



University of the
West of England

Public attitudes to transport: Knowledge review of existing evidence

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List of Abbreviations used in the report

AA	Automobile Association
BATA	British Air Transport Association
BMRB	British Market Research Bureau
BPSS	Bus Passenger Satisfaction Survey (results as reported in Bus and Light Rail Statistics issued quarterly)
BSAS	British Social Attitudes Survey
CAA	Civil Aviation Authority
CfIT	Commission for Integrated Transport
CO2	carbon dioxide
CPT	Confederation of Passenger Transport
CTS	Centre for Transport & Society at the University of the West of England
DCLG	Department for Communities and Local Government
Defra	Department for Environment, Food and Rural Affairs
DETR	Department of the Environment Transport and the regions (now succeeded by DfT and DEFRA)
DfT	Department for Transport
DirectGov	www.direct.gov.uk -the official Govt portal
DPTAC	Disabled Persons Transport Advisory Committee
DSA	Driving Standards Agency
DVLA	Driver and Vehicle Licensing Agency
DVO	Driver and Vehicle Operator (Group of DfT)
ESRC	Economic and Social Research Council
GMPTA	Greater Manchester Passenger Transport Executive
H2	hydrogen (powered)
HGV	Heavy goods vehicle
LRT	Light rapid transit
MORI	the market research firm now Ipsos MORI
MOT	annual vehicle roadworthiness test
NHS	National Health Service
NOP	the market research firm
NPS	National Passenger Survey (rail)
NTS	National travel survey
ONS	Office for National Statistics
PCT	public acceptability of carbon trading

PT	public transport
RAC	Royal Automobile Club (its Foundation is a separate organisation)
RUSS	Road User Satisfaction Survey
TfL	Transport for London
TIB	Theory of Interpersonal Behaviour
TNS	the market research firm
TPB	Theory of Planned Behaviour
TRL	Transport Research Laboratory
UTSG	Universities Transport Studies Group
VCN	Value-Belief-Norm
VFM	value for money
VOSA	Vehicle and Operators Services Agency
VTTS	Values of travel time savings

PART ONE -

EXECUTIVE SUMMARY AND INTRODUCTION

Public attitudes to transport: Knowledge review of existing evidence

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Executive summary

Chapter 1. Introduction

This is a review of available evidence on public attitudes to passenger transport, carried out from March to May 2008 by the Centre for Transport & Society, University of the West of England, Bristol, for the Department for Transport. It spans from the late 1990s up to the latest available data. It uses two main sources: a set of national repeated cross-section surveys, and a selective literature review of journals, books and topic reports. Results are reported in two formats, first on a mode-by-mode basis and then relating to the five major policy goals of government namely competitiveness and productivity, climate change, health safety and security, quality of life, and equality of opportunity.

Caution is necessary when interpreting evidence on attitudes, which can be greatly influenced by survey design, definitions and methodology. In general we avoid describing 'the public view', preferring to identify the sources and size of variations showing a wide range of different views, and varying levels of agreement.

ATTITUDES ACROSS TRAVEL MODES

Chapter 2. Car Use

Attitudes to car use reflect attitudes to life styles and aspirations, and are, as a result, quite complex and multi-layered.

Motives for car ownership and use include an important desire for 'independence' and 'freedom', provided by personal mobility directly under the control of the individual. However, then people sometimes become more dependent on the cars themselves, which in turn can inhibit or constrain the independence sought, resulting in some car use becoming more a matter of habit.

Many saw specific parts of their car use as necessary, the most frequently cited reasons (different for different people) being: carrying large objects; infrequent public transport; economies with a number of passengers; carrying small children;

safety concerns regarding other modes; journeys essential for work; disability; combining several journeys; and long journeys.

Older drivers felt strongly that driving enhanced their independence. However, a (small) minority felt that giving up driving would relieve them of unwanted responsibility. Some older drivers who had given up driving had found it less difficult than they expected.

The desire associated with the car among children and young people is widespread, and nearly all seem to assume that car use will play an important part in their lives. However, there are also stronger negative views about car use among young people.

Many women have complex life-styles due to the way in which work and family responsibilities affect them, and are particularly attracted to the flexibility and convenience of car use.

Some researchers have concluded from attitudinal research that costs of car use are not a decisive influence on travel choices, suggesting that fuel costs are considered as part of the household budget, while insurance and the other 'one-off costs' are disregarded. There are some unexplained discrepancies of evidence on this question, and the interpretation should be treated with caution.

As well as positive views, people express a wide range of irritations and frustrations about car use, notably concerning: stress; congestion; road works; the poor quality of other road users' behaviour; and parking.

As a result of the positive and negative features taken together, nearly half of drivers say they would like to drive less than they do (though there are ambiguities in the statistics; in any case, it is a substantial proportion).

More evidence on these factors is provided in Part 2, especially as revealed by people's response to policies which affect the ease of car use.

Chapter 3. Bus Use

Different trends in bus use - increasing in London, decreasing on average in other areas but with some increases also - are reflected in differences in satisfaction with bus services and value for money among bus users, though also seem partly to be influenced by levels of congestion, other local travel conditions, parking difficulties, congestion charges in London, and differences brought about by a more or less widespread use of buses among different sections of the population who have different expectations.

Formerly common views of negativity towards bus travel are not necessarily borne out by recent evidence, where large majorities reject the view that buses are only for people who cannot afford any better, though nearly half say they would only use buses themselves if there were no other choice.

Perception of the quality of bus services among users is generally better than that reported by non-users. 72% of users of local bus services rated them as being fairly

or very good. Among non-users 44% rated them as good. (Interpretation of 'non-user' should be noted - something addressed in the report.)

Reasons given for non-use are topped by comparisons of convenience of travel by car against the available bus services. This is reinforced by statements that people would travel by bus more if the services were better, fares were lower, and/or car use was more expensive. A quarter of non-users agree that many journeys less than 2 miles could be made by bus.

A widespread research theme is that fares are not of primary importance to users, or the main barrier to non-users, value for money being seen as part of a broader package of quality assessment. However, the evidence on this seems sensitive to the way in which questions are asked, and influenced by an implication that 'cheap' means poor quality.

Research indicates an underlying desire for safe, secure, smooth and tranquil modes of travel. Localised market studies indicates that there are positive responses to the prospect of these attributes being provided, differentiated according to market segments, journey purposes and travelling at different times of the day and night.

Attitudes are different for different age groups. It appears that at primary school and at secondary school age the bus represents independence, but then is seen more as a practical necessity amongst bus users who are young adults. Among older travellers benefits of bus use include its low or free cost, as well as the wide coverage of bus routes across many areas. Key barriers to bus use relate to problems with access for people with mobility impairments, fear of crime, and the limited nature of bus networks in some, particularly rural, areas.

Chapter 4. Walking and Cycling

Walking and cycling are considered differently by the population, and should not be treated together. In particular there are strong differences in attitudes between those who cycle regularly and those who do not, whereas views on walking are rather more evenly spread (there are very few 'non-users' of walking). However there are some common features such as frustrations amongst both parents and children that it is not felt safe for children to walk and cycle more.

Walking - One in ten people indicate concerns about safety or their local walking environment. However, the great majority of people indicate positive views towards the aspects of walking considered. One third of adults indicate that their only form of exercise in a typical month is walking, only counting trips which take longer than 10 minutes. Over 90% of adults agree that everyone should be encouraged to walk to help their health, help the environment and to ease congestion.

Around four in ten car users say they would walk more if congestion charging was introduced, if it was more expensive to park, and if it was difficult to park.

Young people recognise walking as a healthy activity and are positive about it. There are also negative perceptions about being slow, traffic danger and stranger danger. However, Home Office research published in 2005 by Farmer found that nearly all children (8-15yrs) felt safe walking alone in their neighbourhoods.

Cycling - 37% of adults agree that 'Many of the short journeys I now make by car I could just as easily cycle, if I had a bike'. In a Scottish study a third answered that nothing could encourage them to cycle more but a fifth said that an increase in cycle paths or routes would promote bicycle use.

Around 3 in 10 car users say they would reduce their car use if there were more cycle tracks, cycle lanes and better parking facilities for cycles.

Substantial numbers of children aged 9-11 said they would like to cycle (41% of boys and 30% of girls), but by secondary school age cycling can be seen as uncool. Some research indicates that young people would be more inclined to cycle if they saw more people doing so.

Chapter 5. Rail Travel

Indexes of 'satisfaction' are difficult to interpret as they are based on usually non-explicit expectations. That said, over 80% of passengers are satisfied with rail service provision.

They think positively about the journey overall, especially for inter-city services whose passengers have higher levels of satisfaction than other rail users. Overall satisfaction does not appear inhibited by much lower levels of satisfaction for certain features notably 'value for money for the price of your ticket', availability of staff, and toilet facilities.

There has been a continual upward trend in overall satisfaction nationally over the period since 2003.

Rail commuters are sensitive about the railways' apparent inability to cope with current demand (crowding) and perceptions of personal security. Many people feel constrained to travelling in peak periods with limited scope for changing their travel times to less crowded conditions. The most frequently mentioned reason people do not use trains for short distance journeys, or only do so infrequently, is the perceived convenience of travelling by car, i.e. the ease or speed of journey. Cost is mentioned less.

However, other studies find different results on both speed and cost. Many business and leisure passengers express the view that they do not always mind somewhat longer journeys, as these give a welcome chance to either work or relax. And the most commonly mentioned improvement that would encourage non/infrequent users to use the train more was a reduction in fares (33% mentioned this in relation to short distance rail journeys and 54% in relation to long distance journeys).

Chapter 6. Air Travel

Qualitative research finds that travelling by plane was something that participants took for granted and were willing to endure even if afraid of flying. Overseas holidays and international business practices are widely seen as a way of life. On the other hand, 70% of adults believe that air travel harms the environment, and this number has been increasing. 74% of people agree that the current level of air travel has a serious effect on climate change.

This seems to provide a tension in the structure of attitudes to air travel with a wide range of different answers to surveys, especially on the question of whether unrestricted air travel should be provided for, with figures varying enormously from 80% yes to 80% no in different studies.

Some of the variation is due to differences among respondents - frequent fliers are more positive about flying than non-fliers, for example, which is not surprising. However, the largest influence seems to be the way in which questions are framed: questions mentioning freedom and the right to fly receive more positive answers, while questions mentioning environmental damage get more negative answers. The difference is so large that it is difficult to make simple generalisations about 'the public view', which should be avoided.

The recent advent of cheap flights had made overseas travel more affordable and participants were reluctant to give up the opportunities it offered. Nevertheless, there was some willingness to travel by train instead where practical, provided fares come down.

The main reasons given for choosing which airline to fly with are headed by cost for leisure passengers, and convenience factors (location of airport, availability of flight, time of flight) for business passengers. Among the reasons given for choosing to fly rather than use another mode of transport for non-business trips, three factors stand out overwhelmingly: speed, price and convenience.

Reasons given for not flying at all are lack of time, cost, or health. Environmental considerations were only mentioned by 3%, though a larger minority of people (17%) agreed that they felt guilty about taking short haul flights themselves.

ATTITUDES IN RELATION TO POLICY GOALS

Chapter 7. Competitiveness and Productivity

Majorities of over 70% of the public assert the seriousness of congestion for the country, seen as getting worse, and a high priority for action. However, a majority (60%) of the population do not find congestion a serious problem for themselves: a greater proportion consider congestion in towns to be a serious problem for them, and smaller proportions for rural areas and motorways.

The discrepancy seems to be due to people damping down their own irritation about congestion by learning to relax and live with it. They limit its damage to their lives by various coping strategies including changes in the pattern or timing of their travel.

Attitudes to policies aimed at improving road transport may be seen in several broad groups, distinguished by the degree of consensus:

- **Almost unanimous support:** improve public transport (over 95% support).
- **Broad agreement to measures:** reduce speed limits in residential areas, reduce traffic, favour spending on public transport over roads, reward clean cars, priority for buses and walking, charge for road use in proportion to use (55%-80% support).
- **Split down the middle:** strong minorities on both sides, seen as 'controversial': Cordon charge on cars with revenue used to improve public transport; build roads to reduce congestion (around 35:35 with 30% 'abstain').
- **Fairly substantial minorities in support:** mileage charge on cars with revenue used to improve public transport, unrestricted motoring, higher taxes for environmental damage, reduce new road spending. (20%-30% support).
- **Small minorities in support:** support public transport by: increasing petrol cost, reducing road maintenance, increasing VAT (around 10% support).

Attitudes to airport expansion are complex. Respondents in professional or managerial occupations are more likely to oppose airport expansion on both economic and environmental grounds than those in routine/manual occupations. Men were more likely than women to support expansion for economic reasons and disagree with limitations for environmental reasons. Respondents whose nearest airport was in the South East were more likely to oppose airport expansion on both economic and environmental grounds.

Some specialised research has investigated people's stated preferences among different attributes of travel. This has been interpreted as showing the money values that people accord to time savings (modified by the possibility of working while travelling), reliability and overcrowding, and therefore their relative importance when considering a measured change in the attribute.

Chapter 8. Climate Change

A large majority of the population is aware of and concerned about climate change, judges this to be an important area for Government action, agrees that human activities have a significant influence, and considers that transport is an important cause especially car and air travel. The majorities mostly vary in the range 55% to about 80% in different sources. Results are sensitive to context and the wording of questions. Attitudes rejecting some or all of these views exist, and although they are usually minorities they can be quite substantial in size.

There is a lower level of awareness of the relative importance of specific choices, especially in comparing one-off and frequent journeys, carbon emissions from buses, and driving styles.

Willingness to change behaviour is a complex mixture of individual and social interests. People may be more prone to change if the benefit is a proximate one to the individual, his/her family, or the local community – such as improving children's fitness, improving local air quality, or saving money. There is some indirect evidence that there could be 'snowball effects' in which people are influenced by other people's choices. This seems lower in Britain than in many European countries.

Research on barriers to change indicates a conflict for some between concern for the environment and concern about upsetting current lifestyles. Hence findings about intentions to change choices for other reasons (such as stress discussed in chapter 1, economic reasons in chapter 7, and health and quality of life discussed in chapters 9 and 10) have an important interaction with environmental motives.

While there has been some variation in attitudes by age, gender, car ownership and socio-economic status, the differences are not huge. An alternative approach has suggested that there are different groups or segments of the population with a substantially different readiness to change their choices, arising from their current travel patterns and their outlook and circumstances, but with each group containing a mixture of different demographic characteristics. The results identify groups adding to 15%-50% of the population as the most likely initial responders, though the work has not yet identified how this would change over time.

Generally we find that the notion of 'the public attitude' is oversimplified. Rather, there is a range of resistance to changing behaviour, from the very small numbers who would say they would easily contemplate reducing their car use by half or more, 25% to 45% who say they could easily change some short car journeys to bus or walk, up to 75% who would contemplate reducing some non-essential journeys. The figures are rather volatile and depend on the context. However, the finding that there is a substantial willingness to change seems very robust. (Note that this review has not compared people's stated willingness to change behaviour with evidence on whether they actually do so, though the orders of magnitude do seem consistent with the outcome of case studies and local implementation of policies aimed at such changes.)

Surveys have found evidence of a desire among some sections of the public that Government should be taking the lead on these questions, for example in creating conditions that environmentally helpful choices are more practical and attractive, rather than seeing it as a matter for individual initiative only.

Chapter 9. Safety, Security and Health

Walking is considered the safest mode of transport in terms of accidents (meaning that it is not a cause of danger), and motorcycles the least safe mode. Car is considered safest in terms of the risk of personal attack, and walking least safe.

There are substantial concerns about both safety and security while travelling, notably for pedestrians in residential and other urban streets, at bus stops and stations, as well as in buses and trains. Concerns about terrorist attacks lead to support for stronger security measures, but are not reported as having caused

large lasting changes in travel choices. Parental concerns about both traffic danger and security are important motivations in what travel their children are permitted to undertake.

Over 90% of people are in favour of action to enable or encourage more walking to improve personal fitness, and a majority (though not so large) also supports encouragement of cycling for this reason.

Visible exhaust emissions seem perceived as a greater risk to health than invisible ones.

Road safety emerges as the third most important issue for government to address, (after anti-social behaviour and hospital cleanliness). This view was strongest among young men and women; those with children under 15; drivers of lorries/van or motorcycles and parents taking their children to school.

There is an extremely high disapproval of drink-driving, and support for strong action to stop it. Driving under the influence of drugs is seen as a lesser problem, and with some confusion about different types of drug including medication.

There are substantial majorities (60% and more) disapproving of breaking the speed limit, supporting reductions in speed limits including local limits of 20mph, and for policies favouring pedestrians and cyclists over motor vehicles in the area where they live. However, there are also varying levels of tolerance of breaking the speed limits in special cases (notably on motorways when there is no traffic about): results seem to be sensitive to exact wording of questions.

A third to a half of motorists have recently experienced bad or aggressive driving by others, seen as a major problem in driving generally.

Concerning priorities for Government action, both safety and security score highly, and within road safety the three most cited issues for Government were drink driving (69%), speeding (43%) and use of mobile phones whilst driving (40%).

Chapter 10. Quality of Life

Not counting the 'bigger picture' of impacts on climate change which is discussed in chapter 8, there are three other ways in which people feel transport affects their quality of life: (i) crucially, transport provides the means to participate in the whole range of economic and social activities outside the home; (ii) conditions of the travel itself can be enjoyable or unpleasant, and mostly a mixture of the two; and (iii) the safety and pleasantness of the local environment, especially residential streets.

Some key problems affecting a majority of people's lives are exhaust fumes in towns (74%), congestion in towns (73%), and traffic noise in towns (51%).

Older respondents attached great importance to transport for meeting basic needs, preserving a sense of independence, gaining access to sources of mental stimulation, such as meeting people and leisure pursuits; playing an active role in the community e.g. through membership of clubs; gaining physical exercise and

engaging in activities that they enjoyed. Some people were deterred from using community transport because of they perceived a stigma, though others found it enjoyable and friendly.

Studies have varied in their conclusions about how different modes contribute to quality of life. One study reported higher levels of self-esteem and life satisfaction for car users, while public transport use had detrimental physical and psychological effects due to weather and perceived stigma, though this is not universal.

A third of people reported having difficulty in accessing certain everyday facilities because of transport problems. Of the facilities considered, access to the local hospital was most identified as difficult to access (15% of people), and the most frequently reported reason for those with difficulties was inadequate public transport. A larger proportion of respondents aged 16-24 (52%) reported more accessibility difficulties than other respondents. Places they particularly mentioned were friends and family (23%), hospital (21%) and college (15%). 15% of 25-44 year olds said they had difficulty getting to work, as did 10% of those aged 16-24 and 45-54.

The three most popular attributes people look for in a street when choosing a place to live were: feeling safe when walking around, a good general environment, and a well maintained street. A majority of people want their local streets to be used for a range of activities other than traffic flows (though a smaller majority for people with two or more cars than people with no cars). The three activities that respondents thought should have most priority were parking for residents, children playing, and walking.

There are majorities in favour of more traffic calming (especially for respondents with two or more children). A speed limit of 20 mph was favoured by nearly 80% of people; 60% supported use of speed humps; 52% closing streets to through traffic. There are large majorities who declare themselves in favour of giving pedestrians and cyclists priority in towns and cities, *'even if this makes things difficult for other road users'*.

Measures of the degree of satisfaction with the way in which services are provided are reported for: the DfT Agencies as a whole; Highways Agency, the DirectGov website combining services from the Driver and Vehicle Licensing Agency (DVLA), the Driving Standards Agency (DSA) and the Vehicle and Operators Services Agency (VOSA). Figures of 80% or more of drivers are satisfied with the services they receive, but the proportions satisfied with efforts on safety, environmental protection, driver and vehicle related crime; and pursuit of offenders were lower.

Chapter 11. Equality of Opportunity

A minority of the population overall has difficulties of getting access to important local facilities or services, with around 10% of the population reporting difficulties of access to each of a list of important destination types, and around 30% reporting difficulties to at least one of these activities (concurring with findings in chapter 10). This varies for different groups. The largest reported problem was among non-car owners, of whom 40% reported difficulties of access to local hospitals. Those

having difficulties most frequently cite inadequate public transport, and distance, as the main problem.

One study reported that some groups of the population are disadvantaged in both urban and rural areas: older people (living alone or with 65+ only); disabled/frail people; lone parents; carers; young car-less; low income people; people in a deprived area; ethnic minorities; and migrant workers. However there are differences in the nature of the disadvantage (e.g. fear of crime in urban areas, lack of services in rural areas) and the transport solutions sought are also different, with more use of buses in urban areas and more reliance on lifts in rural areas. Access to post offices has a particular importance in rural areas.

Cost is a specific issue for people with low incomes, which tends to result in attitudes of sensitivity to price as a policy instrument in relation to road pricing, fuel tax, road tax, public transport fares, and to air transport where frequency of use tends to be particularly strongly related to income.

Disabled people say that their biggest problem is road and pavement maintenance. More cite public transport frequency than design features like low floors and wheelchair access which are important to particular kinds of disability. The nature of information provided is a particular barrier to (ease of independent travel) for dyslexics.

There is research on the specific barriers where transport opportunities are not matched to the needs of women, parents with young children, children, young adults, the elderly, disabled people, low income groups, and others. Research has not generally asked about the importance people attach to the policy goal in itself, but it is noticeable that questions of fairness are often raised spontaneously in qualitative research, especially in relation to affordability and applied to responses to specific transport initiatives.

In the 2008 DfT Citizens Panel, discussions identified priorities to enhance access as: cheaper public transport; more accessible public transport (especially for such groups as those with a disability, the elderly and young mothers with pushchairs); better public transport links and integration of public transport; and better public transport infrastructure for rural areas.

KEY INSIGHTS AND EVIDENCE GAPS

A concluding chapter discusses some overall insights and themes. The material reviewed as a whole reinforces a general understanding that just as transport and travel choices are rooted in the structure of activities undertaken by individuals and families, so attitudes to transport are also rooted in deeper values and aspirations of how people want to lead their lives. Economic motivations (cost, allocation of time, participation in employment) are important, but so are a much wider set of influences including stress, tranquillity, feelings of control and independence, social obligations, and desires for both excitement and calm.

Some particular issues of interpretation have included:

- differences in the way qualitative and quantitative methods elicit the sources of variation and commonality in attitudes: they underline our view that reference to 'the public attitude' should be avoided;
- some apparent conflicts of evidence about the importance of some attributes of transport in influencing attitudes, notably cost or price which variously appears as unimportant or highly important in different studies -it seems valid to conclude that cost is seen by travellers as part of a wider package of features sometimes called 'value for money', but further work is necessary to understand how this operates;
- while it is well established that the precise wording of questionnaires can influence the results, we have come across some cases where this effect seems very large - this includes the reliability of evidence suggesting a change in attitudes to congestion in the early 2000s, and the relative impact of economic and environmental considerations on attitudes to air travel - therefore conclusions on these questions must be treated with particular caution;
- there are recurrent queries about the connection between behavioural intention expressed in attitude studies, and actual behaviour observed in traffic and passenger counts, household travel diaries, etc., and the analytical models (both orthodox and new) which are used to forecast choices - these are not always consistent, especially when considering intentions or willingness to change behaviour - a review of evidence which compared both types of sources would be most worthwhile; and
- finally we note the almost complete lack of evidence on how attitudes change over time, at the individual level - time-series only deal with aggregate analyses of the sort that can be done with repeated cross-section surveys, and hardly at all enabling longitudinal analysis - it seems to be the most important evidence gap, both for understanding and for practical application of policy development.

Chapter 13. Bibliography

Numbered references are provided to all the main sources used in the text, augmented by separate references for the Appendix and footnotes for incidental sources of information not subject to detailed assessment.

Appendix. Issues of Theory and Interpretation

In an Appendix, we discuss the extensive background of theory of what 'attitudes' mean, how they relate to a number of other key concepts including beliefs, perceptions, expectations, acceptability, values, feelings and norms, and how these also relate to behavioural intentions and actual behaviour. There is no universally accepted standard set of definitions in this field, and a number of different theories have been suggested to explain how attitudes are formed and

what effect they have. In some cases these theories can even differ in the suggested direction of cause and effect, notably in whether changes in attitudes lead to changed behaviour, or vice versa. More than one theory can be valid, for different people or in different contexts. An approach is suggested in which people's own experience and values is influenced by social norms and what they see as acceptable behaviour to their immediate peers and more widely.

Although awareness of this background is an important part of the training of many who carry out attitudinal research, and arguably essential for a full understanding, much of the research reviewed in this study has been carried out with more pragmatic motives and with a rather flexible view about research design, hypothesis testing, and the implications of results. We have written the main text with the intention that it should be comprehensible without a detailed knowledge of the theory, though have used its insights where we have felt able to do so, throughout the text and especially in Chapter 12.

Annex

There is a very substantial compendium of summaries of the research sources, and more detailed data tables and figures, than is given in the main report. This is provided as a separate document.

1 Introduction

Context

In October 2007 the Department for Transport (DfT) published the discussion document “Towards a Sustainable Transport System – Supporting Economic Growth in a Low Carbon World”, as a response to the Eddington and Stern reports, and with the intention of consulting on its proposed goals and challenges for 2014-2019. A Green Paper and a White Paper were planned. To support the process of preparing for and consulting on a Green Paper, at the end of February 2008 the DfT commissioned the Centre for Transport & Society at the University of the West of England, Bristol, to undertake an examination of existing evidence on public attitudes to transport. This document presents the full study report.

Scope

This is a review of evidence on public attitudes to passenger transport. ‘Public’ is interpreted as individuals and sometimes households, but not companies or organised bodies expressing a collective or stakeholder view. ‘Passenger’ means that freight and other commercial transport are not included, though individuals travelling for business purposes are. The scope of the work has been determined by a tight timescale and the needs of the DfT. As a knowledge review, it has focused on specific key sources of information identified by the Social Research and Evaluation Division of the DfT (and, indirectly, other divisions), alongside other evidence brought forward by the research team. Much of the primary evidence used comes from a number of key national surveys, and other research, commissioned by the DfT itself and other Government departments. This has been augmented by a selective general literature review of published material in academic journals and other research reports.

Methodology

The first element has been the examination of available data tables arising from existing analysis of a number of national¹ repeated cross-section surveys. They are based on structured questionnaires administered to a representative sample of the population, or subgroups such as the users of particular modes of transport. The main sources are:

- Bus Passenger Satisfaction Survey;
- National Passenger Survey (rail);
- Road User Satisfaction Survey;
- British Social Attitudes Survey; and
- ONS Omnibus Survey.

¹ In most cases we have simply taken the definition of ‘national’ as used by the original sources, and subdivisions as available. This usually means UK or GB, though recognising that some of the specific interests of the devolved administrations will be outside the ambit of the DfT.

An initial examination of the available analyses from these surveys identified a very large number (in the order of 5000 pages) of results, not all of which had been included in detail in the published summary reports. We made a first selection of relevant material from this base, and then in turn considered a subset for more detailed analysis (contained in a separate Annex), from which the final synthesis in this volume was selected. We note that there is still much material in the original sources, on a wide range of topics, which could usefully be analysed further.

The second element has been a review of selected articles that document the analysis and interpretation of further empirical findings - both quantitative and qualitative - concerning public attitudes to transport. These include papers in journals, books, and topic reports by Government and other agencies. Several of these articles are themselves reviews of wider literature, and some of them report work, commissioned by the DfT and other departments, carrying out detailed analysis on particular topics using the same data sets as listed above.

Approaching 300 relevant articles were identified (from an international research literature probably of ten times this size), seeking to find the key important sources in each of the topic areas we covered. After an initial scrutiny, those listed in Chapter 13 were read in detail, producing summaries of content and a common set of descriptive data. All these summaries are included in the separate Annex.

These two main sources of evidence were then considered in detail to produce interim findings, discuss them within the team and with the DfT, and key findings reported as described below.

Excluded material

There are four main categories of information that the review has not included.

First, we have not included a very large amount of material which has been collected by local government bodies and other agencies in relation to specific local schemes and policies (e.g. specific road or airport projects, rail closures or new lines, service changes, traffic restrictions, local environmental improvement schemes, etc.). Consultation on such proposals, even quite small ones, normally involves forms of public consultation which includes information on attitudes and opinions.

Secondly, we have also not included most overseas material, though noting that there is comparable research in many other countries.

Thirdly, there exists a large amount of information, of which only a small proportion is in the public domain, of attitudinal research carried out by transport operators or infrastructure owners for their own commercial reasons, including marketing, customer relationships, public relations, advertising or lobbying. This has mostly not been included.

Fourthly, alongside the evidence on attitudes there is an even bigger volume of data on actual behaviour, and the models and statistical analyses using it. This is an essential literature in interpreting attitudes, especially concerning the weight to be put on statements about what people would do or want to do: the meaning of such statements must be informed by information about what people actually do. This parallel evidence has not been included in the review, though the authors do have a general familiarity with it, and in some specific cases we include some cross reference or caveat in the form of footnotes, especially where there may be reasons for thinking there could be conflicts in the evidence.

Concerning the time-scale of interest, we have not had a sharp cut-off, but most of the attention has been given to the period from the late 1990s to the most recent figures available which are usually 2007. Two of the authors had carried out a similar, though smaller, review of earlier evidence from 1989 to 2001, and this is included in the Annex.

Report structure

Much of the evidence on public attitudes has been collected with a particular attention to one mode of transport or another, and traditionally nearly all reporting has been divided up on modal lines. On the other hand, current policy interests of Government seek to consider broad policy goals which cover all modes of transport. Therefore we have adopted a two part structure, part one treating each of the modes separately, and part two considering the evidence from the point of view of each of the main policy goals. This results in some risk of repetition which we have tried to minimise by cross reference.

Modes - Following discussion with the DfT, the modes included are cars, buses, walking, cycling, rail (mostly national rail), and air. We have not included separate sections on motorcycles, a distinct treatment of underground, metro, LRT or international rail, taxis, passenger use of commercial vehicles, or water transport, though there are some references to these modes where they were of significance in the discussion of the policy goals. The topics covered for each mode are uneven, reflecting the balance of interest in the research sources rather than a common framework of analysis.

Policy Goals - The policy goals considered are those outlined in "Towards a Sustainable Transport System - Supporting Economic Growth in a Low Carbon World", namely²:

- to maximise the competitiveness and productivity of the UK economy;
- to address climate change by cutting emissions of carbon dioxide and other greenhouse gases;
- to contribute to better health and longer life expectancy, through reducing the risk of death, injury or illness arising from transport, and promoting travel modes that are beneficial to health;
- to promote quality of life for transport users and non-users, including through a healthy natural environment with the desired outcome of an improved well-being for all; and
- to promote greater equality of transport opportunity for all citizens, with the desired outcome of achieving a fairer society.

Although these goals in general show a continuity of interest throughout the period covered by the surveys, this specific formulation of them is new, and nearly all of the evidence has not been collected with a specific orientation to these goals as such. Therefore to some extent we have had to use our judgment in allocating evidence as between, for example, climate change and a healthy environment, or between health and quality of life.

² Note that we have followed the sequence of goals as listed in 'Towards a Sustainable Transport System'. There is no presumption of an order of importance, either by Government or in terms of research agendas.

A notable feature of the source evidence is that much of it has been elicited in the context of asking for responses to specific actual or hypothetical policy measures, e.g. road building, public transport service and fares, traffic restrictions, road pricing, and speed limits. This is often more informative than simply asking how much people like or dislike the existing transport facilities, but should not be interpreted as a vote or referendum on the policies under discussion.

In each section of the report key points are highlighted. Chapter 12 discusses the implications of the results, some problems of interpretation, and important evidence gaps that would justify further research, but it does not repeat all the conclusions, since these are included in the Executive Summary.

Matters of interpretation

The study of attitudes has been the subject of a considerable body of theory, including several different conceptual approaches which reflect the disciplines and concerns of psychology, social psychology, political science especially in the field of voting behaviour, and business science especially relating to marketing and customer relations. The Appendix gives a summary of some detailed issues of definition and interpretation that arise, founded on this theoretical literature. As far as possible the main body of this report has been written in a way which does not require a technical knowledge of these theories, but it is important to emphasise that there can be hidden assumptions and pitfalls in taking stated attitudes at face value. Thus the Appendix discusses:

- defining and understanding what is meant by 'attitude' and by a number of other related concepts covered by the evidence base (such as awareness, beliefs, perceptions, value, expectation, satisfaction and acceptability);
- appreciating how attitudes and the related concepts are measured and the implications or caveats that apply to different methods of measurement; and
- acknowledging the important, but complex, relationship between attitudes and the other concepts, and behaviour.

On occasion these considerations affect the interpretation of apparently conflicting evidence, and we comment on this as appropriate.

Reporting 'the public view'

We have tried to avoid using phrases like 'the public thinks' or 'the public view' or 'old people consider' or 'women want', etc., which are common in the traditions of reporting attitudinal research. It is very clear in the quantitative studies that on virtually every issue, for the population as a whole or any sub-group, there is a range of different views and attitudes, of greater or lesser strength and incidence.

From quantitative data, we have, where the sources give this information, cited the specific percentages, preferring descriptions like 'large' and 'small' to 'vast' and 'tiny'. This is by definition not possible in the small samples often used for qualitative research, but here also we have tended to use 'a view' or 'a common view', rather than 'the view', though we have kept such phrases of course when quoting directly from the source authors.

