service to go around the M25?*
- *Positive appealing message. Alternative ideas which sound right. No preaching.*
- *Much more informative and persuasive that message appeal no.1. But there was little that is relevant to living in GX except to confirm that High Wycombe is now a no-go area.*

Whilst this is the first message appeal of the research programme that receives positive feedback there is little in the way of any evidence that people will change their existing travel behaviour due to the effectiveness of such appeals.
One of the comments made above confirms this as it clarifies how the message carried in the video gets recognised by the respondent when he says '*certainly made me think about*

opportunities to change'. However this individual then immediately erects a barrier to change by adding the comment '*given my travel profile however the only opportunity-----*--'. He then goes on to explain how '*I change when time permits'*. It must be assumed that the respondent, while originally receptive to the message is still not convinced that he could change his travel behaviour. He concluded the point by claiming that *'public transport isn't an option'* without attempting to locate more information about the services on offer or attempting to review where the use of public transport could become a viable option. The habitual behaviour associated with car use, whilst challenged viewing the video, is not re-evaluated in any depth by the respondents. Primarily this is because the existing behaviour is so deeply entrenched that the message contained in the video was not powerful enough to dislodge its foundation. Nevertheless a number of respondents did express criticism with the use of Bill Oddie (formerly of 'The Goodies' fame) as the narrator. Comments included:

- *Patronising video and the message could have been put across more entertainingly, more persuasively and this more effectively.*
- *Positive approach good but personally I found Bill Oddie too flippant and childish in his delivery.*
- *Rather superficial!*

It is a common practice in marketing communications programme to make use of what are termed '*celebrity endorsers*' who appear in or narrate an endorsement of a particular product.

By selecting Bill Oddie as the narrator in the video it can be assumed that the creators of the video intended this to enhance the content of the message. The success of such celebrity endorsements is very dependent on the term '*matchup*' as used in marketing communications. This means that there needs to be a *meaningful relationship* or *matchup* between the celebrity, the targeted audience and the particular subject of endorsement. While a number of respondents supported the use of Bill Oddie in the video, the comments above imply that a number also considered him to be an inappropriate matchup for this particular subject.

It is not possible, due to a lack of information, to analyse specifically why these comments are passed concerning Bill Oddie. One suggestion could be that the respondents view this issue as one of such high concern that to adopt a comedian as the narrator was to undermine the seriousness of the issue. If such a reaction were widespread then it would confirm that this appeal had failed in its objectives. The humour associated with adopting Bill Oddie was meant to facilitate an easier penetration of the target audience. Based on the success of penetrating this audience would create the desired reaction, i.e. a reconsideration of existing travel behaviour.

Message Appeal No. 3 was in the form of a poster. Two posters from a set of four posters in total were distributed and supplied in the sealed envelope to the households. Each one depicted a different theme and these are detailed in Chapter 4.

This appeal received the broadest level of acceptance from the three message appeals. The posters seemed to have encouraged very warm reactions indeed even though this format adopted only a maximum of 20 words with a directly connected piece of artwork, i.e. a photo. Comments included:

- *Brilliant message appeal. Clear and straight to the point.*
- *Picture was a good idea. Clearly and simply explained.*
- *I like the school poster. That is a conscience pricker.*
- *Made me feel quite uncomfortable, at least in regard to transporting our children to school and my commuting. But did it do anything now? Not much!*
- *Does make you feel guilty about very short car journeys!*
- *The advertising was more attractive but not more persuasive!*

It is not clear why the posters were so well received by a large section of the households. It could be that the message was plain, clear and to the point and that this encouraged an immediate level of agreement from the respondents. This is supported by the comments '*clear and straight to the point*' or '*clearly and simply explained*'. Or could it be an appreciation of the artwork that pushed the respondents to agree with the theme of the appeal? This is vindicated by '*picture was a good idea*'.

Criticisms were also levelled at the poster medium but it should be mentioned that three of the comments below came from one household. However the comments bring an important dimension to the discussion on the most suitable format.

- *Totally ineffective! No message and simply reiterating tired PR slogans!*
- *These are pretty unimpressive. The first is very soppy and probably insulting to war veterans.*
- *I think the English is terrible in that poster* (referring to the school run)
- *The second (school run) is ill phrased. 'Why <u>do</u> the school run', initially struck me and my father as an ungrammatical version of 'Why <u>does</u> the school run' and paused to suggest that some more people should <u>walk</u> nearly two miles.*
- *The third is a good motto for a railway company!*
- *The train home from work is nothing to me as it is not a possibility.*
- *The war against pollution is too vague!*

6.2.3. Overview of Findings of Message Appeals

Of the three formats adopted in the message appeals both the video and the posters achieved a reasonable amount of support whilst there was only negative commentary levelled at the leaflets. It is notable that the posters and the video are at the two extremes of the spectrum of communication instruments regarding the attention span that is required to make them effective. In order to reach their audience poster campaigns normally require split second attention due to their siting on roadways. However to view a video in its entirety requires more time and focus by the recipient. As a consequence the use of video may be maximised best when screened in the home.

Based on the habitual behaviour associated with the use of private transport and how this may undermine the success of the message appeals, a contingency was planned for in the research methodology. At the time of induction into Phase 2 of the research all households were required, regardless of the effectiveness of the message appeal, to

undertake three journeys on a voluntary basis on any mode of transport excluding private transport. The data accumulated from undertaking these journeys subsequent to the message appeals are now introduced.

6.2.4. Diary Analysis

The households recorded their experiences of the journeys utilising the various modes of transport. Some were described in three or four words while one participant proceeded to write four pages on their journey to Brussels by Eurostar. Enabling the participants to record their actual experiences of journeys along with their thoughts, either negative, positive or both, was identified as a major justification for selecting the diary for the medium of record. The following analysis is broken down by the mode of transport chosen for the journey. As evident by the depth of material submitted in the diaries it is acknowledged that public transport is the only feasible alternative to private transport for the majority of journeys undertaken.

6.2.4.1 Public Transport

In the focus groups discussions much emphasis was placed on the importance of having an adequate bus service within the public transport domain. Similar evidence was presented in the diaries but the information was more closely related to actual experiences. As the journeys were undertaken, or in certain cases unsuccessfully attempted, on behalf of the research it was envisaged that the transcripts describing these journeys would be more descriptive than if the participant was questioned about the experience some time later.

The isolation of Hedgerley from any dependable bus service was mentioned many times and often as a reason for not making any attempt to experiment with the bus service. Some of the stories told are very powerful in support of these criticisms. A good example is described below and this participant genuinely wanted to succeed in adopting public transport out of Hedgerley village for the benefit of the research. This person's story goes as follows:

- *I investigated the idea of getting the bus to Wexham Park Hospital to do my WRVS shift from 1600 to 1930 on a Tuesday. South Bucks Travel Guide with a timetable costs 50p and is dated 27/7/1997. I had three options:*

  1. *Route 44 from Hedgerley at 1314, arrive Slough Bus station at 1337. Depart Slough 14.25 and arrive at Hospital 1439 (1 hour 21 minutes too early). Last bus from Hospital at 1832 so would need taxi to get home*
  2. *Or 20 minutes walk to Hedgerley Common to catch 1353, arriving Slough Bus station at 14.14. Then as before!*
  3. *Route 44 from Hedgerley at 1414, arrive The George at 1425. Depart The George at 1443 and arrive at the Hospital at 1500 (1 hour too early). Still taxi to get home*

     On checking timetable at two bus stops in Hedgerley, one of the stops had only one-way times and the second had times of both directions. <u>But</u> times not as in Travel Guide of the 27/7/1997. Rang Traveline on 0345 382000, waited over ten minutes for music to stop, then told there is an update to Travel Guide published August 1997. So both my copies of timetable and information on the bus stops are out of date. The bus stop is filthy and needs a seat. Think I'll go by car!

Based on this information it would seem apparent that this particular journey was not suitable for public transport based on the available bus routes and time schedule. This journey would be an obvious choice for the car. However this is not to undermine that the effort made by the participant was genuine and yet it resulted in them coming away with a very poor impression of the bus service. Primarily this impression was caused by the inaccuracies of the timetabling schedule. The issue of timetabling was raised quite vehemently in the focus groups and it was one of the most important issues to emulate from the research. As a consequence this issue will be critically evaluated in chapter 7, Analysis and Conclusions.

Nonetheless it is important to look in more detail at the nuances of the timetabling problem. The research data has already confirmed that there were inaccuracies in the timetable and, whilst these can occur in number of ways, they all lead to further

confusion for the commuter. A collection of these has been alluded to in the research and were recorded in the diaries including:

- Timetabling problems arose because of buses not running to their normal schedule on any given day. This is a common timetabling problem and can occur due to traffic delays on a route, insufficient drivers reporting for a shift or an inadequate number of buses. It was recorded in the diaries with comments such as the *'bus was twenty minutes late'*. The degree of frustration expressed by respondents to such delays is impossible to quantify. It was elaborated upon nicely by one household who commented that it is *'very quick and easy'* as the positive outcomes recorded from the particular journey *'but had to wait for a bus to take me home'* as the negative outcomes recorded for the same journey. This example demonstrates the narrow line between satisfaction and dissatisfaction with any particular journey.

- Problems are caused when new timetables are published and misunderstanding can occur thereafter especially for irregular users of the service. Timetables are normally issued under a revised issue date but it is not clear how to calculate the latest in circulation from one timetable to the next. Comments to support this include '*so both my copies of the timetable and the information on the bus stops are out of date'*.

- Other comments included the difficulty associated with actually getting hold of a timetable for a particular route as verified by the following respondent who stated '*very easy once I had the timetable'*. The research identified the difficulty in locating bus timetables as one of extreme annoyance and inconvenience for the respondents.

The fares charged were also contentious as mentioned in the focus group discussions. They were considered too expensive with comments like *'Prices are disgusting. The buses are late, dirty, do not always turn up and many of the drivers are scruffy old men with an attitude'*. The particular respondent goes on to disparage the timetabling and the appearance of the bus drivers.

Overall the services provided by the bus companies were not recorded in the diaries as being highly rated. Both the comments below summarise this area of discussion:

- *The price of public transport, the time involved in getting to that public transport and the time waiting for the service combine to deter me from making more journeys without the car.*

And

- *The cost of the journey (£2.80 return from Gerrards Cross to Slough) and the time involved. Because of the poor bus services and timetabling (it) made me decide that until we get a good public transport system we will not persuade people to use their cars less.*

One interpretation drawn from these summaries is that the respondents, having tried bus transport on behalf of the research, were not convinced by the experience to change from their current mode of travel, i.e. the car. They still perceive the bus service as inadequate and the experience fails to persuade them of the merits in relinquishing their use of private transport.

It is appropriate to now provide a detailed account of a bus journey undertaken by one of the participants: **Euston Station to Waterloo Station in London**.

- *There is a relatively lengthy wait for the bus despite the fact that three separate buses go to Waterloo from this stop. A male beggar asks the passengers for 30p with no success. He is highly unaggressive, and no doubt needs the money, but nonetheless this is unlikely to encourage people to use this stop. Furthermore various youths on roller-skates attract suspicious glances from middle-aged women waiting at the stop, though they are clearly not looking for trouble (they are probably from the Somers Town estates – these have major social problems and locals may have reason to look at them with some suspicion). The seats at the front of the top deck in this one-person operated bus, which offer by far the best view, are both taken, which is a shame. The good view from the top deck front seats on these vehicles is their*

only redeeming feature, for they are ugly buses and tend to brake and start too abruptly to make them suitable for city use. The crews must be less well trained, for if you ask older drivers about RMs and RTs they insist that they were much harder to drive then the OPO buses, yet travel in them was always smoother.

The bus appears to take quite a while to get down Kingsway, but in fact the journey is very short. It would probably have taken as long on the Northern Line and on this sunny day the bus journey is highly preferable. As usual when riding on the top deck of buses I notice a couple of interesting architectural details, notably the date on the disused post office just north of Southampton Row. Crossing the Thames is always slightly thrilling, and here I notice that a large building near Temple Underground station appears to have been demolished and that a new building is in the process of being built. Moments regret at not having noticed previous building before its disappearance. Travelling by double decker bus is a far better way to notice changes in a city than travelling by taxi or car, let alone the Tube. Gladstone and Lenin were both devotees of the upper saloon of London Buses for exactly this reason.

This account adopts a very positive approach to the use of the buses. The participant describes beautifully the thoughts and feelings of the journey to such an extent that it nearly feels like one was sitting next to the person on the bus. None of the issues that are mentioned are portrayed in a negative or extremely critical way and more of this approach will be discussed later in this chapter.

The other constituent of public transport, the train service, received few complaints with regard to the provision of timetabling and scheduling arrangements. The experiences recorded from adopting the train service were generally favourable with minor negative comments passed. In particular the advantages of using the train were identified with benefits such as the peace-of-mind associated with not having to procure parking for a car and the comfort enjoyed during the train journey itself. Participants were pleased overall and expressed this with the comments listed below:

- *After finding first trip so easy, will use train again.*
- *The trains are good, clean, cheap and quick. Don't get stuck in traffic but unfortunately there is not much access from where I live.*
- *Enjoy train (but not bus) and have a complete timetable. Train is cheap because I have a senior citizens card.*
- *Took longer than car but fun.*

An interesting point to emerge from this material is how people can use the same mode of transport for different purposes and yet still report extreme points of view on their experiences. The same household in relation to the train service made two comments. The first one referred to a leisure journey that was undertaken to view a musical in London. The particular instance displays how content the commuter was with this mode of transport:

- *We got there on time and the train was prompt. Quite successful, the train was easy to use and on time, not very comfortable.*

As the journey was leisure oriented it could be implied that there was more time available for the journey and one could assume less pressure being exerted on the passengers as a consequence. However the second journey by the same respondent clearly displays a frustrated commuter who refers to a work journey by concluding:

- *Train was late and long walks to and from station. Shattering journey arrived late and car was much easier. Never going to work using that method of transport again.*

Now the respondent expresses total dissatisfaction with the train service and yet this is the same train service that received such glowing comments from the journey to London. The respondent does indicate the train was late but no information is provided by how long it was delayed. Nevertheless the description of the journey is '*shattering*' and the walks have become *'long'* to and from the station. Finally a statement of determination is made with '*never going to work using that again'*. A very important question could be

asked here: will such an occurrence affect the modal choice for that household in the immediate future? It would be reasonable to assume that this '*method of transport*', i.e. the train, will not be the respondents' first choice.

Two different households provided accounts of long-distance train journeys. One was to Edinburgh and the other to Brussels. A respondent identified one specific area of interest to the research and attempted to clarify the problem that it caused:

- *Before the train starts the public address system sprouts incomprehensibly gobbleegook about saver tickets not being valid on this train. The ticketing system is so complex no one understands what it means. Everyone now assumes their tickets are not valid and that they will be thrown off or surcharged -------. This system does not work well and even the conductor seems confused.*

The participant identified the complexity of the fare structure on the trains as the area of concern. This issue has become a more common form of grievance since the licensing of private train operators and the subsequent split up of the rail network. The participant claimed that this confusion only makes it more difficult for travellers to select this mode of transport for longer journeys. Part of the difficulty stems from not being able to locate fare information and, even once this is achieved, the complexity of understanding the pricing options. This point needs further investigation as the research data, brief as it may be on this point, indicates that this issue may be acting as a deterrent to long distance commuters from adopting the train.

A detailed description of a complete journey is now recalled and this involves a number of different train journeys. The journey begins in Gerrards Cross and goes as follows:

Walk to Gerrards Cross train station, Chiltern Railway train to Marlybone, walk to Baker Street, Circle Line Tube to Kings Cross Station, finally GNER (Great Northern Express Railway) express to Edinburgh Waverley.

- *This journey is very similar to the Eurostar journey described above, which either stress that Scotland is foreign or that England is an integral part of*

Europe, probably both. Because there is no 20 minute Eurostar check-in requirement on GNER (why? Surely a GNER express would blow up just as spectacularly as a Eurostar) and no time difference between London and Edinburgh, I can leave home rather later than when going to Brussels, although I still have to leave very early and I still arrive far too early at Gerrards Cross. The automatic ticket machine at Gerrards Cross rejects my £5 note about six times, which is irritating. I also discover that for some peculiar reason if I choose to do this journey using the Central Line from South Ruislip I can save 60p (£5.30 rather than £5.90 to Zone 1 from Gerrards Cross).

Kings Cross concourse is quite full and there are far too few seats (i.e. effectively none) for what is virtually an international station. The platform for the Edinburgh is not announced until very late. I am very lucky that I find a history magazine containing an article on the battle of Musselburgh/Pinkie (1547) in the station bookstall, so I am able to kill time and actually prepare for my visit to Scotland at the same time.

The train has a locomotive and a dining car in GNER blue livery (an odd colour that makes GNER trains look like a cross between a Royal train and a mail train in an imaginary Rumination state), but the passenger carriages are still in Intercity grey. This colour mismatch gives the impressions of a country that is in the throes of a revolution, and is hardly what one would have expected in a major European state. It is however true to say that all changes of this sort take several years to complete.

The train is the Scottish Pullman. It is not in fact a Pullman at all, the term simply means that it goes very fast and that proles like me with Second Class tickets are not allowed in the dining car in case we alienate First Class diners by spitting on the floor. I feel this is offensive but I appreciate that on very full trains some form of discrimination may be needed. GNER do after all operate several trains that allow Second Class passengers to eat in the dining car, and if I had chosen to leave an hour later I would have been able to. GNER asked me if I wanted an aisle seat or a table seat and got me an aisle seat, which was efficient of them. The table seats may be useful for groups of four, but for individuals they are a disaster as one ends up trapped behind the

ill-designed tables. Even his relatively modern Intercity East Coast stock is very similar to the old (i.e. mid-1970s) 125 stock, which was very badly designed and several years behind continental stock like French Corails. The aisle seats are not bad however.

The train is clean (apart from seat backs, which are always very tatty on British Trains) but heavily reserved and ends up quite full. There are a number of noisy children who do get my vote. Overall, however, possibly because this is the Scottish Pullman, this carriage is not bad for Second Class. It is my opinion, for reasons that are not entirely clear (although the British car-using culture, the consequent 10%or so shortfall in rail passenger journeys compared to France, the exorbitant cost of First Class and, perhaps, the poor design of British Second Class carriages, must have something to do with it), class differences between First and Second Class passengers are much more obvious in British Trains than in continental ones. As usual, many of the passengers are travelling within England, to York or Newcastle, so the train empties out somewhat as it approaches Scotland.

An announcement is made by the senior conductor that is clear and concise informing us that conditions en route are good. Admittedly one tends to take this for granted on internal BR railway journeys – we are after all hardly crossing the Urals, and in any case it is summer – but it is a pleasant touch nonetheless, even if it is clearly a privatised pseudo-airline gimmick.

The reserved seat next to me is never filled, so I get a seat to myself all the way to Scotland. Despite the fact that the windows strut somewhat impedes my view this is a pleasant and comfortable journey. I am always how amazed how quickly the train covers the distance to New Barnet, the edge of London. I have a friend who lives here. It is hardly 8.20am, so she will probably just be on the way to the station. The train is less smooth than the Eurostar, but not bad. I get a breakfast from the buffet car, having been provided with a 1 stg. voucher because I booked my ticket by phone and credit card. The buffet car food is a bit fast-foody, but at least it is more imaginative than burgers. My Cumberland sausage in a bun is genuinely good, although it makes for very messy eating and would not have been a suitable choice if the seat next to had been filled. The coffee, however, is vile.

The train continues to be amazingly fast, getting to York at 9.45am. The run up the coast after Newcastle is wonderful, although it usually seems to take a very long time and I'd imagine if one had to this journey weekly one would get pretty sick of it. The senior conductor welcomes us to Scotland when we cross the border. As one approaches Edinburgh the landscape becomes definitely foreign, hopefully persuading the passengers that these people at the very least deserve their own parliament.

Although rail privatisation seems to me to have been introduced for largely ideological reasons, it hasn't done any harm on this route. The GNER name is a bit silly (why don't they call it LNER?) and the colour scheme is odd, but the train is no worse (though no better) than before. The 38stg. return fare is a genuine boon and makes six-monthly journeys to Edinburgh possible when they were not before.

It is acknowledged that this description of the train journey is lengthy. However it is both necessary and beneficial to reproduce for the purposes of the research because it possesses a wealth of valuable information. In this section the participant discusses many issues relevant to the future of public transport. The comfort of the train and its seating is of importance and this account is positive. However the basic design of the carriage is questioned compared to European train designs. The quality of the food served on board is another difficulty for the train companies. The experience recounted is favourable but the coffee is recounted as 'vile'.

6.2.4.2 Car Sharing

This is a recognised alternative to travelling alone and is particularly appropriate if a number of people are travelling to the same location at the same time. It was interesting to observe the mode mentioned a number of times within the body of the diaries. This was all the more surprising as it obtained little discussion time in the focus group. Car sharing is a well-developed mode of travel in the US and plays an important role in both Federal and State transport policies. However in the UK this mode is only just being integrated into transport policies being developed by Local and Central Government.