Referencing

In the Annex, provided as a separate volume, there is the full set of annotated summaries and assessments of the literature reviewed, and the compilation of data selected from the original survey reports. Each source of evidence in the knowledge review was assigned a unique reference number. Within the main body of the report this same numbering system is used, with the format: [source reference number, date(s) of data collection/evidence coverage, format of data (qualitative, quantitative, mixed or review)]. A more conventional bibliography is provided as Chapter 13: for convenience of immediate reference this is ordered numerically. Apart from this formally reviewed evidence base, we also use footnotes in the text to identify sources of background information or incidental references which have not been given full scrutiny.

PART TWO -

ATTITUDES ACROSS TRAVEL MODES

2 Public Attitudes to Cars

Key Findings

Attitudes to car use reflect attitudes to life styles and aspirations, and are, as a result, quite complex and multi-layered.

Motives for car ownership and use include an important desire for 'independence' and 'freedom', provided by personal mobility directly under the control of the individual. However, then people sometimes become more dependent on the cars themselves, which in turn can inhibit or constrain the independence sought, resulting in some car use becoming more a matter of habit.

Many saw specific parts of their car use as necessary, the most frequently cited reasons (different for different people) being: carrying large objects; infrequent public transport; economies with a number of passengers; carrying small children; safety concerns regarding other modes; journeys essential for work; disability; combining several journeys; and long journeys.

Older drivers felt strongly that driving enhanced their independence. However, a (small) minority felt that giving up driving would relieve them of unwanted responsibility. Some older drivers who had given up driving had found it less difficult than they expected.

The desire associated with the car among children and young people is widespread, and nearly all seem to assume that car use will play an important part in their lives. However, there are also stronger negative views about car use among young people.

Many women have complex life-styles due to the way in which work and family responsibilities affect them, and are particularly attracted to the flexibility and convenience of car use.

Some researchers have concluded from attitudinal research that costs of car use are not a decisive influence on travel choices, suggesting that fuel costs are considered as part of the household budget, while insurance and the other 'one-off costs' are disregarded. There are some unexplained discrepancies of evidence on this question, and the interpretation should be treated with caution.

As well as positive views, people express a wide range of irritations and frustrations about car use, notably concerning: stress; congestion; road works; the poor quality of other road users' behaviour; and parking.

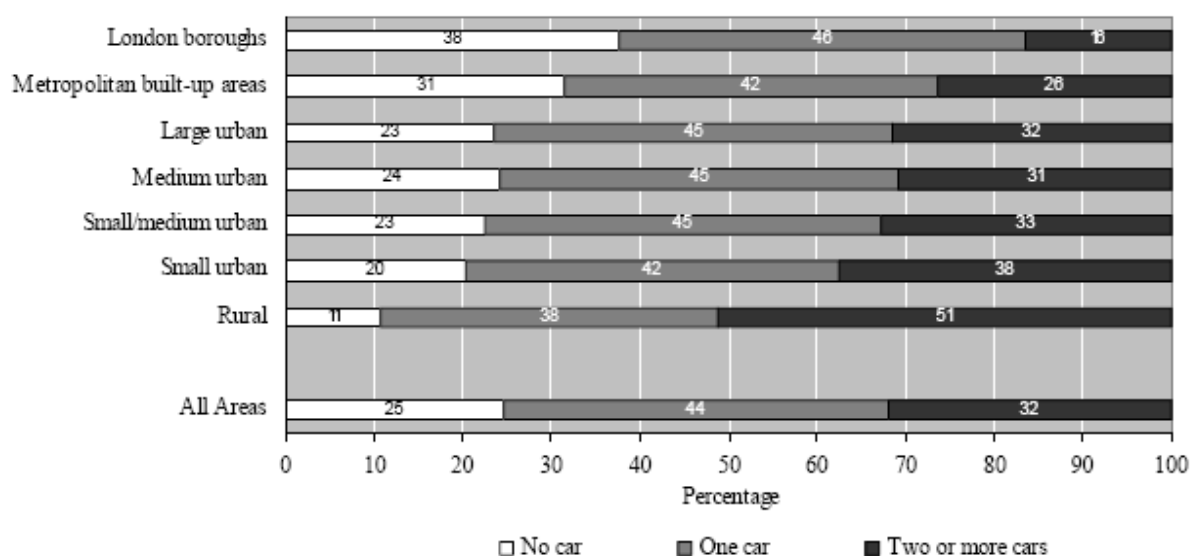
As a result of the positive and negative features taken together, nearly half of drivers say they would like to drive less than they do (though there are ambiguities in the statistics; in any case, it is a substantial proportion).

More evidence on these factors is provided in Part 2, especially as revealed by people's response to policies which affect the ease of car use.

Context

Car ownership and use have shown a very prolonged growth³, the number of private cars licensed in Great Britain at the end of 2006 being 26.5m compared with 1.9m in 1950. Travel as car driver or passenger now represents about 80% of the total distance travelled by surface modes, 63% of the trips, 60% of the time spent travelling, and 59% of the journey stages⁴. It is a very large element in national income and expenditure statistics, representing 10% to 15% of all personal expenditure. However, 25% of households do not have cars⁵, and access varies quite considerably by area of residence, region, age, and income.

Figure 2.1. Household car availability by area type 2006



Source: Copy of Chart 2.4 from National Travel Survey 2006

There has been a long tradition of analytical research on the economic and social influences on car ownership and use, making use of very substantial data bases, surveys, and counts; this shows that both economic and wider social influences are important. It is generally accepted that car use has become a core element of a way of life for a large proportion of the population, resulting in what has been called 'car dependence'⁶ in which there is a dynamic process of increasing reliance on cars as quality or knowledge of alternatives declines. Much of the research on public attitudes to cars has been carried out in the context of policy recognition that car use brings both benefits and costs, and that therefore understanding the strength and nature of attachment to cars, and the conditions under which car use might become better managed, is a salient research concern.

³Transport Statistics Great Britain 2007, Department for Transport

⁴ National Travel Survey 2006, Department for Transport SB (07) 21.

⁵ Transport Statistics Great Britain 2007.

⁶ Car Dependence, RAC Foundation for Motoring and the Environment, ESRC Transport Studies Unit University of Oxford, 1995

Note that tables of statistical data relevant to this chapter are contained in Part 2, related to the different policy goals. Here we give an overview of the main general themes that have arisen from this strand of research.

Overview: lifestyle, independence and dependence

A recurrent theme in the evidence on people's attitudes towards the car is the relationship with modern lifestyles: car use is embedded in, and has helped to form, a significant part of the built environment, structure of social and family relationships, travel and land-use patterns, and rhythms of everyday life. Therefore not surprisingly attitudes to car use also reflect attitudes to life styles and aspirations, and are, as a result, quite complex and multi-layered.

Qualitative research finds that among the influences on car ownership and use, there is an important desire for 'independence' and 'freedom', as expressed by personal mobility directly under the control of the individual. However, in seeking this, people sometimes become more dependent on the cars themselves, which in turn can inhibit or constrain the independence sought. There is evidence that people recognise this potential conflict, and sometimes describe car use as a force of habit rather than an absolute necessity. These effects seem to be different for different age groups, and different for men and women, as shown in the results below.

Freedom and necessity

DfT research as part of the National Road Pricing Feasibility Study [238, 2004, Qualitative] involving interviews and workshops, found that "[d]rivers liked the convenience, comfort, safety, reliability and flexibility of having a car; some, for example those with disabilities, saw it as a necessity. Many valued the sense of freedom having a car or van gave them". Many saw their car use as necessary. However, many also acknowledged that not all their journeys needed to be made by car, it was more a matter of preference, convenience and habit. Respondents reported that they did not put much effort into thinking about alternative ways of doing a journey.

The research listed various categories of journeys that different respondents deemed as necessary to make by car:

- transporting things that are not easily carried on the person;
- trips made in areas where there was infrequent public transport;
- journeys made with a number of passengers to save money;
- travelling with small children, especially with a pushchair;
- times when people did not feel safe using other forms of transport;
- essential car users/driving for work purposes; and
- if the driver has a disability.

The varying necessity of car use was also identified in more recent DfT research employing deliberative research techniques into acceptability of road pricing [242, 2006-2007, Qualitative]. Reasons given for necessity of car use varied but expanded the list above to include:

- no suitable public transport alternative;

- cars were required to transport large items or children;
- cars enabled a combination of journeys therefore saving time; were important at particular times of the year and day; and
- cars were needed for long journeys.

Variation by age

Such motives for car use seem deeply rooted in psychological and emotional attachment, but this works differently at different stages of life. The youngest participants in the research above [242, 2006-2007, Qualitative] also liked driving for the sake of it - seeing it as a pleasurable mode of transport. Meanwhile older people were more likely to only drive when they had to. Psychological aspects such as freedom, privacy and comfort emphasise the importance of using a car. Older participants suggested that using the car had become habitual and was linked to lifestyle. The freedom to drive when, where and how often they like was reported as extremely important by participants. This was linked to being able to be independent, particularly amongst the oldest (65+) and youngest (18-24) age groups. The reliance on the private car was seen as great attachment coupled with great anxiety over losing such freedom, especially amongst male drivers.

For older drivers, car use is felt to be important for inclusion and self-esteem. Recent research [259, 2006-2007, Qualitative] that has involved older drivers in the research process has highlighted the central and critical role that driving plays in the lives of these older people; it also highlights the negative impact arising from giving up driving, especially on men. The research suggested a structure distinguishing three main travel needs:

- practical (make appointments, access shops and services, work);
- social (the need for independence, control, status, roles); and
- aesthetic (the need for relaxation, visit nature, test cognitive skills).

Within a DfT review of mobility [014, 2000-2005, Review] one study by Rabbitt et al for the AA Foundation for Road Safety Research in 2002 found that 92% of older drivers felt that driving enhanced their independence. However, 14% felt that giving up driving would relieve them of responsibility. Indeed where older drivers do give up driving it seems they are generally less negative than beforehand. This may reflect an important observation for travel behaviour change in general: people's anticipation of how they may feel if their behaviour were to change is rather different from their experience when the change actually happens.

Younger people also recognise a lifestyle fit with the car. Research [014, 2000-2005, Review] reveals that some children considering that "their generation were used to everything being instant: cars were the only mode of travel which could provide an instant gratification of travel needs" (2004 TRL research by Martin et al). The desire associated with the car among children and young people is widespread, especially for young adults. Research involving some 600 children in four secondary schools in Scotland [134, 2003, Mixed] found that the benefits of cars are understood widely especially in terms of convenience, speed and comfort. More recent research involving focus groups and interviews for the DfT [012, 2006, Qualitative] has found that among young adults (16-25) the main benefits and attractions associated with cars were practical advantages, independence, the ability to help others and the fact that driving was a leisure activity in itself.

In research investigating the factors influencing the future travel behaviour intentions of young people aged between 11 and 18 [266, 2006, Qualitative], it was found the participants all expressed a wish to drive in future. It was suggested that the participants' underlying value system (emphasising comfortable life, exciting life, social recognition, materialism) underpinned their intention to be car drivers and own their own cars. These and other findings were not found to differ by age within the 11-18 age group of this research. Participants' experiences with transport modes, and what they heard from the experiences of family members and peers, were found to be influential and contributed strongly to negative attitudes towards buses and cycling. Negative aspects of the car relative to other modes were noted, although this was often in the context of being a car passenger.

Variations by gender

There is a suggestion that people consider modern lifestyles to have become more strongly aligned with what the car has to offer, and this may especially be true in terms of changing roles of women in society, one result of which is that many women are confronted with challenging schedules of activity, that give rise to complex journey patterns, for which convenience and flexibility are sought-after attributes of their travel choices.

According to a series of focus groups and home interviews for the DETR [073, 2000, Qualitative], many car drivers consider that for most types of journeys the car meets their needs while alternative modes of transport do not. Social and land-use changes underpin the perception of respondents that their lives are busier, less structured and less predictable than for earlier generations shaped by issues such as: individualism, reassurance, flexibility, convenience and immediacy. For women especially, lifestyle affects their views [014, 2000-2005, Review] - those who are lone parents or with dual home/childcare and work/education commitments perceive cars as easing the time pressures they face and their scheduling challenges with trip chaining being a feature. Many women say they do not feel public transport can help them make these complex journey patterns. Reducing time away from the home and thus managing travel time can be an important consideration.

Cost

Perhaps in part because the car is so embedded in many people's lifestyles, cost is not a factor that is readily discussed or considered in a utilitarian manner. In a study for the DETR involving focus groups and interviews with car drivers [073, 2000, Qualitative], cost did not emerge as a strong factor in the respondents' descriptions of their choice of how to travel⁷. Fuel costs tended to be considered as part of the household budget, while insurance and the other 'one-off costs' were disregarded. It was clearly the perception that the more the car was used, the better value it represented. It was only when

⁷ Note that this does not of itself 'disprove' the very substantial body of evidence that both vehicle costs and fuel costs do have a significant effect on people's behaviour, with highly significant effects seen especially in econometric analysis of time series data on car ownership, traffic levels, and fuel consumption. The best of these studies track statistical data over long periods of time, whereas the qualitative research expresses people's perceptions at a point in time without knowledge of how they, or others, might adjust later. This other evidence has been reviewed for the DfT in a number of studies, for example by Goodwin, Dargay and Hanly (2004) Elasticities of road traffic and fuel consumption with respect to price and income, *Transport Reviews*, 24 (3) 375-292. That price influences travel choices does not seem to be in doubt, though it may do so in ways more complex than simple economic models would suggest or imply.

respondents were forced to consider an extreme projection (a doubling or more in fuel prices) that they would consider adapting to a new set of circumstances.

A key finding of DfT research into consumer behaviour and pricing structures [237, 2005, Qualitative] was that “attitudes to motoring costs appear to differ from those to other expenses and that drivers rarely consider the costs of individual journeys - motoring expenses are widely perceived as unavoidable periodic events”. The authors suggest that a lack of motivation to monitor car use and expenditure may be “associated with the perceived lack of scope for controlling/reducing the length or frequency of car journeys.”

Problems and frustrations

In spite of the supporting role of the car in many people’s lives, some negative aspects of car use (by so many people) are also well recognised.

Stress - According to a major survey by Defra [004, 2007, Quantitative; Table B14A] 57% of people find car travel stressful ‘sometimes’ (with 21% strongly agreeing). Agreement does not vary much by the type of area where people live: big cities - 59%; towns - 56%; and village/country - 58%. A majority also agreed ‘*I like travelling in a car as a driver or a passenger*’ (67% agreeing and 11% disagreeing). Thus it seems car use is often characterised by general appeal accompanied by a degree of stress.

Congestion, maintenance, road-works and road rage - Focus group work with the general public for the DfT [042, 2003, Qualitative] found that people generally consider the situation on the roads has worsened in recent years with their concerns mainly centred upon:

- increased congestion;
- state of repair of roads;
- the amount of road-works; and
- road rage.

Most believe these things will get worse in the future. Perhaps reflecting the distinction between predictable and unpredictable congestion, road-works are a particular concern. People are frustrated by poor co-ordination and poor quality.

Complaints about the behaviour of other road-users - People are also frustrated by other road users: an RAC Foundation survey of motorway drivers [106, 2005, Quantitative] asked what motorists think is the worst driving habit on the motorway: 29% said motorists who drive too close to the car in front; 20% said motorists who drive while talking on their mobile phone; 15% said motorists who suddenly cut across all three lanes to exit the motorway; 13% said motorists who hog the middle lane. Qualitative research as part of a study into drivers’ perceptions of cyclists [229, 2002, Mixed] found that the most readily identified problems facing the motorist were: overall level of traffic and congestion; and, as above, inconsiderate driving (including arrogance, unpredictable behaviour, lack of courtesy, slow elderly drivers and novice drivers). (The experience of driving is revisited later in this report in relation to congestion and road safety.)

Negative aspects of cars seen by young people - Negative aspects of car use are also recognised by children and younger people [014, 2000-2005, Review]. Primary school children identify pollution, congestion, parking and costs; secondary school children are

concerned about pollution, joy-riding and abandoned cars. From secondary school research in Scotland [134, 2003, Mixed] an overall negative view of cars came through from discussions. They were seen as restrictive and boring to this age group, and other factors such as pollution, congestion, parking and costs were widely recognised without prompting. Pupils at secondary school had considerable experience of using cars, mainly as passengers, and could identify plenty of personal advantages in their use. There was however a very wide understanding of the negative effects in terms of pollution and congestion. These views were held more strongly in urban and suburban areas. In rural areas, there was an understanding that the car was a virtual necessity for making many journeys. Note that at the same time, virtually all the pupils involved in discussion expected the car to play a key role in their future travel as an adult.

Parking - Parking is noted as a concern above. From a national survey on attitudes to streetscape and street uses the adults surveyed indicated that if their street were to be redesigned, they would place a higher priority on parking for residents (46%) than any other uses [023, 2005, Quantitative]. The majority (71%) said that it was important for everyone to have a parking space outside their house with 73% of car owners agreeing with this and 64% of non-car owners also agreeing with this. Only 34% agreed that they would be prepared to park an extra 50 metres from their house to enable the street where they live to become somewhere good to stop and talk to neighbours.

RAC Foundation research involving a survey of 500 drivers [245, 2004, Quantitative] asked participants what they would consider (from a pre-defined list) if they had no access to residential parking outside their house ('say within 200 yards'). Responses were as follows: moving house - 29%; selling my car - 6%; renting garage space in the local area - 48%; parking in the street further away - 49%; park in drive/garage - 69%; converting my garage to parking - 56%. 11% of respondents had had an argument with neighbours over parking.

Attitudes about reducing car use

Thus although the research has found very strong attachment to the car and the benefits it brings, at the same time it has also found a list of frustrations and negative aspects. These come together in a complex mix of views about whether people would like to drive less than they currently do. According to a major survey by Defra, 45% of people agree they would '*like to reduce my car use but there are no practical alternatives*', of which 20% agree strongly⁸ [004, 2007, Quantitative; Table B14B]. Considering a breakdown of responses for this statement by the area in which people live finds the following levels of agreement: city - 39%, town - 44%, village/country - 58%. This may suggest the significance of practical alternatives being available. High car ownership is associated with a higher agreement, that is, people with higher car ownership were more likely to say they would like to drive less, (no car - 12%, 1 car - 48%, 2+ cars - 60%). It is not clear which is the cause and which the effect, and this interesting question was not pursued in the research.

When looking to consider their alternatives to car use people are likely to face trade-offs in their concerns. For example, in qualitative research commissioned by the DfT to examine perceptions of congestion on motorways [256, 2005, Qualitative] it was found that "[n]ervous motorway drivers were normally those with children, and initially many said they would prefer to use public transport because they were worried about motorway safety. However, when public transport was available on the routes they travelled, they

⁸ Note that this statement is ambiguous, as it actually contains two contradictory propositions - you could disagree either because you do not want to reduce your car use, or because you do and think that there are practical alternatives enabling you to do so.

said they rarely or never used it due to difficulties travelling with children (due to a lack of seating, storage) and the cost of paying for more than one fare".

More evidence on this is reported in chapters 7 and 8.

3 Public Attitudes to Buses

Key findings

Different trends in bus use - increasing in London, decreasing on average in other areas but with some increases also - are reflected in differences in satisfaction with bus services and value for money among bus users, though also seem partly to be influenced by levels of congestion, other local travel conditions, parking difficulties, congestion charges in London, and differences brought about by a more or less widespread use of buses among different sections of the population who have different expectations.

Formerly common views of negativity towards bus travel are not necessarily borne out by recent evidence, where large majorities reject the view that buses are only for people who cannot afford any better, though nearly half say they would only use buses themselves if there were no other choice.

Perception of the quality of bus services among users is generally better than that reported by non-users. 72% of users of local bus services rated them as being fairly or very good. Among non-users 44% rated them as good. (Interpretation of 'non-user' should be noted - something addressed in the report.)

Reasons given for non-use are topped by comparisons of convenience of travel by car against the available bus services. This is reinforced by statements that people would travel by bus more if the services were better, fares were lower, and/or car use was more expensive. A quarter of non-users agree that many journeys less than 2 miles could be made by bus.

A widespread research theme is that fares are not of primary importance to users, or the main barrier to non-users, value for money being seen as part of a broader package of quality assessment. However, the evidence on this seems sensitive to the way in which questions are asked, and influenced by an implication that 'cheap' means poor quality.

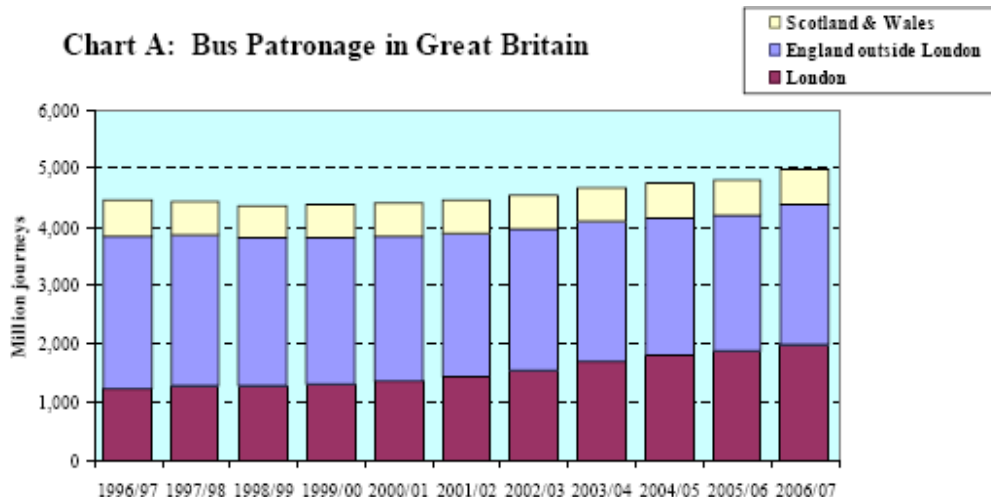
Research indicates an underlying desire for safe, secure, smooth and tranquil modes of travel. Localised market studies indicates that there are positive responses to the prospect of these attributes being provided, differentiated according to market segments, journey purposes and travelling at different times of the day and night.

Attitudes are different for different age groups. It appears that at primary school and at secondary school age the bus represents independence, but then is seen more as a practical necessity amongst bus users who are young adults. Among older travellers benefits of bus use include its low or free cost, as well as the wide coverage of bus routes across many areas. Key barriers to bus use relate to problems with access for people with mobility impairments, fear of crime, and the limited nature of bus networks in some, particularly rural, areas.

Context

Bus use showed a long term decline in the UK since the 1950s, though in recent years this has reversed⁹ - see Figure 3.1. The largest component of recent growth is accounted for in London alone, with a net decline still continuing in the rest of England, though even this picture is mixed with some areas also showing growth.

Figure 3.1. *Bus Patronage in Great Britain 1996-2007*



Source: Copy of Chart A from Public Transport Statistics Bulletin GB 2007

The majority of public transport journeys in the UK are made by bus, comprising an average of a little over one journey per week per person¹⁰, though this is very skewed: 38% of women and 48% of men reported that they used a local bus less than once a year¹¹, and at the other extreme over 16% of commuters were recorded as having used bus as their main method of transport for the daily journey to work for at least one year out of a decade¹² of personal travel records. Bus use is greater among women than men, among the young especially the 16-20 age group, among low income groups, and among non-car owners. Concessionary bus travel by the elderly is an especially important part of their mobility patterns, and a substantial proportion of the bus market in some areas.

The influence of location and externalities upon attitudes

People's travel choices and notably those between bus and car are strongly influenced by convenience [045, 2007, Quantitative], [071, 2001-2007, Quantitative], [088, 2006, Qualitative]. 2007 ONS Omnibus survey results [045, 2007, Quantitative] found that 38% of adults live more than 13 minutes walk away from a bus stop served by a frequency of at least once an hour and that would take them to relevant destinations - indicative perhaps of how public judgement of bus service provision may be affected by the degree of (relative) convenience being offered.

⁹ Public Transport Statistics Bulletin GB: 2007. Department for Transport SB (07) 22

¹⁰ National Travel Survey 2006

¹¹ Bus Use in GB, Department for Transport factsheet 8, 2003

¹² Dargay and Hanly (2003) A panel exploration of journey to work, ESRC Transport Studies Unit, UCL

Bus Passenger Satisfaction Surveys [071, 2001-2007, Quantitative] show very different trends in patronage and satisfaction between bus users in London and metropolitan areas outside London and non-metropolitan areas in the period 2001/2 to 2006/7 – as shown in Table 3.1. Growth in London¹³ would not appear to be entirely a reflection of attraction of quality of service nor rejection due to perceptions of value for money¹⁴. External factors are likely to be playing an important part in determining the relative attractiveness of bus travel as judged alongside other travel options – such factors as growing traffic congestion causing stressful car travel, the relative unattractiveness of the underground, parking difficulties, congestion charges etc. The implication for non-metropolitan areas is that favourable attitudes are just strong enough (noting also that not all people have an alternative to using the bus) to maintain patronage despite a perception that fares are too high for the quality of service received. Meanwhile for metropolitan areas outside London the overall implication appears to be that there are difficulties in maintaining customer loyalty and attracting new users. It should be noted however that in specific cities and metropolitan areas where high quality bus services are provided, growth in patronage has been achieved [068, 2004, Qualitative], [136, 2005-2006, Mixed], [110, 2008, Review].

Table 3.1. Percentage changes between 2001/02 and 2006/07 in responses from bus passengers in different areas

	London	Non-metropolitan areas	Metropolitan areas outside London
Patronage	+29	+1	-6
Overall satisfaction	+4	+2	+1
Value for money	-9	-3	-4

Source: [071, 2001-2007, Quantitative], base 5185

It is important to note that surveying bus passengers by definition only captures individuals who through choice or necessity are using the bus. Individuals who opt to no longer use the bus or to do so less regularly will not or are less likely to feature in the survey samples.

Attitudes towards the overall attractiveness of bus travel

Formerly common views of negativity towards bus travel are not necessarily borne out by gathered evidence. Large scale Defra research into attitudes and behaviour in relation to the environment [004, 2007, Quantitative; Table B14K] found that a very large majority of respondents rejected the proposition '*travelling by bus is mainly for people who can't afford any better*' – 72% disagreeing, one of the highest levels of (dis)agreement for any of the survey statements and spread throughout social groups and areas. Quite a high proportion nevertheless indicated '*I would only travel by bus if I had no other choice*'

¹³ Evidence from the London Travel Report 2007 shows that this may have been partly due to the increased geographic coverage of the network. However, the average passengers/bus over this period rose from 13.2 to 15.3 (Table 3.3.1 of the London Travel Report) and this arguably provides a better impression of increased bus usage at 16%.

¹⁴ London Travel Report 2007 shows that the 'headline' fares had increased over the period 2001/2 to 2005/6, but that the lower charges met by users of Oyster cards brought down the average fares to a little less than the 2001/2 levels (indexed). Note, however, that the surveys consider 'value for money' as opposed to 'fares'.

(46% agreed) but 36% disagreed. Responses are not found to differ by area type though agreement with the statement is higher for high car ownership respondents (2+ car owners - 53%). The overall nature of this survey may have had some influence on responses.

Views on bus use not surprisingly differ between users and non-users. ONS Omnibus results [045, 2007, Quantitative] found that 72% of those who had used the local bus services in the last year rated services as very or fairly good; 13% as very or fairly poor. Among non-users, 44% rated services as good; 16% as poor and 24% did not know. It should be noted that in this survey, the views of respondents were not related to defined common expectation levels, and that these may well differ between the two groups. However, results drawn from the same study source provide more detail concerning reasons for not using local bus services (more often) (Table 3.2) and views on bus use from non-users (Table 3.3) and these are likely to be more revealing, in terms of attitude, than the satisfaction responses.

An understanding of the principal attitudes towards bus travel was sought in a study undertaken for the DfT by the ONS based upon an extension to the June 2007 Omnibus Surveys [045, 2007, Quantitative]. Tables 3.2 and 3.3 show the responses to questioning on reasons why respondents were or were not attracted to bus use.

Table 3.2. Reasons for not using local bus services (more often)

	Any reason %	Main reason %
Convenience of car	64	48
Takes too long by bus	50	17
Buses not frequent/reliable enough	19	5
Prefer to cycle or walk	11	5
Services don't go (directly) where required	16	6
Difficulty accessing services	8	4
Cost	16	3
Concerns about crime	3	1
On board conditions	6	1
Other	20	11

Source: [045, 2007, Quantitative; reproduced from Fig. 14], base 695

Table 3.3. Responses (%) from non-users to statements about bus use

	Strongly agree/agree	Neither agree/disagree	Strongly disagree/disagree	Don't know
<i>'Many car journeys less than 2 miles could be made by bus'</i>	24	8	60	8
<i>'I would only travel by bus if no other way'</i>	72	7	15	6
<i>'I would use buses if quicker/more frequent'</i>	35	18	39	8
<i>'I would use buses if cheaper'</i>	28	26	34	12
<i>'I would use buses if it was more difficult to park'</i>	40	14	36	10
<i>'I would use buses if charged to drive into town centre'</i>	37	14	40	9

Source: [045, 2007, Quantitative; constructed from Fig. 16], base 976 non-users

Non-users were the most negative; nearly three quarters of them considering the bus to be the mode of last resort, though even of this group, one quarter acknowledged that they could use the bus for short journeys. In response to another series of questions to infrequent users rather than non-users, this proportion rose to a third¹⁵.

Cheaper fares appeared to be of relatively minor importance although vocabulary might be an important factor in the responses. Bus and Light Rail Statistics that reports the Bus Passenger Satisfaction Survey (BPSS) data [071, 2001-2007, Quantitative] uses the term "value for money" (VFM) rather than "fares". Satisfaction scores for "fares" may represent an understandable demand for high quality and cheap travel. Meanwhile, an assessment of VFM constrains interpretation to a valuation of quality *against* fare price and, even in cases where concessionary fares apply, provides an understanding of how maximum usage can be afforded. Cheap, low quality services may attract some customers in some circumstances; whereas higher quality with at least existing fare levels can produce a more attractive offer to others [068, 2004, Qualitative], [162, 2003, Qualitative]. The low importance rating of cost as opposed to value for money is corroborated by focus group and interview research with car drivers for DETR [073, 2000, Qualitative], where it was found that the bus was perceived as falling substantially short of meeting the needs of respondents. Buses were seen as undesirable and low status; an opinion based both on hearsay and past experience. Cost was a secondary issue, with the negative factors associated with public transport emerging as the primary concern.

Attitudes towards bus travel attributes

The Bus Passenger Satisfaction Survey (BPSS) data [071, 2001-2007, Quantitative] show trends in satisfaction with certain service attributes – see Table 3.4. The results suggest little change in perceptions of improvement or worsening of service provision. It should be noted once again that these results reflect views of users but cannot reflect any 'churn' in the user population across the survey period (i.e. non-users becoming users and users becoming non-users).

This information is useful in assessing changes in customer reactions towards these specific attributes. However they cannot be used, and neither do the BPSS reports imply that they should be, to measure the relative importance of the attributes in determining overall attractiveness of service provision. Any such attempt would require that a wider set of factors be accounted for – not confined only to 'utilitarian' descriptors of service provision for which the operator has some control over. The results in Table 3.4 cannot be expected to explicitly account for external influences, as noted earlier.

Other research [044, 2004, Mixed], [088, 2006, Qualitative] has sought deeper behavioural motivators rather than top-of-mind attitudes towards specific utility attributes, e.g. good timekeeping. This has revealed an underlying desire for safe, secure, smooth and tranquil modes of travel. In addition, localised qualitative market research for bus operating companies [068, 2004, Qualitative], [162, 2003, Qualitative] has sought to articulate those factors that are of importance to winning more customers, revealing that, beyond a prime requirement for services to operate to the advertised schedules, i.e. 'doing what it says on the tin', different attributes, often in line with the deeper motivators, appeal to different market segments, with differing journey purposes and travelling at different times of the day and night.

¹⁵ Note that the distinction of people between users and non-users depends on the period of time of non-use – there are many more apparent non-users with weekly data than with annual or longer periods. The hard core of people who genuinely *never* use buses is much smaller than those for whom buses are a small and occasional part of their lives.

Table 3.4. Changes in satisfaction (England wide) with bus service attributes

Service attribute	2001/02	2006/07
Reliability	64	69
Bus stop information	61	70
Bus stop/shelter condition	74	76
Condition of bus	80	81
Journey speed	81	82
Safety and security	81	83
Level of crowding	84	83
Staff service/comfort	82	83

Source: [071, 2001-2007, Quantitative]

It follows that characterising bus travel in a way that is meaningful to end users and/or which supports the different purposes of assessing end-user views is challenging and indeed is found to be variable across different surveys and studies [042, 2003, Qualitative], [045, 2007, Quantitative], [071, 2001-2007, Quantitative], [225, 2008, Qualitative]. The wording used to represent attributes is also an important factor with regard to how people respond [161, 2004, Mixed]. The difficulty is compounded because people attach varying importance to each attribute depending upon their journey purpose, the time of day, the weather, their finances at the time of travel, fitness, time available, numerous other factors personal to themselves and influences such as the availability of a car, the difficulties involved with parking, the stress of driving in traffic and other external influences that are not top-of-mind when their views are being surveyed. Therefore 'headline' figures concerning views on bus service provision must be interpreted with care.

Despite the difficulties, it is possible to identify some major broad themes; according to a MORI assessment of attitudes to transport issues in England for DfT [042, 2003, Qualitative]:

- It is clear that people want scheduled services to be reliable (i.e. to run to the advertised schedules) and perceive it to be an important problem if they do not.
- People are attracted by frequent services.
- Personal security is often a significant concern (though maybe only in some cases).

Scores of satisfaction with reliability are broadly comparable between London, other metropolitan areas and non-metropolitan areas with, in all three cases, a modest increase in average satisfaction being revealed [071, 2001-2007, Quantitative].

Empirical evidence suggests [136, 2005-2006, Mixed] a service frequency of more than one every 10 minutes is sufficient for customers to think of the service as turn-up-and-go, and for one every 20 minutes to be still attractive to prospective customers.

The MORI survey of public attitudes to transport issues in England [042, 2003, Qualitative] states “personal security [with bus travel] is also (in addition to reliability and frequency) a major concern, with many respondents saying they do not feel safe travelling after dark due to threats from other passengers, mostly children/teenagers. The bus driver’s lack of control and inability to protect passengers’ personal safety is seen as particularly worrying”.

ONS Omnibus survey results [045, 2007, Quantitative] revealed, based on questions in the British Crime Survey of 2004-2005, that “around 27% (of the 805 respondents that used the bus at least once a month) had seen someone being insulted, pestered, harassed, threatened or spat at” in the previous 12 months, and 10% “had seen someone being physically assaulted, mugged or robbed”. In the questioning of the wider study sample about the reasons why people do not use buses, however, personal safety at stops and on board, was rated low. This may mean that those witnessing anti-social behaviour are those using the bus regularly, whereas non-users or infrequent users may lack awareness of the problems that sometimes exist.

In a DfT review of mobility [014, 2000-2005, Review] women “tended to have negative views about public transport, feeling that buses were overcrowded, and unreliable, with poor waiting facilities and unhelpful staff”. Women have concerns about personal security both in relation to waiting at bus stops but also in relation to walking in their local streets. Note, however, that women use buses more than men, as reported above.

Attitudes of children and young people

It appears that at primary school and at secondary school age the bus represents independence but amongst young adults it becomes something more of a practical necessity [014, 2000-2005, Review]. Indeed, research involving primary and secondary schools in Scotland [134, 2003, Mixed] indicates that perceptions of (public) transport evolve throughout young life in three phases. Younger children consider the fun aspects of transport important. Many older teenagers appreciate the independence that not being reliant on lifts can bring. The use of buses for purposes other than to school or college increases sharply at around the age of 13, when independent travel with friends becomes commonplace. Older teenagers and young adults use public transport for reasons of cost and mainly not out of choice. This research went on to observe that children were generally positive about buses, and understood and enjoyed the benefits of convenient local travel, either alone or with parents/friends.

Other focus group and depth interview research for DfT [012, 2006, Qualitative] which sought to understand the travel aspirations, needs and behaviours of young adults highlighted some important implications aimed at encouraging use of public transport rather than cars. The improvements that were most likely to be successful in addressing negative comments were: reducing cost; increasing frequency of services; reducing overcrowding; improving reliability and predictability; improving the internal environment and transport officials’ customer service skills; and addressing young people’s safety concerns. Such findings align with the broad themes identified earlier for all bus users.

Attitudes of older people

From in-depth interviews studying older people’s experience of using transport [011, 2006, Qualitative] it was found that the perceived benefits of bus use included its low cost, as well as the wide coverage of bus routes across many areas. Key barriers to bus use related to problems with access for people with mobility impairments, fear of crime, and the limited nature of bus networks in some, particularly rural, areas. PhD research involving

older people [129, 2000, Qualitative] found that “bus travel was much more likely to be talked about as ‘episodic’ and often judged by worse case scenarios, while car travel appeared to be seen as a more consistent commodity, possibly because car travel was perceived to be under the control of the owner/driver. Many of the criticisms of bus travel focussed on the physical experience of the journey, particularly waiting at the bus stop and inside the bus. The perceived vulnerability contrasted sharply with the in control’ perception of car driving and use. Some regular bus users by choice valued social contact, not having to drive and a few, a more leisurely pace of life. The rural bus users focus group also knew the staff by name and appreciated the bus as part of their community life, whilst maintaining cars for journeys deemed unsuitable for public transport.” The research points to the problems of (infrequent) worst experiences disproportionately colouring attitudes.

4 Public Attitudes to Walking and Cycling

Key findings

Walking and cycling are considered differently by the population, and should not be treated together. In particular there are strong differences in attitudes between those who cycle regularly and those who do not, whereas views on walking are rather more evenly spread (there are very few 'non-users' of walking). However there are some common features such as frustrations amongst both parents and children that it is not felt safe for children to walk and cycle more.

Walking - One in ten people indicate concerns about safety or their local walking environment. However, the great majority of people indicate positive views towards the aspects of walking considered. One third of adults indicate that their only form of exercise in a typical month is walking, only counting trips which take longer than 10 minutes. Over 90% of adults agree that everyone should be encouraged to walk to help their health, help the environment and to ease congestion.

Around four in ten car users say they would walk more if congestion charging was introduced, if it was more expensive to park, and if it was difficult to park.

Young people recognise walking as a healthy activity and are positive about it. There are also negative perceptions about being slow, traffic danger and stranger danger. However, Home Office research published in 2005 by Farmer found that nearly all children (8-15yrs) felt safe walking alone in their neighbourhoods.

Cycling - 37% of adults agree that 'Many of the short journeys I now make by car I could just as easily cycle, if I had a bike'. In a Scottish study a third answered that nothing could encourage them to cycle more but a fifth said that an increase in cycle paths or routes would promote bicycle use.

Around 3 in 10 car users say they would reduce their car use if there were more cycle tracks, cycle lanes and better parking facilities for cycles.

Substantial numbers of children aged 9-11 said they would like to cycle (41% of boys and 30% of girls), but by secondary school age cycling can be seen as uncool. Some research indicates that young people would be more inclined to cycle if they saw more people doing so.

Context

We follow here the common practice of discussing ‘walking and cycling’ together, though recognising that for analysis and policy these are very unlike modes. There are similarities in that (in the UK), both have been declining. They also have related policy interest in the context of sustainable transport strategies, where both walking and cycling are usually described as crucial at both national and local level. However, they are unlike in terms of their patterns of use, incidence, and characteristics. Factual data available is less extensive than for vehicle modes, partly due to difficulties of definition and collection, and partly due to their absence from forecasting procedures and low profile in the analytical framework of transport planning and appraisal.

Walking is of course the most widely accessible mode, being used to some extent by almost the entire population (notwithstanding those with certain physical disabilities). It accounts for nearly a quarter of all trips, and is a part of most public transport trips and many car trips. Although it represents a small proportion of the total mileage travelled (3%, or about 200 miles per person per year), it is second only to car in the amount of time spent travelling, proportion of trips, and proportion of stages, being about 28% of all stages¹⁶. Women, and the young, walk most, and car owners walk less than those without a car. 57% of the population walks for periods of longer than 20 minutes at a time, at least once a week¹⁷. It is the main mode of transport used for the journey to work for an average of 10% of commuters, but over 22% have used it as a main mode in at least one year out of a decade.¹⁸

Cycling has been declining, in the UK, and accounts for around 1% of all trips¹⁹, when averaged over the population as a whole. However among those who do cycle it is a key mode of transport, accounting for 22% of their trips. Males cycle more than females, the rates being highest among boys aged 11-16 years. Although males in car owning households cycle less than in non car households, this is not true for females, whose cycling is relatively unaffected by car ownership. At a local level there have been substantial increases in cycling following specific policy initiatives, which are not yet reflected in the national figures. It is the main mode for the journey to work by just over 3% of commuters, but over 9% have used it as a main mode for at least one year out of ten.

These trends are both shown in Figures 4.1 and 4.2 below.

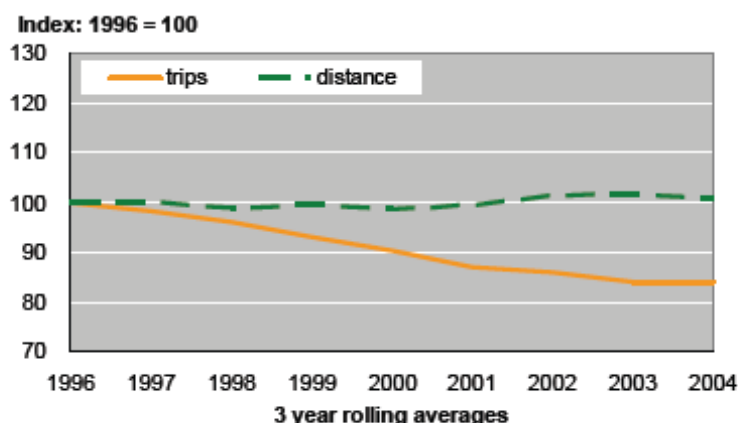
¹⁶ National Travel Survey 2006

¹⁷ Walking Personal Travel Factsheet January 2007, Department for Transport

¹⁸ Dargay and Hanly (2003) A panel exploration of journey to work. ESRC Transport Studies Unit, UCL

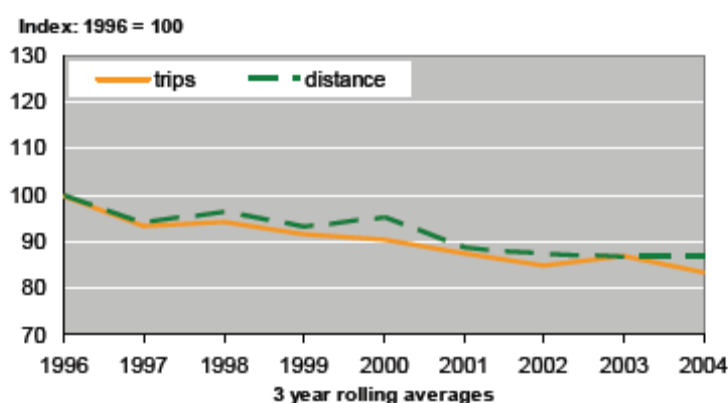
¹⁹ Cycling Travel Factsheet January 2007, Department for Transport

Figure 4.1. Trends in number of walk trips and distance walked per person per year (1996-2004)



Source: Copy of Chart 1 in Walking: Personal Travel Factsheet January 2007, DfT

Figure 4.2. Trends in number of cycle trips and distance cycled per person per year (1996-2004)



Source: Copy of Chart 1 in Cycling: Personal Travel Factsheet January 2007, DfT

Headline attitudes

The DfT factsheets draw out selected findings on attitudes to walking and cycling based upon the British Social Attitudes Survey and Omnibus surveys.

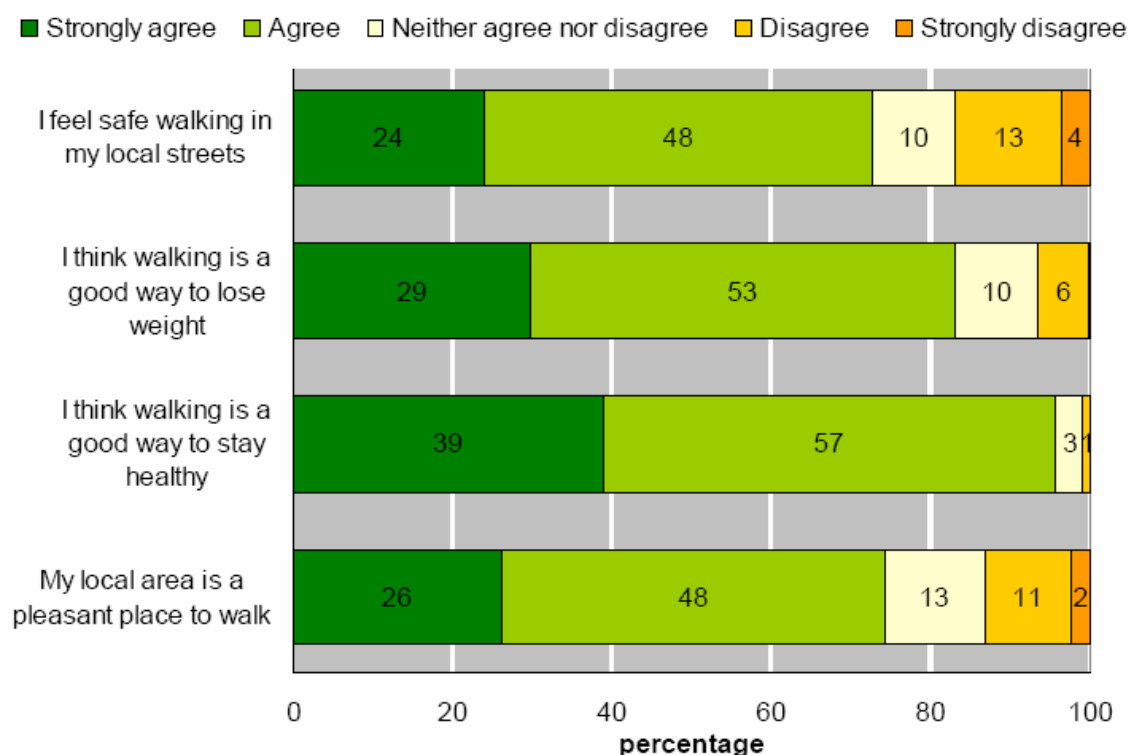
2005 Omnibus results for walking are shown in the reproduced chart below (Figure 4.3).

One in ten people indicate concerns about safety or their local walking environment. However, the great majority of people indicate positive views towards the aspects of walking considered. One third of adults indicate that their only form of exercise in a typical month is walking for more than 10 minutes. The Factsheet draws out the following signals of potential for increasing walking: "

- The majority of adults agree that everyone should be encouraged to walk to help their health (97%), help the environment (94%) and to ease congestion (92%) (Omnibus 2002).

- Many households are within reasonable walking distance of local shops and facilities. In 2004, 81% of households were within a 13 minute walk of their nearest local food store and 59% were within 13 minutes of their nearest chemist.
- Over a fifth (21%) of trips under a mile in length are currently made by car, suggesting there is considerable potential to increase walking.
- According to BSAS, 37% of respondents agree that '*Many of the short journeys I now make by car I could just as easily walk*'.
- Almost four in ten (37%) car users say they would reduce their car use '*if there were safer walking routes*', whilst 30% say they would do so '*if pavements were better*' (Omnibus 2002).
- Similarly, around four in ten car users say they would walk more '*if congestion charging was introduced*' (42%), '*if it was more expensive to park*' (36%) and '*if it was difficult to park*' (42%) (Omnibus 2002).
- Car users who already walk relatively frequently are more likely to say they would reduce car use/increase walking, than those who are infrequent walkers (Omnibus 2002)."

Figure 4.3. 2005 Omnibus results for statements concerning walking



Source: Omnibus 2005

In terms of cycling the Factsheet observes that "[p]eople generally have a positive view of cycling although many are deterred by safety concerns". Women are more likely to express concerns about safety than men.

The Factsheet draws out the following signals for potential for increasing cycling: "

- 43% of people aged 5 and over own a bicycle and a further 1% have use of a bicycle. Bicycle ownership is much higher among children than adults.
- Over two thirds (68%) of all trips and over half (58%) of car trips are under 5 miles, approximately a half hour cycle ride.
- 37% of adults agree that '*Many of the short journeys I now make by car I could just as easily cycle, if I had a bike*' (BSAS).
- Around 3 in 10 car users say they would reduce their car use '*if there were more cycle tracks away from roads*' (31%), '*if there were more cycle lanes on roads*' (27%) or '*better parking facilities for cycles*' (30%) (Omnibus).
- Around a quarter of car users say they would cycle more '*if congestion charging was introduced*' (26%), '*if it was more expensive to park*' (23%) and '*if it was difficult to park [a car]*' (26%).
- Car users who already cycle frequently are more likely to agree such measures would reduce their car use."

Cycling and walking are returned to for later consideration in Chapter 9 but some selected evidence is provided below from more in-depth studies.

Cyclists and non-cyclists

TRL conducted a major study of attitudes, behaviour and motivation to cycle to inform promotional measures in the National Cycling Strategy [145ii, 1999-2000, Quantitative]. An Omnibus survey within the study showed that cyclists (defined as cycling at least once in summer months and representing 31% of total sample) have higher likelihood than average of being aged under 35, having high income, being employed and having car. 65% of non-cyclists said '*there are too many obstacles preventing me from cycling*' compared to 24% of cyclists.

A contemplation-of-change question found that 53% of the Omnibus sample were at pre-contemplation stage (of starting to cycle), 12% at contemplation stage, 6% at ready for action stage, 14% at action stage and 15% at maintenance stage. A key restraint on cycling was '*the traffic would frighten me*' which applied to 38% of cyclists and 59% of non-cyclists.

Cluster analysis was used with pre-Omnibus sample of 300 individuals to segment the population of cyclists and potential cyclists. Nine clusters were identified and promotional strategies that could be used for each of them suggested. Five clusters had generally positive attitude to cycling and mix of sexes, although variation in actual cycling. Three clusters are mostly female and have negative attitudes, social norms and control beliefs.

The study concluded that non-cyclists do not easily fit into a single category and that the contemplation-of-change question is a useful way of measuring attitude to cycling and cycling behaviour. Many of the non-cyclists have positive beliefs regarding cycling in some respects (more often affective responses such as they do not think they would feel self-conscious cycling), but not in other respects (more often instrumental beliefs such as thinking there are too many obstacles preventing cycling). The study concluded that promotional strategies will depend upon whether objective is to increase cyclist trips or cyclist numbers.

Conditions for walking and cycling

ONS Omnibus survey results for DfT [025, 2002, Quantitative] found that 17% of the adult public thought that walking conditions had improved in the last 2 years while 18% thought things had got worse. 27% of people thought cycling conditions had improved compared with 11% who thought they had got worse. When asked to score overall levels of conditions for walking and cycling, average scores were much higher for walking than for cycling and for both modes frequent users gave higher ratings. However, as no minimal quality standard had been set for either mode, a direct comparison between the satisfaction levels of the two modes is not meaningful, and it is not possible to determine the importance of the gap between expectation and perceived quality for either.

Opinions on perceived improvements in conditions of these two modes were separately collected. A 2002 Scottish Executive study by Costly "asked respondents who had cycled in the last 12 months what, if anything, would encourage them to cycle more frequently: a third answered that nothing could encourage them to cycle more but a fifth said that an increase in cycle paths or routes would promote bicycle use" [014, 2000-2005, Review]. (Meanwhile focus group research for the DfT [042, 2003, Qualitative] into attitudes to transport issues in England found that those who cycle perceive cycle lanes as not being well planned.)

It seems that perceptions of time pressured lifestyles are a barrier to greater amounts of walking and cycling, and likely responsible also in part for the decline seen in levels of walking and cycling. "30% of respondents agreed that if they had more time to cycle they would use their car less. Differences between those who cycle frequently and those who never cycle were marked, with 58% of frequent cyclists saying they would use their car less if they had more time to cycle, compared with 17% of those who never cycle. 42% of respondents agreed that they would use their car less if they had more time to walk. Among those who currently do not walk frequently, this fell to 33%" [025, 2002, Quantitative].

Attitudes of young people and attitudes affecting young people

The DfT evidence-base review on mobility [014, 2000-2005, Review] found the following. Young people recognise walking as a healthy activity and are positive about it. There are also negative perceptions about being slow, traffic danger and stranger danger. However, Home Office research published in 2005 by Farmer found that nearly all children (8-15yrs) felt safe walking alone in their neighbourhoods.

Few primary school children cycle to school but according to work by Davis in 2001 cited in the review [014, 2000-2005, Review] "41 per cent of 9 to 11 year old boys and 30 per cent of girls aged 9 to 11 saying they would like to cycle". By secondary school age cycling can increasingly be seen as uncool. Indeed at slightly later ages the effect of norms is highlighted. Referring to work by McWhannel and Brauholtz "Some young people in their older teens and early twenties who lived in urban areas said they would use bicycles more to get to work or college if they saw other people using them".

Work by Granville et al for the Scottish Executive in 2002 cited in the review [014, 2000-2005, Review] which examined why parents drive their children to school found that "[c]ycling was often seen as untenable because of busy, congested roads, poorly maintained road surfaces, lack of cycle lanes and, in winter, bad weather and inadequate street lighting. These concerns were heightened by the belief that other road users do not show adequate consideration towards cyclists". The DfT review also found that parents recognised benefits in their children walking to school - convenient for parents not

needing to escort their children, it encouraged children to be independent and to mix with friends and was healthy. Parents also recognise when they escort their children to school on foot that this can provide the opportunity for quality time together. 2002 DfT research cited in the review found that “around 65 per cent of parents would prefer not to drive their children to school”. The review suggests there is some evidence indicating that the demand amongst children to walk or cycle to school is higher than the proportion permitted.

Thus it seems there are frustrations amongst parents and children alike concerning the degree of walking and cycling engaged in with conflicts between advantages and disadvantages and influences of life stage on attitudes.

A study by Smith (2005) according to the review [014, 2000-2005, Review] “notes that when cycling in a particular locale is uncommon, it is mostly young males who cycle. However, with increasing numbers of cyclists in an area, the proportion of female cyclists increases sharply. This suggests that women may be more willing to cycle if there is an established cycling population, particularly one which includes both genders and a range of ages.”

Attitudes of drivers towards cyclists

As part of a TRL study of drivers perceptions of cyclists [229, 2002, Mixed], literature was reviewed concerning driver behaviours of concern to cyclists. Referring to the TRL report “New Cycle Owners: expectations and experiences” (1998) the review reported that “many of those new cyclists who had ventured onto main roads described the experience in a very negative way (‘absolutely petrifying’, ‘traffic thunders past’). A quarter of those involved in the project said that their experience of cycling on busy roads had caused them to reduce the amount of cycling that they did.” Thus making the transition into cycling faces the challenges of adjusting to the negative aspects of the travelling environment. Another study comprised of a small sample of university staff and students considered individuals who had not previously cycled to the university and investigated their views before and after a period of undertaking cycling to/from the university [228, 2000, Qualitative]. The main reasons for wanting to cycle, comparable across the sample as a whole, were convenience, getting fit and the environment. Before and after the trial participants were asked what they expected to find / found least and most pleasant/enjoyable. From this the authors concluded that “the respondents may have been pleasantly surprised by the flexibility of the bicycle as well as with safety related issues and they may have been somewhat disappointed with the pleasantness of the activity itself”. The majority of participants had enjoyed the experience of the trial more than expected - about a fifth found it harder due to issues of fitness. Again this highlights that matching expectations to experiences can be difficult in seeking to encourage higher uptake of cycling.

The TRL study [229, 2002, Mixed] in its consideration of drivers’ views of cyclists found through qualitative work that cyclists did not feature among the main concerns of drivers. However, when prompted, drivers’ association with cyclists was found “to be predominantly negative rather than positive”. Positive association terms were: healthy; and brave. Negative association terms were: vulnerable; irresponsible; despised; dangerous; erratic/unpredictable; arrogant; and inconvenient. The report considered differences between those drivers who are also cyclists and those who do not cycle themselves. The former were “better able to distinguish between different types of cyclists, separating the good from the bad. Non-cyclists, on the other hand, were generally guilty of linking all cyclists to the same (usually negative) behaviour by association”. Subsequent quantitative research within the study found that “drivers see

cyclists as an 'out group' and therefore have a tendency to overly criticise cyclists while exonerating errors made by drivers (the 'in group')... drivers know what they 'should do' but feel pressured by other drivers into adopting the perceived 'social norm' of moderate impatience towards cyclists". It seems that there is a sense of division in terms of attitude and allegiance between those who cycle and those who do not.

A study considering the affective experience of different modes

Research involving Surrey University staff [247, 2000, Quantitative] considered 'affective' experience of different travel modes on the basis that this can influence their attitudes towards travel experience and may influence future behavioural intentions. Considering people's journey to/from work, the research found that "people who find their journey relaxing are more likely to be walkers or cyclists, whereas people who perceive their journey to be stressful are more likely to be car users". The analysis distinguishes "people who find their journey depressing and boring from people who find their journey exciting; the first are more likely to be users of public transport, the latter are more likely to be walkers, drivers, and especially, cyclists". Analysis considered how sources of (dis)pleasure varied between transport modes. This showed that "danger was especially a worry for cyclists and pedestrians. Fewer car users worried about safety and no public transport users. Delays were particularly salient issues for public transport users and drivers, whereas inconvenience was an issue for pedestrians and cyclists." This study is an important reminder that emotional considerations are part of travel experience and in turn can be part of shaping attitudes towards different modes.

5 Public Attitudes to Rail Travel

Key findings

Indexes of 'satisfaction' are difficult to interpret as they are based on usually non-explicit expectations. That said, over 80% of passengers are satisfied with rail service provision.

They think positively about the journey overall, especially for inter-city services whose passengers have higher levels of satisfaction than other rail users. Overall satisfaction does not appear inhibited by much lower levels of satisfaction for certain features notably 'value for money for the price of your ticket', availability of staff, and toilet facilities.

There has been a continual upward trend in overall satisfaction nationally over the period since 2003.

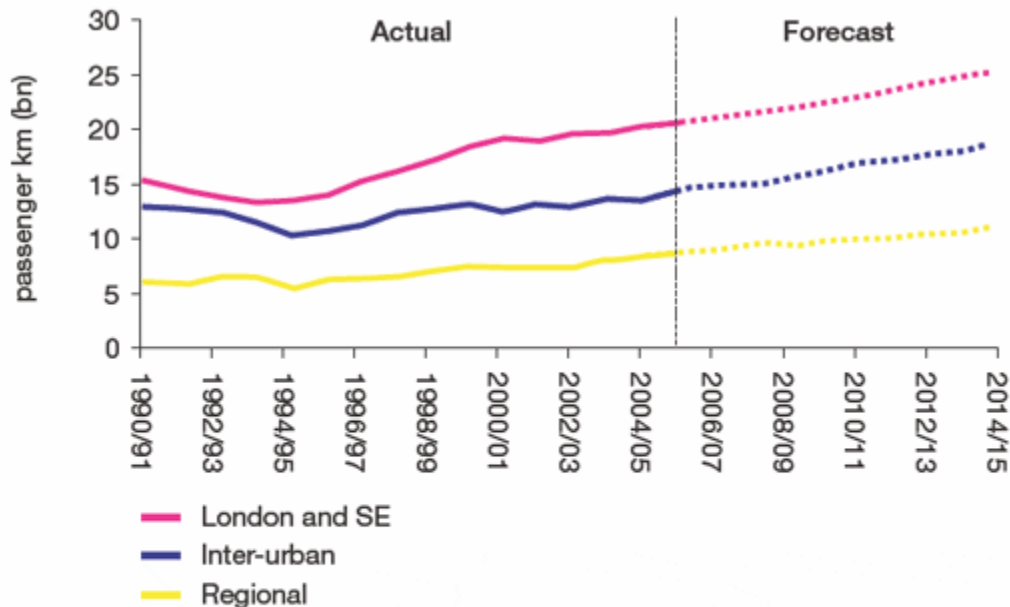
Rail commuters are sensitive about the railways' apparent inability to cope with current demand (crowding) and perceptions of personal security. Many people feel constrained to travelling in peak periods with limited scope for changing their travel times to less crowded conditions. The most frequently mentioned reason people do not use trains for short distance journeys, or only do so infrequently, is the perceived convenience of travelling by car, i.e. the ease or speed of journey. Cost is mentioned less.

However, other studies find different results on both speed and cost. Many business and leisure passengers express the view that they do not always mind somewhat longer journeys, as these give a welcome chance to either work or relax. And the most commonly mentioned improvement that would encourage non/infrequent users to use the train more was a reduction in fares (33% mentioned this in relation to short distance rail journeys and 54% in relation to long distance journeys).

Context

After a prolonged decline for most of the 20th century, rail use stabilised in the 1990s and has shown strong growth in the last decade, and this is expected to continue²⁰ - see Figure 5.1.

Figure 5.1. National rail passenger km actual and forecast (1990/91-2014/15)



Note: NMF = Network Modelling Framework; The NMF calibrates well for all services running over a particular route. However, when NMF results are disaggregated by TOC, the NMF is known to underestimate the loadings of fast non-stop services and overestimate the loading of some stopping services. All these values should therefore be treated as indicative. The baseline timetable that these forecasts are built from include current franchise commitments but do not include any HLOS commitments. Details of a range of demand forecasts collated in the development of this strategy are contained in the Summary of Key Research and Analysis published electronically alongside this White Paper.
Source: NMF v1.3 Rail Passenger Kilometres forecast (DS00201); National Rail Trends Yearbook (DS00013)

Source: Copied from Figure 5.1 in the White Paper 'Delivering a Sustainable Railway', DfT, July 2007

Rail use averages over 500 miles per year per person, with a significantly greater average journey distance than for any other surface mode (32 miles compared with an overall average of 7 miles)²¹. It has a substantial market dominance for commuting journeys to central London, and a substantial though smaller share for some other cities. There has been widespread discussion of the contrast between this strong growth, and a high profile coverage of problems of quality of service and some major incidents.

Views on rail travel

Focus group research for the DfT on attitudes to transport issues in England [042, 2003, Qualitative] found that reactions to rail highlight variability in experience across the country. Words used to describe an ideal railway were: clean, comfortable, informed, on time, reliable, spacious, modern, cheap, punctual, fast, integrated, more staff. On the whole inter-city/long distance train journeys were viewed very positively as generally enjoyable experiences. "For most people fear of train crashes has become more of a

²⁰ White Paper 'Delivering a Sustainable Railway', DfT, July 2007

²¹ National Travel Survey 2006

concern in recent years" [042, 2003, Qualitative] (more specific detail is not offered). People were surprised to learn that rail is one of the safest modes of transport. There was little idea or concern about how railways impact on the environment. Respondents acknowledged themselves that their perceptions of rail are highly influenced by the media (yet many people still point to their own experience as an important source of opinion formation). Respondents want a longer-term approach to transport planning from the Government.

More recent focus group research for Passenger Focus [049, 2007, Qualitative] considered priorities for rail improvement. Rail is considered to be performing 'fairly well' when compared against other modes. It is suggested that key areas of prioritisation identified by passengers relate to inability to cope with current demand (crowding) and perceptions of personal security. It appears passengers generally feel inflexible as rail commuters in terms of travel departure times to avoid congestion. Respondents made a number of observations reflecting upon their rail experiences outside the UK. Many suggested improvements are considered to be 'nice to have' rather than essential in determining continuance of patronage (according to the report). Frequent users express a strong desire for availability of smart cards and e-tickets. The report notes (though not in its headline findings) that "many business and leisure passengers alike express the view that they do not always mind slightly longer journeys, as it represents a welcome chance to either work or relax'. In turn participants considered investment may be better directed at improving the existing network rather than investing in new infrastructure. Seemingly contrary to the focus group research above it is reported that safety was not a top of mind issue for participants in spite of a recent 'major rail incident" [049, 2007, Qualitative].

Again noting DfT's focus group research above and the lack of concern about how railways impact on the environment, an examination was undertaken for Passenger Focus of passenger opinion and views on the role of the environment in rail travel [048, 2007, Qualitative]. It was found that the issue of how green modes of public transport are is not seen as an issue for the passenger but for the train operating companies, other transport operating companies and the Government. Whilst the concept of greener railway travel is welcomed, it is not seen as a priority area by passengers, particularly amongst commuters who have a range of other issues of more pressing concern, for example cheaper fares and overcrowding.

In the DfT 2006 Omnibus Survey [020, 2006, Quantitative] the most frequently mentioned reason people do not use trains for short distance journeys or only do so infrequently is the perceived convenience of travelling by car (ease or speed of journey). The most commonly mentioned improvement that would encourage non/infrequent users to use the train more was a reduction in fares (33% mentioned this in relation to short distance rail journeys and 54% in relation to long distance journeys).

Satisfaction with rail travel

Combining station and train facilities, nationally, 81% of passengers are satisfied with rail service provision. Table 5.1 provides details of the most and least satisfactory service features, based on a scale of very good/good/neither good nor poor/fairly poor/very poor/don't know. Long distance passengers have higher levels of satisfaction than other rail users. The results at face value suggest that the indicator of overall satisfaction is unaffected by much lower satisfaction expressed for specific features, which is odd. There may have been a methodological problem in ensuring that respondents understood the same thing by 'satisfaction' as the researchers intended, and the results should be treated with some caution. Figure 5.2 shows the trends in rail passenger satisfaction over time. There is a clear upward trend with overall satisfaction nationally up from 75% in 2003. The largest increase has been in London and the South East where satisfaction with the overall

journey rose from 70% to 80%. Unlike satisfaction, views on value for money fluctuate from year to year - regional and long distance journeys are seen to offer higher value for money with value for money in London and the South East seen as much lower.