A number of journeys recorded by the respondents were examples of car sharing. The households deliberately made the effort to share a vehicle, all of which were for leisure purposes. The comments made were positive and identified areas of mutual benefit for the commuters such as '*I didn't have to park my car*'. Another household recorded the benefit of the companionship when travelling together in one car with *'Excellent. Traffic was bad so it was better that we all travelled in one car. We also had a good chat together'*. A final comment is made by a respondent who casts some doubt on whether this mode has any future except with people who have very defined hours of work and he comments '*This would work for people doing 9.00 am to 5.00 pm. Mine is less predictable as is the person who I shared with tonight'*. By implication the end of his working day concludes at various times and this makes it inconvenient for him to deliberate on car sharing. This point was also raised in the focus groups and is an obvious deterrent to those who would wish to experiment with the mode.

6.2.4.3 Cycling

Members of the households recorded cycling as a mode of travel some twenty times in the diaries. That is the second highest recorded mode of travel in Phase 2. Nevertheless this mode of travel has endured a serious decline in use over the past twenty years, as detailed by the latest travel statistics presented in Chapter 3. The ease of travelling by bike for short journeys was mentioned, as was the convenience of not having to park a car.

One respondent stressed how much the bike is enjoyed when used, as it is '*easy and quick*'. The same respondent then goes on to mention the pressure exerted by the younger members of the household who try to insist on using the car all the time. The respondent confirmed that her '*son often gets a lift in the car by pestering*'. The respondent concluded by emphasising how she will resist this in the future and '*will be stronger*'. Another respondent described one of the difficulties of taking the bike on certain journeys and recalled '*Exercise 10 miles. Time plus but I arrived a bit sweaty. Circumstances can prevent this journey, i.e. couldn't go out due to clothing unless I carry a change of clothing*'. This particular journey was to visit his girlfriend and he felt he arrived somewhat dishevelled. Another respondent described how cycling was such a healthy exercise and a '*good way to get fit and see things*'.

One final point to note is that this mode of transport was the only one to achieve a positive response to a permanent change of transport behaviour due to the experience recorded:

- *I always now use my bike to go into Gerrards Cross for shopping and work.*

Another respondent who adopted a combination of the bicycle and train for the day's journey to work recorded an interesting experience with a similar outcome. The comments for the journey were as follows:

- *Fun on the way there. Feeling very strong.* [Recorded as positive comments]. *Took a lot longer especially on the way back. Expensive!* [Recorded as negative comments]. *Combination of taking bike and train too long and too expensive means I'll stay with the car.* [Recorded as general comments on the journey]

This respondent makes every attempt to develop an alternative mode of transport to the car for the daily journey to work. The journey in the morning is a positive experience with expressions like '*fun*' and '*strong*' used to describe the trip. However the journey home is not nearly as upbeat. The journey '*took a lot longer*' and is viewed as '*expensive*'. Alas in his concluding comments he admits defeat because of the time it takes to complete the journey, which is '*too long*', and because of the cost of the journey which is '*too expensive*'. Both of these reasons '*means I'll stay with the car*'. The effort he made to change his travel behaviour was clearly evident but this example seems to be yet another journey that would be more appropriate to undertake by private transport.

At this point it is important to observe whether a trend is developing. It is noticeable that the respondents, having experimented with alternative modes of travel, are continuing to travel using their existing private transport arrangements. The examples recorded confirm that it is not a simple task to modify travel behaviour. The existing travel behaviour is well entrenched and offers many advantages specific to the circumstances of the household.

But how important is it for people to comprehend that certain modes of transport are more suitable for certain types of journeys? In other words is there a requirement for people to be more aware that whilst there are a number of different types of journeys, there are also a number of different modes of travel to choose from. The biggest problem in getting people to alter their mode of travel may be their ability to match a journey to the most suitable mode of travel. Some of the journeys described by the respondents in the research, whilst undertaken with the best of intentions, were never really suitable for any other mode of travel than the car. The particular journey may have been too inconvenient, too costly or maybe even too unreliable for anything other than private transport. This is the major benefit offered by the car, a greater degree of flexibility and confidence that the journey will be completed to the person's satisfaction. However it has become so all embracing that it is being used for nearly all journeys, many of which it is not suitable for.

6.2.4.4 Walking

Walking was the most popular mode of transport in the research with twenty-two journeys recorded in the diaries. The diaries provided positive experiences and referred many times to the enjoyment of being close to nature with comments such as '*enjoyed the scenery*' or had '*nice walk through back routes*'. Some respondents mentioned how they enjoyed walking with others and that it was very relaxing during the walks to chat. Others passed comments about how it may benefit their health with comments like '*in principle I like the idea of doing this (walking) mainly from the exercise and companionship point of view*'. Another respondent commented how they '*met other people along the way*'. All the journeys recorded were for leisure purposes and many were referred to as '*weather permitting*' or '*not too far to walk but would have been uncomfortable if cold or wet*'.

One respondent recorded a walk and cites it as a bad experience that may have been compounded by arriving late to meet their friends. However the comment is somewhat contradictory: *'we left enough time but were still late. Will use car in future. Awful. The walk was tiring and we were late to meet friends'.*

6.2.5. Overview of Diary Panel

The descriptions supplied in the diaries of the journeys undertaken are rich in detail. These first-hand accounts recorded by the same respondents who participated in Phase 1 enable important connections to be made between the two phases of research. For example those households who criticised public transport in the focus groups could be studied as they experimented with public transport in Phase 2. Nonetheless it was always going to be difficult to observe a direct correlation in behaviour from the time the households initially viewed the message appeals and any subsequent change in behaviour that may be observed over the longer term. Based on the empirical data it would be a mistake to assume that there was categorically no change in behaviour as a result of the households being exposed to the particular message appeals, even though the research was conducted over a relative short time frame. This point will be expanded upon in the final chapter.

6.3. Section 3: Post Diary Panel Discussions

6.3.1. Introduction

The purpose of these discussion groups was to allow respondents the opportunity to express their thoughts having just completed Phase 2 of the programme. It was not intended to re-run the focus groups as it was considered very difficult at the design stage, some six months earlier, to assess how many people would actually participate. At this point the participants had been involved with the research for some ten months while they had actively participated over the past three months. The author was concerned that placing too much reliance on rerunning the focus group at the end of the research programme could jeopardise the whole project. As described in Chapter 4 none of the participants were being rewarded for their participation in the research programme. As a result the author considered this to be a drawback in extending the research period beyond the diary panel analysis. That being said it was too good an opportunity not to have an informal discussion when the participants returned their research material. It was therefore rewarding to observe eleven participants appearing, three from Gerrards Cross and eight from Hedgerley, all of whom were willing to take the time to discuss the issues raised in Phase 2.

6.3.2 Panel Discussions

The moderator understood that the participants had been informed they would only be kept a short period of time for these discussions. The discussions were therefore more structured and the data is presented under the headings, listed below, as described in Chapter 4.

- *Problems encountered during the period of research*
- *Analysis of panel discussions*
- *An overview of the response to the message appeals:*

  No. 1: Leaflets

  No. 2: 'South Buckinghamshire Travel' Video

  No. 3: Posters
- *Did the experience encourage new travel behaviour?*

6.3.2.1 Problems encountered during the period of research

No issues were raised regarding the scheduling of the research or with anybody's ability to undertake the journeys as requested for Phase 2. However there were a small number of problems identified with the diary and recounted by the respondents.

Three respondents referred to the diaries and expressed confusion about certain areas. Beryl (F60/h) mentioned '*I think I found a bit where it was ambiguous*' and identified one of the sections in the Typical Car Travel Diary. The section heading that read *'Do you believe car use could have been avoided in making this journey?'* She expressed some confusion as to whether it was the use of the car that could have been avoided or was it the actual journey itself? After briefly discussing the information that was required she soon realised that she had in fact completed the section appropriately, i.e. it was how the car was being used that was of interest to the research. The wording used did cause confusion that can only undermine a respondent's efforts to participate. Nevertheless in a study of this kind it is to be expected that there will be occurrences such as this but every attempt should be made to minimise them at the design stage of the programme.

Jo (F65/gx) made the following written comments in her diary feedback form: '*lastly I have found the main travel diary confusing and poorly laid out. I think a form of empathy could have been developed which would have resulted in more information being gathered and that information could be processed more simply*'. It was not possible to get this respondent to expand on these comments during the post-diary meeting. One can only surmise that the layout was sufficiently confusing that it deterred her from completing the diary in more detail. Whilst there are many possible layouts that could have been considered for the research, the small number of complaints expressed by the respondents would support the consideration that this instrument was satisfactory for its intended purpose.

Finally another participant made the following comment in the covering letter when returning the diary '*it seems to me that you have missed the opportunity to find out how much your correspondents already make efforts to minimise car use*'. Again it is only possible to surmise but it would seem the participant was critical because there was no space provided in the diary to record existing travel behaviour that already minimised using the car. This is a very good point as it was envisaged that the sample would be relatively new to this way of thinking, i.e. attempting to reduce the use of the car within the household. This respondent seems to be already applying this way of thinking in his travel behaviour and consequently would have liked the opportunity to report on this in the diary.

In summary the design of the instrument and the layout adopted for the diary seemed to have facilitated the aims of the research quite well. The comments made by the respondents enable areas of concern to be identified and it is important to be continuously aware of such concerns when analysing the data.

6.3.2.2. Analysis of panel discussions

Many opinions were expressed during the discussions from those who felt the research was of little value to those who expressed support for its contribution to the topic. It is fair to state that there was general agreement that a prime objective of the research programme had not been achieved, i.e. none of the respondents were prepared to

permanently alter their travel behaviour based on experiences encountered while participating in the research programme.

Some of the respondents were quite adamant that no change had occurred with their behaviour. Jim (M75/h) described how '*to me it wasn't really valuable and it wasn't really anything significant. Just a normal part of life that we carry on and I can't see any change to it. That's all'*. When quizzed further by the moderator about reviewing his own travel behaviour during the research programme, he replied, '*No different. Nothing surprised me about my behaviour, as it is normal for me'*.

Meanwhile Beryl (F60/h) expressed surprise with her travel behaviour and observed it in an unusual way. She never realised how many times she actually opened the garage door in the normal course of events and only noticed how much during the course of the research. She commented '*I was surprised at how many times I got the car out of the garage. Just the number of times, the number of journeys I think. But there is no way that I am going by BUS (emphasised) so I will carry on getting my car out of the garage (laughing)'*. While she acknowledges that the research made her consider how many car journeys she was making, she quickly shuts down the bus option as an alternative.

Christine (F36/gx) on behalf of her family was not encouraged by the reaction of her two children (son of 14 and daughter of 11) to the research. She commented '*my family has been fairly resistant to it really. The children wanted to be taken places really and we usually have no time so we hop in the car and I am afraid that really hasn't changed. It was me that said we could walk it, train it or walk it. But they would rather be taken in the car'*. This example displays how resistant younger generations are to changes that affect their mode of transport. Whilst they are well short of the driving age they are already conditioned in the use of private transport and they seek to maintain its status as the primary mode of transport within the household.

This particular example could have similar undertones with the earlier example mentioned in the focus group discussions. This described how 16 year old school children are already saving to buy a car of their own once they come of driving age, i.e.

17 years. This behavioural conditioning towards private transport clearly begins at a very early age.

The moderator at this point enquired whether there had been any further decline in public transport since the focus group meetings. He was quickly informed by Jim (M75/h) who responded '*it has got worse with the latest timetable*' and this was supported by Norman (M65/h)) who adds *'it has got worse I think. But Beryl can tell us about her experiment'*. Beryl (F60/h) then gave her account of a planned bus journey that was reviewed earlier in this chapter. Nonetheless it was clarified that there has been a further decline in the quality of bus service over the preceding 10 months.

Jo (F65/gx) identified two discoveries about her own travel behaviour having participated in the research and goes on to explain:

> Jo (F65/gx): *I noticed two things but you must remember that I am on my own. I can therefore make my own plans myself. The things that struck me was what a terrible public transport system exists around here and the information about the public transport system is difficult to get hold of and secondly once you do embark on it, it is quite good. ----------But I found really on the whole the negative side being the cost of public transport and the problems of time. You are waiting to make connections and for me it always a question of time. It will take me an hour and a half; no I will take the car. That was a negative side.*

Others, who were in total agreement, quickly followed up on the issue of time. However Malcolm differ somewhat and takes the issue of '*time*' a step further. He draws on the difference between work and leisure travel and describes how leisure travel should be seen as an experience and not be timed in comparison to private transport. He explains:

> Malcolm (M45/gx): *You have got to get people to stop thinking in terms, like Jo, of time and begin thinking more about the travel as an experience. I don't look at timetables because if I know that a train goes at less than 40-minute intervals, I will not bother finding out the train times. I will just turn up at the station and catch the next train and the worst case is that I will have to wait for 39 minutes.*

A large railway station will have a bar, will have a newsagents. In many towns it will have an area surrounding it maybe with pubs and interesting things to see. I mean I always travel with a book that I can read, 39 minutes in a railway station and you can read.

Malcolm attempts to move the argument away from directly comparing the time a journey takes on public transport as against the time the same journey takes by private transport. Malcolm only makes use of public transport for his journeys and as a result may therefore not have the same conditioning as car drivers towards such journeys. He goes on to compare this thinking when he is taking a journey and says:

Malcolm (M45/gx): *In a sense the whole behaviour pattern that you use on public transport is based on the assumption that you are either commuting and therefore catching a train at a specific time from a specific location that you understand and that just works. Or you are travelling on what effectively is leisure travel. You therefore assume it will take the time that it will take to do it. Essentially you give up half a day or a day to go to St Albans. I think car owners probably tend to think about going to St Albans and back in 2 hours. Going to St Albans is what I do for a day. That is how it works. It is not something you do as a portion of a day. The idea that one would spend less that 6 hours going to and from St Albans and doing the things in St Albans does not make sense to me.*

Malcolm is explaining his way of thinking within his framework of travel behaviour. A trip to St Albans is a day trip for Malcolm whereas for Jo it is a morning or afternoon journey as she is conditioned by her experience of using the car for the journey. Nonetheless Jo immediately steps in to support what Malcolm has just said by stating:

Jo (F65/gx): *I do think Malcolm is right about attitude. The one thing to me that came out of the whole thing was it is about your 'attitude' to public transport and where you are going and so on. If you can take the day to go to St Albans then that is fine. But it is about very much how you use things and how you look at things.*

Jo is accepting the bones of Malcolm's argument when she says it is '*how you look at things*' and that is all about '*attitude*'. This is interesting as the moderator then asked Jo *'was your attitude possibly one of concern (worry) prior to experiencing public transport?* Jo's immediate response was:

> Jo (F65/gx)*: No! Quite the opposite. I did think before-hand that public transport, you know, would be quite good and very interesting. A good change and it will do me good. And I came away thinking that it is expensive and the service is very poor. I think that on the whole the train services were better than the bus. But I quite enjoyed the actual use of the bus and the train as I think that you do relax more and a rather big bonus is parking. You know when you get to your destination you do not have to worry about parking. A big positive thing.*

Jo is effectively saying that prior to her using public transport for the purpose of this research she had a positive attitude towards public transport. However having used the bus service her attitude has changed, partially because she admits that '*for me it is always a question of time*'. She is confirming that she used the criteria of '*time*' as one of the measurements in scrutinising the performance of the bus service. Now she accepts that the issue of '*time*' is more embroiled in one of '*attitude*' as explained by Malcolm.

This could be put another way. If Jo had not looked on her public transport experiences in light of the time it took for such journeys, then she may have been more tolerant in accepting the bus service as adequate. When monitoring the bus service she seems to have adopted criteria that were framed from her experiences with private transport. Malcolm insists that you cannot do this or otherwise you will never be content with public transport. As a consequence Malcolm is saying that people must adjust their attitude to public transport. They cannot hop from private to public transport or vice versa with the same framework of observation and analysis.

6.3.2.3. Response to the message appeals

It would be fair to say that respondents reiterated much of what was reported earlier in this chapter under the section on message appeals. That is not to undermine the value of the discussions as they were extremely beneficial and allowed the respondents to meet

again and discuss the issues further. And the discussion facilitated a more open forum in which to scrutinise the rationale of the respondents at this stage of the programme.

No. 1: Leaflets

There was no change in the negative impact that both leaflets provoked and the criticisms were even more focused based on the interaction of the group members. A number of respondents commented about how they would ignore or dispose of such leaflets including:

> Beryl (F60/h): *If that had been in a library I don't think I would have picked it up It is something I would not have read it and would have put it in the recycling bin.*
> Christine (F36/gx): *I thought it was messy and did not have any punch at all and didn't mean anything to me*

Some respondents went further and complained that it was only a form of propaganda. One said *'I think it is like a lot of propaganda because that is what it is really'*. He is totally disparaging of the method used to convey this information even though he confirms that '*Okay I think what it is saying is pretty vital but I am not sure that is the right way to get it across'*. He accepts the sincerity behind the intention of the message and realises that it is important to get it across to the public somehow.

David (M63/h) raises an important point when he comments '*I think the problem with a lot of road safety agencies is that they are working with ancient advertising techniques. I know they want to be short and sweet but I find them very corny'*. He agrees with the content of the message but is extremely critical of the leaflets in front of him

Jim (M75/h) concludes the comments when he refers to the *Don't Choke Britain* leaflet and says *then you see the next week record sales of new cars and you think 'well we are choked already so here come another lot ready to choke us'*.

No. 2: '*South Buckinghamshire Travel*' Video

This was titled '*There is Another Way*' and was widely acclaimed as having had some success with the audience and comments included:

Rachael (F16/h)*: I liked it and it keeps you moving with the story. Also it showed what works and identifies where it has worked already.*

Giles (M26/h)*: I liked it, as it was quite pro cyclist. Pushing that angle was quite good. A very good medium. Captured its audience.*

The medium seems to be the major constituent of this successful appeal. Some of the respondents were even suggesting how this format could be use on a broader scale to influence the wider public with comments

> Christine (F36/gx): *It might start people thinking. I think after that a persuasion campaign. You need to come at people from various angles and I think that would be quite a good one to come at. Yes being local and places you could recognise. A person that you found quite appealing and fun really. Rather than being preached at!*

> Katherine (F35/gx)*: I thought it was rather fun really. I think if there was the occasional, short, punchy little advert to that effect on TV every other week or so, around about children's time then it might make people think*

Respondents emphasised the continuous use of this medium in any future campaigns. They were of the opinion that video is advantageous in getting the message across. They go on to suggest that more effort should be placed on making the public aware of the issues through the use of such media.

The 'Bill Oddie' factor, as it became known, was particularly targeted during the panel discussion and probably best summarised by Malcolm (M45/gx) who states: '*the problem is that people will not read these (leaflets) but they will watch the Bill Oddie. Primarily because of the Bill Oddie thing. If you sent this (video) through with a huge swan on the front with Buck County Council on the video nobody would have watched it at all. It is just because the Bill Oddie is there that they watch it. Having said this it does work because of that*'. The prime reason in adopting a celebrity endorser was to help gain

awareness for the message. This seems to have worked and Christine concludes this by stating '*it might start people thinking*'.

No. 3: Posters

The wording used was queried by a number of the respondents and criticised for its poor grammar. The medium was considered more successful than leaflets and Christine supports this and comments: '*I think the idea of using a poster to go in bus is eye-catching is good. And is probably more effective that a leaflet*'

6.3.2.4. Did the experience entice new travel behaviour?

At the end of the discussions the floor was thrown open to consider policies that the respondents considered would have the greatest potential in resolving this issue. The majority emphatically answered 'no' to undertaking any change in travel behaviour based on the encouragement through voluntary behaviour alone. However they did express the view that voluntary behaviour was an important part of the overall solution in understanding how this behaviour can be modified.

Giles claimed that there needed to be some reward associated with any modification of travel behaviour. He describes this as such:

> Giles (M26/h) *I have got to admit it would take something else (other than communication and voluntary behaviour), as everybody would just see it as a direct sacrifice by themselves. I mean be it fiscal or something else offering an incentive. That is certainly the way it will have to be with myself*

He clearly views the required changes coming about through a combination of approaches and is receptive to such approaches within his own framework of travel behaviour. Norman links to this an important issue when he refers to regulating any increase in taxation on the motorist as part of the solution. He comments:

> Norman (M65/h): *I think if you said the government were going to put 50p on a gallon of petrol and that that 50p was immediately ploughed into public transport to subsidise that, I think people would accept that more than if it just disappears*

into the treasury, where it does at the moment and get lost. There is the sort of carrot element; up to now it is always the stick.

Norman claims people are more open to the issue of increased taxation but they require this revenue to be ploughed directly back into transport and invested on the alternatives, especially public transport. Norman seems to be implying that he may then use the alternative mode of travel partially due to the consequential improvement in quality service but maybe more importantly because of the increased taxes on the use of the motor car. So while the research may have enticed households to experiment with the alternatives modes on offer, no evidence has become available to support any real change in travel behaviour.

6.4. Summary

This chapter sets out in detail the material gathered in Phase 2 of the research programme. A significant effort was made by each of the households to report on their travel experiences from modes of transport not normally utilised in their weekly schedules. At the same time they expanded upon the lessons learned from experimenting with these alternative modes. The households confirmed that the research site is heavily car dependent and lacking in its use of the other modes, especially the bus service.

Examining the responses to the message appeals the participants confirmed that the medium of video was the most successful. While the participants agreed that those appeals in themselves did not entice them to make changes in their travel behaviour, they did confirm that certain message appeals were favourably received and did exert a degree of influence in their thinking on the subject. The material gathered during Phase 2 has provided an immense amount of valuable data. The following chapters will now attempt to explore the relationship between social marketing and the qualitative data presented in this study.