Table 5.1. Satisfaction (% of respondents) with station and train facilities - three most and least satisfactory aspects

	National	London and SE	Regional	Long distance
Overall satisfaction (station and train facilities combined)	81	80	83	84
<i>Station facilities</i>				
How request to station staff was handled	82	82	83	83
Provision of information about train times/platforms	77	77	77	84
Connections with other forms of public transport ¹	72	74	74	76
The availability of staff	57	56	60	64
The facilities and services	51	50	48	64
Facilities for car parking	46	44	50	52
<i>Train facilities</i>				
The length of time the journey was scheduled to take (speed) ²	83	82	87	85
Punctuality/reliability (i.e. the train arriving/departing on time)	79	78	81	82
The ease of being able to get on/off	77	76	81	82
The value for money for the price of your ticket	45	41	60	56
The availability of staff ³	38	30	56	65
The toilet facilities	37	34	39	53
¹ for regional and long distance, ticket buying facilities score higher than connections with other train services				
² upkeep, repair and cleanliness of the trains are also very important for long distance rail users				
³ space for luggage is less satisfactory for regional and long distance rail passengers at 55% and 52% respectively				

Source: reproduced from [046, 2007, Quantitative; Table 2.2]

The National Passengers Survey (NPS) [046, 2002-2007, Quantitative] and the DfT 2006 Omnibus Survey [020, 2006, Quantitative] are not directly comparable, but many of the service ratings are similar. They differ, in particular, in terms of views on personal safety – something not shown in Table 5.1. In the Omnibus survey about a third of short distance rail users rated safety at stations (32%) and on board trains (35%) as poor. In the NPS, levels of concern for *specific* journeys are much lower with only 8% and 15% considering personal safety at stations and on board trains respectively to be poor. This disparity in results may reflect a distinction between relatively high levels of ‘generalised concern’ about safety at stations/on trains, but low levels of direct experience of such problems on the journeys people make.

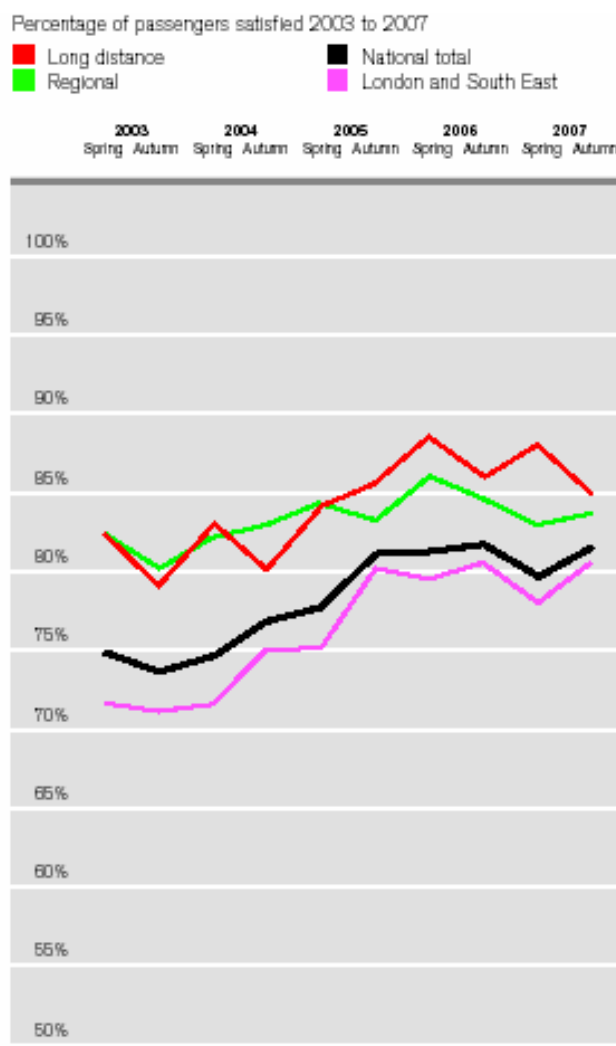
Passenger Focus has examined overcrowding from a passenger perspective [052, 2006, Quantitative] – it is one of the satisfaction criteria in the NPS – ‘*sufficient space for all passengers to sit/stand*’ (not shown in Table 5.1). Results from the Spring 2006 survey show that, nationally, 62% rated the space to sit/stand as satisfactory or good, 15% as neither/nor and 24% as dissatisfied or poor (the Autumn 2007 figures are 63%, 16% and 21% respectively). Satisfaction on this matter of overcrowding has increased from just over 55% in Spring 2003. Perhaps not surprisingly, commuters in London and the South East express the lowest levels of satisfaction. In the NPS passengers are asked to rank the relative importance of improving a range of on train and station service attributes (see Table 5.2). The results show sufficient room to sit/stand as sixth most important (out of a total of 30). For London and South East passengers, however, it is fourth most important. In addition, Passenger Focus research on the Cross Country franchise [052, 2006, Qualitative] shows that passengers ranked ‘*getting a seat*’ as the second most important aspect of their journey, beaten only by ‘*arriving on time at your destination*’. For leisure passengers only, getting a seat is ranked as the highest priority. Table 5.2 shows that across journeys punctuality/reliability and value for money are passengers’ highest priorities for improvement. Priorities below these then vary according to journey type.

Table 5.2. Rail passenger priorities for improvement – May 2005

	ALL	Long distance	Regional	London and South East	Commuters	Business	Leisure
Punctuality/reliability (i.e. the train arriving/departing on time)	1	1	1	1	1	1	1
The value for money for the price of your ticket	2	2	2	2	2	2	2
The frequency of the trains on that route	3	3	3	3	3	3	6
Provision of information about train times / platforms	4	4	4	5	4	5	4
Connections with other forms of public transport	5	6	5	8	7	4	3
Sufficient room for all the passengers to sit/stand	6	5	9	4	6	6	10
The availability of staff at the station	7	9	6	11	9	10	5
Ticket buying facilities	8	14	8	6	5	9	8
Upkeep and repair of the train	9	7	11	9	12	8	12
The upkeep/repair of the station building/platforms	10	15	7	14	10	15	7

Source: reproduced from [052, 2006, Quantitative – Table 4]

Figure 5.2. Trend in rail passenger satisfaction with overall journey 2003-2007



Source: Copied from [046, 2007, Quantitative; Chart 4.1a]

Disability

Within an evidence base review on mobility for DfT [014, 2000-2005, Review] it was found that rail is seen as the most problematic mode of travel (followed by bus) for disabled people (with reference to the DPTAC 2002 survey [231, 2002, Mixed]). Disincentives to travel (on public transport modes) arise in part from experience of negative staff attitudes, lack of time and patience and lack of disability awareness.

In a Disability Rights Commission review of literature on disability and transport [101, 2003, Review] DPTAC research had found that train travel was seen as the worst mode in terms of making travel arrangements, information during the journey and availability of wheelchair spaces and priority seating for disabled people. Only 20% of disabled people (44% amongst rail users) were satisfied with local trains and 13% (38% of amongst rail users) were satisfied with long-distance and intercity rail services. 16% of disabled people thought that the considerations made for disabled people in the design of trains was good, and 29% thought that it was poor. In terms of station design, 18% rated this as good, and 29% as poor.

It should be noted that this survey preceded the Disability Discrimination Act 2005 that placed a requirement upon train and bus operators and authorities to make reasonable provision for disabled access, and to make bus and rail stations accessible for people with disabilities. Attitudes may therefore have substantially changed since this survey was undertaken. Indeed, the 2008 edition of Confederation of Passenger Transport report "On the Move" [110, 2008, review] states, "Accessibility of buses continues to improve, with 58 per cent of the county's fleet now running low-floor access vehicles."

6 Public Attitudes to Air Travel

Key findings

Qualitative research finds that travelling by plane was something that participants took for granted and were willing to endure even if afraid of flying. Overseas holidays and international business practices are widely seen as a way of life. On the other hand, 70% of adults believe that air travel harms the environment, and this number has been increasing. 74% of people agree that the current level of air travel has a serious effect on climate change.

This seems to provide a tension in the structure of attitudes to air travel with a wide range of different answers to surveys, especially on the question of whether unrestricted air travel should be provided for, with figures varying enormously from 80% yes to 80% no in different studies.

Some of the variation is due to differences among respondents - frequent fliers are more positive about flying than non-fliers, for example, which is not surprising. However, the largest influence seems to be the way in which questions are framed: questions mentioning freedom and the right to fly receive more positive answers, while questions mentioning environmental damage get more negative answers. The difference is so large that it is difficult to make simple generalisations about 'the public view', which should be avoided.

The recent advent of cheap flights had made overseas travel more affordable and participants were reluctant to give up the opportunities it offered. Nevertheless, there was some willingness to travel by train instead where practical, provided fares come down.

The main reasons given for choosing which airline to fly with are headed by cost for leisure passengers, and convenience factors (location of airport, availability of flight, time of flight) for business passengers. Among the reasons given for choosing to fly rather than use another mode of transport for non-business trips, three factors stand out overwhelmingly: speed, price and convenience.

Reasons given for not flying at all are lack of time, cost again, or health. Environmental considerations were only mentioned by 3%, though a larger minority of people (17%) agreed that they felt guilty about taking short haul flights themselves.

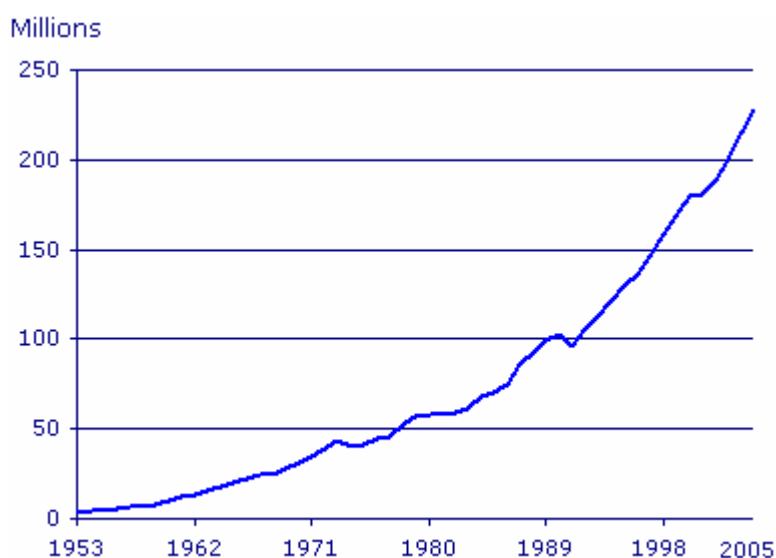
Context

Air travel has been growing very strongly in recent decades, and especially since about 2002, notably in two markets namely international business travel, and overseas holidays especially accelerated by cheap flight availability.

From 1954 to 2005 the number of terminal passengers at UK airports rose from 4m to 228m - see Figure 6.1. Considering UK residents travelling abroad (including by ferry and rail - much smaller proportions), there were some 45m trips a year for holidays, 12m for visiting friends and relatives, and 9 million for business purposes²².

Almost nine in ten air passengers at UK airports in 2005 were travelling internationally. Generally speaking there are significantly greater numbers of UK passengers travelling abroad, than foreign passengers arriving: attitudinal information in this report only refers to the former. There is a strong tendency for the amount of flying to be related to income, with a significant proportion of the population not flying at all. This is discussed further in chapter 11.

Figure 6.1. Passengers through UK airport terminals, DfT statistics



Source: DfT, December 2006: www.statistics.gov.uk/cci/nugget.asp?id=1104

Air travel choices

The main literature covered on air travel concerns the contested policy opinions judged by environmental and economic considerations - these are (further) addressed later in Chapter 8. Apart from these, some more conventional research on consumer attitudes and preferences, and studies of sustainable leisure and tourism can be noted.

In the CfIT attitudes to aviation and climate change national survey [003b, 2006, Mixed] it was found that the most important factor in the choice of airline at the moment is cost related (62% of leisure flyers cite this as the main factor). Convenience factors (location of

²² Travel Trends 2006 Data and Analysis from the International Passenger Survey, <http://www.statistics.gov.uk/STATBASE/Product.asp?vlnk=1391>

airport, availability of flight, time of flight) are the next most important factors, the latter factors being more important for business flyers. No-one spontaneously noted that their choice of airline was linked to the airline's environmental policy. However, while overt environmental concerns are similarly low amongst those who chose not to fly for at least one of their trips (3%), 67% of those considering alternative modes to flying say they are concerned about the environmental impact of air travel (compared to an average of 50% for the overall population). In addition to not wishing to fly, lifestyle factors such as lack of time, money or health are the main reasons listed by those not flying for not doing so, with environmental concerns only being cited by around 3%.

The DfT Citizens' Panel [225, 2008, Qualitative] found that on the question of ensuring that business travellers and holidaymakers can travel from airports and ports to overseas destinations, key themes mentioned by panellists included: faster movement through airports; improved public transport links; ensuring transit is safe; and (considered important but mentioned less often) improved road access.

Table 6.1. 'Thinking of the flight(s) you took within the UK, why did you decide to fly rather than use another form of transport?' - base: all respondents who took a flight within the UK in 2006 (for leisure, holidays or visiting friends or family)

	All	Sex		Age				
		Male	Female	16-29	30-40	41-50	51-64	64+
	%	%	%	%	%	%	%	%
Quicker	58	55	60	73	58	63	48	38
Cheaper	28	31	24	35	30	30	22	22
Easiest/most convenient	27	31	23	30	28	27	17	41
Like flying	5	5	5	12	-	-	8	3
No alternative	7	7	8	3	6	10	9	5
Alternatives are poor services/unreliable	4	4	4	6	3	7	2	-
No specific reason - didn't consider alternatives	4	3	5	5	4	-	6	5
Flight was part of a package	1	1	1	-	-	-	3	-
Too far/distance	1	1	1	-	1	2	-	3
Don't know	*	-	1	-	-	-	2	-
Other Answers	7	9	4	3	7	7	11	5
Base:	299	166	133	66	71	60	64	37

*Less than 0.5%; - not applicable

Source: [004, 2007, Quantitative; reproduced from Table 101]

In terms, specifically, of domestic aviation Table 6.1, drawn from Defra research findings [004, 2007, Quantitative], indicates reasons why people decided to fly rather than use

another form of transport - note that this is for non-business trips. Three factors stand out overwhelmingly: speed, price and convenience.

Concern about flying and the environment

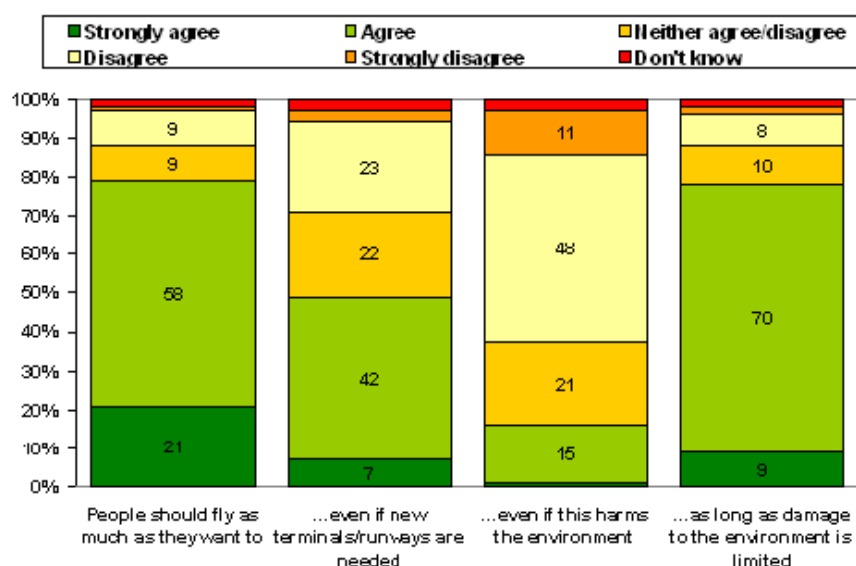
According to Defra research [004, 2007, Quantitative] only a minority (17%) agreed that they felt guilty about taking short haul flights themselves - 55% disagreed with this (after respondents answering 'not applicable' had been removed from the question base), with half of these people disagreeing strongly.

According to results from the ONS Omnibus Survey [019, 2006, Quantitative] 70% of adults believe that air travel harms the environment, and this number is increasing. 74% of people agree that the current level of air travel is having a serious effect on climate change (a jump from 64% to 74% between 2005 and 2006).

Willingness to reduce flights

Defra focus groups investigating public understanding of sustainable leisure and tourism [005b, 2007, Qualitative] found that travelling by plane was something that participants took for granted and were willing to endure even if afraid of flying. The recent advent of cheap flights had made overseas travel more affordable and participants were reluctant to give up the opportunities it offered. Nevertheless, there was some willingness to travel by train instead where practical, provided fares come down. It is striking the degree to which people apparently 'switch off' any environmental concerns when they decide to take a holiday, so that the impact of taking a flight across the world can have much less impact on perceptions than everyday activities close to home.

Figure 6.2. Opinions on freedom to fly [019, 2006, Quantitative - copy of Figure 7]



Source: May 2006 ONS Omnibus Survey. Based on all respondents. Base number = 1297.

DfT research considered public experiences of and attitudes towards air travel [019, 2006, Quantitative]. Figure 6.2 is copied from the DfT report and highlights that 79% of people believe they should be able to fly as much as they want to. Responses are markedly different if conditions are added to the statement highlighting environmental concerns.

The figure of 79% reasserts itself when environmental sensitivity is accounted for in the freedom to fly statement. It seems that the majority of the public are prepared to compromise their freedom to fly on environmental grounds. The level of support for such a position may be dependent upon an assumption that this would apply to everyone thus preventing a social dilemma.

Differences in opinion about freedom to fly are present in the results for different socio-demographic groups and by levels of air travel. However, there were found to be relatively few statistically significant differences in response. Those differences that did exist were not large. Women, those in managerial/professional occupations and those in the highest income band (£31,200 or more per annum) were more likely to oppose unrestricted air travel once the potential consequences were considered. The most frequent air travellers were more likely to support unrestricted air travel even once the potential environmental consequences were considered, though the majority still disagreed with the statement *'people should be able to travel by plane as much as they want to, even if this harms the environment'*.

In the CfIT attitudes to aviation and climate change national survey [003b, 2006, Mixed] 30% agreed and 46% disagreed with the statement *"People in the UK should not be expected to reduce their air travel, as we cause less damage than other countries"*. The research notes that "33% of leisure flyers are willing to reduce their own personal use of air travel for environmental reasons, with a similar proportion (38%) saying they would not be willing to do this. The attitudes of business flyers closely mirror those of the leisure flying public in this respect. Those who have flown for leisure or business within the last 12 months are less willing to change their behaviour in this respect (c. 43% disagreeing), with this increasing to 53% amongst those who flown three or more times in this period.

The British Social Attitudes Survey also addresses this matter of willingness to fly, with and without 'conditions' [169, 1992-2006, Quantitative]. Almost 70% of people think that people should be allowed to travel by plane as much as they like (down from almost 80% in 2003). However, this falls to only 20% if the question is framed somewhat differently as *"People should be allowed to travel by plane as much as they like, even if this harms the environment."* This figure of 20% has been fairly stable since 2003. Another framing of the question yields an answer between the two: 44% of people think that *"People should be able to travel by plane as much as they like, even if new terminals or runways are needed to meet the demand"* (down from 52% in 2003 but stable since 2004) with 24% in disagreement.

Thus there is a complex view about whether unrestricted air travel should be provided for, with figures varying enormously from 80% yes to 80% no depending on how the question is framed. There is a bigger mood in favour of paying extra to reflect the environmental costs, rather than charging extra to reduce demand. According to the CfIT attitudes to aviation and climate change national survey [003b, 2006, Mixed] nearly half of both leisure and business travellers would be prepared to do this.

There are, understandably, difference in attitudes between those who fly and those who do not, It should be noted that only 50% of the population currently fly, with about 20% having taken a long haul flight in 2006, the calendar year before the survey [004, 2007, Quantitative]. The CfIT research [003b, 2006, Mixed] found that just under half of respondents had flown for leisure in the past 12 months - consistent with national statistics. Half of those who had not flown, expect to in the future. A smaller proportion of those who had flown (11%) expected to fly less frequently.

PART THREE -

ATTITUDES IN RELATION TO POLICY GOALS

7 Maximising the competitiveness and productivity of the UK economy

Key findings

Majorities of over 70% of the public assert the seriousness of congestion for the country, seen as getting worse, and a high priority for action. However, a majority (60%) of the population do not find congestion a serious problem for themselves: a greater proportion consider congestion in towns to be a serious problem for them, and smaller proportions for rural areas and motorways.

The discrepancy seems to be due to people damping down their own irritation about congestion by learning to relax and live with it. They limit its damage to their lives by various coping strategies including changes in the pattern or timing of their travel.

Attitudes to policies aimed at improving road transport may be seen in several broad groups, distinguished by the degree of consensus:

- **Almost unanimous support:** improve public transport (over 95% support).
- **Broad agreement to measures:** reduce speed limits in residential areas, reduce traffic, favour spending on public transport over roads, reward clean cars, priority for buses and walking, charge for road use in proportion to use (55%-80% support).
- **Split down the middle:** strong minorities on both sides, seen as 'controversial': Cordon charge on cars with revenue used to improve public transport; build roads to reduce congestion (around 35:35 with 30% 'abstain').
- **Fairly substantial minorities in support:** mileage charge on cars with revenue used to improve public transport, unrestricted motoring, higher taxes for environmental damage, reduce new road spending. (20%-30% support).
- **Small minorities in support:** support public transport by: increasing petrol cost, reducing road maintenance, increasing VAT (around 10% support).

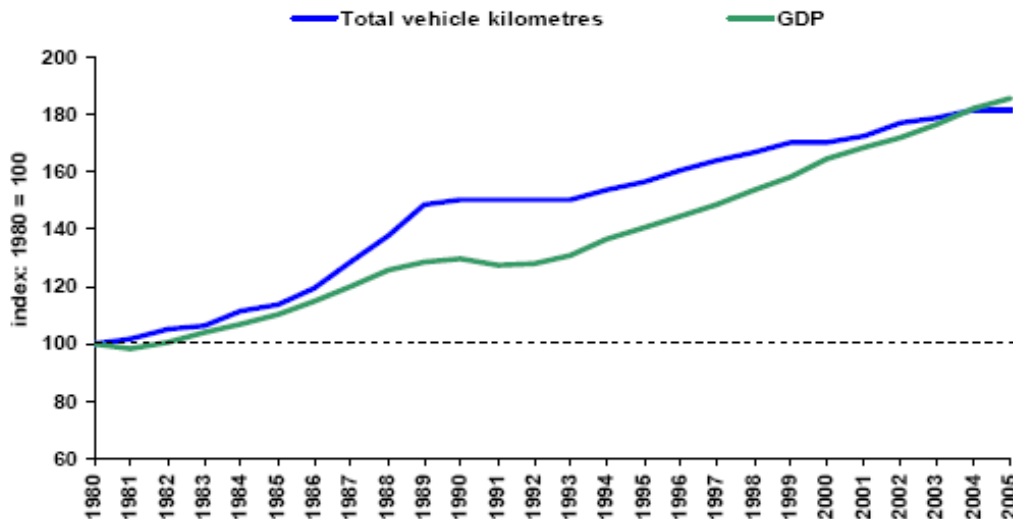
Attitudes to airport expansion are complex. Respondents in professional or managerial occupations are more likely to oppose airport expansion on both economic and environmental grounds than those in routine/manual occupations. Men were more likely than women to support expansion for economic reasons and disagree with limitations for environmental reasons. Respondents whose nearest airport was in the South East were more likely to oppose airport expansion on both economic and environmental grounds.

Some specialised research has investigated people's stated preferences among different attributes of travel. This has been interpreted as showing the money values that people accord to time savings (modified by the possibility of working while travelling), reliability and overcrowding, and therefore their relative importance when considering a measured change in the attribute.

Context

It is well established that economic growth is associated with growth in travel, and figures have been given for the increase in car, rail, and in some locations bus use in previous chapters. The main indicator is often taken as road traffic, and since the 1990s traffic has been growing more slowly than the economy - see Figure 7.1.

Figure 7.1. Growth in traffic and GDP (1980-2005)



Source: Copy of figure from Road Statistics 2006, Transport Statistics Bulletin DfT SB (07) 20

The most notable economic cost usually considered in transport assessment is the cost of congestion. From 1995 to 2003, traffic speeds on motorways and all purpose trunk roads fell by 2.5 mph in the morning peak, 3.2 mph in the evening peak, and 0.2mph during the off-peak period. A sample of routes on the strategic road network showed increases in delay (measured as the difference between free flow speeds and actual speeds) from May 2006 to April 2007. This indicator of congestion increased by between 6.2% and 12.9% for different time periods. In urban areas, considering like-for-like roads, there was virtually no change in peak speed from 2004 to 2006, but a fall from 25.2 mph to 24.1 mph in the off-peak.

Most of the attitudinal evidence we have found on the contribution of transport to economic efficiency is of three types (i) attitudes to congestion, which has been extensively researched; and (ii) responses to questions about specific policies where the potential impact on the economy has been mentioned in the form of questions asked, often by contrasting policies done 'to benefit the economy' or 'to benefit the environment'; and (iii) interpretation of surveys about the monetary value of time and other transport attributes.

Experience of congestion

In recent DfT research into public acceptability of road pricing [242, 2006-2007, Qualitative] two constructs were identified reflecting an understanding of what constitutes congestion: restrictions in movement; and the impact on journey time. Local newspapers and travel reports appear to play only a small role in shaping such perceptions.

Across a series of ONS Omnibus surveys [017, 2005-2007, Quantitative] around 1 in 4 adults say they experienced congestion on their most recent journey all or most of the time (2005 - 25%; 2006/07 - 24%; 2007 - 26%) and similar proportions identified this for their general road journeys. 39% of adults believe, as at 2007, that congestion is worse than 2 years ago (the figure was 43% when asked in 2006/07). Almost the same proportions believed there would be a lot more congestion in two years time.

In DfT research into public attitudes to road pricing [238, 2004, Qualitative] participants identified the outcomes of congestion as being delays, frustration, stress and unpredictable journey times. The same research found that "people with disabilities talked about the discomfort of sitting in traffic jams and there was a general view that both the environment and people's health suffered from vehicle fumes; this view was held by drivers and non-drivers alike".

Perceived causes of congestion

Focus group research for the DfT concerning attitudes to transport in England [042, 2003, Qualitative] found that people see major causes of congestion as: poor public transport, badly managed roadworks, the school run, and the 'sheer volume of traffic'. (It is intriguing that the root cause of 'sheer volume of traffic' was not explored.) Many people plan around 'predictable' congestion. People also admit that they as individuals are contributors to the congestion problem (but they recognise that many people are too selfish to give up their cars).

The DfT research into attitudes to road pricing [238, 2004, Qualitative] further expanded upon the reasons above in finding that UK adults considered congestion was "caused by obstructions on the roads, rush hours with many people trying to get to/from work or making the school run, narrow roads not built for the volume of traffic and people automatically jumping into their cars without thinking about alternative forms of transport". Lack of good alternatives to car use was also pointed to.

Congestion as a problem - for the country

Across a series of ONS Omnibus surveys [017, 2005-2007, Quantitative] respondents were asked whether they believed congestion was a serious problem for the country: 85-87% agreed it was. The proportion of adults believing it is very important for government to tackle road congestion has steadily increased across the surveys: November 2005 - 37%; October/November 2006/ January 2007 - 40%; and October/November 2007 - 42%. When accounting for very important and quite important together the picture is rather consistent at around three quarters of respondents.

The British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative] finds that a majority (over 70%) have agreed with the statement '*The amount of traffic on the roads is one of the most serious problems for Britain*'²³, with only 20%-25% disagreeing with this. In the late 90s the question was asked whether people agreed '*within the next twenty years or so, traffic congestion will be one of the most serious problems for Britain*'²⁴; over 80% did so. This question was not continued, but as part of an ONS Omnibus survey [017, 2005-2007, Quantitative] in 2006/07 respondents were asked whether they felt congestion had increased or decreased during the past two years and whether they felt it would increase or decrease in the following two years. 77% of respondents felt the level of

²³ This question asked between 1997 and 1999.

²⁴ This question asked between 1995 and 1999.

congestion had increased in the last 2 years. The public were even more pessimistic looking to the future with 83% believing congestion would worsen. Drivers were more likely to believe congestion had got worse in the last two years and would worsen in the future than non-drivers.

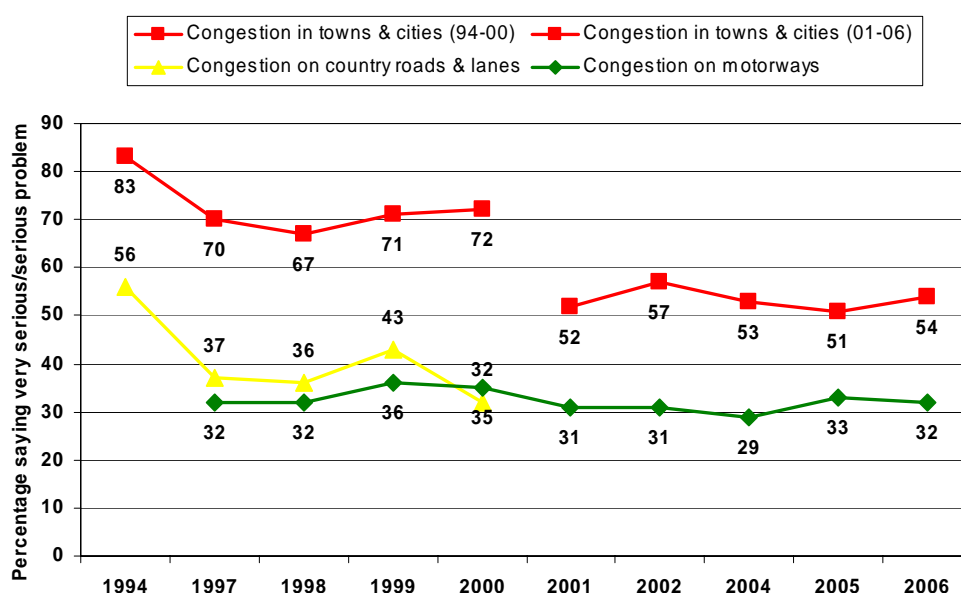
ONS Omnibus survey results [017, 2005-2007, Quantitative] reveal that across all social groups around three-quarters or more said they felt road congestion was a serious problem in the country. Taking each group separately, those particularly likely to consider congestion a problem were those in managerial or professional occupations, or with the highest levels of income (£31,200 or more per year) or living in the least deprived 20% of areas or living in the South East. Certain groups were significantly less likely to consider congestion to be a serious problem: young people aged 16 to 24, those living in the most deprived areas or living in the North East.

Thus, a large majority of the public report that they think congestion is important for the country, and is getting worse, and three quarters of people consider it important for government to tackle this.

Congestion as a problem - for individuals

According to recent ONS Omnibus survey results [022, 2005, Quantitative] a majority (60%) think congestion is not a serious problem for them personally, mainly being annoyed at the resulting unpredictability of journey time.

Figure 7.2. Trends in personal experience of traffic-related problems (1994-2006) [169, 1992-2006, Quantitative]



Source: 1997 to 2006 British Social Attitudes Survey - face to face interview. Note due to the removal of two questions from 2001 the data between 1997 and 2000 on congestion in towns/cities is not directly comparable to that from earlier surveys. Base numbers for each year (94-06): 1143; 1355; 1075; 1031; 1133; 1099; 1148; 1053; 1101; 3220.

Chart constructed using data supplied by DfT and from www.britsocat.com

The British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative] has asked questions over a number of years concerning how serious a problem congestion is on motorways and in urban areas for the respondent, and for 1994 to 2000 a similar (but not

identically worded) question about how serious a problem traffic on rural roads was for the respondent. Figure 7.2 shows the results.

Taking the latest figures available, the key finding is that traffic congestion in urban areas is felt to be a more serious problem for people personally than traffic in rural areas or congestion on motorways. Even so, nearly half the population do not find it serious in towns, and around 70% not a serious problem on motorways or in rural areas. This is consistent with the 60% who say congestion is not a serious problem for them overall, mentioned above.

The findings on trends are complex. For motorways the results seem to have been broadly stable for the entire period of the surveys, with two thirds of the population finding it not serious. At face value there was a fall in the perceived seriousness of congestion in rural areas (from 56% in 1994 to 32% by 2000) and in urban areas (from 83% in 1994 to 54% in 2006). The fall in urban areas is not very certain because a large part of the fall in urban areas took place in a sudden drop from 2000 to 2001 – the same year that the rural question was removed from the survey. It is possible that the earlier figures for urban areas were exaggerated by contrast with the lower traffic levels in rural areas, and when these were not mentioned this effect disappeared. The rural question was asked just before the urban question. Therefore we conclude that at least part of this effect is probably due to a sensitivity to survey design.

However, similar results were recorded in July 2001 by the Office for National Statistics Omnibus survey, and it is therefore conceivable that a real shift in perception of urban congestion occurred in the early 2000s.

The robust finding is that while a very large majority of the public asserts the seriousness of congestion for the country, a large proportion of the population do not find congestion a serious problem for themselves.

Coping with congestion

Explaining this difference is of great interest. One tentative suggestion is that the response to questions about importance to the country reflects a view about the economic costs of congestion which people may have seen discussed in the media, while responses about importance to themselves are based on their experience of congestion and how much it impacts on their lives, not necessarily for economic reasons, and how well they are coping with it. This would explain why perception of importance to the country could be higher than to the individual. It may also be the case that people are conscious of or assume that congestion is a regular occurrence across many urban areas and on other parts of the network, irrespective of whether they are a part of it. They can relate to their own experiences of congestion, even if they largely avoid it, and assume such experiences are occurring on a bigger scale for the country as a whole.