CHAPTER 7

ANALYSIS

7.0 Introduction

In this chapter the principal findings of the study are reviewed in line with the objectives as set out in Chapter 1. One of the prime objectives of the research programme was to examine what effect on travel behaviour, if any, would take place as a result of exposing private transport users to a number of message appeals in the form of leaflets, posters and video. The research programme enabled the author to scrutinise the effects of these message appeals in helping to test a key hypothesis of the research; i.e. social marketing can play a central role in influencing the behaviour of private transport users. It is important therefore to present the major themes that ran throughout both phases of the research programme, as they need to be more fully understood in the broader context of the research. The chapter begins with a review of the topics that lie at the centre of the participant's resistance to changes with their existing travel behaviour.

7.1 An Overview of the Topics

Over a total period of 10 months the respondents reviewed their travel behaviour on and off while undertaking everyday journeys whether for work or pleasure. The programme of research facilitated the design of research instruments that could gather and analysis data related to these experiences at specific times that suited the participants. The topics that were considered to be of most relevance to this focus of research are now briefly presented.

7.1.1 Public Transport

Adopting public transport, either the bus or train service, was identified as the only real alternative to that of private transport for the majority of journeys undertaken during the course of the research. Fundamentally this was because the average distance travelled in a journey was either too far to walk or cycle. Nonetheless the consideration of public

transport, and in particular the use of the bus service, received widespread comments of dissatisfaction from the respondents and these comments encompassed many different issues.

Poor reliability of the bus services was cited in the discussions by many of the respondents as the main reason for not attempting to use the service *'The service is infrequent'* says one respondent. Another states that *'people do not think about them (buses) really because they are so infrequent'*. A direct link is constructed by the participants between the issue of poor reliability and the low levels of usage recorded in both parishes.

This point is extended further by the continuous reference throughout the discussions on the issue of poor timetabling. The timetable was identified to be of importance because the participants interpreted it as a form of contract or as a declaration of commitment by the transport company to provide them, as passengers, with specific travel services. However the respondents quickly determined that the timetable was of little value as they confirmed that the bus companies rarely adhered to it with any sense of urgency. This seeming unwillingness by the bus companies to comply with their own schedule of services implied to them, as customers, that they were not considered important. Not maintaining the timetable therefore was seen to represent an act of bad faith on behalf of the bus companies.

This issue was perceived differently by those participants who adopted private transport. Those participants who adopted the car were of the opinion that they effectively designed and implemented their own personal timetable every day. This allowed them the freedom to decide when to arrive and depart any of their chosen destinations whether for work, school or social purposes. If the private mode of transport were to be exchanged then they considered someone else, in the capacity of bus driver or train conductor, was determining their schedule of travel for that journey. Forfeiting control, by relinquishing the use of private transport, signified to the participants that a considerable amount of trust existed with the public transport provider. However it is evident from the research data that the participants have a very low level of trust with the bus companies. As a

result the bus companies, in particular, have a serious hurdle to overcome if they hope to persuade private transport commuters to convert to public modes of transport.

As documented in Chapter 6 both parishes had a very high percentage of car ownership among the participating households. Only one household in the study made no use of private transport and relied heavily on the availability of public transport. The remaining households all used private transport for the majority of their journeys and in some cases viewed public transport as an external resource that could be called upon when necessary. Public transport was not a mode of transport that these households needed to consider on a daily basis and when discussing the service many participants struggled to comprehend how they could make use of it. Consequently it would be reasonable to assert that low levels of awareness existed among these respondents especially regarding the routes in operation, the frequency of service and the fares charged. It is difficult to pinpoint any one reason for this but the researcher would surmise that many of the participants were ignorant of what was on offer from public transport because they rarely made use of the service.

A good example of this was discussed regarding the fares charged for using the local bus service which many participants claimed were too high. The younger participants, namely those travelling to school or college, expanded on the detail of the fares charged. Nevertheless one respondent expressed amazement when he was made aware in the discussion of the low fare for the one-day travel card that could be used for unlimited travel by train and bus around Greater London. The fare was quoted as £4.70 and could only be purchased after 9.30am. This respondent had lived in Gerrards Cross for over twenty years and yet was unaware of this cheap travel fare. He admitted that he did not use the train service but would he have considered adopting this mode of travel if he had been aware of the cheap fare? It is not possible to answer this question here but this example confirms that respondents were unaware of important information related to journey considerations. Mention was also made of the confusion generated by the many fare variations on offer when travelling long distances by train. It was agreed that such confusion only deters people from using the train service.

Many respondents also referred to what they considered as the steady decline in the quality of the bus service over the past five to ten years. The comments inferred a direct connection between the diminishing demand for the service and the decline in the quality of the service on offer. It is not possible for this research to determine which came first, the diminished demand or the reduction in quality of service. Nonetheless respondents were of the opinion that the change in ownership from public to private was the major factor contributing to this decline. None of the respondents supported the transfer of public transport into private hands. Rather they confirmed how uneasy they were to see this change come into effect in their area. The bus service was identified as an integral part of their community and of similar significance to the Royal Mail post van or the local dairy milk cart. Therefore it was impossible for the residents not to notice the bright new bus colours and company insignia that accompanied the change of ownership.

The participants were of the opinion that this change in ownership has not been widely accepted in the communities and constantly made reference between the decline in the quality of the service and the private operators taking possession of the bus routes. It is not possible to examine these criticisms in-depth but, upon analysis, the focus group material confirmed that the respondents identified a decline in the quality of the local bus service. Over the course of the research the participants also confirmed that they believe this decline is continuing to this day.

While these were the major issues raised by the participants it is acknowledged that other issues of importance to public transport were not raised in any great depth. This could include the standard of the bus fleet, the confusion that seems to exist with hail–and-ride bus stops and the courtesy displayed by the bus drivers while on duty. Nevertheless it is important for social marketers to be aware of the issues raised in this research. It is only by being aware of such issues can attempts be made to understand why and how people make choices when selecting a mode of travel. It is accepted that the primary purpose of public transport is to facilitate the easy movement of people travelling any distance for whatever reason. Public transport therefore must do everything in its power to enable people consider this mode more favourably when making travel arrangements.

Many of the problems associated with the above issues could be tackled with some success through adopting social marketing techniques. Concerns for the public regarding timetabling, pricing and ownership could be presented in a manner that would enable the public to gain a more comprehensive understanding of the issues that lie at the heart of such decisions. While applying social marketing techniques is not suggested as a remedy for the continued poor performance in levels of service, designing message appeals that provide a better understanding of pricing, for example, could help counteract the formation of negative attitudes. A campaign that would set out total cost comparisons between public and private transport for particular journeys could be regarded as a good example. Such a campaign could educate travellers on the true cost of undertaking certain journeys and possibly provide them with the more pertinent information that they require in order to make informed judgements when reconsidering their existing behaviour.

7.1.2 A Sense of Security or Lack of it

The issue of personal safety and security was discussed for the most part regarding the safety of females when travelling alone and a level of fear was evident among participants in such situations. It was noticeable though that people were overall very content when riding the bus or train services themselves. The fears were expressed more in regard to concerns for their personal safety and it was agreed that this restricted the eagerness for respondents to undertake even simple tasks such as walking to public transport facilities, perhaps a bus-stop or local train station. A resident provided an example that '*neither my husband nor myself would contemplate walking home from the station in the evenings. The morning is fine but not later in the evening*'. Nonetheless documenting the concerns for safety when using public transport is not meant to suggest that there no such concerns exist when using private transport. Respondents confirmed that personal safety is now relevant when considering all modes of travel but it is perhaps more prominently exposed in the public domain when contemplating the use of public transport facilities.

It could be argued from the research findings that the issue of personal safety is one of the main reasons people are adopting private transport in greater numbers. This was

inferred in the discussions when reference was made to the fact that households were becoming '*insular*' in the way they lead their lives. Or how '*artificial bubbles*' were being created in order to allow members of the household to feel more secure when undertaking day-to-day journeys. While the participants expressed how difficult it is to feel completely safe in any mode of transport there was general consensus that private transport provided the greatest sense of safety for those who consider it a priority. However the issue of personal safety carried with it a negative consequence for many of the participants contemplating public transport.

This topic might be difficult to tackle from a social marketing perspective. It only requires one occurrence of an incident when waiting to use public transport and thereafter, through the regional or national media as the vehicle, the incident becomes widely reported causing a sense of anxiety among the travelling public. It is very difficult to counter this anxiety in people's minds, as such incidents are by their very nature difficult to contain. However social marketing campaigns can help make people feel safer in many different ways. For example campaigns could focus on building people's confidence by advising them on how to take extra precautions when travelling alone. It might be appropriate for further research to consider such applications if the issue of personal safety is deterring significant numbers of travellers from adopting any of the alternative modes on offer.

The participants did not discuss the issue of safety from accidents and potential injuries in any detail. No problems were expressed at all with public transport on this issue and there seemed to be a high level of contentment when utilising such modes. People also seemed relatively content with the level of safety when adopting private transport. However the surge in the demand for SUVs in Gerrards Cross was volunteered as an example where there is increasing demand for more protection on the road. Participants considered that SUVs could offer an increased feeling of security. The use of SUVs was also closely associated with driving children to school and the protection it offered at such times.

7.1.3 Class and Mode of Travel

While this topic did not get much airtime in the discussions it was agreed, somewhat reluctantly, that a connection could be made between mode of travel and the perception of an individual's standing within the local community. As Desmond mentioned, the train is something that the commuter will easily accept but the bus, as he puts it, *'is very down market'*. Positioning the bus service so low down in the social domain of transport could be viewed as a serious distraction for many commuters from utilising the bus service for everyday journeys. The lack of anonymity in the communities of Gerrards Cross and Hedgerley seemed to perpetuate this feeling, as there seemed to be no reluctance in using the buses when visiting London. Maintaining a level of social acceptance for public transport should be identified as an important issue central to its survival. Therefore to observe the bus service being categorised as a somewhat lower class of travel should be of serious concern to bus companies in general.

Social marketing programmes would be well suited to counter these perceptions and to influence the standing of public transport in the eyes of the commuter. The design of specific message appeals would be required and they would need to have clear objectives and be properly targeted at the appropriate groups. However the participants agreed that well designed and focused message appeals could make a significant contribution in countering this perception.

7.1.4 Congestion

The topic of congestion was mainly raised in association with the school run and how this affected traffic in the areas close to the schools at certain times of the day. There was little mention of the wider issues of congestion in connection with the motorway systems or when travelling outside of the locality. This was of surprise to the author given how close both parishes are to Greater London and to the two motorways servicing the west of England, the M4 and the M40. Both of these motorways can endure serious congestion at peak times. The reality seems to be that the respondents participating in the research do not consider congestion to be a serious problem based on their particular pattern of travel movements.

Attempting to remove the problem of congestion entirely from the road network is not a realistic objective. Therefore it may be difficult to quantify how beneficial social marketing may be in such instances. While ongoing attempts are being made to reduce the effects of congestion, traffic experts are beginning to realise that congestion is becoming a more permanent feature on the roadways. Therefore it may be better to reflect on how congestion can be integrated and controlled as an everyday function of traffic management. Imparting information to assist with this objective could be enhanced by utilising social marketing techniques in an ongoing programme of public education. This programme could initially be carried out on a national basis in order to present an overall understanding of the problems caused by congestion. Regional and local programmes could then be rolled out in support and be targeted at specific congestion black spots closer to the commuter's home and place of work. Such programmes could encourage commuters, by providing real time information, to travel at times and on routes that help minimise the problems of congestion. The information contained in these programmes could also help to influence the commuter's choice of transport to the extent that the profile of public transport is enhanced as a viable option.

7.1.5 Noise Pollution and the Generation Gap

This was raised as an issue of concern by the respondents and was particularly noticeable for the way it was criticised by the older participants but yet accepted as a normal part of everyday life by the younger ones. Comments in the narrative range from '*the noise is terrible now*' to '*I can't say that I noticed it*'. Noise pollution acted as a catalyst opening up other areas of divergence between the respondents. These differences can be best divided between the different ages of those involved. However they all seemed to focus on one consideration; different generations have different demands. The older participants were happier if the locality remained as it was some twenty years earlier. One household even considered moving out of Gerrards Cross into the countryside as a direct result of the changes they had observed in recent times. The younger participants expressed no such concerns and were happy to witness the area moving on and keep up with the modern pace of life.

The research confirmed that social marketing programmes could help to make motorists more aware of pollution-related issues and the damaging effect that can occur as a result. Running campaigns that encourage a greater concern for noise related pollution is therefore well within their grasp. However the quality of these campaigns is critical to their success. Such programmes could emphasis the proper maintenance of a vehicle in order to minimise noise-related malfunctions. Nonetheless increasing the volume of traffic can only increase the noise that is generated and this seems to form the basis for much of the criticism in Gerrards Cross. Participants recalled how years ago, when traffic was light, the noise was acceptable. However as the volume of traffic has increased some of the participants claim the location has become less desirable to live in. Where families decide to settle, whilst a contributing factor to environmental problems, is possibly on the boundary of social marketing programmes. This is identified as a much broader social issue and one that requires more consideration by local authorities at the planning stage of new developments.

7.1.6 The Threat of Urbanisation

This topic followed on somewhat from the prior discussion on noise pollution. The participants claimed that the concept of urbanisation has become more normal over the past 20 years as large numbers of people move from the countryside to live and work in the cities. In some cases participants claimed that urbanisation was becoming synonymous with overcrowding, congestion and smog. However the participants considered that neither parish could be viewed as urban even though Gerrards Cross Parish consists for the most part of a large town.

Respondents initially referred to the possible oncoming of urbanisation through the influx of new people to live in the area. Those people who were deemed to be uninterested in the upkeep of the parish were labelled as uncaring. They were also characterised as resembling people who normally live in urban areas. The discussion then went on to consider what respondents perceived as artefacts of urbanisation such as traffic lights or sleeping policeman. It was pointed out that these artefacts are being more readily adopted as a means of controlling growing volumes of traffic in the areas surrounding Hedgerley. However the respondents signalled that they do not want to see them adopted

in Hedgerley. Finally the segment looked at some examples of how self-enforced traffic restrictions were enforced as a substitute for sleeping policeman.

The adoption of social marketing programmes in this instance may be somewhat more limited in scope. Programmes reflecting the environmental benefits of living in particular areas certainly can be devised and implemented. However a greater determinant for people when deciding where to live may be how far they have to travel to work. It is acknowledged that social marketing programmes alone cannot persuade people where to live for the benefit of the general public. Nonetheless they can make an important contribution in presenting information relevant to this topic.

7.2 Thematic Analysis of Participant Response

Over the course of the research the respondents touched on many different themes. A central theme that ran throughout the research was how unsure respondents were that their existing travel behaviour could be modified to any great extent. They also admitted at the time of the research that they were already heavily dependent on private transport for the majority of their journeys. Bearing this in mind it is important to review these themes to grasp a deeper understanding of the issues that may not have fully surfaced during the programme of research and that may be deterring respondents from modifying their behaviour. Social marketers need to be aware of such issues if they are ever to communicate effectively with their targeted audience.

7.2.1 Change in Behaviour

Phase 1 of the research programme facilitated in-depth discussions to take place on issues that the participants believed to be of concern in their locality. During these discussions the participants actively debated the advantages and disadvantages of the different modes of travel with specific references to where they lived and worked within the region. Nonetheless it was noticeable how vociferous the participants were in favour of private transport as this mode offered them the greatest flexibility when undertaking journeys originating from within the parishes.

There was no way of telling during Phase 1 whether participants would be willing to change their travel behaviour if prompted, or encouraged, by outside influences. While it was possible in the discussions to gauge the participants' enthusiasm for such changes, or lack of it as the case may be, it was not possible to observe whether such changes in behaviour would actually occur. This was the primary reason for the inclusion of Phase 2 in the research programme. Participants had discussed and made known their concerns in Phase 1, whereas Phase 2 would enable participants, along with other family members, to voluntarily undertake journeys using alternative modes of travel other than the car.

While the journeys undertaken and the alternative modes of travel adopted on a voluntary basis have been documented in Chapter 6, the question of whether there has been any permanent recorded changes in travel behaviour during the period of research must be asked. Aside from one respondent who now considers the bike as her primary mode of travel into Gerrards Cross, no other participant reported any change in choice of travel mode from that which existed prior to the start of the research programme.

One of the focus group discussions referred to the '*cliff edge*' in the context of adopting behaviour change and it was interesting to observe how this was developed. However none of the participants were of the opinion that the cliff edge would be reached during the course of their lifetime. One participant contrasts the present concerns of the environment to the concerns expressed over drinking-and-driving some thirty years ago. He claims '*it has taken a whole generation to get that cultural change*' enacted to where it is today. He challenges whether the appearance of the cliff face is enough to influence a change in travel behaviour and concludes '*I think we would happily walk over the cliff*'. He believes that different generations are more inclined to live with new anxieties or concerns. Each generation seems somewhat unable or unwilling to recognise the dangers associated with the anxiety of their time. The same participant acknowledges that years ago he did not recognise the dangers with regard to drinking-and-driving. At the time the responsibility for enacting the desired behaviour changes was placed more, as it is now, on the forthcoming generations to take upon themselves. Many of the older participants in the groups cited this consideration as the best way forward in dealing with environmental issues.

Nonetheless the younger participants in the group did not agree with this sentiment. They viewed access to the motor car as continuing to play an important role in their everyday lives to the extent that they are now consider the car as an everyday accessory. They are not willing to comprehend restrictions limiting their freedom of access to the use of the car. Nonetheless it is evident that the participants in this programme of research do not view environmental concerns as a serious threat to the extent that they are willing to modify their travel behaviour. On the contrary they consider that any burden, whether health related or not, arising from existing levels of pollutants to be so far away in the distance as to be of negligible concern.

7.2.2 Quality of Message Appeals

Scrutinising the feedback from the participants on the message appeals it could be confirmed that the response to the overall quality of the appeals was mixed. The leaflets were disparaged and yet the video and posters were identified as having some good points. How can this be objectively judged? One of the criteria for evaluating social marketing programmes is whether the campaigns actually instigated a consideration of intended behaviour change. It is widely accepted that behavioural changes envisaged as a result of participating in this research were not attained and the respondents clearly identified weaknesses in the message appeals as one of the main reasons for this.

Nonetheless both the video and the poster message appeals received positive comments alongside critical ones. '*Brilliant message appeal. Clear and straight to the point*' was how one participant referred to the appeal in the poster. '*Video was good and put over with a sense of humour, which was good*' was a comment made about the video message appeal. It is acknowledged that a behavioural change was not reported as a result of viewing these two appeals. But judging from the feedback these appeals definitely seem to have made the participants consider their behaviour.

Whereas the leaflets seem to have achieved the opposite effect. One example of how the leaflet was seen to have failed was described by one of the message sources during the period of research. This failure was in connection with the artwork adopted on the front cover of the *Don't Choke Britain (DCB)* leaflet used in the 1997 campaign. During the

research a significant number of participants volunteered negative comments relating to the artwork, which utilised the imagery of a baby in a gas mask. The detail of this leaflet was presented in Chapter 4, see Appendix 7. Those participants considered it was not only ineffective but, to many, it actually turned them away from considering the message any further.

Further light was thrown on this specific point when the results of research conducted by the *DCB* team were examined. The *DCB* Newsletter dated December 1997, reported that over 130 organisations returned completed questionnaires and that one important issue emerged from the survey. This confirmed that the decision had been made to remove the 'gas-mark baby' logo from further circulation as this logo was reported to be alienating many of the people who were the intended target of the message. Nonetheless the *DCB* team seemed unaware that such a decision may be damaging to the standing of the campaign. In social marketing terms such strategic decisions as changing the brand identity can have serious consequences. As a result the credibility of the *DCB* Campaign may be seriously undermined. The participants asserted that the appeal contained in this medium failed primarily because of weaknesses in the copy, i.e. poorly designed artwork. They went on to assert that such a negative reaction could damage the credibility of subsequent messages from the same source.

The research did not expect the message appeals alone to bring about immediate changes in behaviour. Nonetheless it was considered that they could have some effect and soften somewhat the respondent's deliberations of the alternative modes. While this may have occurred with the posters and video, the research has confirmed that this behaviour was so deeply routed that comprehending a simple message was not going to have any significant effect. Nonetheless these two appeals were at least considered with a degree of reflection by the participants. The author suggests that exposing the leaflets to the participants only hardened their resolve to maintain using private transport.

7.2.3 Mistrust of the Message Source

One of the fundamental objectives of social marketing programmes is to maximise the credibility of the campaign. Credibility is defined here as a function of three things:

expertise, trustworthiness and likeness. Evidence is gathered during the research citing a lack of credibility within the message appeals. It is prudent to briefly scrutinise the organisations behind the production of the message appeals in trying to determine how their credibility came to be undermined.

As discussed it is evident that the *DCB* logo is disliked to the extent that the respondents ridicule it. The artwork adopted on the front cover is also criticised and these criticisms only help to weaken the degree of trust that should exist between the message source and the target audience. As a consequence the participants in the main viewed material published by *DCB* as disparaging to anybody who choose to pick it up.