Further insight on this arose during the course of recent deliberative research for the DfT on public acceptability of road pricing [242, 2006-2007, qualitative] when in a series of discussions participants came over time to the view that they were part of the congestion problem personally. Nevertheless, initially and to some extent enduringly, people in this study also considered congestion a problem for society in general, more so than a problem for themselves personally, as found in the BSAS results above. Thus their agreement that it was a problem that needed to be tackled was seen more as a problem for others than themselves.

One of the key reasons why it was seen as less of a problem for themselves (which had been noted in other earlier research in the UK and elsewhere) is that congestion is seen as

a fact of life - younger people highlight that they have never known any different while older people are resigned to accommodating congestion in their lives. Many people do not report that their choices (especially mode choice) are influenced by congestion - rather they see that choices especially of routes and times of travel are 'tactics' they can employ to deal with the situation.

In this use of coping strategies, some people have less tolerance of congestion than others [242, 2006-2007, qualitative]. In spite of congestion not being seen predominantly as a problem at the level of the individual, many individuals are nevertheless conscious of congestion affecting them. At a practical level, participants stated how congestion impacted upon their time. The unpredictability of congestion had caused individuals to be late for appointments. Of particular concern was being late for work and where an individual's time was closely related to their work which could result in lost business. Ordinarily, participants set off on their journeys earlier than normal if they knew congestion would be faced, in order to take into account the longer journey time expected. It was not unusual though for participants to deliberately travel at times when congestion was not expected if appointments or work start and finish times allowed it.

Participants [242, 2006-2007, qualitative] stated they felt congestion was very stressful and caused them great frustration which could on occasion lead to anger and road rage. This stress, frustration and anger was felt to be made worse by extra external pressures such as having children in the car, being short of time or knowing that a busy day ahead at work was looming. The impacts of such stress on health were also noted, particularly amongst older participants, who mentioned how it could make them feel quite unwell with headaches and fatigue. Additionally, negative effects on blood pressure were noted. Not everyone feels affected by congestion. Exceptions were found amongst those living in rural areas who mentioned that congestion, for them, was a rare encounter. Retired individuals also mentioned that congestion did not affect them directly.

An important distinction emerges between 'usual' and unanticipated congestion with the latter causing greater frustration and with a feeling that traffic was becoming more unpredictable. In society in general unexpected congestion is now seen as a reasonable excuse for being late.

In other qualitative research commissioned by the DfT to examine perceptions of congestion on motorways [256, 2005, Qualitative] it was found that "[i]n general, some older car drivers who made long, frequent and time critical business trips on motorways said they found it difficult not to get frustrated in congested traffic. They said they would be frustrated about the business implications associated with being late for appointments, and they were more likely than others to admit to responding to this frustration by driving aggressively (e.g. tailgating) and/or directing their anger at other drivers. In comparison, other drivers (and in particular younger drivers and HGV drivers) said they actively tried not to get frustrated by congestion, and this was because they recognised that there was little or nothing they could do if stuck in traffic. Most felt that getting too angry and frustrated was a health risk, in that it could lead to heart attacks. Generally these respondents had better coping strategies in congested traffic than those who admitted they found it difficult not to get frustrated by motorway congestion". A large proportion of people have 'learned to live' with congestion and have decided to accept rather than get frustrated by it. People are coping with congestion by listening to the radio/CD player and generally trying to relax. "Most young respondents (aged under 25) were in this category, and they often had additional coping strategies which included sending texts and making phone calls. It is important to note that this ability to 'relax' in congested traffic contributed to reasons given by this group for never or rarely diverting on motorway journeys".

According to this qualitative research, the main issue raised in terms of leisure trips was that as a consequence of motorway traffic many respondents had suppressed leisure journeys. (A distinction was not made between 'suppressed' and 'rescheduled' in this context.) They said that where possible they avoided travelling on the motorways on bank holidays when they knew there would be serious congestion.

In the same research [256, 2005, Qualitative] it was found that "respondents who enjoyed driving on motorways were also those most likely to say that they enjoyed the feeling of being in control when driving. They generally felt that even in busy motorway traffic they were more in control, and this was partly because they could set off and depart when they wanted to without the time constraints often associated with using public transport. They also felt that if public transport was delayed then any chance of making up lost time on a journey would be dependent on the transport operator, whereas if delayed in congested traffic lost time could sometimes be made up when hitting open stretches on the motorway".

Thus in summary, we conclude that many people have damped down their own irritation about congestion by learning to relax and live with it, and they have limited its damage to their lives by various coping strategies including changes in the pattern or timing of their travel. At the same time, they do not see the country as a whole as able to make corresponding responses, and therefore presume that it is, as they are informed, a serious and growing problem.

Reactions to surface transport policies

Following on from consideration of public attitudes towards congestion, attention is now given to public views concerning (prospective) policies and measures to tackle the problem. Recent evidence suggests a proposition: the public are sceptical about whether congestion can be solved and as a result appear more comfortable deciding for themselves how to cope with it than having further interventions by authorities responsible for the transport system.

According to deliberative research into public acceptability of road pricing for the DfT published in May 2008 [242, 2006-2007, qualitative] "[t]he public (or parts of it) appeared resigned to the fact that whilst congestion was a problem it was not a problem that could be solved. Such an impression originates from past experience which shows a problem which is if anything getting worse rather than better [yet] in the face of government (national and local) attempts to solve the problem". (It appears that many people's experience with or views concerning measures to tackle congestion relate to traffic management rather than demand management.) In light of a belief that congestion may well be an insoluble problem at the level of society, people were inclined to favour their own approaches to the problem - i.e. they would prefer to take their own steps to cope with or avoid congestion rather than have a demand management approach imposed on them which they would consider to restrict rather than support their travel opportunities. "People continue to hold precious their 'freedom to drive'. There is in turn a tendency for a view to be taken that demand management 'sticks' impose or would impose a greater restriction on their freedom to drive than congestion would by itself."

There was also a view that people's own coping mechanisms would remove the need for intervention to solve it - it will solve itself. It was felt that people have a tolerance threshold that they would not go beyond with regards to congestion. When the threshold is met people will change time, roads or mode of travel (though changing mode is less likely). When participants in the deliberative research into public acceptability of road pricing [242, 2006-2007, qualitative] were confronted with statistics on how the number of licensed cars had increased in the UK people considered this 'about right' but this did not

stop people being affected by the statistics and expressing amazement at the extent to which traffic conditions have got worse. When presented with a figure on forecast traffic growth this also generated an emotive response, despite most participants believing it to be true. Younger people saw the increase as bigger than expected while older people and some from urban areas saw it as smaller. It can be suggested that because people generally adapt their behaviour over time just as traffic conditions change or deteriorate over time, they do not have an appreciation of the growing extent of the problem - informing people can confront this issue which may be the first step to opening their minds to the need to consider (new) solutions. (On the other hand, of course, it may be that their 'adaptive' view of responses to congestion has some aspects of a deeper reality than is expressed in formal forecasts of an increasing problem.)

An example of this informational approach is the systems that have been developed to supporting drivers in the opportunity to change the routes for their journeys by car in response to (predicted) congestion of heavy traffic. However, in qualitative research commissioned by the DfT to examine perceptions of congestion on motorways [256, 2005, Qualitative] it was found that "[t]he majority of respondents said they were unwilling to divert when encountering congested traffic on motorways during a commuter or business journey, and these were nearly all those respondents who said they were accepting about congestion and had developed ways to cope with it". They would never or rarely divert when they felt that:

- heavy traffic was still moving (however slowly);
- there might be an increased risk of getting lost - unfamiliar with alternative routes;
- urban A roads on alternative routes might be more congested than motorways; and
- A roads would be more difficult to drive on with features necessitating stop/start driving.

Improving public transport - An interpretation which has been drawn from some qualitative research in this review has rather suggested a coolness to policy initiatives of any sort. However, this is not borne out by some other qualitative studies, and a substantial body of evidence from quantitative surveys, which indicate that some policies have very strong and abiding support, and others are the subject of quite strong divisions of views among the population.

Thus focus group research for the DfT concerning attitudes to transport in England [042, 2003, Qualitative] found that top priorities to reduce congestion are: improve public transport, better junction layouts and traffic signals, and more school buses / reduce the effects of the school run.

Across the evidence base there is strong support for improving public transport with a belief that it would reduce congestion. The British Social Attitudes Survey (BSAS) has found very much larger majorities in favour of improving public transport than building roads, both in towns and in the country. A substantial majority also indicate support for giving pedestrians priority over traffic in residential areas.

In the DfT Citizens' Panel [225, 2008, Qualitative] it was found that across the five policy goals, the importance of improving public transport was frequently and consistently mentioned in terms of the need to provide a real alternative to the private car. However, expectations upon public transport improvements are extremely high with requirements for it to be more reliable/regular/timely, convenient/easily accessible, affordable/cheaper, safer, faster, and more comfortable/cleaner. Panel members also

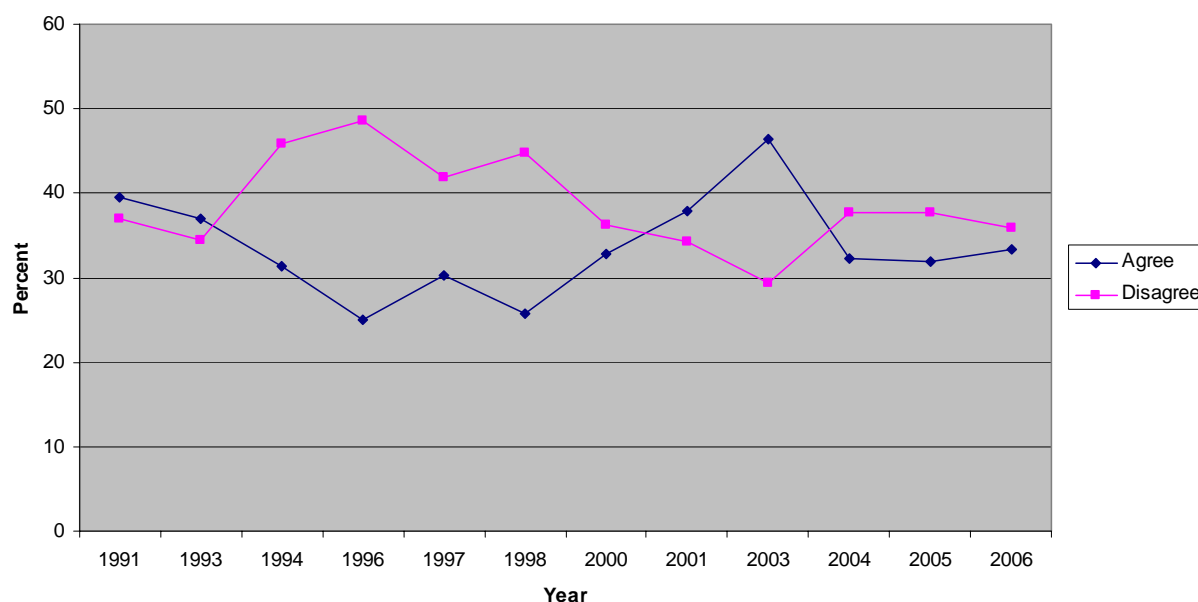
felt it is important that transport is fully integrated across modes, with better coverage of the UK (both rural and urban areas) and with less impact on the environment. Generally public transport is currently felt to be too expensive.

Interviews conducted by Socialdata as part of the Sustainable Travel Demonstration Towns initiative in Darlington [240b, 2004, Mixed] found that the following proportions of people considered different approaches to tackling congestion would be effective: putting tighter restrictions on where you park - 32%; limiting car traffic - 48%; creating more pedestrian areas - 64%; further developing bicycle routes and facilities - 73%; and further developing public transport - 76%.

Weaknesses in the evidence relates to a rather poor level of probing of the effect on public attitudes of information about the feasibility of these solutions. Thus there has been little systematic attempt to investigate the effects on people's policy preferences of information about (say) the extent of induced traffic, the capacity constraints on how many car users could be carried by existing public transport services, or whether the impacts implied in 'for the sake of the economy' or 'for the sake of the environment' would actually apply.

Road building - Attention now turns to public views on the role of road building in addressing the transport challenges faced. The British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative] explicitly posed the proposition '*[t]he government should build more motorways to reduce traffic congestion*'. In 2006, 33% were in favour of this and 36% opposed. Responses to this proposition over time from 1991 to 2006 are shown in Figure 7.3 below.

Figure 7.3. Time series data on public response to the statement "the government should build more motorways to reduce traffic congestion"



Source: chart constructed using DfT-supplied data file Table A.4 [169, 1992-2006, Quantitative]

A similar question was asked in an extensive survey of public attitudes and behaviour towards the environment in a Defra study [004, 2007, Mixed] for roads in general, not just motorways. The statement '*It is important to build more roads to reduce congestion*' split the respondents approximately down the middle, with 39% agreeing and 37% disagreeing - not greatly different for car ownership and not varying much as between cities, smaller

towns and rural areas [004, 2007, Mixed; Table B14F]. There is no sign of a developing consensus on the matter of roadbuilding as a solution, in either direction. The reasons for this were not explored, but it is salient that one possible reason was offered in the form of the proposition '*building more roads just encourages more traffic*', which about 44% agree with and 27% disagree.

Road pricing - More recently, attention has been focused within attitudes studies on the proposition of road pricing as a measure to tackle congestion.

Recent DfT research into public acceptability of road pricing [242, 2006-07, Qualitative] found that initial reactions to demand management were that it would restrict rather than create choice. Though greater support emerged during the research it was oriented towards carrots rather than sticks. "Participants could not envisage a situation where they would not want to be in control of their own travel behaviour, regardless of how bad traffic congestion was perceived as becoming". Negative press about past apparent demand management failures fuelled a feeling that people would rather face congestion which was seen as more 'natural' than be controlled by the perceived artificial hand of demand management. Road pricing was viewed primarily as an extra personal expense without clear benefits - road pricing would only be acceptable if it really did reduce congestion. There was scepticism over the measure's ability to reduce congestion because "people drive as they have to and do not have a choice; it doesn't solve the problem it just moves the problem; and congestion has become too much of a problem to solve".

DfT research as part of the National Road Pricing Feasibility Study [238, 2004, Qualitative] found that "respondents did feel there was a need to tackle congestion, but only where the roads were particularly busy, or at peak times like the rush hours". Respondents were comfortable with the present system of charging for road use though fuel tax was thought much too high. They recognised that a road pricing system involving paying at the point of use would "create a connection in motorists' minds between the paying for roads and using their car". There was concern about pricing being imposed where journeys were necessary. Views were more positive concerning pricing where it was thought improvements to travel would be seen and provided a new approach to pricing would not see them paying more overall.

Table 7.1 presents public reaction over a period of three years to the overall proposition of road pricing in principle.

For the latest of the ONS Omnibus surveys[017, 2005-2007, Quantitative], a rather different balance of reaction to that in the Table above is seen when considering more *specific* statements. For the statement '*People who drive on busy roads should pay more to use the roads than people who drive on quiet roads*' 25% agreed and 58% disagreed. For the statement '*People who drive at the busiest time should pay more to use the roads than people who drive at quiet times*' 23% agreed and 60% disagreed. It is not altogether clear why these results somewhat differ but it can be suggested that as the road pricing proposition becomes more specific, agreement with it is weakened.

In terms of fairness and effectiveness of road pricing, the 2007 Omnibus Survey found the following [017, 2005-2007, Quantitative]. 52% of adults in 2007 believed that road pricing would be unfair. Reasons for this were: people won't be able to change travel behaviour (51%); the cost would be too much for people (29%); poor people would be affected worse than rich people (28%); there are no adequate alternatives for people to use instead (25%); and people won't want to change (15%). "In 2007, 30 per cent of adults believed that road pricing would be effective in reducing congestion and 52 per cent thought it would be ineffective. In 2006/07 these percentages were 33 and 49 per cent respectively. Key

reasons given for the perceived ineffectiveness [of road pricing] were the inability and unwillingness of people to change their behaviour”.

Table 7.1. Responses (percentages) to the statement “the current system of paying for road use should be changed so that the amount people pay relates more closely to how often, when and where they use the roads”

	Nov 2005	Oct/Nov 2006 / Jan 2007	Oct/Nov 2007
Strongly agree	17	18	16
Tend to agree	38	37	37
No opinion / don't know	19	16	16
Tend to disagree	15	16	18
Strongly disagree	11	13	13

Source: ONS Omnibus Surveys [017, 2005-2007, Quantitative]

A DfT summary of evidence note [232, 2008, Review] synthesised findings from across a number of studies from which its authors draw the following conclusions. “Research suggests that some people consider that they are already paying enough for their car use. Increases in costs is a concern for certain groups, particularly those on low incomes... The public has a strong attachment to their cars. Any policy intervention that is perceived to interfere with how people use their cars is likely to generate a knee-jerk response, high levels of opposition and, in the case of road pricing, a belief that revenue generation is the overall aim... There does seem to be a consensus that congestion needs to be solved, but the public needs to be convinced that it can be solved.”

Deliberative research for the DfT [242, 2006-2007, Qualitative] has highlighted how public attitudes to road pricing can adapt as they are exposed to more insight and collective consideration of the proposition and to more detail. During the course of this deliberative research arose an alternative notion to acceptability - namely inevitability - a sense that road pricing was set to happen in light of the media coverage of apparent Government exploration of the measure.

The study [242, 2006-2007, Qualitative] went on to report that “[o]n the whole, participants (especially females) felt they had become more open during the research towards the idea of road pricing and were more willing to consider the concept. This said, some participants’ negative attitudes did become more entrenched - those from C2DE socio-economic backgrounds tended to have especially negative attitudes towards accepting road pricing. Factors influencing the acceptability of the principle of road pricing included:

- impact on congestion;
- cost implications for the individual;
- extent to which road pricing is part of an overall traffic plan with alternative modes and routes;

- improvements in public transport;
- equity and fairness;
- evidence of improvements;
- access to (educational) information; and
- trials.

When specific detail concerning possible road pricing schemes and their technologies is introduced to participants, concerns about privacy arise spontaneously whereas this is less the case at the point of only considering road pricing in principle.

TfL monitoring of the impacts of the London Congestion Charge [249, 2002-2003, Quantitative] found that before charging was introduced (survey results for February 2003) 39% of Londoners supported congestion charging and 41% opposed it. Just after congestion charging was introduced survey results in March 2003 found that 57% supported congestion charging and 27% opposed it. By October 2003 survey results showed 48% supported and 28% opposed. Such findings highlight the dynamic nature of attitudes for a given context.

On the question of price as a policy instrument, it should be noted that DfT research into consumer behaviour and pricing structures [237, 2005, Qualitative] found that “except when planning a long and unfamiliar journey, drivers seldom think about, or estimate, the cost of making an individual car journey” “drivers typically consider how much they spend on fuel over a period of time rather than in relation to particular journeys, or types of journey and driving conditions or speeds”. The authors note that “the general lack of concern for car journey costs or distances contrasts with drivers’ awareness of the time taken to complete car journeys”. This will clearly influence responses to proposals to change price structures as a policy instrument.

Summing up attitudes to surface transport policies - Although the different sources show some variation, in general the main sources of quantitative data that have asked questions about attitudes to policies show a broad consistency, which is not at odds with the qualitative research. The British Social Attitudes Surveys [169, 1992-2006, Quantitative] provide a base for summarising these attitudes in several broad groups, distinguished by the degree of consensus. Note that although the policies listed are discussed here in the context of their contribution to economic efficiency, public attitudes will also be informed by considerations of environment, equity and quality of life, so the results carry forward into the following chapters. We identify the following broad groups:

- **Almost unanimous support:** improve public transport (over 95% support) - see Table 7.2.
- **Broad agreement to measures:** reduce speed limits in residential areas, reduce traffic, favour spending on public transport over roads, reward clean cars, priority for buses and pedestrians, charge for road use in proportion to use (55%-80% support) - see Table 7.3.
- **Split down the middle:** contested strong minorities with fairly equal balance of ‘for’ and ‘against’ - cordon charge with revenue used to improve public transport; build roads to reduce congestion (around 35:35 with 30% ‘abstain’) - see Table 7.4.

- **Fairly substantial minorities in support:** mileage charge on cars to improve public transport, unrestricted motoring, higher taxes for environmental damage, reduce new road spending. (20%-30% support) - see Table 7.5.
- **Small minorities in support:** support public transport by: increasing petrol cost, reducing road maintenance, increasing VAT (around 10% support) - see Table 7.6.

Table 7.2. Surface transport policy measure with almost unanimous support

Proposition	Proportion in favour, or saying 'important'	Notes
How important is it to improve public transport in Britain: in 2004		The proportion of people saying 'not important' has varied between 2% and 4%
Very important	77%	
Fairly important	18%	

NB This is supported by many sources - BSAS, focus groups DfT review and external research have all found strongest public support for improving public transport.

Source: [169, 1992-2006, Quantitative] data from unnumbered table in britsocat.com from year 2004

Table 7.3. Surface transport policy measures receiving broad agreement

Proposition	Proportion in favour, or saying 'important'	Notes
Speed limits on residential roads of 20 mph in 2006	76%	Mostly suggested for safety and quality reasons
How important is it to cut down the number of cars on Britain's roads? In 2004	72%	('very' plus 'fairly' important) Reflects focus group view that 'the sheer volume of traffic' is a major cause of congestion, above
If the government had to choose, should it improve roads <i>or</i> public transport (PT)?		(Choice forced in question)
In country areas in 2002	67% PT, 31% roads	
In towns and cities..... in 2002	62% PT, 37% roads	
Pedestrians and cyclists should be given priority in towns and cities, even if this makes things difficult for other road users in 2005 (was 59% in 2004)	60%	
People who drive cars that are better for the environment should pay less to use the roads than people whose cars are more harmful to the environment. In 2006	66%	
Buses should be given more priority in towns and cities even if this makes things more difficult for car drivers in 2005	55%	(20% disagree, others not stated)
The current system of paying for road use should be changed so that the amount people pay relates more closely to how often, when and where they use the roads. In 2006	55%	(29% disagree; 56% of drivers agree)

Sources: [169, 1992-2006, Quantitative; Tables A.15. A.22 through A.24] and www.britsocat.com unnumbered tables

Table 7.4. Surface transport policy measures for which support is 'spilt down the middle'

Proposition	Proportions in favour and against	Notes
Charge motorists £2 to enter city to raise money to improve public transport year 2002	40:40 split	
It is important to build more roads to reduce congestion* in 2006	39% agree 37% disagree	24% no answers (ambiguous, as may be because congestion is thought not important or that more roads might not reduce it)
The government should build more motorways to reduce traffic congestion* in 2006	33% agree, 36% disagree	Quite volatile from year to year, no overall trend. 'Pro' strongest in 2003, 'anti' in 1997, neither side has yet exceeded 50%

* NB '*building more roads just encourages more traffic*', 44% agree with this and 27% disagree. This affects attitudes on the policies. [169, 1992-2006, Quantitative] Table A.5

Sources: [169, 1992-2006, Quantitative; Table A.4] and unnumbered tables from www.britsocat.com; build more roads proposition from [006, 2007, Mixed]

Table 7.5. Surface transport policy measures with fairly substantial minorities in support

Proposition	In favour	Notes
£1 per 50 mile charge for motorists to improve public transport year 2003	28%	
<i>'People should be allowed to use their cars as much as they like, even if it causes damage to the environment'</i> in 2006	23%	
<i>'for the sake of the environment car users should pay higher taxes'</i>	25%	This was quite strongly related to car ownership – 36% of non car owners agreed, 23% of 1 car owners and 21% of two car owners. There was little difference as between cities, towns and rural areas. This cell comes from Defra [004, 2007] see version of our report from 13 th May
Cut spending on new roads by half to improve public transport in 2003 BSAS	21%	

Sources: [169, 1992-2006, Quantitative; Tables A.11 and A.12] and unnumbered tables from www.britsocat.com

Table 7.6. Surface transport policy measures with small minorities in support

Proposition	Proportion in favour	Notes
Gradually double cost of petrol over next ten years to raise money to improve public transport year 2002	12%	All these in context of raising money to improve public transport
Cut road maintenance spending by half year 2003	8%	
Increasing VAT year 2001	9%	

Sources: [169, 1992-2006, Quantitative] and unnumbered tables from www.britsocat.com

Reactions to aviation expansion

Here we develop further on the discussion in Chapter 6. It is not at present possible to treat attitudes about air travel and airport expansion in the same way as attitudes to traffic and surface transport policy – they do not fit into the table structure above. This is because the attitudes seem to be very much more influenced by the context in which questions are asked, much more so than in the cases discussed above. This is seen in a series of studies in which questions have been asked which are typically based on the presumptions that aviation is good for the economy and bad for the environment, neither of which seem universally agreed.

Thus the Omnibus Survey 2006 and 2007 [016, 2006-2007, Quantitative] presented respondents with two statements regarding air travel and asked them to select the statement that came closest to their own views – Air travel should be limited for the sake of the environment or Limiting air travel would be too damaging to the economy. In each survey views were close to equal strength. In August 2007 47% said that '*Air travel should be limited for the sake of the environment*', while 53% said that '*Limiting air travel would be too damaging to the economy*'. In 2008 [016a, 2008, Quantitative] there was a small shift of opinion making these two statements exactly equal in strength, i.e. at 50% each. (note that this includes some people who supported both statements as discussed below). Those who travelled by plane more than twice a year were more likely to say limiting air travel was too damaging to the economy (64%) than those who travelled by plane less than once a year or never (45%).

It should be emphasised that the statements above are not a direct test of the relative importance of economic and environmental considerations, since it seems that some of those supporting the first proposition do not accept as true the presumption that limiting air travel would actually be bad for the economy, and some of those supporting the second proposition do not accept as true the presumption that limiting air travel would be good for the environment. Thus the division of opinion in part reflects differing opinions about the science and economics, rather than the importance of the goals. (We note that there may be some post rationalisation in this case, i.e. that people may be led to favour certain views of fact which justify their chosen activities.)

The 2006 Omnibus [019, 2006, Quantitative] asked about local airport expansion (rather than air travel per se) – the following paragraphs consider the findings. "46% of adults said they would personally support the expansion of their local airport; 24% said they would oppose this. In the South East, 39% said they would support the expansion of their local airport; 36% said they would oppose this." "The most commonly mentioned advantages of local airport expansion were increased job opportunities (mentioned by 36%) and improvements to the local economy (29%). The most commonly mentioned disadvantages were noise from flights (46%), pollution (38%) and congestion on the local roads (33%). Almost a third of respondents said they could not immediately think of any advantages to their local area, while a quarter could not think of any disadvantages".

Respondents were asked several other questions to assess their general attitudes towards airport expansion. 84% of respondents believed that a condition for airport expansion should be improved transport links to the airport. Only 5% disagreed with this.

Presented with the statement '*in order to boost the economy, new terminals and runways should be built*', 49% agreed and 22% disagreed. Presented with the statement '*in order to protect the local environment, we should limit the expansion of airports*', almost two-thirds (62%) of respondents agreed, and only 13% disagreed.

By considering who answered each question, it can be noted that 26% of respondents both supported airport expansion on economic grounds and felt that expansion should be limited for environmental reasons. A fifth opposed airport expansion in both scenarios, believing expansion should be limited for environmental reasons and there was no need to expand for economic reasons. A tenth felt that expansion was required for economic reasons and did not believe environmental concerns should constrain this.

In this context it is perhaps not surprising that 44% of respondents neither agreed nor disagreed or were unable to give an opinion on one or both of the questions.

“Respondents in managerial/professional or intermediate occupations were more likely to oppose airport expansion on both economic and environmental grounds than those in routine/manual occupations”.

“Men were more likely than women to support expansion for economic reasons and disagree with limitations for environmental reasons”. “Those who had flown on multiple occasions in the last year were more likely to support expansion for economic reasons without environmental constraints than those who had not flown or had done so only once”. “Respondents whose nearest airport was in the South East were more likely to oppose airport expansion on both economic and environmental grounds, than those in other regions” (as noted above).

A set of findings from the CfIT study into attitudes to aviation and climate change [003b, 2006, Mixed] suggested the following:

- among leisure fliers, 38% would be unwilling to reduce their amount of air travel for environmental reasons, and 33% would be willing to do so;
- among business fliers, 43% would be unwilling to change, and about 33% would be willing to do so;
- among both groups, about 50% would be prepared to pay more for their flights to reflect environmental costs - frequent fliers are rather less prepared to change their behaviour, and rather more prepared to pay higher prices; and
- there is strong support (85%) among business fliers for initiatives such as teleconferencing, and they are reported as feeling that this would have ‘some influence’ on reducing the number of flights.

This is a complex picture, but there seem to be two robust results. First, aviation growth and airport expansion are subjects of strongly divided opinions among the public, with no evident signs of a consensus. Secondly, assessing the balance of view will be very dependent on the exact design of surveys (apparently more so than any other issue we have studied) and therefore conclusions need to be made with great caution.

Reactions to new technologies

In relation to a number present and potential policy measures, perhaps notably road pricing, technology is set to play an important part as a facilitator; it can also be a factor which influences public attitudes towards policy measures – as such it deserves brief consideration following the sections above. There is little research which explicitly addresses this consideration however. We refer to one recent piece of DfT research which has examined public attitudes to new technologies [257, 2006, Qualitative]. This identified seven levels of acceptance of technologies:

- absolute rejectors;
- thoughtful rejectors;
- thoughtful accepters;
- partial rejecters/accepters;
- resigned accepters; and
- unengaged.

It concluded that “most of the participants were either Partial Rejecters/Accepters or Thoughtful Rejecters”. The former group “is not concerned by issues of privacy but its members are more egocentric; they see the benefit in catching uninsured drivers and penalising dangerous drivers (more dangerous than themselves), so long as they personally are not caught for what they consider to be minor traffic offences”. Meanwhile, thoughtful rejecters are described as follows: concerned about the security of data, the cost of implementation, the potential for misuse and a perceived associated reduction in police presence; concerned also about performance of the technologies.

Insights from studies of economic values of time and other travel attributes

The DfT has carried out a substantial programme of research over the years aimed at calculating how much members of the public would be willing to pay for various improvements in transport conditions, which can then be used as a measure of the value to the economy of providing them. The method used, in which respondents state their preferences among various hypothetical alternatives offered to them, may be thought of as ‘attitudinal’, in the sense that the responses are expressions of opinion not based on observed choices, though the survey instruments are normally rather tightly defined ‘experiments’ rather than questions to which a variety of answers may be given.

At the request of the Department, we included a small number of studies of this type selected by the DfT in order to illustrate this.

Value of travel time savings (VTTS) – According to a 2003 value of travel time savings study for the DfT [261, 2003, Quantitative] among car users, the sources of variation in VTTS are income and journey length. VTTS for commuting is slightly higher than for other non-work purposes. VTTS is lower for retired people, other things being equal. VTTS appears to be 20% lower for passengers than for drivers (though there are concerns about the interpretation of this result). VTTS also differ for different purposes and regions.

Relative to the VTTS for car, car users have a higher VTTS for bus and lower for rail, reflecting in part views about their relative attractiveness, though there are interactions with person-type [261, 2003, Quantitative].

There is some evidence that, with the changing of the nature of the journey, e.g. the increase of telecommuting and the usage of mobile phone and laptop, the existing approach to valuing time tends to under-estimate the usefulness of travelling time, hence overestimate the economic value of saving it and the real value of the journey time [261, 2003, Quantitative].

2008 work for the DfT specifically examines productive use of travel time and working time saving [263, 2008, Review/Quantitative] with a focus on rail. Work undertaken by one of this review’s authors included the design of a series of question on travel time use

in the 2004 National Passengers Survey (NPS)²⁵. This revealed that 31% of business travellers spent most of their train journey working/studying (with 51% spending at least some of their time doing this). Of those who had spent most of their time doing so, 42% considered the time use very worthwhile²⁶. Work by Kirby et al for Virgin Trains which was also based in part on these NPS questions estimated that the effect of travel time use in this context can reduce employer's costs of a business journey by train by a fifth and increase the relative costs of car journey [263, 2008, Review/Quantitative].

Values of rail overcrowding - In on-going DfT work on rail overcrowding, there is reference to earlier studies by Faber Maunsell in 2007 and MVA and ITS in 1989. The Faber Maunsell study had reported that 25% of participants stated that they set off earlier than they would otherwise like in order to travel under less crowded conditions and make sure they got a seat / avoided crowding. Others chose trains that had different origins, as it was felt that this determined the level of crowding when they boarded the train. Respondents to a subsequent survey indicated that 28% of passengers arrived before or after their 'ideal' arrival time to counter the effects of crowding. (It is not altogether clear whether such behavioural responses to overcrowding reflect (only) a temporal or spatial displacement of the rail journey or whether extended journey times are also a consequence.) The work also suggests that passengers are more tolerant of crowding in the PM peak journey than the corresponding AM journey.

The MVA/ITS study had asked respondents to trade off crowding against fare and journey time, with resulting valuations derived against a base level of "seated in plenty of room". There were high initial penalties for standing, irrespective of distance, and [it was found] that the average values for standing fall as total standing time increases."