The *FoE* material also lacked a degree of trust as a number of respondents had an unfavourable opinion of the organisation. How these opinions were formed is not known but they were in place prior to the beginning of the research. It should be remembered though that *FoE* is a respected non-profit organisation and is the source of expert information on many different aspects dealing with the environment. However the organisation has taken a contentious stand on many issues and segments of the general population have not agreed with the issue or the way in which the issue had been placed in the public domain. Consequently some people, as identified in the research, have taken a dislike to *FoE* as an organisation.

Finally selecting Bill Oddie as the celebrity endorser to narrate and appear in the video did not prove to be universally acceptable. Many of the respondents considered his position to be compromised. He was a comedian figure of a particular genre that some of the participants could relate to. The younger ones did not know of him. The participants viewed the topic to be one of importance and the matchup between adopting Bill Oddie with this particular topic was viewed with some mixed feelings. Nonetheless this should not undermine the fact that some respondents had no issue with the use of Bill Oddie. Also the participants viewed the medium of video to be the most powerful message appeal adopted in the research programme.

7.2.4 Alternative Modes of Travel Cannot Offer the Complete Solution

The research did not set out to promote any one mode of travel over another as the ultimate solution. In other words the research attempted to get participants to vary their mode of travel solely based on their own criteria. Encouraging them to become more flexible about their choices, by selecting a different mode for each journey, achieved this. This is referred to as intermodality, i.e. individual modes of transport work together to provide the user with the best choices of service. The participants, when confronted with this concept, seemed inflexible and lacking in ideas of how journeys could be undertaken. They were so focused on the use of the car as the complete solution that, even when they did experiment with the alternatives, they quickly resorted back to private transport thereafter. However integrating different modes of transport was portrayed as forward thinking by the participants and was encouraged by comments such as:

> Hilary (F31/h): *I think we need both (public and private transport). I don't think we can do without cars because there are journeys where it is very difficult. I don't think it is realistic to say we all have to travel on public transport the whole time. It is not. We need both.*

The consideration of intermodality needs to be expanded upon in the public's mind, as it is not a term that they are familiar with. The research did not attempt to get the respondents to pick only one mode of travel as an alternative to the car. On the contrary the research attempted to get the respondents to experience different modes and, as a consequence of this experience, to try and continue to adopt this new mode for the most suitable journeys.

7.3 Limitations of the Research

While the programme of research enabled an in-depth analysis of travel behaviour to be conducted, there were limitations on what the research could actually achieve and it is important to review these here. The complexity of exploring social marketing campaigns and any direct links to behaviour modification was discussed earlier in the thesis. It was mentioned how difficult it was to monitor private behaviour accurately and, as a result, how challenging it was to acquire research data that could be validated by a third party.

Firstly the make up of the focus groups was not randomly chosen, i.e. judgmental or purposive sampling, and the participants were hand picked by the research co-ordinators. While this facilitated the research process it is possible that it could undermine the independence of the material gathered from the participants. Handpicking the participants could result in selecting people who have the same views on this topic and this could occur because the co-ordinator had the sole freedom in deciding who to select. The author was aware of this potential problem and attempted to prevent it by issuing guidelines on participant selection to the co-ordinators.

The diary panel method of data collection was designed so that it could be undertaken voluntarily and was viewed as the most appropriate instrument for this particular study. The author acknowledges that other forms of instrument design could have been selected, such as in-depth interviews, to gather the research data. At the outset the author sought to obtain a small number of participants who were keen to participate in the research. Thereafter, in order to test the effectiveness of the social marketing techniques adopted in the research, it was clear there needed to be in place an instrument that the participants could respond directly to. The diary fulfilled this objective. Nonetheless the author is aware of the weaknesses associated with this research instrument and took all necessary steps to ensure quality data was collected. Errors can easily occur with this format of data collection, as it is not possible for the research material to be independently validated. The diaries were self-completing and therefore require a level of confidence in the participants that they would record their behaviour as accurately as possible.

It is also acknowledged that the sample size used in the research was small which could lead to criticism of the results. While this is accepted the methodology adopted enabled a rich amount of detail to be gathered, thus enhancing the quality of the empirical data. This is also supported by the length of time the researcher had an open line of communication with the participants. Actively it was some four months and this facilitated a level of trust to be built between the participants and the researcher resulting in excellent feedback from the majority of the participants and their households.

While there were obvious weaknesses in the message appeals adopted, it should be stressed that there were few examples available to chose from at the beginning of the research. In 1996 there were not many public information campaigns running solely on issues relating to transport. The author had difficulty in obtaining adequate copies of the message appeals for the research, i.e. some thirty copies of each message appeal were required.

7.4 Summary

Overall the research concludes that a minimum amount of behaviour change occurred as a result of participating in the programme of research. And, based on the sample size of participants, this level of change could be deemed inconsequential given the size of the problem at hand. However the author considers that a significant number of the participants did voluntarily question their own travel behaviour. This is not to say that they are prepared to make modifications at this time but the research would conclude that many of them are prepared to listen and be open about the options that may lie ahead.

The heavy reliance on the motor car as the sole mode of transport within most households should be tackled. Nonetheless the research has provided evidence that this behaviour cannot be effectively challenged by running, what are in effect, anti-car campaigns in the hope that car-users will simply discard the car for other modes of travel. The evidence has shown, through the testing of a number of message appeals, that this approach can simply end in failure. A different approach therefore needs to be adopted in how best to communicate with the private transport community if any chance in behaviour is to be recorded. The research suggests that the concept of intermodality should be introduced at the core of new public information campaigns aimed at the travelling public. No one mode of transport should be allowed to dominate the transport agenda, which is what the motor car is doing at present. People who travel, either for work, pleasure or both must be convinced of the benefits to be gained by integrating different modes of travel into their personal lives, wherever possible.

The level of trust generated between the message source and the audience must also be enhanced if social marketing programmes are to be effective in convincing people to

change their behaviour. Messages sources with low levels of trust cannot hope to accomplish their goals as their messages are discarded by the majority of the targeted audience that they are aimed at.

CHAPTER 8

INFLUENCES ON TRAVEL BEHAVIOUR CONCLUSIONS

8.0 Introduction

This chapter presents a review of the major influences that were identified in the research as having a significant bearing on travel behaviour decisions.

8.1 Key Influences on Travel Behaviour

8.1.1 Perception of Risk

The research data suggests that the participants did not place much importance on the consideration of risk especially in connection with the negative consequences emanating from driving a car. Throughout the research, while acknowledging that much of the advice contained in the messages was accurate, the participants were still of the opinion that any harmful consequences were not of a serious nature. As discussed in the analysis chapter the focus group participants discussed and accepted that the exposure to risk was growing and that how this was like getting closer to the '*cliff edge*' as society moves forward. However the groups generally agreed that the cliff edge would not be reached during their lifetime.

The participants continue to remain at ease about their existing travel behaviour. They seem not to accept that their individual driving behaviour can act as a contributing factor to environmental problems. The participants in the research showed few signs of being able to acknowledge any responsibility for present day environmental problems. A challenge for the appropriate authorities therefore is to present a convincing perspective of the short term, medium term and long-term impact of private transport behaviour on the environment. In order to do this effectively the authorities must succeed in relaying the message that the risk associated with specific behaviours is real and will have consequences for all concerned.

The research goes further and suggests that the participants do not accept that even if these environmental problems existed they would affect them personally, either directly or indirectly. So even for those participants who agree that there are some negative consequences from this behaviour, there is the belief that they are so small as to cause only minor inconveniences to their lifestyle.

One could ask how did these conceptions came about? Have the message appeals been unsuccessful in enlightening the participants of the potential dangers from such environmental problems? Alternatively it could be surmised that the participants understood the core message of the appeals but considered the message source as dubious, rejecting the message content as a result. Many of the participants considered *FoE* as a dubious source and one whose information they would be slow to listen to and, even slower, to base a change in behaviour upon. It is identified from the research that it is not enough just to publish information and facts, as perceived from different sources, on the topic of transport pollution. The participants identified that they needed to be presented with a more sophisticated set of messages generated by reliable and trustworthy sources.

The majority of the participants also seem to have no concept of time in regard to how close these environmental hazards may be. Could the damage to the environment caused by car pollution be so insurmountable that it will create hazards affecting mankind into the distant future? The participants seem to believe that consequences of these considerations are too far away to be troubled about them now. The participants have faith in the scientific community and in their ability to come forward with ideas and answers to the problems. The latest trends in transport technology will be part of the solution over the coming years. One example identified by the participants was the evolution of electric powered vehicles. They consider this as the next generation of vehicle, which would assist in solving many of the environmental problems now causing concern.

8.1.2 The Responsibilities of Different Generations

The discussion above raises another important issue that ran throughout the research. What did the research have to say about 'age' in the context of people's transport behaviour? The research provided rich data on this issue.

When the discussion was underway on the issue of risk it was noticeable how the older participants looked across the room at the younger participants with an inquisitive mind. They seemed to be enquiring whether the young participants were yet willing to change their behaviour. In one instance during the discussion Jim (M75/h) took this thought head on when he pointed to two of the young participants across the table and said:

> *The ones that are going to make the decision for us are the two youngsters there* [pointing to Rachael (F16/h) and Mark (M17/h)] *because in my time it is just going to make no difference.*

There was agreement by many of the older participants on this point. They felt that the time they have left was of little value to the long-term problems that lie ahead. One could question the other reasons for such inaction on behalf of the older participants. Nonetheless the younger participants were having none of it. The car was their expression of freedom and they intended to get the opportunity to enjoy using it. During the discussions many of the younger participants claimed that they needed access to a car in order to lead an enjoyable social life. This was especially true for those who lived Hedgerley as it went without public transport after 7.00pm each evening. Mark, who had just recently purchased a small car and lives in Hedgerley, took up this point when the moderator asked him the following question:

> Moderator: *Would you still have bought the car Mark if public transport were improved out of Hedgerley village?*
> Mark (M17/h): *I would have bought it still. It's freedom isn't it? I don't have to wait every hour for a bus in the rain or pay £3.60 on the train. Walking past all the tramps and that. It does my head in.*

The expression of freedom associated with the car is very strong indeed in all of the participants but in particular, the younger ones. Mark shuts down quickly the possibility of giving up the car. The comment about 'tramps' is not explained and no attempt was made to enquire further. As a result there seems to be no agreement among the participants on what action should be taken. And even if there was agreement on actions there is definitely no agreement on who should be responsible for undertaking such actions. All the participants consider that it will take decades to implement a solution and each of them deem their time to be too short to be of any consequence. Judging from the indecision of what action should be taken one could surmise that the older participants are waiting for the younger ones to undertake the desired behaviour changes. However the younger participants may be in turn waiting for the scientific community to come up with the answer to these problems.

8.1.3 'A Sense of Powerlessness'

The participants expressed the belief that they have no influence or power in addressing the environmental issues raised, specifically in regard to their own locality. They reflect upon the fact that there are no provisions for them to either express their concerns or to put forward possible solutions that could limit the further growth of environmental problems. Acknowledgement of this during the discussions seemed to generate a degree of scepticism among the participants in their dealings with, particularly, the local authorities. The participants believe that these authorities do not always take the correct action or, more importantly, take any action at all. The authorities were defined in this instance to be a broad array of institutions or organisation. It could be the local district council who carries significant responsibility for implementing local transport policies. It could be the local bus company who has responsibility for providing the local area with an acceptable level of public transport service.

Examples of this sense of powerlessness abound in the discussions, especially regarding the performance of the bus companies. Many of the participants are of the view that, as the bus companies are now privatised, the public has no voice or controlling power in setting the criteria for an acceptable level of service. The problem with the timetable is one example and it is continuously referred to as an issue of concern. The parish councils

admit that they have no jurisdiction over decisions of this kind and that they can only offer advice when requested by the District or County Council.

Why does this feeling of powerlessness occur? One could surmise that the locals are unwilling to assist the local authorities in providing accounts of their own experiences. Or it could be that the authorities are unwilling to place any value on the local viewpoint when considering issues in relation to pollution management and control. Based on the eagerness of the participants to discuss such issues during the programme of research, the former is most likely not the case and the latter should be examined more closely. This lack of communication could be construed as an example of the experts, in this case the local authority, believing that they can resolve these problems alone without any need for assistance from the locals. The participants expressed the opinion that there was little effort on behalf of the local authorities to communicate with the residents on these issues.

On the other hand it should be borne in mind that the local authorities might already believe that they are doing a good job in seeking the opinions of the residents. The publication by Bucks District Council of '*The Draft State of the Environment Report,*' January 1996, seemed to be a genuine attempt. In releasing the report the Council held a public meeting and invited representatives from all the parishes within the District. The Council clearly requested people to respond to issues as raised in the report. Nonetheless, while the District Council may have been pleased with this attempt at communicating with the public on these issues, none of the participants referred to this study at any time during the research. It was clear that the majority of the participants were unaware that this report had been published. As a consequence it could be assumed that such documents, while published with the best of intentions, are not reaching into people's homes and stimulating debate. The research concludes that the local authorities need to re-evaluate their efforts at communicating with the public on transport related issues of local concern.

However the research also demonstrated that the participants were not directly seeking the power to regulate on these issues. Instead the participants were simply seeking the power for their voices to be heard on such issues. They were indirectly expressing frustration that all this information on the environment was being delivered to their

homes without any identifiable opportunity to respond. Much of the content of the message appeals, so far removed from their perceptions as everyday travellers, only confirmed that they were not being consulted about the problems. The participants found it difficult to understand how such messages could be devised, implemented and yet still are so wide of the mark regarding their thinking on such matters. The participants confirmed that there were very receptive to information in the form of social marketing programmes but that this information needed to be linked to reality, as they perceived it. In other words simply suggesting not using the car was of little value if there was no alternative means of travel available in the area. Campaigns need to focus more on the local situation when devising messages so that they are more accurate and better resonate with the community. It was considered that campaigns would be more effective in helping participants review their existing behaviour as a result.

It is interesting to explore whether social marketing campaigns would therefore have a greater chance of success if they were devised at the local level. The participants gave the clear impression that they would support such initiatives with enthusiasm. One advantage of this approach is that common messages can be created that are of genuine concern to the target audience. Adopting the language of the local community can also convey these messages more succinctly. The author suggests that more control of social marketing campaigns should be disseminated to the local level and supported with funding in order to observe the results.

The research concludes that this sense of powerlessness is identified with a sense of helplessness participants experience at being unable to influence social marketing campaigns. The participants signalled in the focus group discussions that they were willing to listen to the arguments as presented in the marketing collateral. But the material presented in the research failed to put across a clear and consistent message. In other words their sense of powerlessness had nothing to do with any executive power as exercised by the local authorities. Their sense of powerlessness was more to do with giving them the opportunity to voice their opinions on this topic. This, they concluded, had not happened and they feared would not happen in the future as the issue develops further.

8.1.4 A Poor Image of Public Transport

A key influence for the participants when considering alternative modes of travel was the poor image they held of public transport. Many examples were recounted of buses not running, timetables not being followed or the difficulties in finding out fares for specific journeys. It is acknowledged that the experiences recounted were genuine and that they did put people off adopting public transport. However this also seems to have generated a lack of trust among the participants that the service can ever be adequately improved. This belief seems to have been consolidated even further by the arrival of private companies to run the bus and train service.

While accepting that Hedgerley is a rural parish, and only has a bus service to Slough, Gerrards Cross has excellent public transport facilities. But the research has provided evidence that private transport was preferred for the majority of journeys by the participants. And this preference was strengthening, rather than diminishing, over time.

8.1.5 A Sense of Security and Comfort

This point also played a significant part in influencing the decision to select a specific mode of transport. All the participants enjoyed the security and freedom associated with the adoption of private transport. Through this mode the participants had the freedom to decide when to travel, how long to get there, feel safe about the journey, listen to the radio and still make changes to their own itinerary if desired. The expression of freedom associated with this mobility was such a strong part of their lifestyle and they all wanted to maintain it without any disruptions.

It was also noticeable how this mode was defended when it came to costs. There was no mention of fixed or running costs in the discussions. The cost of owning and maintaining the vehicle seems to be tolerated by the participants. However there was strong resistance to any further increases in fuel taxes even though they are normally raised each year in the budget, at a rate over and above the rate of inflation. And yet it was very noticeable how much criticism in the research was directed at the fares charged on public transport. Paying for travel as it is used, on demand, seems to be an issue for the participants. It seems that by paying out for fares each time you use the service can deter

people from making greater use of this particular mode. This was in contrast to silence form participants regarding the costs that one incurs when owning and running a vehicle.

8.1.6 Site Selection

It is acknowledged that the households selected in the two parishes are not representative of the average UK household and the research would classify the areas as middle to upper class. As a result it is accepted that the finding of this research are relatively unique to the research area. Does that make the evidence gathered of less consequence? The author would strongly argue that this is not the case for the following reasons.

Firstly the focus group discussions raised issues that are commonly talked about on a day-to-day basis when it comes to problems of transport. *'The buses are late', 'the train is delayed', 'the cars are speeding' or 'the pollution is terrible with the fumes'* are some of the comments that can be heard across the country. Therefore the opportunity to discuss such issues in depth in the Hedgerley and Gerrards Cross parishes was an invaluable source of data. And the availability of such data to the research community, while specific to these areas, must assist in the search for long-term solutions.

The same can also be said of the diary panel data. Availing of an opportunity where people can document their travel behaviour over a given period of time is fruitful research. It would be reasonable to assume that there are no two households in the UK that have the exact same demands on their time and how they make their journeys to work or school. However having obtained data that is self-compiled from within each of the households is rich in detail. As mentioned in Chapter 4, Gerrards Cross parish is recognised as having the highest density of two-car households in the UK. Nonetheless it was also confirmed in Chapter 3 that the level of car occupancy per household is steadily rising across the UK. Therefore while Gerrards Cross Parish is identified as having the highest density of two-car households in the UK, it could also be surmised that this Parish is an early indicator of a trend that is occurring in many different parts of the country.

8.1.7 The Use of Qualitative Research

In the chapter on methodology there was a discussion on the benefits of either qualitative or quantitative data collection instruments for this topic of research. It was eventually decided to adopt qualitative instruments throughout the research programme aside from a small questionnaire that collected data on the make up of the households. The question should be asked whether the right instruments were chosen and whether they had any undue influence on the participants when either they were discussing or reporting on their transport behaviour.

It is important to stress that there is no such think as the perfect instrument for data collection as each one has its own strengths and weakness. Beginning with the focus groups the author confirms that this instrument was successful in producing valuable data on this topic. There was never any consideration that this instrument would undermine the willingness of participants to recount their transport experiences. The focus group offers an open and stimulating forum for discussion and this format was well received by the participants in the programme. Each group made a valuable contribution to the topic and many of the discussions had to be stopped to comply with the timetable rather than the participants wanting to leave the discussion early.

The diary panel is a distinctive type of instrument, as it is not widely used in research situations and this was briefly discussed in Chapter 4. The diaries worked reasonably well in their capacity as mechanisms for self-reporting of events. One significant weakness of the diary panel is that once the diaries are distributed to the households there is no facility to have any further control on how they are used. Consequently events can be reported that have been distorted. However no evidence of this was identified during the analysis of the data.

This weakness could have been catered for if the researcher had the facility or the resources to call upon the households during the research itself. This would have provided an opportunity for the researcher or a representative of the research team, to meet with the participant in their household on an interim basis. At such times they could discuss how the diary was progressing and offer encouragement where necessary.

However it was not possible for the researcher to undertake this role due to work commitments.

As an aside there was one invaluable lesson the author experienced from undertaking focus group discussions and that was how important the role of moderator is to their success. This was the first occasion that the author had the opportunity to participate in a formal focus group setting and to experience the capacity of guiding while not attempting to interfere or influence the course of the discussion. When a point was made that was considered important to the topic of research, it can be difficult for the moderator to see that point fade away when a new topic is introduced. It is very important that the moderator stands back and does not attempt to influence the discussion at those particular times. This moderator experienced these difficulties with the first two groups.

8.2 Conclusions

These are major findings of the research project and they could be summarised as follows:

- The participants do not widely acknowledge the link between transport pollution and environmental concerns. As a result they seem to have little understanding of the negative consequences associated with enacting this behaviour.
- Nonetheless the participants acknowledge that actions need to be taken. Different ideas are articulated in the research on what actions should be taken and who should bear the responsibility for undertaking them.
- The participants express a feeling of powerlessness about this subject. There is no effective forum for them to put across their views on the subject. They also express frustration that they cannot influence the social marketing material that they so fundamentally disagree with.
- The poor image of public transport is undermining its choice as an alternative mode of travel.
- There is a strong sense amongst the participants that private transport provides a greater degree of security and comfort.
- The research has taken into account that the residents of Gerrards Cross and Hedgerley are not representatives of the average UK household. Notwithstanding

this the material gathered is rich in detail and of value to all concerned with this topic.

CHAPTER 9

SOCIAL MARKETING IN CRITICAL PERSPECTIVE

9.0 Introduction

Researching the rationale of a number of private and public transport users when selecting their mode of transport was extremely beneficial for the purposes of the research objectives. But what can be gained from this research? And how can an analysis of this material contribute to social marketing and help provide solutions to environmental problems created by this particular behaviour? The research findings concluded that the application of social marketing in this instance failed to meet its objectives. Consequently the role of social marketing in this area of public concern needs to be reassessed. This final chapter undertakes a critique of social marketing in the context of what was observed in the research. This is followed by a number of recommendations that may be of assistance in future research on this topic.