Values of crowding depend on definition of a suitable base level, where passengers feel 'uncrowded'. However, the definition and perception of "overcrowded" condition among individuals differ among previous studies. Some studies suggested that respondents with no flexibility in travel time valued crowding level and arrival time significantly higher than those reporting some flexibility in travel time.

There may well be further useful insights to be gained from direct scrutiny of the estimated coefficients of valuation studies of the sort referred to in the selected evidence above - especially where responses can be segmented according to wider attitudes expressed about the influences on travel. This has not been possible within the scope of this review.

²⁵ Lyons, G., Jain, J. and Holley, D. (2007). The use of travel time by rail passengers in Great Britain. *Transportation Research*, 41(A), 107-120.

²⁶ Lyons, G., Holley, D. and Jain, J. (n.d.). The Business of Train Travel: A Matter of Time Use. Forthcoming in Hislop, D. (Ed). *Mobile Work/Technology: Changing Patterns of Spatial Mobility and Mobile Technology Use in Work*. Routledge.

8 Addressing climate change by cutting emissions of carbon dioxide and other greenhouse gases

Key findings

A large majority of the population is aware of and concerned about climate change, judges this to be an important area for Government action, agrees that human activities have a significant influence, and considers that transport is an important cause especially car and air travel. The majorities mostly vary in the range 55% to about 80% in different sources. Results are sensitive to context and the wording of questions. Attitudes rejecting some or all of these views exist, and although they are usually minorities they can be quite substantial in size.

There is a lower level of awareness of the relative importance of specific choices, especially in comparing one-off and frequent journeys, carbon emissions from buses, and driving styles.

Willingness to change behaviour is a complex mixture of individual and social interests. People may be more prone to change if the benefit is a proximate one to the individual, his/her family, or the local community – such as improving children's fitness, improving local air quality, or saving money. There is some indirect evidence that there could be 'snowball effects' in which people are influenced by other people's choices. This seems lower in Britain than in many European countries.

Research on barriers to change indicates a conflict for some between concern for the environment and concern about upsetting current lifestyles. Hence findings about intentions to change choices for other reasons (such as stress discussed in chapter 1, economic reasons in chapter 7, and health and quality of life discussed in chapters 9 and 10) have an important interaction with environmental motives.

While there has been some variation in attitudes by age, gender, car ownership and socio-economic status, the differences are not huge. An alternative approach has suggested that there are different groups or segments of the population with a substantially different readiness to change their choices, arising from their current travel patterns and their outlook and circumstances, but with each group containing a mixture of different demographic characteristics. The results identify groups adding to 15%-50% of the population as the most likely initial responders, though the work has not yet identified how this would change over time.

Generally we find that the notion of 'the public attitude' is oversimplified. Rather, there is a range of resistance to changing behaviour, from the very small numbers who would say they would easily contemplate reducing their car use by half or more, 25% to 45% who say they could easily change some short car journeys to bus or walk, up to 75% who would contemplate reducing some non-essential journeys. The figures are rather volatile and depend on the context. However, the finding that there is a substantial willingness to change seems very robust. (Note that this review has not compared people's stated willingness to change behaviour with evidence on whether they actually do so, though the orders of magnitude do seem consistent with the outcome of case studies and local implementation of policies aimed at such changes.)

Surveys have found evidence of a desire among some sections of the public that Government should be taking the lead on these questions, for example in creating conditions that environmentally helpful choices are more practical and attractive, rather than seeing it as a matter for individual initiative only.

Introduction

Evidence on public attitudes towards climate change has been of increasing interest in recent years, but the political context has been changing quite swiftly even on a month by month basis, which is reflected in media attention. None of the evidence available at the moment enables a test of whether there is currently a substantial (ongoing) change in public attitudes that goes further than a shift, discussed below, which seems to have occurred around the 2005-2007 period. A further caveat is that questions using phrases such as 'to protect the environment' sometimes do not distinguish between global climate change, and local air quality and other environmental impacts (which relate to other policy goals as well - see chapters 9 and 10).

A large part of the survey evidence under this heading has been prompted by Government interest in the extent to which environmental concerns influence travel choices, and in turn what the likely effects on behaviour will be of Government initiatives intended to achieve environmental improvements. Attitudinal research is only one aspect of answering that question, as discussed in several chapters. We consider evidence on the current views and understanding of climate change

General awareness and concern about climate change

Research for CfIT involving a national sample of adults (16+) [003b, 2006, Mixed] reported that half the sample believed the UK is already being affected by climate change. From the qualitative work, this seems to have come from media reporting and perceived changes taking place in the UK climate.

The DfT evidence base review of public attitudes to climate change and transport behaviour [037, 2006, Review] reported a higher level of awareness, suggesting that recognition of the concept of climate change among the UK population has almost reached everybody. This had happened quite swiftly, contrasted with surveys in the few years previously, which had showed a much lower public awareness or acknowledgement of the seriousness, scale and urgency of climate change. The review suggests that the great majority of the public report their belief that climate change is happening, and around two-thirds of the population are convinced it is linked to human activity.

The National Statistics Omnibus Surveys in 2006, 2007 and 2008 [016, 2006-2007, Quantitative] and [016a, 2008, Quantitative] reported that a rather stable 80% of adults said they were very or fairly concerned about climate change, with about a quarter being very concerned. This was identified as being in the 'top three policy issues facing Britain' by 23% in August 2006, by 32% in August 2007 and by 29% in February 2008.

The importance of context and social response bias is implied in the DfT evidence base review of attitudes to climate change and transport behaviour [037, 2006, Review] which notes that while climate change concern is high (around 80%), in surveys like the British Social Attitudes Survey (BSAS) other social issues frequently take precedence when *compared with* climate change, though even then a majority still find it important.

Recent DfT research focused upon UK drivers [226a, 2007, Mixed] asked respondents to choose one statement from a number that best reflected their attitude to the environment. The results are shown in Table 8.1 below and it would appear that just under half of people (47%) believe themselves to be both 'quite concerned' and taking action when they feel they can, and less than 1% do not feel the environment is their responsibility. These results have changed very little from those obtained using the same question in a 1999 survey as part of the 'Are you doing your bit?' campaign evaluation.

Table 8.1. *Alignment of respondents to statements concerning attitude to the environment (participants could only select one statement)*

Statement	Response (%)
<i>'I am very concerned about protecting the environment and do everything I can to help'</i>	12
<i>'I am very concerned about protecting the environment but know there is more I can do to help'</i>	25
<i>'I am quite concerned about the environment and try to take environmentally friendly actions when I can'</i>	47
<i>'I realise that protecting the environment is important but do not feel that there is much I can do about it'</i>	12
<i>'I think there is too much fuss made about environmental issues and I don't believe that anything I do will make much difference'</i>	3
<i>'The environment isn't my responsibility'</i>	<1

Source: [226a, 2007, Mixed]

Link with transport

Among the various sorts of human activity considered, a majority of people recognise a link between climate change and transport specifically. The DfT evidence base review of 2006 [037, 2006, Review] reported that around two thirds of the population identify transport as a cause of climate change compared to a fifth identifying the use of gas and electricity in the home²⁷. Within transport, cars and vans are considered to be the largest transport contributors to UK climate change overall, and flying as the most harmful for specific journeys.

A similar number of people made the link between transport and climate change according to National Statistics Omnibus Surveys in 2006 and 2007 [016, 2006-2007, Quantitative] and 2008 [016a, 2008, Quantitative] in which it was found that that about 70% of the public identified emissions from road transport as a cause of climate change. In response to a multi-choice card the figure given for air travel was 43% in 2007 and 39% in February 2008. However, BSAS results [169, 1992-2006, Quantitative] showed a much higher proportion of people agreeing with a statement that the current level of air travel has a serious effect on climate change, increasing from 64% in 2005 to 74% in 2006). This reinforces the finding that results on attitudes to air travel seem particularly sensitive to questions asked.

Recent DfT research focusing upon UK drivers [226a, 2007, Mixed] asked respondents to what extent different behaviours "would help reduce global warming a lot, help a fair amount, help a little or would make no difference". Those indicating 'a lot' for different behaviours were as follows:

²⁷ As one of the authors of the 2006 review, Jillian Anable stresses that this may be one of the areas where it is now out of date - see the more recent 2007 Defra findings discussed below.

- recycling more - 71%;
- switching to smaller fuel-efficient cars - 62%;
- taking fewer flights - 60%;
- cutting down on gas and electricity used at home - 59%;
- buying food produced locally - 51%;
- switching from cars to other forms of transport - 46%; and
- cutting down on water used at home - 33%.

Generally, “[t]hose who said they were very concerned about the environment were much more likely to say each behaviour would help a lot [original emphasis] compared to those who did not feel as strongly.”

CfIT [003b, 2006, Mixed] reported that half of the public say they are very or fairly concerned about the environmental impact of flying and less than one in ten (7%) say they are not at all concerned. The authors note that this is a similar level of concern to other recent studies, such as the YouGov survey for BATA (British Air Transport Association) of August 2006, where 56% of the population were at least fairly concerned about this issue.

One of the recent elements of the Defra research has been the use of workshops and mobility biographies to examine sustainable transport [005a, 2007, Qualitative]. This found that environmental awareness and subsequent concern were widespread across participants. While the term ‘sustainable transport’ was unfamiliar to a majority of participants, they were aware of links between transport and the environment even if only at a general level. Other recent work for the DfT exploring public attitudes to personal carbon dioxide emission information [002, 2007, Qualitative] also highlights an increasing awareness of environmental issues, especially climate change.

Other specific transport behaviours

As reported above, awareness and concern is now widespread, and a link with general transport activities notably ‘car use’ and ‘flying’ is made. However, an understanding of the impacts of more detailed specific behaviours on the environment is not as developed (notwithstanding the recording of expressed views such as the bullet list above). A synthesis report of a series of Defra research projects [005c, 2007, N/A] observes that participants across all projects, and across all segments, demonstrate a poor understanding of the relative impact of specific different behaviours on the environment. One aspect noted was that there is a belief that frequent, day-to-day behaviours have more of an impact on the environment than one-off event-driven behaviours, leading to the assumption that ‘good’ daily behaviour legitimises or offsets occasional ‘bad’ behaviour.

The recent DfT research exploring public attitudes to personal carbon dioxide emission information [002, 2007, Qualitative] found in line with the Defra findings that while awareness of environmental issues was increasing, this does not necessarily equate to improved understanding of the linkages with personal behaviour and thus travel choices. Awareness of how carbon emissions are quantified and measured was limited, and once explained, felt to be meaningless unless contextualised, and especially based on other prior knowledge. A study specifically examining views of bus users and non bus users in

Greater London about introducing H2 vehicles [082, 2003, Mixed] found a strong positive relationship between prior knowledge about H2 vehicles and likelihood of support.

According to DfT research into public attitudes to road pricing [238, 2004, Qualitative], "[a]lthough respondents were aware of the effects of congestion on the environment, they did not raise this as a key concern. Some respondents believed buses to be the main pollutants on the roads and thought that measures to cut pollution should focus on buses rather than cars".

Changing transport behaviour can appear to the public as more substantial than the changing of other behaviours. The research [002, 2007, Qualitative] for the DfT exploring public attitudes to personal carbon dioxide emission information perhaps underlines the strong link between travel and lifestyle, and highlights the importance of context. A qualitative study specifically into public views on carbon calculators suggests that "Sometimes carbon calculator sites...[present] strategies which require a perceived large change such as buying a smaller car or giving up a certain journey altogether. This is compared to suggestions for small-scale changes put forward for household emissions like boiling the kettle with less water rather than to give up tea altogether or drink cold tea!" Also, household changes are likely to save money, whereas travel changes could incur extra costs and extra effort. People will generally not change their travel behaviour unless it is made easy for them to do so - as noted in work for Defra on public understanding of sustainable transport [005a, 2007, Qualitative].

In a DfT review of public attitudes to climate change and transport behaviour [037, 2006, Review] with reference to a DfT 2003 study, it was observed that environmental concerns the public may have played little role in car purchasing decisions. The authors suggested that there is a cognitive dissonance such that the importance of fuel economy is minimised in order to legitimise higher order preferences such as costs, performance, image, reliability and safety. More recent DfT research focusing upon UK drivers as a benchmarking study for the Act on CO2 awareness campaign [226a, 2007, Mixed] asked respondents to choose from a list of factors the five most important in making the most recent car purchase decision and found a similar level of low priority given to environmental issues. The overall ranking of factors revealed the following top seven:

- reliability - 58%;
- price - 55%;
- fuel efficiency - 46%;
- make of car - 46%;
- comfort - 41%;
- engine size - 30%; and
- safety features e.g. airbag - 21%.

'Impact on Environment' ranked 13th overall with 11%. However, a link may be made with the apparently higher priority of fuel efficiency, since if environmental and efficiency motivations actually both led to the same outcome of less fuel consumption, the attitudes reinforce each other rather than being in conflict. The study found that "factors that drivers would consider when making a future car purchase were similar to those mentioned for previous purchases". Further findings from this study [226a, 2007, Mixed] are set out below.

On the other hand a rather different balance is given when asking the question in a different format. Just under three quarters (74%) of respondents agreed with the statement '*we should all consider choosing a car based on its environmental impact*'. There was some scepticism about how many people would do so in practice, with 55% agreeing with the statement '*only those who are very committed to the environment would look for a car that is kinder to the environment*'.

Whilst these results seem to suggest that environmental awareness and concern has limited priority in influencing the cars people purchase, there are other results (presented below) consistent with the idea that there is a public understanding of emission-related aspects of vehicle design, and an acceptance that it should influence prices paid.

On the impact of driving behaviour (ecodriving), 34% agreed with the statement '*It would be difficult to change my driving behaviour, even if it would help the environment*' [226a, 2007, Mixed]. Nearly half (47%) thought avoiding unnecessary acceleration would affect the amount of CO₂ emitted a lot, while keeping tyres inflated was mentioned by 37%, carrying unnecessary loads by 31%, changing gear as soon as possible by 29% and driving with a roof rack by 23%. More than half (57%) of drivers would be interested in information on how driving impacts upon the environment (women - 61%; men - 54%).

Studies contrasting self-interest and collective objectives

People are concerned about personal gain and loss and in line with this travel choices are often described as difficult to change, if change implies sacrificing other benefits. There can also be a sense of futility if it is thought that other people will not change in the same way. On the other hand, people also recognise social needs at the level of family, community, nation or the world. There is no research consensus on the relative importance of these two outlooks, though we note that the analytical tradition in travel forecasts puts nearly all the emphasis on the former. We also have the impression that this particular balance is one where it is often difficult to tell precisely the boundary between the views of respondents themselves, and the judgements of the analysts summarising research findings.

Research for Defra into public understanding of sustainable transport [005a, 2007, Qualitative] observed that people may be more prone to change behaviour if the benefit is a proximate one to the individual, his/her family, or the local community - such as improving children's fitness, improving local air quality or saving money. DfT research exploring public attitudes to personal carbon dioxide emission information [002, 2007, Qualitative] found that participants were not optimistic about the general public (i.e., in this context, 'other people') engaging with carbon calculators purely for environmental reasons. Instead, participants felt that incentives, such as money and fuel savings, health benefits, or supermarket vouchers linked to completion might attract people to calculate their emissions.

Other Defra work on sustainable leisure and tourism [005b, 2007, Qualitative] found that 'on the whole' participants did not think about the environment when making leisure and tourism choices (in some cases not seeing leisure and tourism as an environmental behaviour) but when they did, some participants saw no point in changing behaviour unless other individuals and countries followed suit. Participants wanted to know that their pro-environmental choices were part of a wide movement. At face value, this implies a snowballing effect if larger numbers of people are involved (and, possibly, a tipping point or threshold level at which such snowballing might be triggered), though in some cases it might be that the proposition 'other people won't do it' is a convenient excuse rather than a contingent condition.

Amongst young adults there is a greater tendency for environmental protection to be seen as a collective rather than individual responsibility [012, 2006, Qualitative].

A review for the DfT of attitudes to climate change and transport behaviour [037, 2006, Review] referenced a European-wide survey which revealed that when individual countries are examined, the UK comprises far fewer people who both state that they make an effort and at the same time believe their efforts to protect the environment actually have any impact. The UK comes fourth from the bottom of the table of 25 European countries. The Netherlands is at the top of this table with 39% of people 'convinced' versus 9% in the UK.

This public frustration over the dilemma may in part explain their belief that it is the responsibility of Government to take action (note the mandate for action highlighted below from a key overview report from Defra [006, 2007, Mixed]. Indeed according to one of the pieces of Defra research on sustainable leisure and tourism [005b, 2007, Qualitative] there is widespread expectation that Government should be taking the lead on environmental issues, in part due to the scale of intervention needed. However, authors of research studies, especially qualitative ones, commonly report that they have formed an impression of a mistrust of Government and scepticism about its motives.

Motivators and barriers

There has been a substantial amount of research into trying to understand the underlying motivations and barriers to change. This has not all been based on the same view of human motivations, or come to the same conclusion.

The 2008 reporting of a recent major Defra research programme [006, 2007, Mixed] summarises what are seen to be the motivators for and barriers to behavioural goals being pursued. These are not exclusive to transport. A frequent interpretation is that travel is one of the more difficult consumption behaviours to change, though this is contested.

Motivators - a behaviour results in the 'feel good factor'; new behaviours fit within current lifestyles; individual benefits accrue from taking up the behaviour; behaviours are easy to do; people understand why they are being asked to act.

Barriers - external, practical limits to choosing a certain behaviour; belief that taking on new behaviours will have a negative impact on current lifestyle; habitual behaviour, apathy towards change and effort needed; maintaining one's self-identity and negative perceptions of 'green' lifestyles and products; scepticism around the climate change debate; disempowerment.

The Defra report observes that "[i]n terms of public understanding and attitudes, there is a mandate for government to take action - not to force radical changes in people's lifestyles so much as to help 'green' those lifestyles and reduce their overall negative impacts." This said, "[e]vidence suggests that there is a lack of trust in government, local authorities and industry relating to pro-environmental behaviour. People are sceptical about the motives of each player, particularly where money is involved" "People believe that if the crisis were so serious then addressing climate change would be the subject of major government spending".

Using this approach, there has been interest in seeking to reconcile concerns held about the environment by the public with concerns about any compromises to current lifestyles. One of the key observations from the Defra report was that behaviour change initiatives must recognise this.

The Defra research on sustainable transport [005a, 2007, Qualitative] found that perceptions of sustainable transport and potential to change behaviour were influenced by lifestyle and individualism. Convenience, quality of the experience and speed were important, particularly to those that did not use public transport. Transport was considered to be a problematic area for research participants in terms of making a genuine positive environmental impact. Other forms of 'green' behaviour such as reduced energy use, recycling and support for local farmers, for example, were identified by participants as being accessible and tangible ways to play a role in environmental sustainability, and seemed easier to some.

Thus for some it was assumed that more sustainable transport would probably result in an unwelcome change in people's lifestyles, such as loss of convenience and freedom, be more expensive and would take more time through use of public transport. Other Defra work on public understanding of sustainable leisure and tourism [005b, 2007, Qualitative] also observed a reluctance in many sections of the population to make any changes that fundamentally impact on present lifestyles and standards of living. Similar considerations apply to air travel, where although there is rarely use of the idea of 'necessity' for leisure travel, nevertheless foreign holidays have become an important part of many people's lifestyles. Thus there is support for curbing the environmental impacts of aviation but not for 'sacrificing foreign holidays altogether'²⁸ [003b, 2006, Mixed].

A study by Anable (referred to in a DfT review of mobility [014, 2000-2005, Review]) found that "even motorists disillusioned with car use and aware of its environmental impacts believe there are too many obstacles to change their transport habits". In an RAC compilation of secondary source material on commuting [103, N/A, Review] 57% of people were reported to see urban driving as a necessary evil and felt unable to change their habits despite the fact that 20% of urban drivers experience some form of 'green guilt'. This highlights the apparent challenge when people reflect upon their immediate existence. However, it is known that life events such as moving house can help create a dynamic for (intention in) changing behaviour²⁹.

Attitudes at different ages and over time

This review and others [037, 2006, Review] found the evidence on the relationship between attitudes to climate change and age to be mixed. The overall suggestion is that the behaviour of young adults, including travel behaviour, is not influenced by environmental concern, and that those considering themselves to be most green belong to older cohorts.

A review for the DfT on attitudes to climate change and travel behaviour [037, 2006, Review] found many studies which concluded that younger people exhibit greater environmental consciousness and are comparatively well informed about what they could personally do to help protect and improve the environment, but that in practice they exhibit less environmentally friendly behaviour. Older people, on the other hand, were found to be "less convinced by the *environmental case* [original emphasis], but are much

²⁸ We note that there has been a tendency in some research to ask questions about giving up cars completely, or giving up air travel completely. Such questions usually elicit strong rejection, and convey a mood of the importance of travel to lifestyles, but it is not clear how useful they are in informing policy discussions in practice.

²⁹ Stanbridge, K. and Lyons, G. (2006). Travel behaviour considerations during the process of residential relocation, paper presented at the 11th International Conference on Travel Behaviour Research, Kyoto, August 2006.

more likely, across a range of behaviours, to be acting in a more environment-friendly way". It also found, however, that many other studies had the opposite conclusion, suggesting that younger people exhibit *less* concern possibly due to their more optimistic outlook and the priority given to other issues at a younger age.

A study for the DfT using focus groups and in-depth interviews with young adults (16-25) [012, 2006, Qualitative] found that health and the environment did not seem to play a significant role in the choices many young people made about transport. Where it was relevant, it reflected concerns about the local, rather than global environment. The impact of a particular mode on the environment seemed less important than other concerns, such as personal convenience. Another study of UK drivers [226a, 2007, Mixed] found those considering themselves 'most green' were more likely to belong to an older age group and drive less.

PhD research addressing older people [129, 2000, Qualitative] highlighted how personal and collective benefit are weighed up in justifying mode choice. The choice of public transport for environmental reasons was often seen as conditional on a reasonable standard of service being provided; choice of travel by car for personal benefit meanwhile was sometimes tinged with 'guilt' about the environment.

Research investigating the factors influencing the future travel behaviour intentions of young people aged between 11 and 18 [266, 2006, Qualitative] found a great deal of confusion and lack of confidence with respect to understanding of climate change with indications that mixed messages are being received from the media, school and family and friends. The participants expressed an appetite for clearer information. Some of the 18 year-old participants noted that they took back messages on climate change received at school to their family and sought to influence their behaviour. Climate change was usually not a front-of-mind consideration. For various reasons, young people did not think their own behaviour would make a difference to climate change. There was acceptance, however, of car restrictive policy measures if they applied to everyone and alternative options were available.

The examination of attitudes at different ages and different stages of life leads to a question about generational versus cohort effects. Without the benefit of longitudinal analysis it is not possible to conclude whether the attitudes and behaviour of the current younger generation will carry on through time, or will change to reflect those of the current older generation. We do not know from cross-section data whether there is something specific about how the values and attitudes of each generation have been formed (such as the influence of rationing during the war or the more recent 'instant gratification, consumer culture') so that the values (for a given generation) will be stable across time. This is crucial for assessing the sensitivity of responding to different policy initiatives or changing conditions. We return to this discussion with respect to segmentation below.

Attitudes towards influencing travel behaviour for environmental reasons

The British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative] framed questions about changing travel choices specifically in terms of environmental objectives (though not distinguishing between climate change and other environmental aspects). A large proportion reject the proposition '*People should be allowed to use their cars as much as they like, even if it causes damage to the environment*' - just under 40% compared with just under 25% agreeing. The figures vary year by year but agreement averages about 45% and disagreement hovers about 20%.

In a survey of public attitudes and behaviours towards the environment for Defra [004, 2007, Quantitative] 25% agreed with the proposition '*For the sake of the environment, car users should pay higher taxes*'. This was quite strongly related to car ownership - 36% of non car owners agreed, 23% of 1 car owners and 21% of two car owners - see Table 8.2. However, there was little difference as between cities, towns and rural areas. Meanwhile, there is much broader support (66%) found by the BSAS for the more targeted/restrictive policy option '*People who drive cars that are better for the environment should pay less to use the roads than people whose cars are more harmful to the environment*' [169, 1992-2006, Quantitative].

Table 8.2. Responses (percentages) to the statement "for the sake of the environment, car users should pay higher taxes"

	All	No Car	1 Car	2 Cars or More
Agree/strongly agree	25	36	23	21
No opinion / don't know	18	21	18	17
Tend to disagree/strongly disagree	53	36	57	50
Base	3618	749	1575	1294

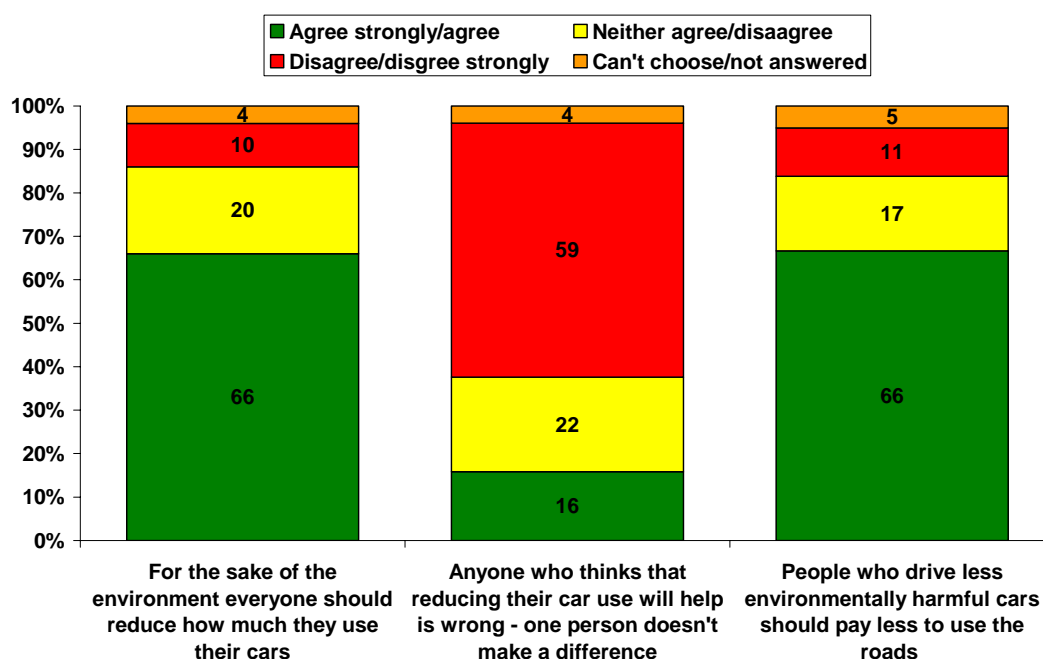
Source: [004, 2007, Quantitative; reproduced from Table B.14]

In BSAS 2006 [169, 1992-2006, Quantitative], respondents were asked three new questions in relation to car use and the environment. Two-thirds of adults agreed that '*for the sake of the environment everyone should reduce how much they use their cars*' and the same proportion agreed that '*people who drive less environmentally harmful cars should pay less to use the roads*' - see Figure 8.1). This is directly comparable to three Omnibus Surveys from 2005 to 2007 [017, 2005-2007, Quantitative], which found there to be growing support for a view that '*people who drive cars that do less damage to the environment should pay less tax than other drivers*' - 69% in 2007 compared to 63% in 2005. Around 1 in 5 adults disagreed with this.

It is worth noting, however, that there was a minority scepticism in the BSAS survey [169, 1992-2006, Quantitative] about the impact of individuals reducing their car use with 16% believing that '*one person doesn't make a difference*' (see Figure 8.1). 59% disagreed with this.

In a recent Ipsos MORI national survey of UK adults [112, 2007, Quantitative] the most favoured option for determining any form of road use charging was '*exhaust emissions their vehicle produces*' (42%) (followed by '*size of their vehicle's engine*' (39%) and '*type of vehicle they used*' (31%)); the least favoured option was '*driving history and speeding fines or insurance claim records*' (10%). In DfT research into consumer behaviour and pricing structures [237, 2005, Qualitative] participants thought that installation of a meter in cars showing the rate of expenditure on fuel and other costs would be useful and would help encourage drivers (most notably other drivers) to reduce their mileage.

Figure 8.1. Public attitudes towards car use and the environment (2005- 2006)



Source: 2006 British Social Attitudes Survey - self-completion interview. Base numbers: 930. Constructed using Tables A.13, A.14 and A.15 [169, 1992-2006, Quantitative]

The DfT Citizens' Panel [225, 2008, Qualitative] found that on the question of making it easier for people and businesses to make more environmentally friendly choices about the way they travel, and on the question of reducing emissions that contribute to climate change from journeys in the UK or internationally, the panellists questioned in their spontaneous responses raised most frequently the following key themes across both these questions:

- encourage and incentivise the use of green technology including greater research and development/investment in green technology;
- make public transport a viable alternative to using the car;
- discourage private and business motoring; and
- discourage use of air travel

In addition to the above there was reference to the provision of reliable information on about emissions from different transport modes and more pressure on individuals and businesses to reduce emissions

CfIT examined public attitudes to aviation and climate change [003b, 2006, Mixed]. The study authors concluded that the majority of the public are receptive to the idea of policies designed to reduce the environmental impact of flying (see parallel with the findings of the Ipsos MORI research for the Airfields Environment Trust [141, 2006, Quantitative]). However, their support comes with the strong caveat that they are not willing to sacrifice foreign holidays altogether. For many, flying is an aspiration with travelling abroad seen to be a 'good thing'.

74% believe that it is important that the UK should do what it can to tackle climate change. A majority, but a smaller one (57%) support policies directly designed to restrict growth in air travel, and with qualitative findings indicating that support would fall if people felt that they would be 'priced out' of flying altogether.

The study concluded that its respondents find that flying for the main holiday is "not very price sensitive"³⁰. For example, half of those who have flown in the last 12 months say they are willing to pay higher prices for the environment (35% disagree). For short-haul leisure flyers, a price rise from £100 to £124 would discourage 25% of people from flying, while the same percentage increase for long-haul leisure flyers (from £500 to £620) would discourage 60% from flying. The authors comment that higher implied fare elasticities³¹ for long-haul (-2.5) than for short-haul (-1.04) leisure trips runs counter to the existing technical literature, but may be explained by people considering substitution of a long distance destination for a short-haul one if price rises are significant.

The CfIT study concluded that there was most public support for measures that do not restrict individual action. A system where everyone would be able to fly once a year free of environmental taxes and then be taxed for further flights according to their environmental impact was seen as equitable. Environmental taxes were only acceptable to a majority if funds are hypothecated towards measures to reduce aviation damage (62%) - they would not be happy for the money to be diverted to the public purse more generally, though a substantial minority (35%) did seem to find this acceptable. The authors conclude that people "need strong proof that this issue would not be a Trojan horse for taxation"³². Many participants felt that solutions will ultimately lie in technology.

MORI research for the Airfields Environment Trust [141, 2006, Quantitative] considered the effect of providing some information and showing respondents the sentence '*Air travel is set to become one of the main causes of climate change due to the emission of carbon into the atmosphere*' on responses to a policy aimed at slowing growth in air travel:

- for respondents who did not receive the information and statement, 37% supported and 22% opposed (34% neither supported or opposed; 7% don't know); and
- for respondents who did receive the information and statement, 57% supported and 17% opposed (21% neither supported or opposed; 5% don't know).

Even with that information, less support is still seen from frequent flyers (47% support) and those aged 15-24 (46%).

The information provision did not affect reactions to statements on environment versus economic growth discussed in the previous chapter. 68% of all respondents agreed with the

³⁰ Statements in surveys are notoriously weak in estimating true demand responses to price, partly because market elasticities are based on an adaptive process over time (perhaps several years) whereas attitude surveys elicit opinions at a moment in time. It is widely thought that cheap air fares in fact have been a significant contributor to the growth in air travel, and we have no reason to challenge this. Note that this study seems odd in describing the (implied) price elasticities as 'not very price sensitive' - they seem very large indeed by the standards of transport economics. Econometric evidence can be sought on this point. However, 'sensitivity' in the non-economic sense of a public acceptance or anger may well be indicated by these results.

³¹ Sensitivity of demand to price.

³² The phrase 'a Trojan horse for taxation' seems to be from the authors of the report, not actually used in the questionnaire.

statement '*Protecting the environment should be given priority, even at the risk of slowing down economic growth in the air travel industry*'. 11% agreed with the statement '*Economic growth in the air travel industry should be given priority, even if the environment suffers to some extent*'. 13% thought "both should be given equal priority". The study also found that "[t]he public support higher tax on flying to reflect environmental damage by about three to one; and overall there is slightly more than two to one support for a doubling of the air passenger duty, a surprising result as people do not normally support tax increases."

A study for the DfT which specifically explored public attitudes to personal carbon dioxide emission information [002, 2007, Qualitative], found there to be significant scepticism over Government's motives for providing information and would like consistency and it to be directly linked with behaviour. The study reflects other research cited above that awareness of environmental issues (especially climate change) is increasing, but this does not necessarily equate to improved understanding of the linkages with personal behaviour and thus behaviour change.

One reason is the lack of engagement with and confusion over the terminology used. Understanding of more specific terms such as 'carbon footprint', 'offsetting' and 'neutrality' were found to be less widespread than for general environmental terms, but once understood, deemed to be more relevant to people than the broader environmental terminology. The report demonstrates the difficulty of providing information at the right level of detail to be of relevance to people without blinding them with science and generating fatigue and scepticism. With respect to carbon calculators, the DfT study [002, 2007, Qualitative] concluded that they would be usefully targeted at specific populations - such as those who consider themselves already eco-aware but are resistant to campaigns as they believe themselves to be already aware, plus harder to reach groups by appealing to different emotional triggers such as social desirability, feelings of belonging, and making green behaviour worthy.

Other potential policy solutions to climate change have been examined to a limited extent in a few studies. In one (a DfT study exploring public attitudes to personal carbon dioxide emission information), carbon offsetting was not seen by the respondents as a solution but as 'getting away with emissions' [002, 2007, Qualitative].

On emissions trading, the study for CfIT [003b, 2007, Mixed] found focus group participants had difficulty with the concept, had concerns about how it would work such as whether the price would become so high that it would put some airlines out of business, leaving the rest with monopoly control; or conversely set so low that it is not a deterrent at all. They are also reported as instinctively feeling that it would be difficult to police and open to fraud. After it was explained that emissions trading is already happening in some industries, participants warm to the idea slightly although still have concerns about who would be involved in the trading and how 'fair' carbon allowances would be set. As with the taxation options discussed above, if money from the trading scheme went back into measures to reduce emissions there is significantly more support for the idea than if more efficient companies are simply able to keep any money they make from selling carbon permits as profit. Also, the study reported that participants feel it is very important to set significant levels for fines for producing carbon without permits, and to put the money into research and development.

On [personal] carbon trading, the aviation study for CfIT [003b, 2007, Mixed] found this idea to come up spontaneously in the focus groups. Some embraced the idea and suggested that alongside monitoring behaviour, people could be given credits for reducing their emissions in one area, which could be collected over time and then be 'spent' on

high emission activities such as flying. This would enable those people reluctant to reduce the amount that they fly, to make the necessary savings in other areas of their behaviour.

A more recent study for Defra [290, 2008, Qualitative] specifically examined the public acceptability of carbon trading (PCT) vis-à-vis a carbon tax and upstream trading. The study used focus groups organised by the Defra segments (outlined below). The study found strong feelings against the “perceived idea of Government-imposed ‘limits’ on carbon emissions from individuals. Of the three policy options proposed, PCT was seen as the most complex and difficult to understand, even though some could see that it may be more equitable than other options’. However, the research highlighted that none of the options were unacceptable in principle but the way PCT is presented and described can have a considerable impact on its acceptability. The report also concludes that there is “an apparent inconsistency of views. On the one hand participants thought that something should be done to cut emissions and that Government should be responsible for helping individuals to reduce their impact. On the other hand, there was also some unease about Government influencing individual behaviour in this way and concern that individuals would have to pay for the emissions reductions to be achieved”.

Synthesis by segmentation analysis: attitudes varying by population group

There are differences in the views of young and old people, car owners and non-owners, fliers and non-fliers, etc., as one would expect. However, a quite different approach was taken in a major programme of work by Defra involving 10 separate pieces of research (including a substantial survey of public attitudes and behaviours towards the environment involving 3600 interviews). This reported a synthesis of its findings in January 2008 [006, 2007, Mixed]. It divided the population up in a different way.

The report notes “It is well reported that for many people there is a gap between their high level of concern about the environment and their actions - the value action gap.” It goes on to observe that “most of our consumer research points to the need for pro-environmental behaviours to fit within people’s current lifestyle”.

To this end, an analytical approach is developed to deal with 12 behaviour goals placed in five groups including personal transport (“Buy/use more energy efficient (low carbon) vehicles”, “Use car less - seek alternatives for short trips (<3 miles)”, “Reduce non-essential flying (short haul)”). Then the population is divided into seven groups or clusters each sharing a distinct set of attitudes and beliefs (towards the environment, environmental issues and behaviours). The model includes an estimate of the population size for each segment (based on a population of those aged 16+ in England of 41.1 million). For the purposes of this current DfT review of public attitudes, a summary of each segment has been compiled from the report contents with a specific focus upon travel behaviour - see Table 8.3.

From this analysis it appears that those with high mobility consumption are more pro-environmental/reduction while those with lower impact travel behaviours are more resistant to lowering them further. Alternatively, it might be because they cannot realistically make any changes.

Table 8.3. Segmentation of the public according to environmental attitude and beliefs

<p>1 - Positive Greens (18% of population) - consider themselves to act in a more environmentally friendly way than others. High potential to do more. Very pro-environmental attitudes towards car and air travel including users to pay for the environmental damage caused. Less attached to their cars but level of ownership close to average. 57% reject the view that '<i>driving is too convenient to give up for the sake of the environment</i>'. Likely to be thinking about or to have switched to a more fuel efficient car. The second most frequent flying of all groups though most have already reduced their air travel. 41% (highest for any group) feel guilty about taking short haul flights.</p>
<p>2 - Waste Watchers (12%) - low willingness to act and medium potential to do more. Highly motivated to help the environment to avoid waste rather than to reduce impact. Only 6% support car users paying more tax to cover their environmental impacts (against 25% of the whole population). Least likely to feel it would be easy for them to reduce their car use.</p>
<p>3 - Concerned Consumers (14%) - mainly pro-environmental beliefs but with lower conviction. Medium willingness to act and relatively high potential to do more. Attitudes towards car travel are greener than average. 64% disagree that people should be able to use their cars as much as they like regardless of the impact. Only 16% agree that car users should pay higher taxes for the environment. Average car ownership and use. 51% disagree that driving cars is too convenient to sacrifice for environmental reasons. Higher level of bus usage than any other group. Most frequent flyers of all groups, and only minority (34%) agree that people who fly should bear the cost of their impacts.</p>
<p>4 - Sideline Supporters (14%) - a generally pro-environmental world view but beliefs are relatively weak. Medium willingness to act and medium ability to act. Only 24% have reduced their level of car use (and intend to keep it up). A larger proportion (28%) say they do not really want to do so. Only 19% agree that car users should pay more tax to cover their environmental impacts. Only 21% disagree that people should be allowed to use their cars as much as they like even if it causes damage to the environment. One of the least frequent flying segments though after controlling for socio-economic factors they fly a little more than other groups.</p>
<p>5 - Cautious participants (14%) - environmental world view close to average - pessimistic about ability to tackle climate change but recognise their impacts. Middle to low willingness to act, middle potential to do more. Unfavourable attitudes towards car and plane use. 68% disagree that people should be able to use their cars as much as they want regardless of environmental damage. 40% agree that car users should pay higher taxes for the sake of the environment. Less attached to their cars than most other groups and more likely to see car travel as stressful (but average car use). The most likely segment to say they are thinking about reducing their car use (14% say this) yet getting into the car is still an automatic choice for many - 42% say they don't consider alternatives.</p>
<p>6 - Stalled Starters (10%) - Mostly negative, but confused, environmental views. Low willingness to act and low-medium potential to do more. Very ungreen travel attitudes. Least likely to own a car but most likely to say that car use is a right regardless of environmental impact (42%) and that more roads are the answer to congestion (65% say this). They do not like buses and are the most likely group to see them as a last resort for those who cannot afford better (27% say this against an average of 12%). Second least likely group to have reduced their air travel and yet the least frequent flying of all.</p>
<p>7 - Honestly Disengaged (18%) - Low potential to do more and low willingness to act. Ecological worldview predominantly shaped by a lack of interest and concern. They do not see themselves as green in any way although they would not particularly care if others saw them as such. Least likely to have reduced their car use (and to intend to keep it up) - only 15%. 40% do not really want to. Second most likely group to agree that people should be able to use their cars regardless of environmental impact (38% say this) and second least likely to call for higher taxes for car users (only 10% do so). Air travel around average for the population.</p>

Source: Table compiled from information set out in Defra research report [006, 2007, Mixed]

This raises an important (but at present unresolved) question of interpretation. At one extreme we might see the segments as representing stages in a dynamic process, where individuals develop from one group to another, perhaps passing through several as their lives and experiences change. At the other extreme, it might be that they represent stable personality characteristics which would be very resistant to movement. The policy and behavioural implications are considerable: both would see focusing on the most responsive groups initially, but the first interpretation would see this as a developing and expanding process, and the second as representing an upper limit to what is possible.

Other studies have also applied segmentation analysis³³. When considering respondents who were visitors to a National Trust property in the North West of England [036, 2000, Quantitative] the four car-owning segments display significant differences in the extent to which they exhibit psychological attachment to the car, feel responsible for the environmental effects of their car use and perceive behavioural control over using alternatives to the car. The largest segment in this sample, the malcontented motorists, for example, perceive a high number of constraints to the use of public transport despite feeling increasingly frustrated and unhappy with car travel and believing that they have a moral responsibility to change behaviour. The complacent car addicts on the other hand admit that the use of alternative modes is possible, but do not feel either moral imperative or other incentive to alter their car use.

The same study suggests that there are very few statistically significant differences with respect to socio-demographic indicators between the four regular car-access segments. This demonstrates that attitudes and opinions largely cut across demographic characteristics. Education appears to be the only demographic variable to distinguish the groups.

Summarising overview

Putting these results together, we find that there is a range of resistance to changing behaviour, from the very small numbers who say they would easily contemplate reducing their car trips by half, 25% to 40% who say they could easily change some short car journeys to bus or walk, up to 75% who would contemplate reducing some non-essential journeys. Some key figures are summarised in Table 8.4.

Thus, from the survey evidence it is apparent that quite large numbers of people express willingness to change travel behaviour in general terms, and say they would do so *if*:

- public transport, walking and cycling conditions were improved,
- or car costs were higher;
- or both.

³³ One example is a recent DfT study [257, 2006, Qualitative] which suggested seven groups of attitude to acceptance of new technologies: absolute rejectors; thoughtful rejectors; thoughtful accepters; partial rejecters/accepters; resigned accepters; and unengaged. We also note that the DfT is currently planning to develop new research which would apply this general segmentation method specifically to a model of transport and travel behaviour.

Table 8.4. Range of resistance to varying behaviour

Question about behaviour	Answers	Notes
(Omnibus) Individuals should try to limit their car use for the sake of the environment	About three quarters said they would undertake some form of activity to reduce car journeys, mostly non-essential journeys	Only 5% of cars users said they had done so in the previous year
(BSAS 2003) Driving one's own car is too convenient to give up for the sake of the environment	44% agree, 26% disagree	Figures are unstable 1997-03
Suppose you were forced for some reason to cut <i>half</i> of your regular car trips. How inconvenient would you find it?	Only 6% 'not inconvenient' 13% 'fairly inconvenient'	Figures are stable 1997-2001
(BSAS 2006) Many of the short journeys I now make by car I could just as easily go by: Bus Walk	28% agree, 54% disagree 34% agree 47% disagree	Reasonably stable
(Defra 2007) Reduce the number of flights made in the following year for environmental reasons	About 10% of those who had flown in the last year	
(Omnibus 2006) Would change behaviour if road pricing introduced	10% of total said would change mode, time, frequency or route.	NB total included non-drivers
Limit car use <i>currently</i> due to: the price of petrol the environment	5% a great deal, 22% to some extent, 20% not very much 2% a great deal 18% to some extent, 22% not very much	
(Omnibus 2003) I would reduce my car use if: pavements better maintained Safer walking Cycling facilities better Charges on car use Charges along with better public transport	30% 37% 20% of those who currently do not cycle 40%-60% 52%-72%	NB <i>size</i> of reduction in use not specified in questionnaire

Source: Table constructed using data from [169, 1992-2007, Quantitative], [004, 2007, Quantitative], [021, 2005, Quantitative] and [025, 2003, Quantitative]

The proportion of people saying they are currently doing so has similar proportions to those saying they would, but the evidence is not very explicit, and sources differ. This

cannot be taken at face value without linked evidence on actual journey patterns over time by the people saying so, which we do not have³⁴.

³⁴ However there is extensive other evidence about the real-world effects of initiatives intended to change behaviour. A recent review of sources is given in Goodwin P (2008) Policy incentives to change behaviour in passenger transport, International Transport Forum on Transport and Energy: the Challenge of Climate Change, Leipzig 28-30 May, ITF/OECD.

9 Contributing to better health and longer life expectancy, through reducing the risk of death, injury or illness arising from transport, and promoting travel modes that are beneficial to health

Key findings

Walking is considered the safest mode of transport in terms of accidents (meaning that it is not a cause of danger), and motorcycles the least safe mode. Car is considered safest in terms of the risk of personal attack, and walking least safe.

There are substantial concerns about both safety and security while travelling, notably for pedestrians in residential and other urban streets, at bus stops and stations, as well as in buses and trains. Concerns about terrorist attacks lead to support for stronger security measures, but are not reported as having caused large lasting changes in travel choices. Parental concerns about both traffic danger and security are important motivations in what travel their children are permitted to undertake.

Over 90% of people are in favour of action to enable or encourage more walking to improve personal fitness, and a majority (though not so large) also supports encouragement of cycling for this reason.

Visible exhaust emissions seem perceived as a greater risk to health than invisible ones.

Road safety emerges as the third most important issue for government to address, (after anti-social behaviour and hospital cleanliness). This view was strongest among young men and women; those with children under 15; drivers of lorries/van or motorcycles and parents taking their children to school.

There is an extremely high disapproval of drink-driving, and support for strong action to stop it. Driving under the influence of drugs is seen as a lesser problem, and with some confusion about different types of drug including medication.

There are substantial majorities (60% and more) disapproving of breaking the speed limit, supporting reductions in speed limits including local limits of 20mph, and for policies favouring pedestrians and cyclists over motor vehicles in the area where they live. However, there are also varying levels of tolerance of breaking the speed limits in special cases (notably on motorways when there is no traffic about): results seem to be sensitive to exact wording of questions.

A third to a half of motorists have recently experienced bad or aggressive driving by others, seen as a major problem in driving generally.

Concerning priorities for Government action, both safety and security score highly, and within road safety the three most cited issues for Government were drink driving (69%), speeding (43%) and use of mobile phones whilst driving (40%).

Introduction

Although safety has always been an important policy concern, the policy goal has been recently broadened in definition to include a range of other matters affecting health.

Therefore this chapter deals mainly with attitudes to a range of issues that have until recently tended to be treated quite separately: perceptions of safety and security, especially from crime, while travelling; threats to health caused by pollution (which is also of importance in Chapter 10 which includes a 'healthy environment'); the effects of travel choices on fitness through physical activity; and road safety in the sense of traffic accidents. Note also that Chapter 2 also includes reference to sources of stress while driving, which will have health implications though has not been discussed in that context.

General considerations about the safest form of transport

An ONS Omnibus Survey [021, 2005, Quantitative] reported that walking is considered the safest form of transport in terms of traffic accidents, but car is considered safest in terms of protection from crime (not including car-related crime, of course). However, substantial numbers of people consider that their local streets are dangerous and particularly young walkers and cyclists are deemed vulnerable to traffic. An explanation may be that in saying that 'walking is safe' people are also making a statement that it is not the *cause* of the danger that pedestrians experience, which is due to the traffic³⁵.

Vulnerable road users and fear of traffic

The evidence would suggest that children are deemed to be the most vulnerable road users both due to traffic related issues and the fear of crime. For parents security and safety and traffic are key reasons for driving children to school as well as trip chaining, according to a DfT evidence base review [014, 2000-2005, Review]. It is noted that success of travel plans is found to depend "as much, if not more, on parental attitudes towards children travelling by means other than by car as they did on practical barriers". Cycling was often seen as untenable because of busy, congested roads, poorly maintained road surfaces, lack of cycle lanes and, in winter, bad weather and inadequate street lighting. These concerns were heightened by the belief that other road users do not show adequate consideration towards cyclists.

Likewise, the National Travel Survey data for 2002/03 (referred to in [014, 2000-2005, Review]) revealed that "58% of parents of children aged 7-10 cited traffic danger as a reason for escorting their children to school, 45% 'stranger danger'. 42% of 7-10 year olds were not allowed by their parents to cross the road alone".

In the study of primary and secondary school children in Scotland [134, 2003, Mixed] limitations on being able to walk or cycle to school were: parental choice related to safety and timing/ convenience; and also school influence over cycling policy and storage facilities. A local authority practitioner highlighted conflicts in relation to safety with young people growing up with perceptions that many places are not safe to walk and with concerns about road safety. However, when asked about the various modes of transport,

³⁵ This definition of dangerous and safe behaviour is internally consistent, but quite different from that revealed in accident rates as used by transport professionals. An analogy might be the statement 'tigers are dangerous and children playing are not' ie the children are more at risk from the tigers than vice versa. This distinction seems essential in understanding how people insist that walking is safe but also report that they feel threatened by the danger to pedestrians in the streets.

pupils did not immediately associate any particular mode with being particularly safe or unsafe. When walking or waiting at bus stops, older pupils were concerned about their personal safety at various locations, particularly for the urban groups.

From an ONS Omnibus survey [023, 2004, Quantitative] it might also be inferred that people believe children to be more vulnerable from the finding that a higher proportion of parents with children are in favour of traffic calming/controlling measures in residential streets. "The more children living in the household, the more likely the respondent was to think that installing traffic calming schemes would solve the problem [of danger from traffic]. 46% of respondents with no children thought traffic calming was a solution compared with 50% with one child and 68% with two or more children."

Personal safety and fear of attack

There is evidence of a not insignificant fear of crime on public transport and in the street, but the evidence of the effect of these perceptions on mode choice is limited.

Several studies identify the car as being the safest mode in terms of the protection it can give against personal attack. According to DfT research into public attitudes to road pricing [238, 2004, Qualitative], "[t]he car was seen to be a safer option than using public transport because motorists believed they were less likely to become the victims of crime whilst using their cars". Similarly, in a DfT study of attitudes to car use [021, 2005, Quantitative] respondents were asked which forms of transport they considered to be most and least safe with respect to both accidents and personal safety and what impact concern about these issues had on transport choices. Three quarters 75% of respondents thought the car was the safest form of transport in terms of criminal victimisation. This is not surprising as the car is a private space to which the owner can control access. Walking was considered to be the least safe mode of transport in terms of victimisation - selected by 52%, followed by the train (20%) and bus (11%). Those who used cars more frequently were more likely to consider this the safest mode in terms of victimisation than those who used a car less. Reflecting this, the groups more likely to use buses in London were more likely to consider buses the safest form than other groups.

Omnibus survey results on people's experiences of and attitudes towards bus travel in GB [045, 2007, Quantitative] find that the majority of bus users said that they felt safe when travelling by bus. However, 11% said that they felt unsafe when on board buses and 20% when waiting at stops/stations. 27% of bus users said they had seen someone being insulted, pestered, harassed, threatened or spat at in the last 12 months; 10% had seen someone assaulted, mugged or robbed. These figures appear higher than would be expected given the level of actual incidents reported to police or operators, or reported in surveys of experience of crime. There may be issues of definition of what constitutes 'insult', 'pester' etc., or an under-reporting of incidents. However, the reports especially of unease at bus stops do reinforce concerns about perceptions of security in the streets. According to another ONS Omnibus survey, 11% of people in Scotland thought safety at bus stops was poor compared to 26% in London [028, 2001, Quantitative].

A survey of rail users and non-users [020, 2006, Quantitative] revealed the aspects of service that were least likely to be considered good). Whilst fares were most likely to be rated as poor (55%), personal safety from crime/threats at stations came second (44%) and personal safety from crime/threats on board trains (40%) came third. Interestingly, however, around a half of non-users considered safety from crime and threats on board trains (48%) and at stations (52%) to be poor. However, only 2% of non/infrequent users

mentioned personal safety concerns as a main reason for not using short distance train services or doing so infrequently³⁶.

DfT research cited in a DfT review on mobility [014, 2000-2005, Review] found that “[t]he majority of young people [aged 12-16] felt unsafe on buses and underground trains, and at bus stops and stations. Young people are more likely than older people to be victims of anti-social behaviour or crime on public transport. Twenty-three per cent of young people from black and minority ethnic groups experienced harassment due to their colour, race or religion, on public transport”.

Research for the DfT on attitudes to car use [021, 2005, Quantitative] shows that most respondents said that concerns about the risk of accidents and criminal victimisation had no impact on their transport choices (67% and 60%). The most common impact was deciding not to travel at certain times, particularly in relation to crime risk. Almost a quarter of respondents (23%) said they avoided certain times due to crime risk concerns; 15% said they did so because of accident risk. Around one in ten avoided certain routes/roads due to concerns about accidents or crime. A similar proportion avoided certain forms of transport. There were relatively few differences in the impact of accident and crime concerns across social groups. However, men were more likely to say such issues had no impact on their transport choices than women. Women were twice as likely to say they avoided travelling at certain times compared to men.

The 2004-2005 British Crime Survey included a set of detailed questions to assess people’s perceptions and experiences of crime and disorder on public transport. Concern about personal safety and anti-social behaviour was rarely given as a reason for not using public transport mentioned by 3% of those who rarely or never used public transport. The vast majority of regular bus users 95% said they felt safe when travelling by bus. However, 7% said they travelled by bus less than they otherwise would and 25% said they avoided travelling at certain times due to concerns about crime and disorder. Women were more likely to say concerns about crime impacted on their bus use than men³⁷.

At face value there is some difference between the findings of the British Crime Survey and those of MORI’s survey of attitudes to transport in England [042, 2003, Qualitative] where it states “personal security [with bus travel] is also (in addition to reliability and frequency) a major concern, with many respondents saying they do not feel safe travelling after dark due to threats from other passengers, mostly children/teenagers. The bus driver’s lack of control and inability to protect passengers’ personal safety is seen as particularly worrying”.

However, this may in part be due to the difficulty of comparing qualitative and quantitative results: the use of the phrases ‘major concern’ and ‘many respondents’ in the MORI work should not be interpreted as indicating the numbers of people affected. Taking both together the picture given is that crime/personal security is a concern from some people, and that this is likely to be expressed most strongly by those people who have stopped using buses, or reduced their bus use, as a result.

The GMPTE tracking surveys [161, 2004, mixed] implied that “making you feel safe when travelling by bus/train” was an important attribute.

³⁶ Note that the responses from non-users are based on those able to give an opinion, with a large number unable to do so.

³⁷ Public Transport Statistics Bulletin GB: 2005 Edition

DfT research into people in later life revealed that a barrier to bus use was fear of crime [011, 2006, Qualitative]. Research in Edinburgh on why people do not like buses [044, 2004, Mixed] found that safety concerns were endorsed by significantly more females than males, more low income than high income respondents and received most endorsements from the 25-34 age group and least from the over 64 group (seeming to contradict the DfT research, although specific to Edinburgh). Safety comments showed a fear of drunks, youths, teenagers and schoolchildren.

From the DVO private motorists survey [031a, 2005, Quantitative], 26% of motorists were dissatisfied with efforts made by the DfT Agencies to reduce driver and vehicle related crime.

Fear of terrorism

The effects of the July 2005 attacks on London's transport network on public attitudes towards travel were examined by a BMRB Omnibus survey [010, 2005, Mixed], carried out three months after the attacks. Respondents were asked if they had changed their travel behaviour since the July attacks.

A large majority of respondents did not report sustained changes to their travel behaviour in response to the attacks. At the time of the survey only 6% of respondents reported that they had made a sustained change in travel behaviour. There were three categories of respondents:

- no change to travel behaviour (89%);
- retained change (6%); and
- reverted change - i.e. people who had initially changed, but by October /November 2005 had reverted back to previous travel behaviour (8%).

Note, however, that this classification does not allow for people who might otherwise have started using buses in this period but had not done so. It also does not consider any potential affect on the Underground. All three groups' main purpose for travelling was commuting. A majority of respondents were not worried about travelling in London generally since the attacks (79%). Also, a majority were not worried about travelling specifically on London buses or the London Underground after the attacks (80% and 75% respectively).

That still leaves roundly 20% of people who said they were worried about travelling in London since the attacks, with a higher proportion of women (27%) than men (16%). 38% of respondents agreed that the introduction of additional security measures would make them more likely to use the Underground. 44% of respondents supported the use of body searches once a week or more. 21% of those surveyed said they would never support the use of body searches. Higher travel fares to cover additional security costs were generally unpopular.

Although the research indicates little change in reported travel behaviour as a result of the July 2005 terrorist attacks, it does indicate a significant proportion of people who are worried about them, and support for tighter security measures. It omits some categories of people who might be responding in a different way, especially that proportion of non-users who at any particular time would be expected to become users, and does not address the extent to which short term concerns become incorporated within a wider long term trend. In addition, if a small proportion of 6% were affected on each of several

occasions, that might become a more substantial issue. Therefore the issue of the long term importance of this question remains unresolved.

There were also a few results with respect to air travel and increased security addressed in DfT research into public experiences of and attitudes towards air travel [019, 2006, Quantitative], but this was before the attacks of the following months and findings would have to be treated with caution. "The majority (81%) of adults said they were satisfied with levels of airport security on their last visit to a UK airport. 68% of air travellers said that they would feel reassured by the presence of armed police officers at airports, though a slightly lower proportion (56%) felt that armed officers provided a deterrent against terrorist attacks. 64% of air travellers said they would be willing to pay a small additional charge (no more than £5) to go towards airport security, including policing."

The data sets considered within this review of public attitudes generally had less about air and airport security, and in any case this issue has been changing very substantially in the recent period.

Attitudes towards active and healthy travel

There is some evidence on attitudes to the health benefits of travel. An ONS Omnibus survey of 2003 [025, 2003, Quantitative] asked respondents how much they agreed with a series of statements about why people should be encouraged to walk and cycle. Over 90% of respondents agreed that people should be encouraged to walk to: help their health; help the environment; and to ease congestion (see Table 9.1). Slightly fewer respondents felt the same way about people being encouraged to cycle for these reasons, with the same pattern of decreasing support across the three issues.

Table 9.1. Proportion (%) of respondents agreeing with statements concerning walking and cycling

People should be encouraged to ...	walk ...	cycle ...
... to help their health	97	87
... to help the environment	94	79
... to ease congestion	92	73

Source:[025, 2003, Quantitative; pp. 7-8]

From the same source [025, 2003, Quantitative], walking is considered to be a more important form of transport for respondents than cycling. 60% felt that walking was an important form of transport for themselves and 38% did not. In contrast, just 16% of respondents thought that cycling was an important form of transport for themselves whereas almost four-fifths (79%) disagreed.

A DETR study of car drivers [073, 2000, Qualitative] found that both walking and cycling were generally seen as modes of transport for leisure and recreational journeys and for keeping healthy. DfT research addressing young adults [012, 2006, Qualitative] suggested that health did not seem to play a significant role in the choices young people made about transport among the respondents of that study.

A study of primary and secondary school children in Scotland reveals more insight into influencing factors associated with young people's attitudes towards walking and cycling as set out in the remaining paragraphs below in this sub-section [134, 2003, Mixed].

In terms of factors influencing travel decisions, healthy exercise was ranked 4th in importance, whilst 'goes from door to door' was ranked as the least important issue in making the decision (11th). Respondents were generally neutral on the road safety and stranger risks. All interviewees commented that peer pressure was one of the most significant factors for young people. If cycling is not regarded as a socially-acceptable form of transport amongst a certain age group then it will be very hard to encourage more people to cycle. The survey results corroborated this. The construct of cool -v- not cool first comes to light in the primary aged 6/7 group, and indicates an early recognition that transport is more than just about getting around. Cool -v- not cool is a very social construct - it is not just about how I feel about something (my personal experience) it is about how I think others might see me. Respondents were asked to rate different forms of transport as being '*cool/ trendy*' and therefore potentially fitting their lifestyle, or not '*cool/ trendy*'. For all pupils, the car and train are seen as most acceptable, with taxis and cycling the least popular. For boys, the acceptability of cycling is substantially greater than for girls. Buses and walking are viewed with much greater regard by girls. Boys of lower secondary age are more open to messages relating to health and fitness than girls, while the latter attach greater importance on walking and bus use for social reasons.

Children at primary school level are generally enthusiastic about walking and cycling, recognising health and environmental benefits and with the provision of personal freedom, independence, ability to explore their surroundings alone and with friends, and also provide fun. For older children, attitudes to walking were generally favourable, and again there were good levels of understanding of health and environmental benefits. The ability to mix with friends, for example, on the journey to school was important, especially for girls. Getting fresh air and waking up before school was also important. However, attitudes to cycling were less positive with increasing age, stronger peer pressures and the perception of fashion / 'coolness'. Even at an early age, it seems that there is an awareness of the benefits of car use and that quite quickly the fun element of riding bikes is replaced by the downsides of cycling - getting wet; slow speeds and risk of theft.

Concerns about air quality

In a review of public attitudes to climate change and transport behaviour [037, 2006, Review], it was shown that at least until relatively recently, *visible* emissions are of more concern than CO₂ emissions and air quality is of more concern than climate change, and certainly of equal concern to congestion. This is presumed to be due to the link in people's minds with these localised emissions and the effects on their own health. However, whilst there may be concern, there may still be confusion over the causes, nature and effects of air pollution from transport. For example, the review cites one study by Lane (2000) which highlighted how ozone was believed to be an issue because of its depletion (within the stratosphere) and it seemed few are aware of the environmental and health issues relating to the toxicity of ground-level ozone.

This issue is discussed further in Chapter 10.

Perceived danger of accidents on different modes of transport

We have mentioned the distinction between a mode being thought of as safe in terms of its danger to others and safe in terms of the risks involved when using it. However, there is relatively little evidence on the risks perceived one way or another for different modes

specifically in terms of the risk of accidents when using that mode. One survey [021, 2005, Quantitative] showed that walking was most often considered the safest mode, with 45% of respondents thinking this was safest in terms of accidents. A fifth (22%) selected train as the safest mode, 16% bus and 15% car. Motorcycles were considered the least safe mode by 70%, followed by bicycle (13%) and car (9%). Those who said they made all or most of their trips by car were more likely to consider cars to be the safest mode with regard to accidents (18% did so), than those who made a lower proportion of trips by car (8%).

Passenger Focus research into priorities for rail improvements [049, 2007, Qualitative] reported that safety was not a top of mind issue for participants in spite of a recent major rail incident. Men were more likely to consider trains the safest mode in terms of accident risk than women (30% versus 16%). Those in managerial and professional occupations, groups who frequently use rail services, were more likely to consider trains to be safest than those routine and manual occupations.

Road safety

Of the health and safety issues related to transport, road safety appears to have received the most attention in studies of attitudes. Although road safety itself can be broken down into various components, the broad issue appears to rank as important to people even when compared to issues unrelated to transport. In a review for the DfT of public opinions to road safety in the context of its campaign 'Think!', road safety emerges as the third most important issue for government to address, after anti-social behaviour and hospital cleanliness [264, 2006, Review]. This view was especially prevalent among young men and women; those with children under 15; drivers of lorries/van or motorcycles and the 'school runners'.

The Think! Road safety campaign evaluation report [181a, 2007, Quantitative] shows that drink driving (69%), speeding (43%) and use of mobile phones whilst driving (40%) were seen as the key issues that the government should address. The top three has remained the same since 2005. On a scale of 1 to 5 in terms of unacceptability of behaviour, each of these behaviours received a 4 or 5 [181b, 2006, Quantitative].

In general, dangerous driving behaviours are more prevalent amongst male drivers, younger drivers and those covering long distances a year or driving for many hours in a typical week. Women and older respondents tend to be more likely to be aware of the dangers from each driving behaviour and these groups were also more likely to think that certain driving behaviours were extremely unacceptable [181a, 2007, Quantitative].

Attitudes to drink driving

Various surveys confirm that drink driving (over the limit) is now socially unacceptable in the UK. The Think! evaluation reports found about nine in ten respondents completely agreed that driving when over the legal alcohol limit or under the influence of a Class A drug was dangerous. The numbers are identical for the November 2006 and November 2007 surveys [181a+b, 2006+2007, Quantitative]. These attitudes seem to be largely reflected in behaviour with increasing numbers of people either not drinking at all when they drive, or keeping within the legal alcohol limit - see the DfT study examining public opinions towards road safety [264, 2006, Review]. Despite this, a sizeable minority of people drive when over the limit and this minority seems to have little regard for safety messages or the danger they present on the roads. In the DfT study [264, 2006, Review] it is stated that about 40-50% of drivers said they had driven after drinking some amount of alcohol - and almost all of them thought they were only slightly over the limit. They were drink and driving because they still felt safe to drive, demonstrating great confidence in themselves and in their own assessment of their suitability to drive/ability to drive. It

does seem, also, that many others do not plan to get over the limit, but they find it difficult to know for sure how many units of alcohol they have consumed.

However, the 2006 British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative] revealed 82% of people think that if someone has drunk alcohol they should not drive and 74% think that anyone caught drink driving should be banned for at least 5 years. This leaves a not insignificant minority who believes that it is ok to drink and drive.