9.1 Critique of Social Marketing

9.1.1 An Understanding of How Transport Behaviour May Change

It has been stressed that behaviour change is the bottom line for all social marketing programmes. The research has concluded that there was a minimal level of behavioural change reported by any of the participants when faced with specific social marketing messages. This could imply that there was too little, if any, understanding by social marketers of the issues that influenced this particular behaviour, transport selection. As a result these issues may not have been properly addressed, leaving the existing behaviour intact.

During the preliminary stages of the project the researcher met informally with people responsible for distributing social marketing material on behalf of the different authorities. These meetings took place so that specific material could be selected and adequate numbers of originals obtained for use in the research. Local Authorities such as

Essex County Council and Buckinghamshire County Council had produced social marketing collateral on the subject of transport selection. In these meetings it was suggested that the authorities had difficulty in identifying the exact nature of problems caused by transport pollution. Nonetheless the authorities considered they had a primary duty to inform the public living in the area of the potential consequences. This was identified as the primary reason for producing the social marketing literature. The secondary reason was acknowledged as an attempt to influence a change in the behaviour of transport users in whatever small way this could be achieved.

It was accepted in these discussions that none of the marketing collateral used in the research had been designed with a detailed understanding of how people use transport or how they make decisions when selecting certain modes. The drawback of this is evident by the negative response the leaflets generated among the participants during the research. As expressed in the issue of powerlessness, the leaflets in many ways produced the opposite effect of what they were designed for; i.e. they made the participants feel disconnected from the topic rather than embracing a positive response to the appeal contained in the message. It made the participants disparage the use of such material in trying to convince people of the benefits of changing their behaviour. The video and posters were better received but still made little headway in convincing the participants to change their behaviour.

It was also interesting to note, while undertaking the empirical research, that some participants possessed detailed knowledge on the topic of transport pollution. There was an awareness of the environmental damage being caused by transport pollution and of the various transport alternatives available to them that would, if adopted, help to reduce levels of this pollution. Nonetheless this increased level of knowledge made no difference in assisting participants to modify their travel behaviour.

There are a number of reasons why this was the case. Firstly many of the participants considered that their individual behaviour was insignificant in the overall context of the problem. Reducing levels of transport pollution, in the eyes of the participants, could only be resolved if a significant number of transport users altered their behaviour together. The participants expressed concern as to why they should sacrifice the comfort

of private transport while others would continue to enjoy the benefits. Secondly some of the participants, while accepting that they were already aware of the problem, did not consider that changing one's behaviour was the only solution. The likelihood of a technical solution being devised for the problems caused by transport pollution was still in the early stages of exploration. Nonetheless the participants were curious how such developments could make a significant contribution in the search for a solution. Therefore they were more inclined to adopt a wait-and-see approach before modifying their personal behaviour.

Finally there was also a degree of scepticism among the participants that transport pollution was contributing to the degradation of the environment. If the scientists could not agree amongst each other then what was the man-in-the-street to believe? This point identifies one of the major difficulties facing social marketing campaigns in this area of concern; i.e. the participants could not directly observe any negative outcome arising from their existing transport behaviour. The AIDS awareness and anti-smoking communication campaigns had the benefit of being able to link a direct outcome due to a specific action. Unprotected sex carried the risk of exposing oneself to the HIV virus. Smoking, for an extended period of time, carried with it the risk of contracting a number of illnesses, many of which would seriously reduce levels of life expectancy. And yet, the participants asked, what negative outcome could be directly related to driving to work or to the supermarket?

9.1.2 The Failure of Not Targeting

The goals set by social marketing programmes are never easy to achieve. But one of the fundamental rules in seeking to make programmes successful is to target the right audience. In the past this meant segmenting the market into a number of different homogeneous groups. However it is becoming increasingly evident that many markets can not be broken down in this way. While some customers, for example, may buy a car as a means of cheap transport from A to B, others may buy it for comfort or safe travel, and others may buy it for reasons of status and to project self-image. Other people will take a bus in the city and yet would avoid taking one in their local village. Segmenting the market, thus allowing such groups to be identified with a common behaviour, can be extremely helpful in expanding the effectiveness of particular campaigns.

No evidence existed of any targeting or segmentation of the market when reviewing the marketing collateral in the research. The participants perceived that the information contained in the marketing collateral was primarily aimed at the general public. There was no effort to break down sections of the market by age, gender, or existing behaviours. This was borne out further when one observes how this material was distributed across the regions. The posters were used on buses in Essex. The *FoE* and *Don't Choke Britain* leaflet material was available for general distribution to anybody who sought such information. And the video, produced by Buckinghamshire County Council, was made available to the general public also. However it should be mentioned that the video was also distributed to all the libraries and schools within Buckinghamshire County. A scattergun approach therefore was adopted in attempting to distribute this material to the widest possible audience. The 'one-size-fits-all' tactic can have the effect of distorting the impact of the message by trying to be of interest to everybody who views it. Attempting to target everybody with the same message only generalises the content to such an extent that the messages may fail to resonate deeply enough with anybody.

Messages designed for segmented audiences should also be delivered at the most appropriate time. Preferably this should be when the targeted audience is receptive to behavioural changes. This could be when a person comes of driving age or when a person changes jobs or even retires from work. These are some occasions when people may be more receptive to modifying their behaviour because they need to evaluate new behaviours associated with the change in situation. However people can only be targeted if the market is properly segmented, message campaigns specifically created for the audience and the messages delivered using the most appropriate and effective method. The research would conclude that none of these factors were taken into account when designing the original marketing messages used in this research.

9.1.3 A Lack of Primary Research

During the period of research it appeared as if each region, each county, and even each borough, were all designing and implementing their own social marketing programme for this campaign of action. And the messages created for these appeals received broad criticism from the participants during the research.

But why should the marketing collateral be so widely rejected? The research concludes that part of the reason was that the message sources were so out of step with the thinking of private transport users. As a result the marketing collateral failed to resonate positively with the participants. The message appeals seemed somewhat disconnected from the participants' current understanding of environmental issues. While this does not necessarily suggest that a more appropriate message design would directly induce a change in travel behaviour, it is acknowledged that messages more in line with the user's thinking would be more successful in influencing their behaviour. And yet the information necessary to devise these appeals can only be gathered through detailed primary research on the subject.

A critical lesson to be considered for future social marketing programmes is the extent of primary research that is needed prior to the design of a campaign. Too many marketing programmes, including social marketing ones, have in the past relied on a relatively light amount of primary data in the form of background research. In recent years the growth in demand for professional marketing research firms has been vast in response to commercial organisations seeking ever more primary data on their markets and customer base. The funding for such research has not been forthcoming in cases where social marketing issues are at hand. One example where funds became widely available was launching the 1986 campaigns aimed at educating the public on safe sex and the dangers of transmitting the AIDS virus.

Information specifically focusing on Gerrards Cross and Hedgerley residents may have connected better with the participants' current perspectives. This was attempted in the production of the video and was singled out for approval by the participants. The participants claimed this made the message more relevant and conveyed a greater sense of meaning of the issues. However such approaches necessitate in-depth research to be conducted on the target audience prior to the design stage of the social marketing programme.

The evidence gathered in the research also supports the view that message appeals should always be test marketed among a sample audience. Pre-testing of campaign material

enables the creators of these messages the opportunity to make changes and to acquire a greater understanding of how they can succeed in meeting their overall objective. The researcher has been informed that none of this marketing collateral was test marketed to any great extent prior to distribution to the general public.

9.1.4 A Core Message: The Concept of Intermodality

As mentioned in Chapter 3, intermodality refers to a holistic view of transportation in which individual modes work together to provide the user with the best choice of transport for different journeys. Some of the participants raised the issue of adopting assorted modes for different purposes but were aware of the term intermodality. They viewed it correctly as indicating the willingness to switch between different modes of transport for different journeys.

This concept was not addressed in the marketing collateral and the participants detected this. The feedback from the participants stated that they were not being presented with an open choice of travel in the message appeals when asked to consider alternative modes of travel. On the contrary many of the participants considered that an 'anti-car' theme was constantly being promoted at the core of social marketing literature on this topic. This was forcibly expressed mainly by participants who considered such a message as an attack on their freedom of choice. The participants confirmed that this 'anti-car' emphasis should be removed forthwith as it was doing more harm than good to the campaigns.

The participants went on to claim that there was also too little focus in these campaigns on the potential benefits to be gained by those who adopted alternative modes of travel. Reference was made by many of the participants to how healthy it was to walk. The participants confirmed quite firmly that they were not going to give up the use of private transport just because the car was being positioned as an instrument that was destroying the environment.

One conclusion that can be drawn from this evidence is that the participants were actually more open-minded than first considered to the issues under discussion and were willing to at least consider the benefits of alternative travel arrangements. However this was not

a zero sum game to them and they clearly identified that the car, as of now, had to remain at the centre of their modal choice. They stressed this was especially accurate until alternative modes of transport were better developed and made more easily available to the public. They contemplated that if public agencies *(PAs)* and non-profit organisations *(NPOs)* wanted them to reduce their reliance on the motor car, then they must also acknowledge the use of the car when it is the most appropriate choice of transport. Too many unpleasant experiences were recounted in the research by participants who adopted public transport for journeys that were totally unsuitable to that mode of travel.

Therefore it is suggested that social marketers need to place more emphasis on the concept of 'alternative' modes of travel rather than constantly promoting what is presently perceived as 'replacement' modes of travel, i.e. they should promote the concept of intermodality. Participants have clearly expressed the view that they are not prepared to give up their ownership of the car. This needs to be formally recognised and the research suggests that messages in the future need to be refocused with this in mind. Presently many people who adopt private transport feel threatened, and to some extent harassed, by the intensity of the replacement message. This is only helping to create a barrier for each individual to resist any future messages that may be generated on this topic.

9.1.5 Too Many Sources and Too Little Cohesion

One of the consequences of too many sources is the number of messages that radiate across all sections of society. The research would suggest that this could be a problem for future social marketing campaigns on this topic. The more sources working at producing literature on this topic would normally be viewed as an advantage. However there is one major factor missing from that argument that the research would like to identify. Too many sources producing unsatisfactory messages can only help to distort the significance of the narrative rather than assist in its penetration even further. The researcher would conclude that this was a major problem identified by the participants in this programme of research. And because there was so many sources, each attempting to be heard above the other, the message was being drowned out amongst all the 'noise'. Noise is a marketing term and refers to any interference or distraction that interferes with the preparation, transmission, or reception of a marketing message.

How can this be catered for? This is a difficult question to answer in the context of this research. Nonetheless many of the participants confirmed that they were actively seeking a message source that they could trust and that would give them the facts in an orderly and dispassionate manner. The participants were unable to identify one organisation that matches this description among the many sources encountered during the course of the research.

This point needs to be looked at in greater detail and would be a good topic for further research in this area. The researcher suggests that some kind of authority could be created that could help the public understand this issue more easily. This authority could take responsibility for nationally run social marketing campaigns associated with these issues. Such campaigns could be well-crafted campaigns run across radio, TV and print in a cohesive and strategic manner. Where appropriate these campaigns could be supported on a local basis by local councils or other voluntary bodies.

9.2 Implication for Social Marketing

In summary there are serious questions raised in the research of how beneficial social marketing programmes can be in the search for solutions to transport generated problems. While social marketing is identified as a relatively new approach to changing behaviour in socially desirable ways, the marketing collateral utilised in the research did not generate significant evidence of any behavioural change. Allied to this is the fact that the participants still perceive there to be little, if any, significant risk from the consequences of driving a motor car.

Nonetheless it is apparent that social marketing programmes are limited in their scope when dealing with issues of human behaviour. It is not feasible to expect such programmes alone to persuade private commuters to modify their behaviour. The question is therefore asked: can social marketing be effective in persuading people to modify their travel behaviour? The research has identified that this behaviour is so deeply routed in the cognitive framework of the individual that the marketing collateral tested in the research had little, if any, positive effect. However there is evidence

provided by the participants that both the video, '*certainly made me think about opportunities to change'*, and some of the posters, '*does make you feel guilty about using the car for very short journeys'* alerted them to the issues. But it is recognised that this behaviour is so grounded in the participants' lifestyle that a simple message aimed at prodding their thinking is not going to have the desired effect.

So where does this position the message appeals? The research suggests the video and poster had a positive effect in helping the participants consider the issues more openly. Notwithstanding that little or no change in behaviour was recorded during the period of research, it could be surmised that the participants may require more time, i.e. they may gradually make changes to their behaviour based on their experiences from viewing the appeals. However it is not possible to track continuous behaviour as part of this research programme. Nonetheless the research has produced firm evidence that message appeals alone will not generate changes in transport behaviour.

The research acknowledges that having ever-increasing access to a car has resulted in a very high degree of personal freedom. The participants in the research readily agreed on this point. While social marketing programmes did help to raise awareness of the alternative modes of transport, the messages were not compelling enough to entice them over to the alternatives. The research concludes that one of the reasons for this is the perception held by private transport users that there is a distinct lack of alternatives, suitable to their individual pattern of travel, available for consumption. The research recommends that this observation should be challenged in future social marketing programmes. This is necessary if there is to be any hope of maintaining a degree of balance between the alternative modes of travel already on offer.

And yet when used in an appropriate setting, such as the AIDS campaign, social marketing can be a very effective means of communicating with an audience. However, judging from the research findings, it seems the question of whether social marketing should be used in areas associated with transport is still open to debate. Accepting this nonetheless the researcher proposes that the following points could be taken into consideration when designing future campaigns:

- *Segment the population of interest into target audiences.*
- *Devise specific message appeals aimed at altering existing behaviour for each of these audiences.*
- *Utilise the most appropriate media to enable high rates of recall among the targeted audience.*
- *Ensure organisations are engaged to run the campaigns professionally.*
- *Ensure adequate funding is budgeted for with each campaign.*
- *Collect primary research prior to design of message appeals.*
- *Monitor results during and after the campaign.*
- *Share this knowledge with other organisations working on similar projects.*

What else did the research identify that, if corrected, could encourage redirection of thought among the travelling public? The participants identified that the poor image of public transport also needs to be challenged. How this is achieved is open to debate. But if public transport is to be encouraged and given an air of respectability among the travelling public then there needs to be a co-ordinated attempt to raise the profile of this modal choice.

The research also proposes that authorities need to be more cognisant of the needs of commuters and opening lines of communication with local populations could help to bring this about. Enabling discussion forums is one example where people can have their say on transport related issues, which should help improve the images of local services. These forums could also help experts concerned with the issues better understand the dynamics of the locality and how they may be affected.

The results of this thesis could be interpreted as denying a role for social marketing based on the failure to observe any significant behavioural change during the research. However the author would argue, given the results obtained from this research, that it is still too early to disregard a future role for social marketing in the area of transport behaviour. It is essential to acknowledge that more primary data, accurately sourced and collected, is required from the appropriate audiences if successful campaigns are to be designed. These campaigns, in turn, require adequate funding to be provided enabling

professionally managed programmes to be created. It is only if these considerations are taken account can social marketing campaigns be truly tested in helping to change peoples' attitudes and behaviour towards transport.

9.3 Recommendations for Future Research

As a sequel to this thesis it is appropriate to offer some suggestions in the form of recommendations that could be of assistance to academics, practitioners and public agencies in the search for workable solutions. These recommendations are based on an exposure to a small but intriguing number of participants that the author had the pleasure to work while gathering the research material.

It is recommended that campaigns should give more consideration to stressing the direct benefits of all modes of transport as appropriate to particular journeys or situations. In effect this embraces the concept of 'intermodality' to better package the desired behaviour. It is not enough to expect commuters to switch from private transport to public transport just by producing negative advertising campaigns about the environmental damage generated by private transport. This is clearly an ineffective approach as the research has shown.

How commuters respond to current campaigns should be evaluated and incorporated into future social marketing programmes. This is important, as social marketing programmes need to become more accountable in defending how well they meet their overall objectives. This requires social marketers to be more aware of, for example, how many people hold certain beliefs before they commit resources designed to rectify any associated behaviour. Background data needs to be compiled before designing the campaign. This can facilitate a more accurate measurement of the outcomes during or after a campaign has ended. This research uncovered no indication of formative evaluation processes being undertaken by any of the concerned authorities.

The research also recommends that a dual approach be considered when communicating with the public on the subject of transport. A national campaign could be devised informing the public of the benefits to be gained by adopting any of the alternatives

modes on offer. At the same time a regional programme of communication could be designed to enhance the profile of each of the alternative modes on offer in this area. Presently participants are of the opinion that their transport behaviour is being targeted as the cause of current environmental problems. There seems to be little awareness by the authorities of the difficulties participants encountered when considering alternative modes of transport. The participants are inclined to think that the authorities should be more aware of such difficulties and not just lay the blame on existing behaviour. As a consequence the participants would like to see authorities act more responsibly in seeking a solution between all of those concerned rather than seeking to place the blame in any one area. The participants identified that the providers of alternative transport modes need to be at the centre of such discussions, whether this is a local bus provider or a local authority that has the responsibility for the upkeep of cycling lanes.

Finally the author suggests that future research should attempt to enhance the standing of social marketing in the specific area of transport behaviour and decision-making. The research could be embarked upon in an area of transport most appropriate to a social marketing campaign. This research and its findings could help to enlighten policy-makers who need to have a better understanding of social marketing and how it can make a positive contribution to this area of human behaviour. The benefits of this research could further help to convey to local and regional authorities the role that social marketing programmes can play in areas of public concern.

APPENDIX 1

WHAT KIND OF PEOPLE GET AIDS?

THE KIND THAT DON'T KNOW THE FACTS.

These are the facts.

Doctors don't have a cure for AIDS yet. But we do know how it's spread and how to control it.

Many more men than women have been infected so far.

The AIDS virus is not just caught by homosexual men and drug addicts.

Many more men than women are infected so far. But *all* men and women can catch it and pass it on. It depends on how you behave.

The only ways you are likely to catch the AIDS virus are through sex with an infected person – and by sharing needles if you inject drugs.

You can't tell if someone is infected. They can look and feel completely well – and not know they have the AIDS virus. Probably 30,000 people are already infected in the UK. Don't join them.

Women can catch the AIDS virus too. A woman can pass it on to her unborn child.

FIRST, about sex. There is no risk if both partners know they're not infected. But if you're not sure about your partner – to be safe, don't have sex. If you do have sex, men should wear a condom (also called a sheath or a rubber). This cuts down the risk of infection.

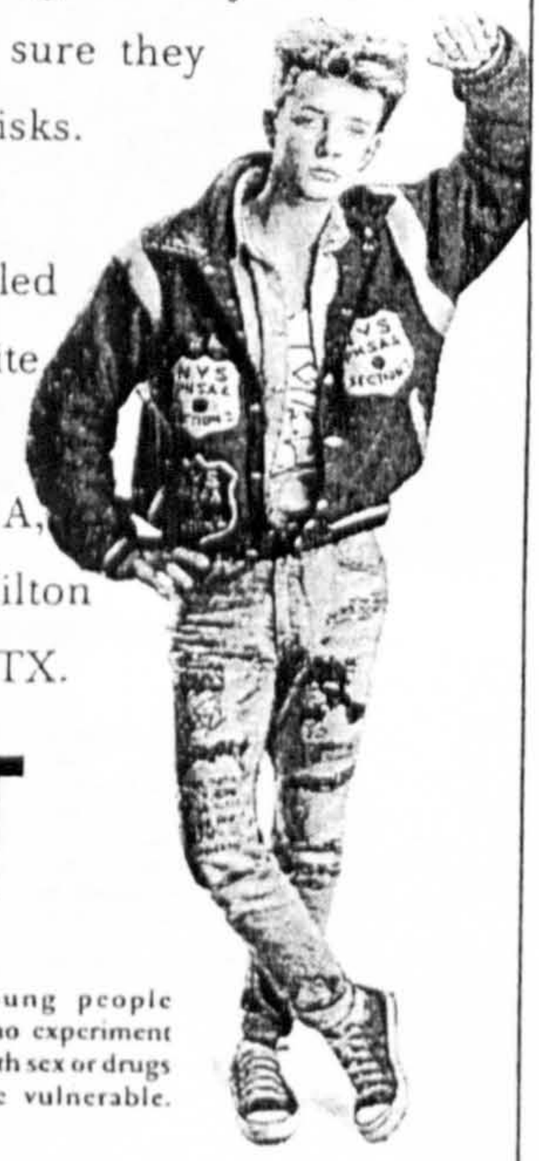
The more partners, particularly male partners, you have, the more likely it is that one of them will be infected. So beware of casual sex.

Sex which might damage the anus, vagina, penis or mouth is particularly dangerous if one of the partners is infected. Anal sex involves the greatest risk. Avoid it.

SECOND, about drugs. If you inject drugs, do not share needles or other equipment. Better still don't inject at all. Just one fix with an infected needle can give you the AIDS virus.

So remember – these are the two ways you are likely to get AIDS. No one has been infected through normal day to day contact.

As children grow up they may experiment with sex or drugs. So if you are a parent, make sure they too know the risks.



Young people who experiment with sex or drugs are vulnerable.

For more detailed information write for the AIDS booklet to Dept A, PO Box 100, Milton Keynes, MK1 1TX.

More detailed information is available.

You can also get information on the confidential Healthline telephone service on either 01-981 2717, 01-980 7222, or 0345 581151.

If you are dialling from outside London, use the 0345 number and you'll be charged at local rates.

THE HEALTHLINE TELEPHONE SERVICE:
01-981 2717, 01-980 7222 or 0345 581151.

D O N'T A I D A I D S

ISSUED BY THE DEPARTMENT OF HEALTH AND SOCIAL SECURITY

YOU KNOW WHAT'S IN HIS MIND.

BUT HOW CAN YOU TELL WHAT'S IN HIS BLOOD?

Anybody, whether they're male or female, can catch the AIDS virus from ordinary sex. The disease is incurable and eventually it kills.

Up until now, the virus has been confined mainly to small groups of people, but it's spreading all the time.

If a man carries the virus, it's in his sperm. If a woman carries the virus, it's in her vaginal fluid. The problem is, signs of illness can take years to develop.

So, even though over 30,000 people in the UK carry the virus, most of them will look perfectly normal. But, they can still pass the virus on to other people.

With this in mind, suppose a boy shows all the usual signs of fancying you?

Just remember, the more people you have sex with in the future the greater your chances of catching the virus.

And apply that rule to this boy as well. If he's had lots of other partners, how can you be sure he's free from infection?

If you're not completely sure about him and you do decide to have sex, insist that he wears a condom.

(By preventing his sperm from entering your body, it can help you to avoid infection.)

He may complain that condoms aren't very romantic. But what's so romantic about AIDS?

For more information and advice please phone 01-981 7140 or 0345 581858. (If dialling from outside London, use the 0345 number and you will be charged at local rates.)

DON'T AID AIDS

YOUR NEXT SEXUAL PARTNER COULD BE THAT VERY SPECIAL PERSON.

THE ONE THAT GIVES YOU AIDS.

"Your next sexual partner" needn't be the latest in a long line.

He could just as easily be your very first. Even though the AIDS virus has up until now been confined mainly to small groups of people, it's spreading all the time.

Any infected man can pass the AIDS virus to you in his sperm, during ordinary sex.

(And likewise, any infected woman can pass the virus to a man in her vaginal fluid.)

So please don't say "It can't happen to me," because it happens to people like you every day.

This doesn't have to mean the death of romance, but it does mean that in the future you've got to be very careful. The more people you sleep with, the more chance you will have of getting infected.

To reduce the risk to yourself, have as few partners as possible.

And if you do have sex with anyone you're not completely sure about, make sure he wears a condom.

If he won't, then don't, it could be the death of you.

For more advice and information, please phone 01-981 7140 or 0345 581858. (If dialling from outside London, use the 0345 number and you will be charged at local rates.)

DON'T AID AIDS

DON'T INJECT AIDS

Imagine somebody who knows a bit about drugs. Somebody who's smoked, swallowed and snorted most things.

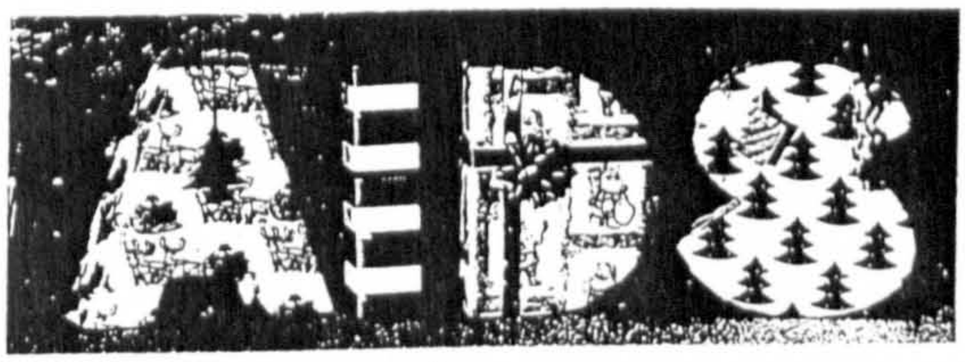
But so far, they've never used a needle. If they do, though, the first needle they use will probably be somebody else's.

At that moment, they'll be in serious danger of catching AIDS. Because sharing a needle or equipment with someone who carries the AIDS virus is the easiest way to get infected.

Now does this somebody sound a little like you? If it does, don't inject. And never share.

For more information and advice, please phone 01-981 7140 or 0345 581858. (If dialling from outside London, use the 0345 number and you will be charged at local rates.)

DON'T AID AIDS



HOW MANY PEOPLE WILL GET IT FOR CHRISTMAS?

Every day, more and more people are catching the AIDS virus.

Up until now, it's been confined mainly to small groups of people. But it's spreading all the time.

Men and women can give the virus to each other during ordinary sex if one of them is infected.

If a man carries the virus, it's in his sperm. If a woman carries it, it's in her vaginal fluid.

When you meet someone you fancy at a party or in the pub, just remember this – you can't tell whether someone has the virus just by looking at them.

Many people who have it can walk around for years before they start looking ill. And during all this time, they can still pass the virus on to you.

So in the future, sleeping around is quite simply risking your life. It's best to have sex with as few people as possible. But if you do have sex with someone you're not completely sure about, always use a condom. (Or make your partner use one). It's safer for both of you.

Christmas is a time for giving. But don't let anyone give you AIDS.

For more information and advice, please phone 01-981 7140 or 0345 581858. (If dialling from outside London, use the 0345 number and you will be charged at local rates.)

DON'T AID AIDS

APPENDIX-2

Hedgerley Parish Offices
Bucks, SC2 3YL

25 October, 1996

Re: Focus Group Research: Hedgerley Parish

Hi _____
Thanks for taking the time to help co-ordinate the setting up of research groups within Hedgerley Parish on behalf of the collaborative approach being adopted between *Brunel University* and *South Bucks District Council.*

As agreed I have scheduled the week commencing the 18th November 1996 as the preferred week for the research and would be happy to undertake the research at times suitable. The conventional thought is for an evening slot, starting at 8.00pm. However feedback from the Parish on any other starting times would be welcome. One consideration being proposed by Gerrards Cross is for Saturday mornings. It would be appreciated if it were possible to have use of the Youth Club hut. Would it be possible to serve refreshments there, which we could organise.

On the issue of determining who is suitable for the focus group, I can only re-emphasise that the selection procedure be undertaken on an impartial basis allowing a fair representation of respondents within the Parish. This representation would obviously involve a reasonable cross-section of those working or not (retired, homemaker, unemployed or at school), a selection across the age spectrum, a number of female and male participants, etc. No hard rules apply as long as they have some interest in the topic to be discussed. As mentioned a figure of between 8 and 10 participants would be suitable.

I enclose an example of a wording that may help people understand better what will be happening on each evening. If suitable, please feel free to make use of it. Otherwise I look forward to speaking to you late next week and if you have any queries, please don't hesitate to contact me.

Kind regards

Enda Mc Govern

APPENDIX-3

Hedgerley Parish

'Traffic Pollution and Congestion
What Are the Local Consequences'

Have Your Say!
Participants Sought For Group Discussion

Brunel University is carrying out research on the above topic in collaboration with ***South Bucks District Council***. A small number of participants are being sought within Hedgerley Parish to meet shortly and hold an informal discussion on this topic. Local viewpoints are considered a critical element in the search for solutions.

Please accept this invitation through the Parish Council and we welcome your participation in the discussion. The representative of your local Parish Council will confirm date, time and location.

APPENDIX 4

Focus Group Discussions: Script

'Traffic Pollution and Congestion What Are the Local Consequences'?

The following is intended to act as the moderator guideline/script that will be followed during the course of the focus group discussion.

Introduction:
Introduce myself and give a brief description of the research, commenting that more time will be allocated at the end to answer any questions.

1.) Group Introduction
Before asking this question, I will briefly tell them something about myself.

a) Your name and could please tell us one thing about yourself

b) I don't know this area at all and it would be helpful if each of you could tell me one good thing and one bad thing about living in the area.

2.) Local Issues:
Some of you mentioned pollution and congestion as an issue. Can we explore this further.

Some Prompts
a) What would you identify as the major local issue regarding transport associated with the problem of:

- *pollution, and*
- *congestion?*

b) Is this problem created by the local population or by people passing through the area.

3.) Transport Use:

Regarding the use of various modes of transport, could we discuss this briefly.

Some Prompts

a) What, do you believe, makes a person choose a certain mode of transport?

b) Is there a good selection of transport alternatives available within or near your parish? If not, is this the real problem?

c) Why has the car become the most widely used transport mode in recent times?

d) Can this growth in the car culture continue indefinitely? If not, why?

4.) Prevention Strategies:

Please read the handout and open discussion to follow. This handout contains three options that Government could incorporate into their policies on transport and could seek to implement to the wider public.

5.) Summary and Conclusions

a) *All Things Considered Question:* A round robin question to get participants to state their final position.

"Suppose you had one minute to talk to the Minister of the Environment , John Gummer, on the topic of traffic pollution and congestion. What would you say?"

b) *Summary Question*: After a brief oral synopsis of the proceedings, the participants will be asked,

"Is this an adequate summary?"

A critical question to be answered for the impending analysis.

c) *Final Question*: Then, in line with the objective of the study, the participants will be asked,

"Have we missed anything?"

The End

Focus Group Discussions: Topic Guide Format

'Traffic Pollution and Congestion What Are the Local Consequences'?

Format Overview:

The discussion will be opened by myself giving a brief welcome and thanks to each participant for taking the time to attend this evening. The objective of the research will be explained and it will be emphasised that the proceedings will be confidential and that nobody will be identified with specific comments, etc.

Opening Questions; will be round robin questions that everyone will be asked to answer and these questions will be factual rather than attitude or opinion-bases. Two questions are proposed in this section under *Introduction* and expected to last approx. 10 minutes.

Introductory Questions; will attempt to introduce the general topic of discussion and/or provide participants an opportunity to reflect on their connection with the overall topic. These questions will attempt to foster conversation and interactions amongst the participants. *Local Issues* will be the heading used to foster this discussion and a number of questions are proposed in this area.

Transition Questions; will move the conversation into the key questions that are driving the study. These questions help the participants evolve the topic onto a broader spectrum. Transport Use will be the theme that is used to allow this transition.

Key Questions: These will drive the study and must be worded to allow maximum effect, as they will require the greatest attention in the subsequent analysis. Prevention Strategies is the term applied as these questions will be seeking to discover what strategies exist, if any, that could result in a change of behaviour on a voluntary basis.

Ending Questions: These questions bring closure to the discussion enabling participants to reflect back on previous comments. A brief oral summary will be read out of the key questions and big ideas that emerged from the discussion. A small number of questions may then be put to clarify items and to allow an opportunity to identify important issues missed in the general discussion.

APPENDIX 5

Hedgerley Parish
Household Background Questionnaire

(All details of which are totally confidential)

Where appropriate, please tick the box

Q1. Name: _____:
*Address:*_____
_____ **Telephone No:**_____

Q2. Household Identification: (first line of address) _____

Q3. How many people are there in your household?
One 1 ☐ Two 2 ☐ Three 3 ☐ Four 4 ☐ Five+ 5 ☐

Q4. How many car are there in your household?
One 1 ☐ Two 2 ☐ Three + 3 ☐

Q5. Are the cars:
You: Private ☐ Company ☐
Ptnr: Private ☐ Company ☐
Other: Private ☐ Company ☐

Q6. How long have you been driving a car(s)
You: Years_____
Ptnr: Years_____
Other: Years_____

Q7. Do you or any members of your household make use of any of the following modes of travel in everyday or weekly transport journeys? (not recreational)
(If so give a brief explanation of application)

1. Public Transport(bus/train):_____
_____
*2. Cycling/motor cycling:*_____
_____
*3. Walking:*_____
_____
*4. Car Sharing:*_____
_____

Q8. Do you believe members of your household contributes in any way to the deterioration of the environment, with specific regard to pollution issues associated with transport?
*Explain:*_____
_____
_____
_____
_____
_____
_____
_____

TEXT BOUND INTO THE SPINE

Please circle, as appropriate, only one number per line	Very good idea	Quite a good good idea	Neither a good nor a bad idea	Not a very good idea	A bad idea
Development of public transport to reduce road usage and congestion	[1]	[2]	[3]	[4]	[5]
Increased taxation on private transport, e.g. road tolls	[1]	[2]	[3]	[4]	[5]
Development of traffic management schemes, e.g. car pooling or park and ride schemes	[1]	[2]	[3]	[4]	[5]
More communication with individuals on how to change transport behaviour	[1]	[2]	[3]	[4]	[5]
Higher regulations on private and commercial pollution from vehicles	[1]	[2]	[3]	[4]	[5]
Investment into 'clean technology' to replace combustion engine, e.g. electric vehicles	[1]	[2]	[3]	[4]	[5]

APPENDIX-6

Typical Car Travel Diary:
One Week Period

Date	Destination	Reason for Journey	Return Mileage (Approx)	Could Journey have been avoided and how? (e.g. better planned)	Do you believe car use could have been avoided in making this journey	If so, briefly describe the alternative means of travel that could have been used for the journey

Question: Was the one-week period a typical week in the normal use of your mode of transport?
Yes/No *(please circle)*

If not a typical week, please briefly explain why?

APPENDIX 7

Message Appeal Diary Survey:

Parish: July / August 1997

Household Identification *(first line of address)*:

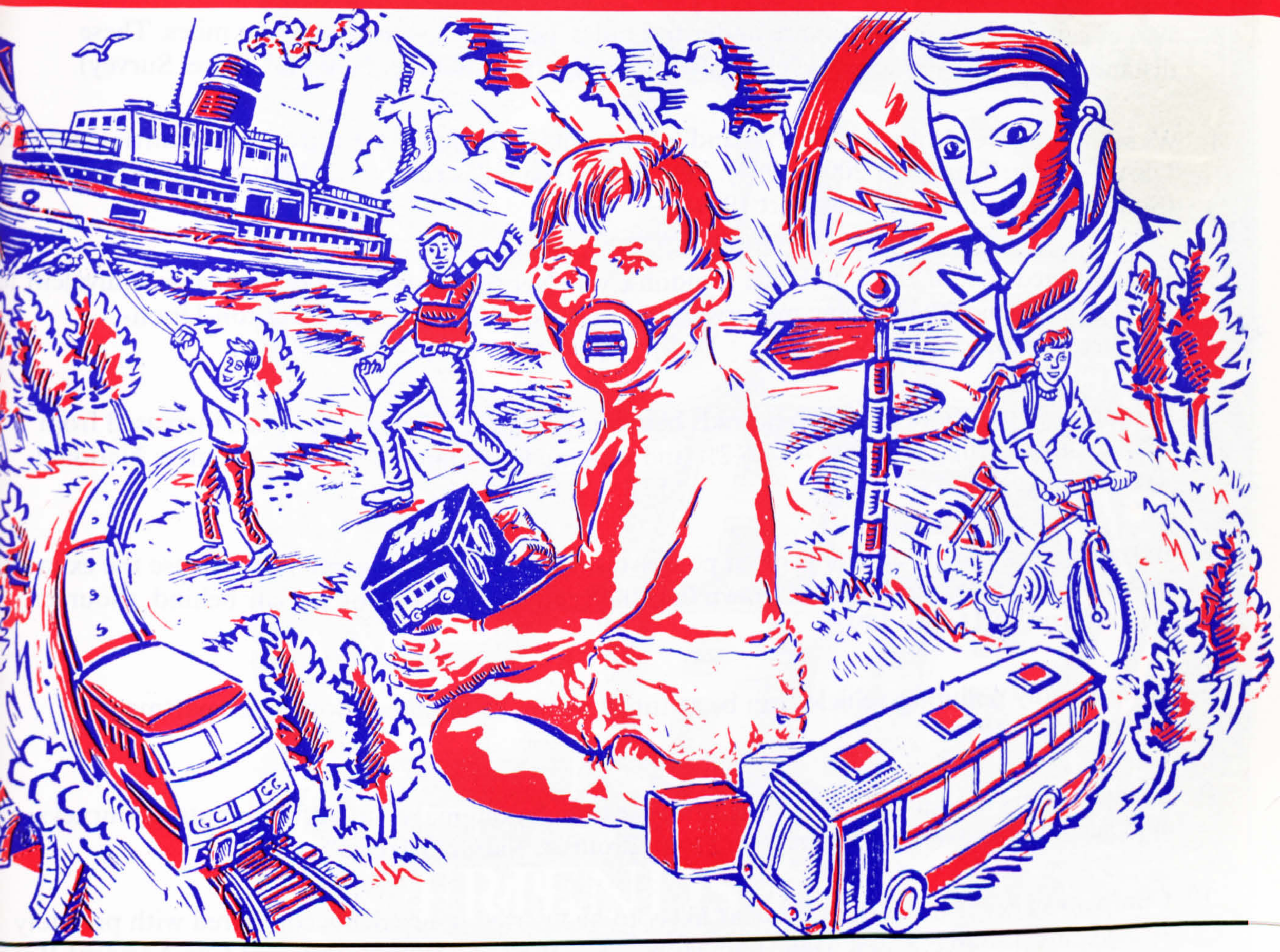
Period	Message Appeal Number	Date	Change of transport mode From - To	Purpose of Journey	No. of people sharing	Time: am/pm Day: Weather: Dry/Wet	Experience: Positive Outcomes	Experience: Negative Outcomes	Is change of transport mode altered: *No* (explain)	Is change of transport mode altered: *Yes* Perman-ently	Is change of transport mode altered: *Yes* Tempo-rarily	Alternative means of transport that could have been used	General Comments
W	*Did Message Appeal:*	– *Inform* – *Persuade* – *Remind* Tick		Other Observations or Comments									
E	1												
E	1												
K	1												
W	*Did Message Appeal:*	– *Inform* – *Persuade* – *Remind* Tick		Other Observations or Comments									
E	2												
E	2												
K	2												
W	*Did Message Appeal:*	– *Inform* – *Persuade* – *Remind* Tick		Other Observations or Comments									
E	3												
E	3												
K	3												

APPENDIX 8

TEXT BOUND INTO THE SPINE

Don't Choke Britain

KEY FACTS



LEAVE YOUR CAR AT HOME

National Bike Week 7th - 15th June 1997

Walk to school

National Car Free Day ETA Tuesday 17th June, 1997

June 1997

Local Government Association

Going for Green
Making a world of difference – together

100% RECYCLED

Don't Choke Britain 1997

KEY FACTS

1. Provided the engine is warm, 99% of car drivers will save fuel and minimise pollution if they turn off their engine and restart it, without pressing the accelerator, when they are halted for more than 5 seconds. (Source: Ruedi Schwarz, VSL, Switzerland).

2. Cycling or walking briskly 3 to 4 times a week can halve your risk of heart disease and help keep you fit. (Source: British Heart Foundation).

3. 59% of car journeys in Britain are under five miles, and 25% are less than two miles. These distances are easily walked or cycled, often more quickly. (Source: National Travel Survey).

4. We send more freight by road (61%) and less by rail (7%), than most European countries and the USA. (Source: Transport 2000, 1994). Yet, 30% of the miles run by road hauliers are run empty. (Source: Department of Transport 1997).

5. The projected cost of the 1,500 mile London Cycle Network is £67 million, which is equivalent to 6 miles of a typical new 3 lane motorway. (Source: Royal Borough of Kingston-Upon-Thames/Highways Agency 1997).

6. For journeys to school by 5-15 year olds between 1975 and 1995 car travel has increased from 12% to 26%; cycling fell from 4% to 2% and walking fell from 61% to 53%. (Source: National Travel Survey).

7. In traffic jams, the air quality is often poorer inside the car than it is outside because the exhaust emissions of the car in front are drawn into the ventilation system of the car behind. (Source: Department of Health 1997).

8. 90% of badly polluting vehicles can be re-tuned within 15 minutes. (Source: Department of Environment 1995).

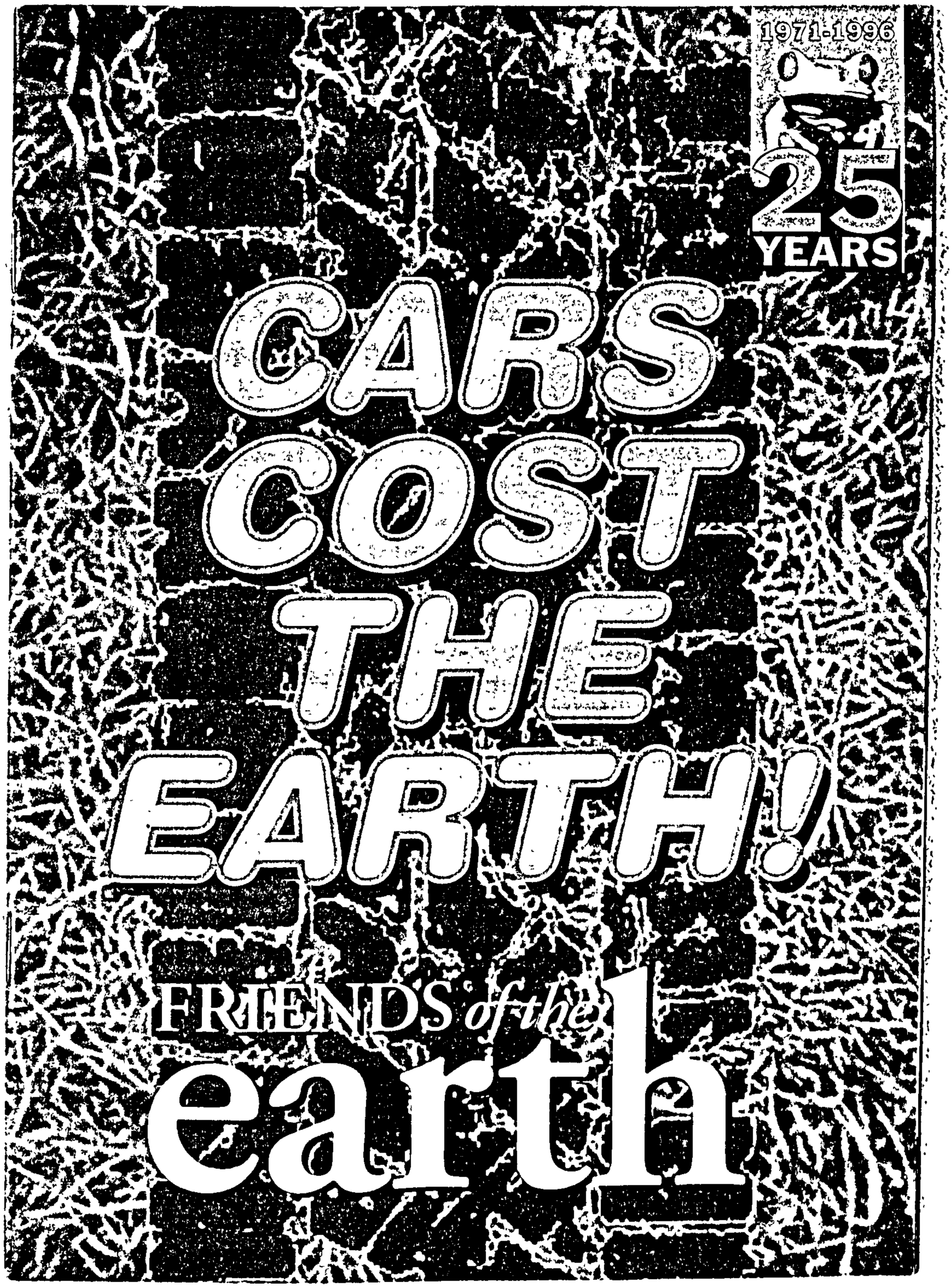
9. Company cars account for 9% of the total car population; make 18% of commuting journeys; and account for over 50% of new cars sold. (Source: National Travel Survey).

10. Company cars are more than twice as likely to be invoved in accidents compared with privately owned cars. (Source: Cars; Make and Model: The Risk of Driver Injury and Car Accident Rates in Great Britain).

11. In Birmingham in the morning peak 39 people travel on average in one bus or occupy 32 cars. One bus occupies the road space of 3 cars. (Source: Centro 1996).

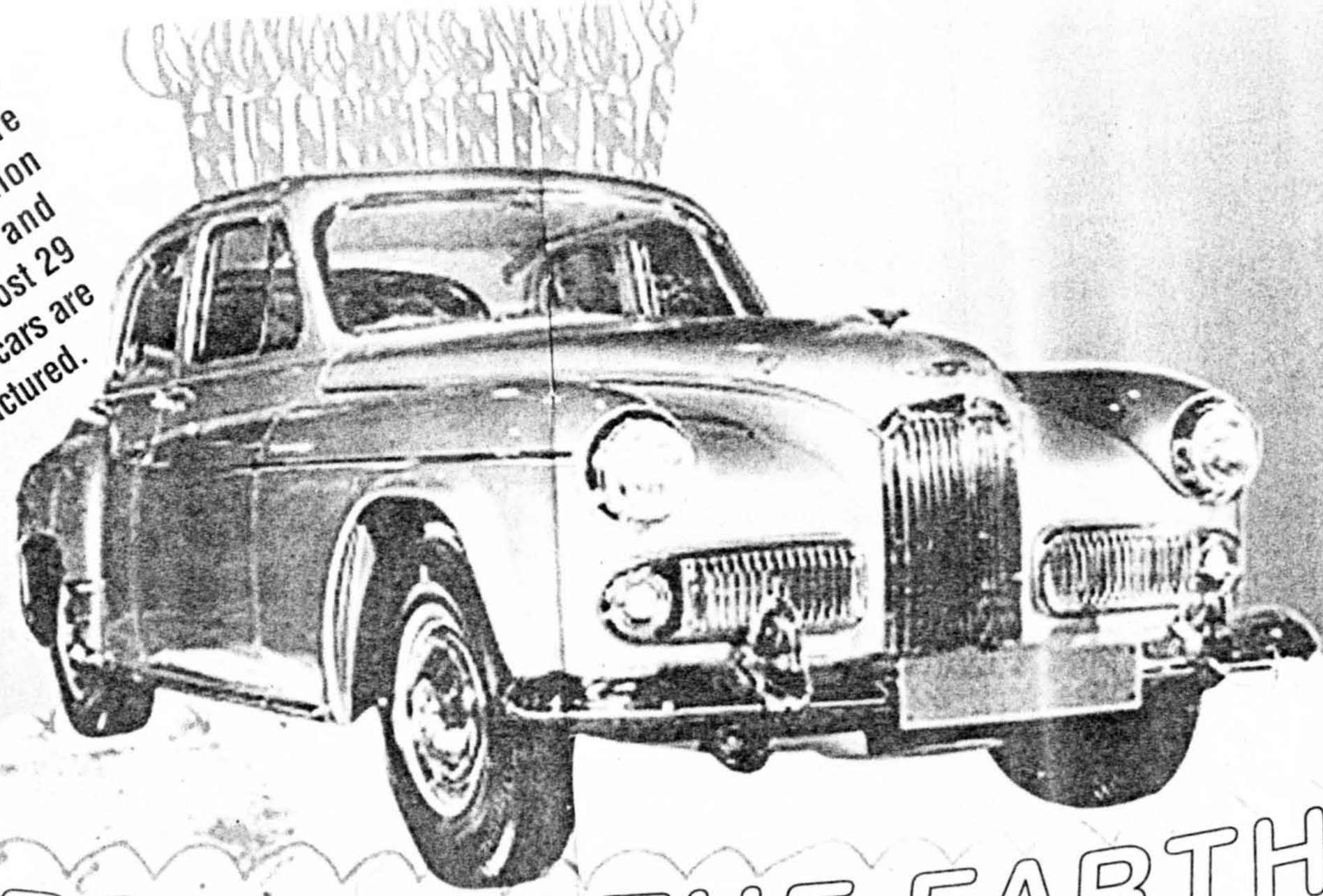
12. Buses and coaches are responsible for only 1% of the total vehicle milage on Britain's roads. For journeys into a typical city, buses account for 2% of traffic and carry 10% of travellers. (Source: National Travel Survey).

13. Road traffic is forecast to increase by 9-15% by the year 2000, and by 55-87% by 2025. (Source: Department of Transport 1997).


1971-1996
25 YEARS
CARS COST THE EARTH!
FRIENDS of the earth

e are already 21 million cars on the roads in the UK. This number could increase by more than 50% by the year 2025.

The massive explosion in numbers is a worldwide phenomenon. There are now about 480 million cars worldwide and each year almost 29 million new cars are manufactured.



nce 1926, statistics w almost 430,000 people have been killed in road accidents in the UK. Over 3,500 still die annually. Another 11,000 are believed to die prematurely due to air pollution.

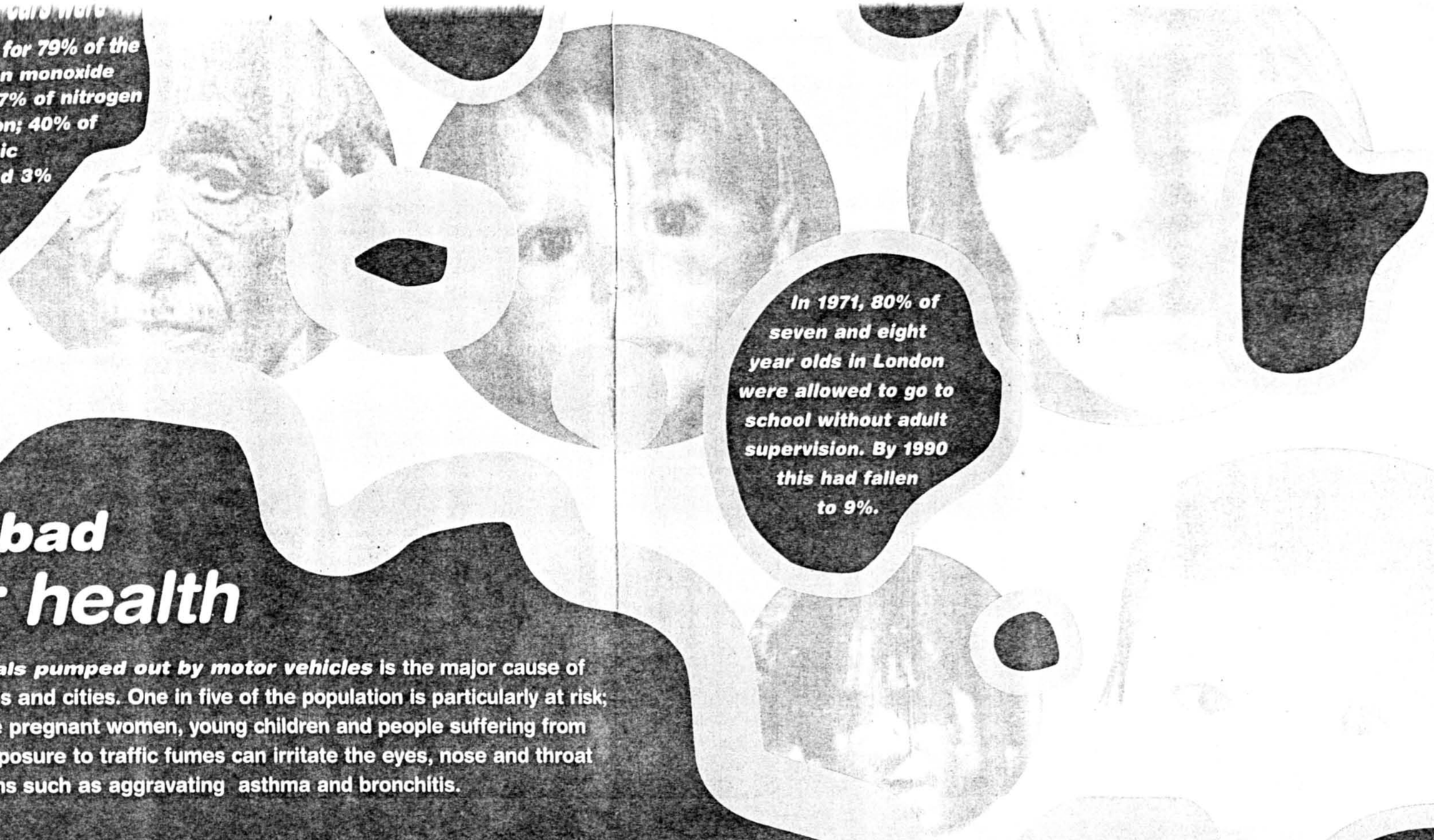
CARS COST THE EARTH

There is little doubt that over the last hundred years, the car has come to dominate modern life. More and more of our everyday journeys to work, to do the shopping or to visit family or friends are made by car. More than this, we have elevated the car to a cultural icon - a symbol of freedom, independence and success. **But in reality our car dependency is far from glamorous.**

The British Motor Industry is 100 years old in 1996

t home, we face problems of road safety, traffic congestion, fume- choked cities where the air is unfit to breathe, the destruction of mes and countryside by more and more road-building, and villages beleaguered by traffic and heavy lorries. rldwide, vast amounts of energy and precious natural resources are plundered to make cars and fuel and to build roads. housands of tonnes of **toxic fumes** are emitted by **road traffic**, endangering people's health and the stability of the global climat e common link between all of these problems is our **over-dependence** on the car. s time to rethink the way we travel, to reduce the number of cars on the road and to improve facilities for **alternative ways of getting about such as walking, cycling and** public transport. The challenge is to ensure the next hundred years bring clean, healthy, efficient and

100 years of Motoring



responsible for 79% of the UK's carbon monoxide pollution; 37% of nitrogen oxide pollution; 40% of volatile organic compounds and 3% of emissions of black smoke.

In 1971, 80% of seven and eight year olds in London were allowed to go to school without adult supervision. By 1990 this had fallen to 9%.

Cars are bad for your health

The cocktail of chemicals pumped out by motor vehicles is the major cause of poor air quality in our towns and cities. One in five of the population is particularly at risk; those most vulnerable are pregnant women, young children and people suffering from heart and lung disease. Exposure to traffic fumes can irritate the eyes, nose and throat and cause serious problems such as aggravating asthma and bronchitis. It can even cause cancer.

Traffic fumes are not the only problem. Fear of traffic accidents is one of the main reasons parents have stopped allowing their children out to walk and cycle. Being ferried around by car is a feature of young people's lives, imposing on them a sedentary lifestyle which not only deprives them of their freedom and independence but also of the exercise they need to be fit and healthy.

By balancing the needs of drivers with the needs of other road users, we can help improve the lives of young people and their parents. Simple measures such as imposing speed limits in residential areas and providing safe routes will allow young people to walk and cycle more.

A 10% increase in the number of peopl cycling regularly would lead to a 4% reduction in the numbers of people with heart disease, saving the NHS £200 million a year.

Climate Catastrophe

Road traffic is the fastest growing source of carbon dioxide, the principal greenhouse gas. The world's top climate scientists now agree that increasing levels of pollution are responsible for global warming, which threatens to disrupt the world's climate

THE RACE FOR SPACE

Cars eat up land,

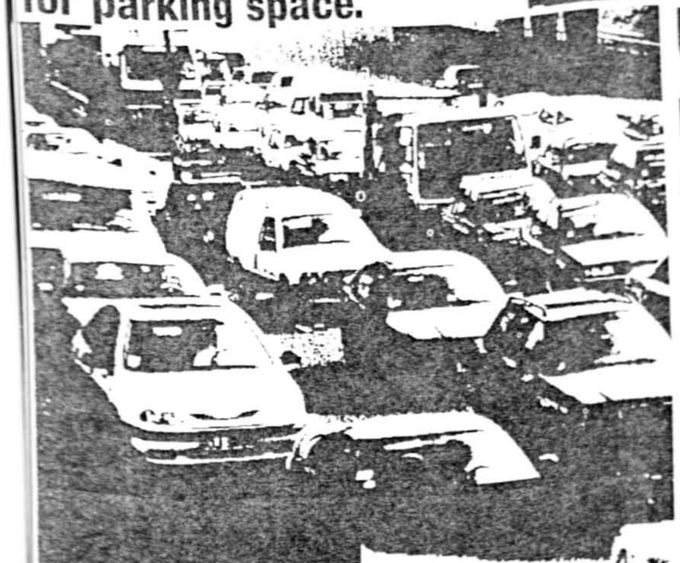
whether it's through road-building, or quarrying in the countryside for stone to build the roads, or through the ever-increasing demand for parking space.

PHOTO: IAN HARWOOD/ECOSCENE

Parking places

The more we use our cars, the greater the demand for parking space when we reach our destination, whether it's at the supermarket, business park, school, college, hospital, airport or housing development.

■ An area twice the size of Birmingham is devoted to vehicle parking in the UK.



Urban sprawl

More and more superstores, business parks and housing estates are being built on 'green-field' sites at the edge of towns. This increases people's need to travel, the length of journeys they make and their reliance on the car.

■ At least 10,000 hectares of land are swallowed up by out-of-town developments each year.

■ **100** new super-stores are built each year. Each one takes up eight acres of land for the store itself and the supply roads and

PHOTO: SIMON HORTON

■ Planning permission has been granted for more than three million square metres of office space around the M25.

Wild places under threat

Some of our most unique wildlife habitats are under threat from road-building.

The current National Roads Programme, if built, is expected to damage at least
50 Sites of Special **Scientific Interest**
10 Areas of Outstanding **Natural Beauty**
and **five** National Parks in England and Wales alone.
A rich variety of plants and animals live in these places, often depending on them for
their very existence. With each site that is lost, their chances of survival diminish.

■ *Parts of **Twyford Down**, near Winchester in Hampshire, were among the **most important** and protected downland **landscapes** in the country. Home to 27 species of breeding butterflies, including the Chalk-Hill Blue, and many rare plants such as the Yellow Rattle and **Bastard Toadflax**. Twyford Down also had three Scheduled Ancient **Monuments** including the site of an **Iron Age Village**.*

Despite local, national and international protests an extension to the M3 Motorway has been carved through Twyford Down. Now a huge chalk scar is visible from miles around.

Digging up the countryside

Quarrying aggregates, such as rock, sand and gravel, to meet the demand of road-building, destroys precious wildlife habitats and increases noise, pollution and heavy lorry traffic.

■ *There are over 360,000 kilometres of road in the UK. Their construction is estimated to have required over 125 billion tonnes of aggregates.*

■ *Scotland has been a particular target for vast quarrying developments. Plans for a superquarry on the Island of Harris will blast millions of tonnes of rock out of the mountains, creating one of the biggest human-made holes in Europe. Huge ships will release dirty ballast into the sea and greatly increase the*

Time

Much of the time we spend on our cars is actually spent going nowhere-servicing, washing and maintaining our cars or sitting in traffic jams. Traffic congestion is estimated to cost the UK economy £15 billion a year.

PHOTO: JOHN HILL

■ *The average household in Britain spends 16% of its total expenditure on travel, 83% of this is spent on motoring costs.*

■ *On average, car drivers spend 5.4 days each year in traffic jams.*

Despite hundreds of millions of pounds being spent annually building or widening roads, congestion is expected to get worse in the future as traffic levels grow.

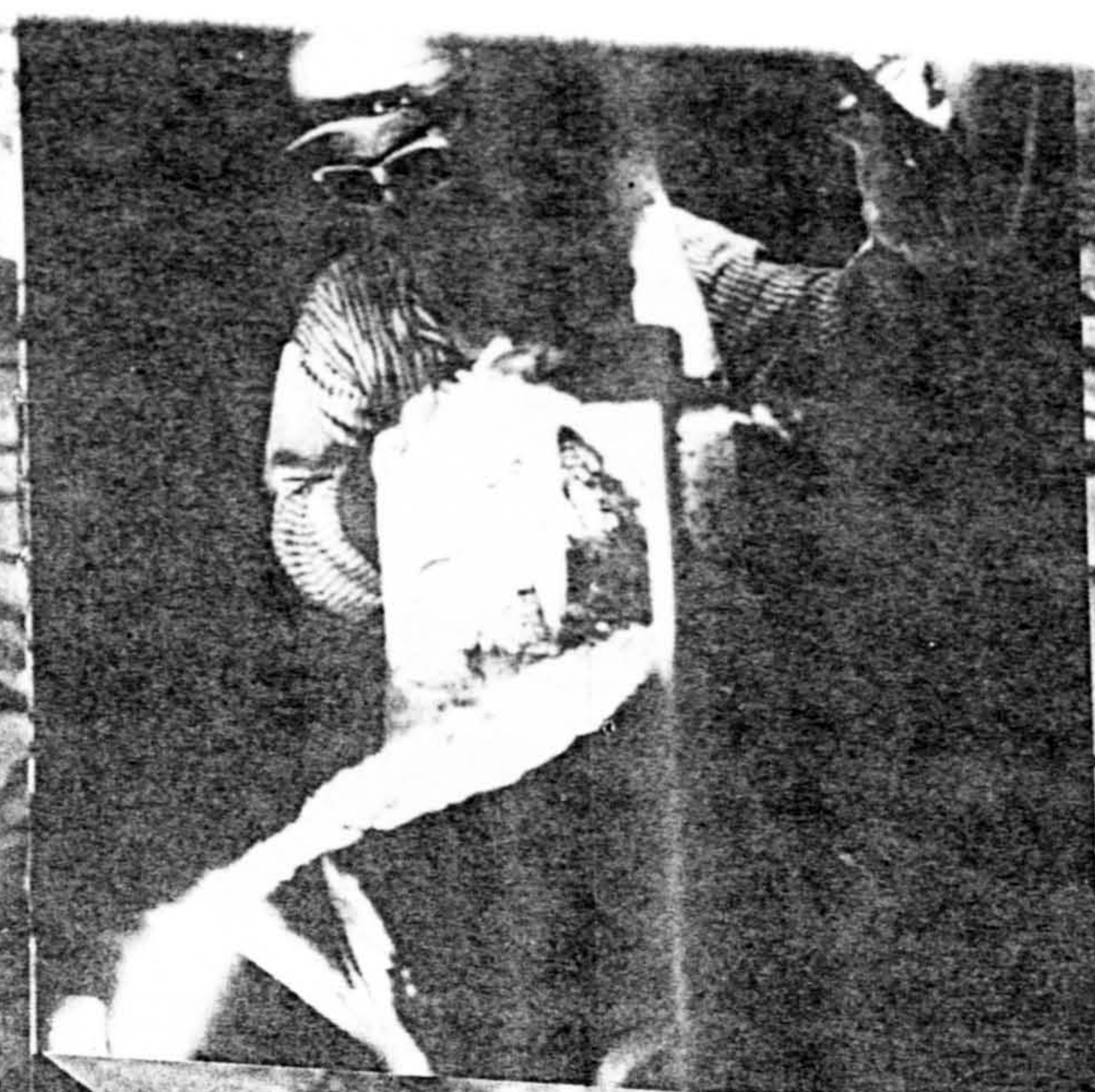


Photo: Hartmut Schwarzbach/Still Pictures

Cars are highly complex machines,

comprising over 15,000 parts made from materials including steel, aluminium, copper, zinc, plastic, rubber and glass. Many of these raw materials are mined and transported long distances across the world. Huge amounts of energy are then used to transform them into car components and to produce the fuel needed to keep our cars on the road.

The social and environmental costs of the production process are high. Precious natural resources are plundered, huge tracts of land and wildlife habitats are destroyed, the soil eroded and water sources contaminated.

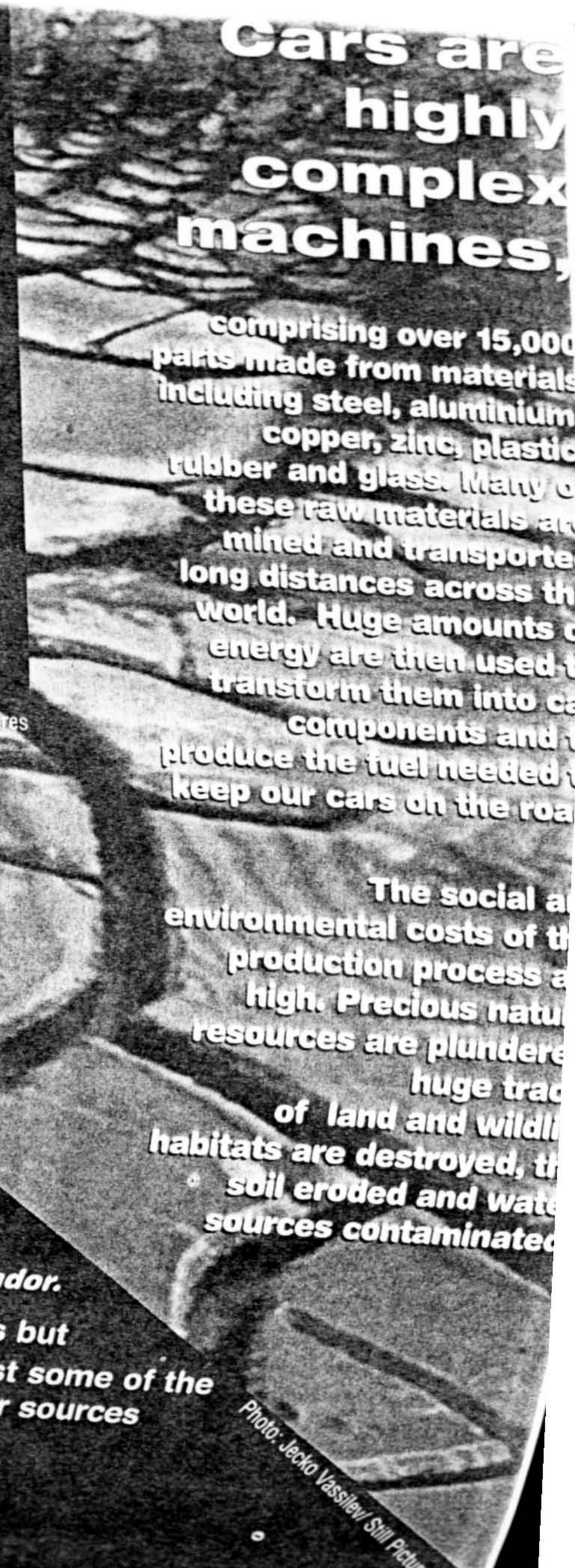


Photo: Jecko Vassilev/ Still Pictures

WHAT A WASTE

■ **CAR** *consumes an estimated 25% of the world's iron, about 4% of its zinc, 16 % of its aluminium and 9% of its copper.*

■ **The production of one tonne of copper requires** *the removal of 140 tonnes of rock, leaving behind huge scars in the landscape and polluted rivers.*

■ *Oil companies which sell petrol in the UK have been responsible for serious pollution problems in the developing countries where they extract their oil. For example, Texaco's oil-drilling operations destroyed 2,600 hectares of rainforest in Ecuador.*

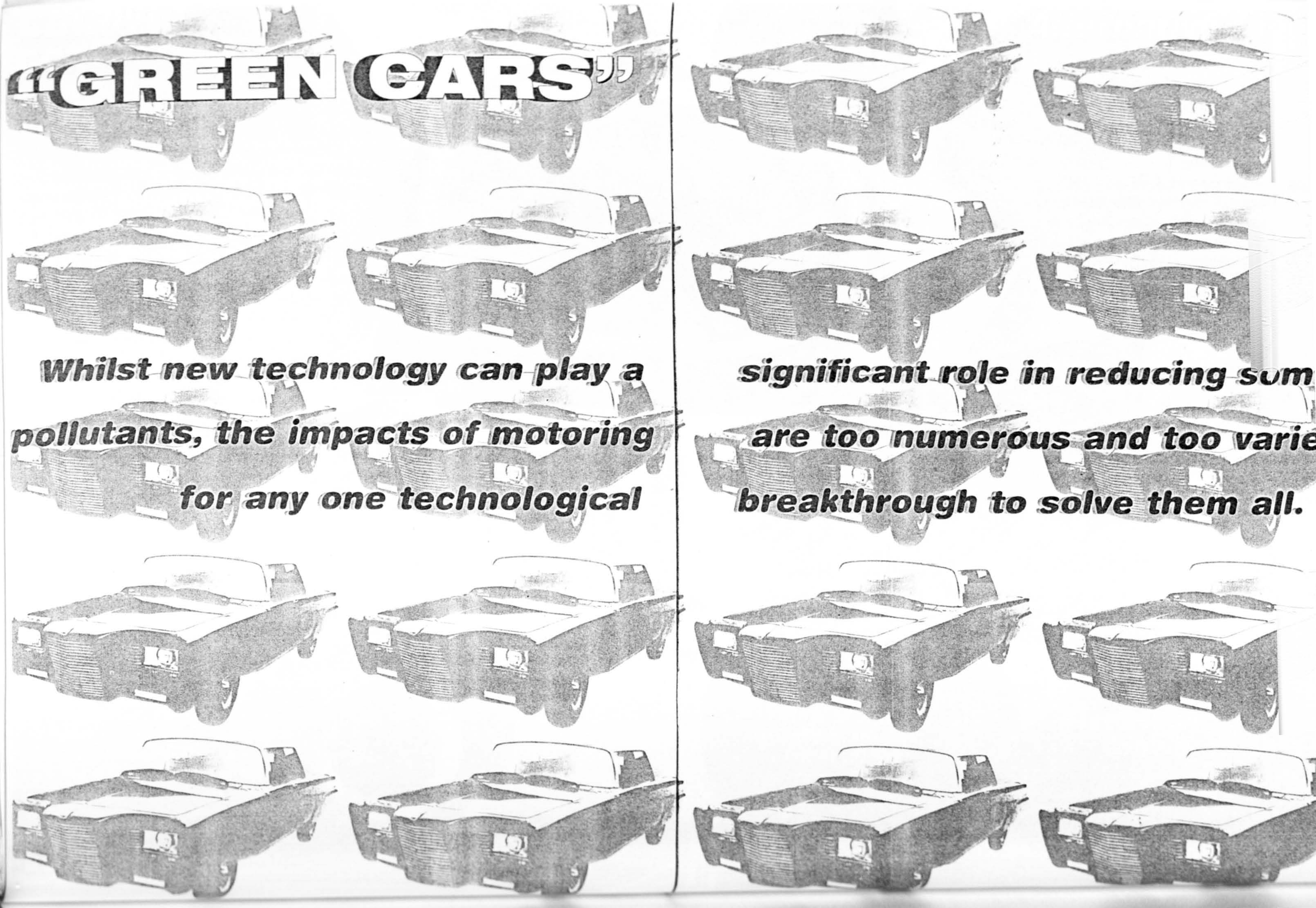
Like so many other products in our 'throw away society', cars are seldom life-long companions but are upgraded or traded-in on a regular basis. This causes huge problems of waste disposal. Whilst some of the metals are recycled, many of the other components end up in landfill sites, contaminating soil and water sources or being burned in incinerators producing highly toxic smoke.

■ **1.4 million cars were scrapped in the UK in 1992.**

■ **Every year, the British dispose of between 25-30 million tyres.** *50% of these are buried in landfill sites, illegally tipped or stockpiled.*

■ *A stockpile of 8-10 million tyres in Knighton, Powys caught fire in Sept*

"GREEN CARS"



Whilst new technology can play a significant role in reducing som

pollutants, the impacts of motoring are too numerous and too varie

for any one technological breakthrough to solve them all.

Catalytic converters

Since 1993, all new cars have been fitted with catalytic converters.
These can help to reduce emissions of nitrogen oxides, carbon monoxide and hydrocarbons by more than 75%. However, catalytic converters do not work until they have warmed up, making them ineffective for many short journeys. New pre-heated catalysts are being developed which could alleviate this problem.

Even so, some of the benefit of catalysts are likely to be eroded as traffic grows.
Air pollution cannot be reduced to safe levels unless traffic growth is itself reduced. Catalytic converters also have some negative side effects. They reduce fuel efficiency and consume large amounts of rare metals, the mining of which creates its own problems.

Shedding 10% of a car's weight reduces fuel consumption by about 7%.

Alternative fuels

Some people argue that we shouldn't be driv
petrol or diesel cars at all, and that other fue
such as methanol, ethanol, propane or natural g
would be cleaner. Many of the fuels proposed
produce less pollution. However, they often h
negative side-effects. Burning methanol can produ
formaldehyde, which is a suspected carcinog
Ethanol production from organic waste mater
takes land away from food production
can lead to soil erosion. Propane is
available in relatively sm

The pro of lightweigh plastics used in cars is expected to increase from 12% in 1990 to between 20-25% by 2000.

Fuel efficiency

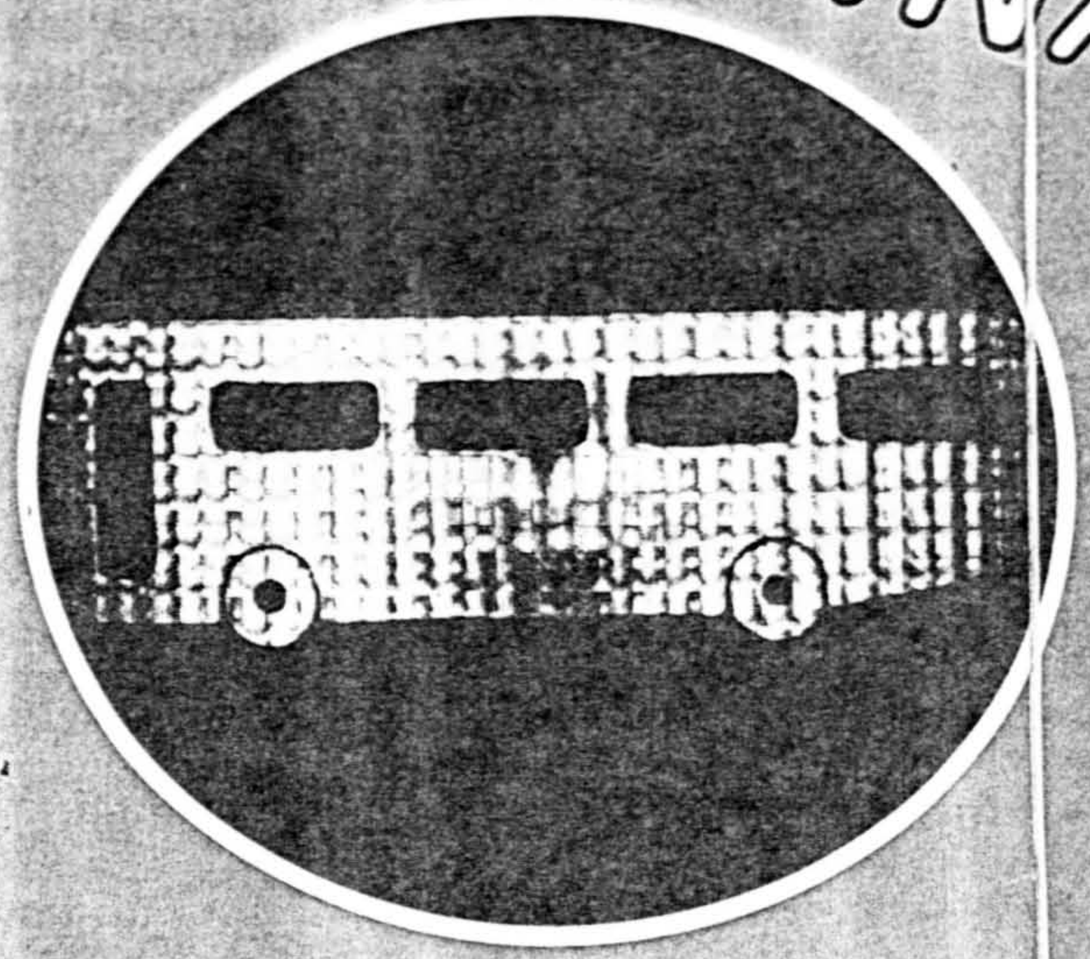
Fuel efficiency can be improved if lighter materials such as plastics are used instead of steel to make cars. But plastics are more difficult to recycle than steel and so create waste disposal problems.

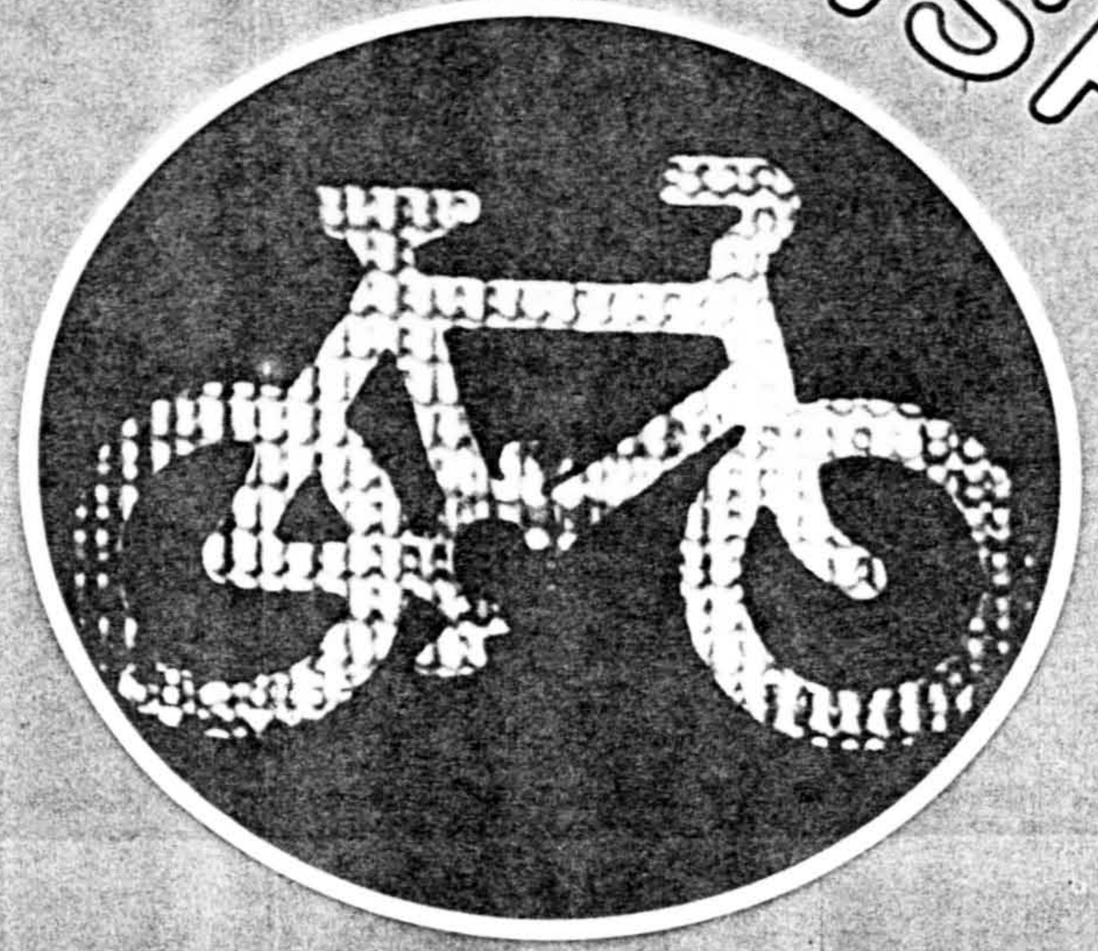
The manufacture of catalysts to reduce pollution consumes over 40% of the world's platinum, almost all the world's rhodium and almost a fifth of the world's palladium.

Electric or powere

Electric or hydrogen-powered cars are al
sometimes cited as pollution solutions. Thi
not the case, as electricity has to be gener
and hydrogen manufactured and currently
these processes produce pollution. To date
electric or hydrogen-powered car exists th

SUSTAINABLE TRANSPORT





So,
there is no such thing
as a truly GREEN CAR

The only real solution is to make it easier for people to use their cars less - by greatly improving rail services and other forms of public transport and by providing safe routes for walking and cycling.

Until recently, Government policies have favoured the car, accommodating increasing numbers of cars by building more and more roads. But things are beginning to change. There are now plans to cut funds for road-building and to protect spending on public transport. New planning policies have been introduced to traffic-generating out-of-town shopping centres and promote town centres which are get to on foot, bike or public transport. But much more could be done.

In November 1994, the Royal Commission on Environmental Pollution published a report which made over one hundred recommendations for ways of of transport. Implementing these recommendations would go a long way to making real transport choice and a way of getting around which won't cost the Earth.

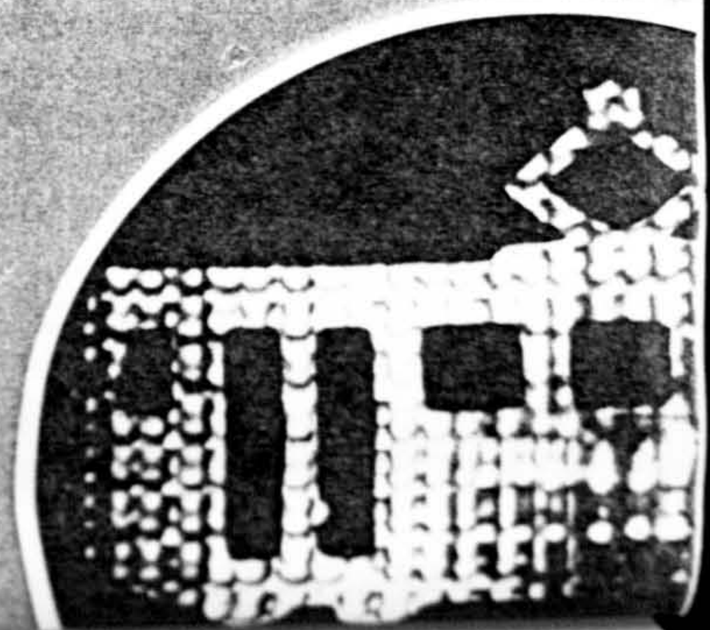
■ ***Since 1985 Government investment in the roads network has been 114%***

■ ***Nottingham City Council's 'Green Commuter Plan' aims to cut employees' car travel by 30 per cent over three years. The package of measures includes flexible car parking permits, car-sharing, discounted travel cards and loans for buying bikes.***

curb
easier to

reducing the environmental impact
sure that the next one hundred years bring us

higher than in the rail network.



Although

Government action is vital, so too is what you do as an individual.

So

take action

- *Leave your car at home and use Walk, cycle and use public transport whenever possible.*

- *Find out if your company or employer will introduce interest-free season ticket loans for public transport.*

By choosing to leave your car at

home and using other forms of transport whenever possible, you'll be making a real contribution now to cutting car fumes and congestion where you live.

- *If you are buying a new car, choose a small, fuel-efficient vehicle.*

- *Driving at lower speeds, accelerating gently and smooth gear changes can all cut fuel consumption. At 70mph you can use 30 per cent more fuel than at 50mph.*

please

today.

home.

Find out more about

Friends of the Earth's Campaign for Sustainable Transport and how you can help. Write to

Friends of the Earth, 26-28 Underwood Street, London, N1 7JQ.
Telephone: 0171 490 1555 Fax: 0171 490 0881
Email: info@foe.co.uk URL: http:www.foe.co.uk/car

Further reading from Friends of the Earth:

T335 What's in the Air you Breathe? 50p,
L285 Your drinking water is being polluted 50p.
T337 Roads to Ruin 50p,
T290 Your countryside is under threat 50p,
T340 Disappearing Forests and the Timber Trade 50p,
G83 Energy 50p, G124 Recycling 50p,
G75 Waste 50p, G165 How to be a friend of the Earth £3.45

FRIENDS of the

APPENDIX 10

DADDY, WHAT DID YOU DO IN THE *WAR AGAINST POLLUTION?*

Essex County Council
Highways
and Transportation

CUT CAR USE, CUT CAR POLLUTION

TRAVELWISE®