Moreover, 67% believe that most people do not know how much alcohol they can drink before being over the legal limit [169, 1992-2006, Quantitative]. Another study [181a, 2007, Quantitative] compared people's attitudes towards dangerous driving behaviours with how they actually behave, and found one in twenty (6%) of drivers over 18 years of age admitted that they had driven when over the legal alcohol limit and a further 14% admitted to driving when they were not sure if they were over the limit. Men are more likely to drive when over the legal alcohol limit (8% and 2% respectively), as are younger drivers (13% of those in the 18-34 age group compared with 4% of those aged 35 and over). Young men aged 18-29 are the worst offenders (25% compared with 5% of men in other age groups). (Not only the young drink and drive - "it is also older drivers, particularly those with company cars/luxury cars and/or those who cover high mileage according to the DfT review [264, 2006, Review].) In addition, those from ABC1 backgrounds are more likely to say that they have driven after drinking (7% compared with 4% of C2DEs). The same groups are more likely to drive when unsure if they are over the legal alcohol limit and the numbers are higher [181a, 2007, Quantitative]. According to the review for the DfT, the Association of British Insurers (ABI) "have stated that the uninsured motorist is 10 times more likely to drink and drive and also three times more likely to be convicted of driving without due care and attention" [264, 2006, Review].

Driving while under the influence of drugs

Drugs appear to be a different matter altogether, with the combined lack of peer pressure and enforcement seeming to lead to some relaxed attitudes - according to the review for the DfT [264, 2006, Review]. While the general view is that it is totally unacceptable and dangerous, there are some who appear not to have picked up or internalised the message that it is illegal and dangerous. Everyone accepts that driving under the influence of hallucinatory drugs or heroin is unacceptable. However, one of the problems appears to be that 'drugs' is too broad a term - there seems to be a need to discriminate better, or describe more clearly what is meant by drugs. Drivers accept alcohol and driving is dangerous/wrong but the soft(er) drugs message is comparatively absent [264, 2006, Review].

In one study, very few people admit to driving after taking Class A drugs or smoking cannabis (1% and 2% respectively) [181a, 2007, Quantitative]. However, according to opinion poll research cited in the review of public opinions towards road safety for the DfT [264, 2006, Review], "more than 20% of people admitted driving shortly after taking illegal drugs and 7% of them have been involved in an accident while impaired by drugs". This study found that these people offend partly "because they think they can get away with it and 1 in 3 said they would be deterred if the police did more checks and a further 13% if the punishment was more severe". Although they may accept rationally that it was socially unacceptable to drive after taking drugs there was no contextual peer pressure to dissuade them and they had no fear about being a passenger in a car driven by a drug driver - unlike drink driving. Indeed, cannabis is the most likely to be taken when driving and is seen as safe, much safer than drinking and driving. Those who drive after taking cocaine are unsure about the risk in taking it and driving and its use is increasing.

As with alcohol and drink-driving, those whose peers drug drive are also more likely to behave in variety of other dangerous ways, including drink-driving, not wearing a seatbelt, and using a hand-held mobile phone while driving. In addition, the review study [264, 2006, Review] claims children are picking up bad habits from their parents, including the parents' bad driving behaviours, from speeding, drink-driving, drug-driving, etc.

Breaking speed limits

A remarkable feature in studies of attitudes to speed limits is the contrast between an apparent high level of support for enforcement of speed limits, and also lower speed limits in some contexts, at the same time as an apparently high tolerance of exceeding the speed limits as 'acceptable' or 'normal' behaviour, and support for higher speed limits. The difference seems in part due to differences in responses when 'drivers are being interviewed as drivers' and 'residents are being interviewed as residents' (even if in some cases they must be the same people). There is also a tendency for research reports to use phrases like 'the public view' (with the implication of near unanimity) even on issues where there can be quite strong divisions of opinion.

There is wide acceptance that speed limits and enforcement are a good thing'.

A DfT review which synthesised results from a number of studies [232, 2008, Review] concluded that compared to other dangerous driving behaviours, such as not wearing a seat belt, higher proportions of people did not consider speeding as a dangerous behaviour in itself. Whilst there is support for lowering speed limits in residential areas or close to school and where people live, there are certain circumstances when speeding is acceptable to many (e.g. on a motorway; when the road ahead is clear; in a non-residential area). According to NOP and TNS surveys, drivers consider that speeding is less of a problem/less serious than drink/drug driving or using a mobile phone [264, 2006, Review]. Indeed, despite campaigns on this issue, a review of public opinions towards road safety for the DfT found there does not appear to be a great deal of understanding about why speeding is so dangerous [264, 2006, Review]. Similarly, another review found in general, about three quarters seem to agree that driving too fast for the conditions is dangerous and 40% agree that it is dangerous to drive over the speed limit at all [264, 2006, Review]. Large majorities are reported for reducing speed limits in residential or urban areas to 20mph: this is discussed in Chapter 10.

In the 2006 BSAS [169, 1992-2006, Quantitative], "[a] very high proportion (92%) of the population agree that people should drive within the speed limit.", but more respondents thought that exceeding the limit was acceptable on a motorway than a dual carriageway appearing to do so because 'the former is built for speed'. On build up roads with a 30 mph speed limit, most people agreed that to drive at 40 mph would be dangerous. However, nearly a fifth of respondents thought that it would be safe to drive at 35 mph or above if the road was clear. Most people (48%) thought that a safe speed to drive would be between 30 and 34 mph on such a road. Those who walked regularly and inhabitants of rural areas were more likely to think that lower speeds were safer [024, 2004, Quantitative].

The issue of speeding also illustrates a seemingly large gap between attitudes and behaviour. It seems that many people endorse responsible speed behaviour when asked their opinion of statements such as '*driving at 40mph in a 30mph speed limit area*', but their behaviour does not reflect this. For example, in the road safety campaign evaluation annual report [181a, 2007, Quantitative], 75% of drivers admitted to driving over the speed limit and 29% admitted to speeding one or more times a week. In the same survey, 42% agreed to the more specific speeding question '*driving at 90mph on the motorway when there is no traffic*' and 17% admitted to doing this at least once a month.

Similarly, the DfT review of public opinions towards road safety [264, 2006, Review] observed that, despite general support for appropriate speed adherence, the majority of drivers admit to breaking the limit on a daily basis. It cites a Brake/Green Flag survey in which 30% of the sample drove '*more than 35mph in a 30mph zone*' at least once a week and 11% did this more than once a day. An NOP survey found that 15% of respondents speed at least once a week and in the Admiral 2005 Annual Drivers Survey, 17% said they frequently exceeded the speed limit. Quoting from the 2005 RAC report on motoring, 84% of respondents considered themselves to be law-abiding although 55% of them admitted to exceeding the speed limit a little every day. According to the review [264, 2006, Review] "[t]he 2006 RAC survey claims speeding as the most commonly committed offence, with only around a third (37%) of people who don't [underlining in source] break the limit on a daily basis (this is backed up by numerous surveys), and this finding supports DfT data on traffic speeds that suggests speeding is endemic". The reviews observes that "speeding of course is frequently accompanied by aggressive driving behaviour such as tailgating, undertaking, or even road racing, especially amongst young men" [264, 2006, Review].

As with other dangerous driving behaviours, speeding is slightly more prevalent amongst men (78% compared to 70% of women) and those in the 25-44 age group. Whilst this is a slightly older age group than for other behaviours (82% in this age group compared with 69% in the other age groups), the age of driver (being young) is found to have a significant impact on the behaviour of exceeding speed limits on all roads except for motorways in more than one study reviewed. Also, the presence of a male passenger would encourage drivers to drive faster, while the presence of a child or elderly would encourage the driver drive more slowly [264, 2006, Review].

In order to diagnose why breaking the speed limit is so endemic, one clue may be in drivers' perception of other drivers, which of course may themselves be based in reality. In the review of public opinions towards road safety for the DfT [264, 2006, Review], Holder found that perception of risk is minimised and legitimised "everyone does it - I know what I'm doing" and there tends to be a belief that the benefits outweigh the risk. Drivers tended to break the speed limit when 'all the traffic around them was already breaking the limit', and the majority (92%) of drivers in the UK considered that other drivers exceeded the speed limit often, very often or always.

According to the Think! road safety campaign evaluation [181a, 2007, Quantitative], those driving high mileage in a typical year are more likely to admit to speeding (88% of those driving 10,000+ miles a year falling to 60% of those driving up to 3,000 miles a year); as were those in households with children (80% of them admit to driving over the speed limit compared to 70% of those in households with no children). The former group may be those labelled the 'Frustrated Business Driver' group who were found to be the most inclined to speed and justify their behaviour by claiming to be always under pressure commonly using the excuse 'I was in a hurry' [264, 2006, Review]. Others see themselves as being in control of the situation. Many drivers feel they know better than the authorities and claim they break the speed limit because they think the speed limit is too low (typically people drive 10 mph over the limit) - in addition some young people tend to be more willing to take risks, place emphasis upon thrill seeking, and do not see road safety as an important issue. According to research by Spalding and Meadows cited in the review [264, 2006, Review], for young drivers "speed is a positive state in mainstream culture". However, speeding behaviour differed according to type of road network, e.g. impact of driver enjoyment of driving fast on the driver's attitude towards exceeding speed limits was only found significant on motorways.

Another group containing a significant number of people who break the speed limit is motorcyclists [264, 2006, Review]. These are often riding beyond their ability and skill and frequently fail to negotiate bends on rural A roads or cope with other hazards. According

to the review "[o]ne of the major problems is that many were bike/scooter riders in their youth and these riders have returned to two wheels but gone straight to the larger engine bikes without gaining sufficient experience or skill in handling it". The review suggests that "[t]he requirement for this category of rider is to obtain the training and acquire the skill that he needs to be a safer motorcyclist" but goes on to note that "[t]he barriers to this are his desire for thrill, sensation, freedom and speed and the challenge is how to reduce his risk without spoiling the fun".

Attitudes to other dangerous driving behaviours

Seatbelts - According to the Think! road safety campaign evaluation [181a, 2007, Quantitative] almost all people agree that wearing a seatbelt is something they have to do (94%) and 90% agree that it is something they want to do and consider that it makes them feel safer. However, only 34% feel that wearing a seatbelt makes them *drive* more safely. Just under a quarter (24%) of drivers admit that they have ever travelled without using seatbelts in the back of the car, but only 10% said they travelled in the front of the car without a seatbelt. Few travel without seat belts in the back of the car on a regular basis, however of this small group, nearly half of them travel in the front without a seatbelt one or more times a week. Men and younger people are more likely to travel without a seatbelt in the front of the car, as are smokers and those driving for long periods of time in a week. However, the sample numbers are very small for this behaviour.

Mobile Phones - Research was carried out for the Health and Safety Executive on risk perceptions of mobile phone use while driving (before the 2002 announcement by the Government of a consultation concerning potential legislation) [096, 2001, Quantitative]. The report's literature review, note a general conclusion from various approaches that hands-free and hand-held phone use both increase the risk of an accident while driving. They note too that "problems seem to be associated with the cognitive demands of a conversation". The authors tentatively suggest that using a hand-held mobile may be seen as particularly dangerous compared against other activities because "familiar hazards tend to become 'normalised'", by which they seem to mean treated as being part of normal life. Familiar hazards with equal risk are thus suggested to be more acceptable. The difference between hands-free and hand-held responses is taken to suggest that "people tend to focus [in their perception of risk] on the physical rather than cognitive distraction".

Before the implementation of legislation in 2007 governing the use of mobile phones while driving, questions were asked in the 2006 British Social Attitudes Survey (BSAS) about attitudes to mobiles and driving [169, 1992-2006, Quantitative]. The vast majority (90%) of people thought it was not safe to talk on a hand-held mobile while driving and 59% of people thought that all use of mobile phones while driving, including hands free, is dangerous compared to 27% who disagreed. Half thought that all use of mobile phones while driving including hands free should be banned compared to 33% who disagreed.

According to the Think! road safety campaign evaluation [181a, 2007, Quantitative] almost two in ten (17%) had used a mobile phone whilst driving without using a hands free kit after the legislation change, and 12% had texted on a mobile whilst driving. These mobile phone behaviours are more common amongst younger drivers, and also among those in ABC1 backgrounds.

Aggressive and poor quality driving - A considerable theme in attitudes to driving evidence is the experience of other people's quality of driving. In the DVO private motorists survey [031a, 2005, Quantitative] in 2005 39% of motorists were satisfied with the general standard of driving today while 42% were dissatisfied. The main reasons cited

for dissatisfaction were 'the poor standard of driving' (29%), 'aggressive driving' (21%) and 'lack of consideration for other road users' (19%).

According to the review of public opinions towards road safety for the DfT [264, 2006, Review], the proportion of drivers who state that they experienced aggression towards them is higher than the percentage of drivers who admitted their own aggression towards other drivers. The reviews refers to identification of aggressive driving in the Sartre study (from which Table 9.2 is taken) in noting that this repeats "findings of other surveys that when self reporting behaviour drivers report the dangerous behaviour of others yet consider their own behaviour relatively safe, even though they frequently admit some kind of dangerous behaviour".

Table 9.2. Aggressive driving behaviour (% of respondents)

experienced aggressive behaviour on the road directed towards them in last 12 months	47
exhibited aggressive behaviour on the road themselves towards other road users in last 12 months	17
think their own driving is less dangerous compared to other drivers, a bit or a lot	66

Source: [264, 2006, Review]; original source - European Drivers and Road Risk Sartre 3 June 2004

Table 9.3. Proportion of road users (%) agreeing to having experienced poor driving on their most recent journey on the HA network (2004-05 to 2006-07)

	2004-05	2005-06	2006-07
I have experienced poor driving on my most recent journey ...	35	36	39
Trend in types of poor driving on the network:			
Speeding	44	45	46
Tailgating	28	30	35
Not signalling	28	27	28
Drivers cutting you up	30	26	30
Lane hogging	23	20	23
Drivers using mobile phones	15	19	19
Slow driving	10	10	10
Undertaking	7	9	8
<i>Base</i>	<i>779</i>	<i>786</i>	<i>978</i>

Source: National Road Users' Satisfaction Survey 2006-07 [030a, 2006-2007, Quantitative; Table 6.1]

More detail is given in the Highways Agency's Road Users Satisfaction Survey [030, 2006, Quantitative] which asked respondents about specific journey experiences on the Agency's Network and whether they had experienced any poor driving on their most recent journey (see Table 9.3). Over a third (35%) of respondents had experienced poor driving on their most recent journey in 2004-05; this increased to 36% in 2005-06 and 39% in 2006-07. While this was not of concern to about 60% of the people, there were about 40% who found it disturbing, with a greater proportion of women being bothered by it than men. (There is an indirect hint in evidence on this that men are more likely to drive badly, and

women more likely to be troubled by it.) There was a strong variation by region. The main behaviours of concern were learner drivers, road rage, jumping traffic lights, intimidation, undertaking, slow driving, drivers using mobile phones, lane hogging, tailgating, lane jumping, not signalling, drivers cutting you up, poor overtaking and speeding.

It is of interest that bad driving was also perceived as one of the causes of congestion, not only of stress and annoyance. In qualitative research commissioned by the DfT to examine perceptions of congestion on motorways [256, 2005, Qualitative] it was found that two related problems faced by motorway driving were bad driving (and the potential this creates for accidents) and busy congested motorways. Bad driving “was seen as both a cause of motorway congestion and also something that could make congestion worse”. Heavy and stop-start traffic congestion was most frustrating because of not knowing the cause and assuming it might have been avoided if caused by bad driving. Frustration here was “also linked to the amount of effort and concentration required to drive in this type of traffic”. Such congestion for familiar routes where it is unexpected was most frustrating.

Table 9.4. Attitudes towards dangerous driving behaviours - proportion of respondents (%) opposed to behaviours

Behaviour	Nov-07	Nov-06
Drive when over alcohol limit	98	92
Drive when unsure if over alcohol limit	94	92
Use mobile phone without hands free	93	92
Use mobile phone to text whilst driving	93	92
Drive too fast for conditions	93	93
Drive after taking Class A drugs	93	93
Carry on driving when too tired	92	92
Drive after smoking cannabis	91	90
Don't use seatbelts in front of car	91	92
Drive without insurance/MOT	89	89
Don't use seatbelts in back of car	89	89
Drive over speed limit	85	85
Park on double yellow lines	77	77
Use mobile phone with hands free	72	73
Drive at 90mph on motorway when no traffic	69	69
<i>Base</i>	<i>2019</i>	<i>2259</i>

Source: Think! road safety campaign evaluation [181a, 2007, Quantitative, charts 5h to 5j]

Putting these results together, Table 9.4 sets out attitudes (disapproval) towards various dangerous behaviours. It may be seen that there are high levels of disapproval for all of them, ranging from near unanimity on drink-and-drive, down to nearly 70% on motorway speeding when there is no traffic.

Attitudes towards policies to improve road safety

There has been little change in satisfaction with efforts made by the DfT Agencies to improve road safety (2005: 52% and 2004: 54%) [031a, 2005, Quantitative]. 21% of motorists were dissatisfied with efforts made by the DfT Agencies to improve road safety, with 22% saying that there is too much emphasis on speed cameras [031a, 2005, Quantitative] though a DfT Review which synthesised a number of studies concluded that 96% of people also believed that penalties for dangerous driving should be increased [232, 2008, Review]. The DfT Citizens' Panel [225, 2008, Qualitative] found that on the question of reducing the numbers of people killed or injured in accidents, the most frequently raised key themes by the 200 panellists questioned included: better roads/markings/town planning; higher standards of driving; and stricter speed controls.

As with attitudes towards speeding itself, views are also mixed about enforcement of speeding and there appears to have been a shift in attitudes against speed cameras according to results from the British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative]. In 2006, the British Social Attitudes Survey (BSAS) found that while 55% agreed that speed cameras save lives, 51% thought that they '*are there mostly to make money*' (compared to 25% who do not). It is interesting to note that the proportion agreeing with this statement *fell* in the BSAS results from a figure of 58% in 2004. However, the BSAS findings contrast to the earlier attitudes to road safety ONS Omnibus survey results of 2004 for DfT [024, 2004, Quantitative] where it was found that a higher proportion (72%) agreed that speed cameras were effective in reducing speeding, but a lower proportion of just over a third (35%) agreed with a slightly different statement that '*speed cameras are only used to raise money*'. In addition, in 2006 (BSAS) [169, 1992-2006, Quantitative] 42% believed that there are too many of them (28% disagree), compared to only 30% (65% disagree) who thought there were too many in 2004 (DfT ONS Omnibus survey results) [024, 2004, Quantitative].

Once again these attitudes differ according to road type. According to BSAS results, on residential streets, 76% of people are in favour of having speed limits of 20mph, 47% are in favour of having speed bumps to slow down traffic although only 37% are in favour of closing residential streets to through traffic (down from 47% in 2005) [169, 1992-2006, Quantitative]. By contrast, motorways are one area where there is a great deal of agreement that the speed limit should be raised.

DfT research into public attitudes to new technologies [257, 2006, Qualitative] found that "[a]ttitude towards driving strongly influenced acceptance of the different technologies presented. Those participants who were more likely to comply with traffic regulations, such as speeding and driving through red lights, were generally more positive towards technology that could be implemented to enforce them." "One of the biggest concerns raised by participants was the potential for the technologies under discussion to be used for a wide range of different purposes from those originally intended, such as road pricing, and that their functionality could be extended with greater ease following installation."

Attitudes towards policies on health, safety and security

ONS Omnibus survey results for DfT [025, 2002, Quantitative] found that over 97% of respondents agreed that people should be encouraged to walk to help their health - the figure was 87% for cycling. "Just 6% of respondents agreed with the suggestion that '*pedestrianised areas simply inconvenience car users*'. A slightly higher proportion, 11%, agreed that '*cycle lanes on roads simply reduce space*'. This difference may reflect the fact that respondents generally cycle less than they walk, with only 8% of infrequent car users agreeing that '*cycle lanes simply reduce road space*'. 68% of respondents also agreed

that '*cyclists should be given more priority*', with 73% holding a similar view about pedestrian prioritisation."

Work undertaken by Socialdata for Lancashire County Council involved 638 depth interviews with members of the public in Preston/South Ribble and Lancaster/Morcambe [240a, 2006, Mixed]. This revealed that "the vast majority [84% or more] of residents of both areas would support measures favouring walking, cycling and public transport even if these were to the disadvantage of car users". The research considered reasons why people do not cycle for given trips. It identified the following: constraints; no objective choice (e.g. journey too long); infrastructure (perceived); time; comfort; and community climate. In turn these are divided into 'constraints/no objective choice' and 'only subjective reasons against cycling': the research suggests that for 29% of trips in Preston/South Ribble and for 25% in Lancaster/Morecambe there is no objective barrier against cycling. Similar work for Darlington in 2004 [240b, 2004, Mixed] also looked at participants views on how mode use might change when looking ahead to 2010. Nearly three quarters thought there would be no increase in public transport use while 52% and 69% anticipated no increase in cycling and walking respectively. This study also found similarly high support for measures favouring walking, cycling and public transport even if these were to the disadvantage of car users. This was found in similar research for Peterborough [240c, 2004, Mixed] and Worcester [240d, 2004, Mixed].

10 Promoting quality of life for transport users and non-users, including through a healthy natural environment with the desired outcome of an improved well-being for all

Key Findings

Not counting the 'bigger picture' of impacts on climate change which is discussed in chapter 8, there are three other ways in which people feel transport affects their quality of life: (i) crucially, transport provides the means to participate in the whole range of economic and social activities outside the home; (ii) conditions of the travel itself can be enjoyable or unpleasant, and mostly a mixture of the two; and (iii) the safety and pleasantness of the local environment, especially residential streets.

Some key problems affecting a majority of people's lives are exhaust fumes in towns (74%), congestion in towns (73%), and traffic noise in towns (51%).

Older respondents attached great importance to transport for meeting basic needs, preserving a sense of independence, gaining access to sources of mental stimulation, such as meeting people and leisure pursuits; playing an active role in the community e.g. through membership of clubs; gaining physical exercise and engaging in activities that they enjoyed. Some people were deterred from using community transport because of they perceived a stigma, though others found it enjoyable and friendly.

Studies have varied in their conclusions about how different modes contribute to quality of life. One study reported higher levels of self-esteem and life satisfaction for car users, while public transport use had detrimental physical and psychological effects due to weather and perceived stigma, though this is not universal.

A third of people reported having difficulty in accessing certain everyday facilities because of transport problems. Of the facilities considered, access to the local hospital was most identified as difficult to access (15% of people), and the most frequently reported reason for those with difficulties was inadequate public transport. A larger proportion of respondents aged 16-24 (52%) reported more accessibility difficulties than other respondents. Places they particularly mentioned were friends and family (23%), hospital (21%) and college (15%). 15% of 25-44 year olds said they had difficulty getting to work, as did 10% of those aged 16-24 and 45-54.

The three most popular attributes people look for in a street when choosing a place to live were: feeling safe when walking around, a good general environment, and a well maintained street. A majority of people want their local streets to be used for a range of activities other than traffic flows (though a smaller majority for people with two or more cars than people with no cars). The three activities that respondents thought should have most priority were parking for residents, children playing, and walking.

There are majorities in favour of more traffic calming (especially for respondents with two or more children). A speed limit of 20 mph was favoured by nearly 80% of people; 60% supported use of speed humps; 52% closing streets to through traffic. There are large majorities who declare themselves in favour of giving pedestrians and cyclists priority in towns and cities, *'even if this makes things difficult for other road users'*.

Measures of the degree of satisfaction with the way in which services are provided are reported for: the DfT Agencies as a whole; Highways Agency, the DirectGov website combining services from the Driver and Vehicle Licensing Agency (DVLA), the Driving Standards Agency (DSA) and the Vehicle and Operators Services Agency (VOSA). Figures of 80% or more of drivers are satisfied with the services they receive, but the proportions satisfied with efforts on safety, environmental protection, driver and vehicle related crime; and pursuit of offenders were lower.

Introduction - scope of this chapter

There is a practical difficulty in collating evidence related to this policy goal, because the language is rather general and overlaps with all the other goals: a full assessment of the evidence would involve excessive repetition. Therefore we first briefly explain how we have interpreted the goal and its relationship with the others.

‘Quality of life’ and ‘wellbeing’ are widely used phrases, though not necessarily in the same way by everybody, and in one sense embrace aspects of all the other policy goals since all of them seek to improve quality of life in one respect or another. For this reason, we include here a short overview of the key findings from other chapters which relate to the highest level of the contribution that people feel transport makes to the quality of life as a whole.

The distinction between ‘transport users and non-users’ has been a common feature of survey reports of each of the separate modes of transport in chapters 2-6. However, there it has a specific significance, of distinguishing say between bus users and non bus users - not transport as a whole (and as we discuss further in chapter 12, can be elusive and misleading due to the frequent difficulty in defining ‘non-user’ unambiguously). We do not consider that question in this chapter, except to say that non-users of any particular mode may become users at other stages in their life and all results have to allow for this flexibility of definition. Nor do we consider the very specific issues of quality of life of restrictions on travel due to disability, which are covered in chapter 11. Rather, we interpret this distinction here as applying to the different influences that transport has on people in their capacity as transport users, and the same people in other capacities notably residents of areas affected by traffic.

‘A healthy natural environment’ clearly relates to the considerations of climate change in chapter 8 and travel modes that are beneficial to health in chapter 9; ‘improved well-being for all’ also relates to promoting greater equality of opportunity in chapter 11. Here, we focus more on those aspects of the environmental impacts of transport which relate to local air quality and the pleasantness of local living conditions.

Within this general policy goal, the DfT has also been interested in attitudes to ‘service transformation’, concerned with the satisfaction or otherwise that people feel with the services offered by the Department and related agencies, and relationships with front-line staff.

Putting these considerations together, we first summarise the higher level linkages which are discussed more fully in other chapters, and then consider in more detail research which has focussed more specifically on wellbeing as affected by the quality of the travelling experience and its effect on local living condition, and finally attitudes to the various transport agencies.

Attitudes on high level interactions between transport and the quality of life

A theme throughout the evidence considered has been a general understanding that just as transport and travel choices are rooted in the structure of activities undertaken by individuals and families, so attitudes to transport are also rooted in deeper values and aspirations of how people want to lead their lives. Some form of travel is the universal condition for participation of all those activities done outside the home - it thus follows that where quality of life is enhanced through participation, transport must make a positive contribution to quality of life. However, there is substantial evidence that within this general context, transport is felt to make both positive and negative specific contributions to quality of life, as follows.

Car use - (see chapter 2, 7 and 8) Motives for car ownership and use include an important desire for 'independence' and 'freedom', provided by personal mobility directly under the control of the individual. However, then people sometimes become more dependent on the cars themselves, which in turn can inhibit or constrain the independence sought, resulting in some car use becoming more a matter of habit. As well as positive views, people express a wide range of irritations and frustrations about car use, notably in relation to: stress; congestion; road works; the poor quality of other road users' behaviour; and parking. Congestion is widely seen as a serious problem for the country (though less so for individuals themselves).

As a result of the positive and negative features taken together, a substantial proportion of drivers say they would like to drive less than they do (maybe nearly half say this, though there are ambiguities in the statistics). This suggests that although car users in general are positive about its role in their life, a significant proportion feel trapped into driving more than they want.

Bus Use - (chapter 3) Formerly common views of negativity towards bus travel are not necessarily borne out by recent evidence, where large majorities reject the view that buses are only for people who cannot afford any better; though nearly half say they would only use buses themselves if there were no other choice. Among those who do have no choice (and some of those who do), bus use is considered essential. Perception of the quality of bus services among users is generally better than that reported by non-users. 72% of users of local bus services rated them as being fairly or very good. Among non-users, 44% rated them as good. (As discussed in chapter 12, there is a problem of interpretation of 'non-user', and here this includes infrequent users.)

Walking and Cycling - (chapters 4 and 9). Over 90% of people are in favour of action to enable or encourage more walking to improve personal fitness, and large numbers (though not quite so many) have a similar attitude to cycling.

Rail Use - (chapter 5) Indexes of 'satisfaction' are difficult to interpret as they are based on usually non-explicit expectations. That said, over 80% of passengers are satisfied with rail service provision. They think positively about the journey overall, especially for inter-city services where passengers have higher levels of satisfaction than other rail users.

Air Travel - (chapter 6, 7 and 8) Overseas holidays are widely seen as an enjoyable way of life. On the other hand, a large majority believe that air travel harms the environment: the resulting attitudes towards airport expansion and restriction are complex, not all consistent, and very sensitive to context.

It is obvious that the bigger picture of what climate change might do to quality of life overall is a subject of concern, but the resulting attitudes are discussed in chapter 8 and we do not consider them further here. Apart from this, there are three other ways in which people feel transport affects their quality of life:

- First, and importantly, transport substantially underpins people's access to other people, goods, services and opportunities - it provides the means to participate in the whole range of economic and social activities outside the home, ranging from short walks to local destinations, up to long haul flights for distant holidays.
- Secondly, the conditions of the travel itself can be enjoyable or unpleasant, and mostly aspects of both. There is no universally loved travelling experience or mode, with some smaller or greater degree of dissatisfaction being part of the price one pays.

- Thirdly, there is the impact that transport, especially road traffic, has on the safety and pleasantness of the local environment, especially residential streets: this is mostly seen as negative.

We now turn to consider the second and third of these aspects in more detail.

Concerns of safety and security while travelling

There are substantial concerns about both safety and security while travelling, notably for pedestrians in residential and other streets, at bus stops and stations, and in buses and trains. Concerns about terrorist attacks lead to support for stronger security measures, but are not reported as having caused large lasting changes in travel choices. Parental concerns about both traffic danger and security are important motivations in what travel their children are permitted to undertake. More detail on these aspects is given in chapter 9.

How serious are concerns about transport problems affecting quality of life?

Looking at different problems affecting people's lives: according to an ONS Omnibus survey of 2001 [029, 2001, Quantitative], the order of seriousness given (for the population as a whole) was exhaust fumes in towns (74%), congestion in towns (73%), traffic noise in towns (51%), congestion on motorways (35%), and traffic on country roads (32%). In all these cases, more people said it had got worse in the last two years than better. According to the British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative] 60% of people in 2006 consider exhaust fumes from traffic in towns and cities to be a problem, a figure which has decreased from 77% in 1997. But asked the more general question '*How concerned are you about exhaust fumes from traffic?*', over 80% are very or fairly concerned. (This question has relevance to policy goals on better health and longer life expectancy (chapter 9) and promoting quality of life (chapter 10); and may also influence perceptions concerning the policy goal on climate change (chapter 8)). More people gave poor than good for condition of pavements and especially provision of cycle lanes.

On the other hand, more people gave a 'good' rating than 'poor' rating for getting about by car, air quality, traffic noise, ease of crossing roads, and bus frequency, reliability and information.

According to a 2001 ONS Omnibus survey [028, 2002, Quantitative] respondents living in Scotland tended to be most satisfied with all local conditions and those in London least satisfied. For example, 5% of those in Scotland thought air quality was poor, compared with 33% in London. Respective figures for safety at bus stops being poor were 11% and 26%. This is consistent with results showing that those in rural or small urban areas tended to be more satisfied with local conditions than those in large urban areas, particularly air quality and noise from traffic.

Life pressures

DETR focus groups and home interviews with car users [073, 2000, Qualitative] found that social and land-use changes underpin the perception of respondents that their lives are busier, less structured and less predictable than for earlier generations.

A DfT review of mobility [014, 2000-2005, Review] pointed to research by Macintyre et al published in 2000 which suggests that "those with car access also show higher levels of self-esteem and life satisfaction, while public transport can have detrimental physical and psychological effects because it exposes travellers to the risks of bad weather and is perceived as stigmatising".

Quality of life for older people

Much of the research on transport and quality of life has focussed on transport provision and travel in later life. DfT research involving depth interviews with older people [011, 2006, Qualitative] found that respondents attached great importance to transport as they grew older and entered later life. Reasons included meeting basic needs, preserving a sense of independence, gaining access to sources of mental stimulation, such as meeting people and leisure pursuits; playing an active role in the community through membership of clubs etc.; gaining physical exercise and engaging in activities that they enjoyed.

Meanwhile, some people were deterred from using community transport because of the stigma they attached to it and the feeling that using it represented a loss of independence. However, other people had positive attitudes/perceptions of community transport. A key finding from the study [011, 2006, Qualitative] is that age, in and of itself, was not the main influence on transport behaviour, and that older people, even within age bands, are characterised by significant diversity in their needs and use of transport. The report includes policy recommendations that more could be done to help older people who cease using public transport through ill health, particularly through training of bus drivers and design of buses. It was also recommended that the cost of driving for older drivers should be reduced, while older drivers should also be prepared for the impacts of driving cessation.) The same study found health to be the key influence on transport behaviour in later life.

A DfT evidence base review [014, 2000-2005, Review] found that there is an important association for older people between transport provision and independent living and quality of life. One study in the review (by Gilhooly et al (2005)) found that "older people who owned or had access to private transport generally reported having a higher quality of life compared to those without access to private transport. Those who could still drive and had cars reported a higher degree of independence than those who could not, more so than public transport. The relationship between car-ownership and quality of life was stronger for men than for women. Participants in in-depth interviews described how car-ownership enhanced quality of life by broadening the range of possible activities open to them (including days out and contact with family and friends) and offering a sense of freedom". The review reports another study in 2004 (by Banister and Bowling) finding that "access to a car improved perceptions of quality of life amongst older people: 55 per cent of people with access to a private vehicle said their quality of life was very good or excellent, compared to 41 per cent of those without access to a car or van". A study by Rabbitt et al., (2002) which is reported in the review explored the effects of increasing age and changes in health on car use, driving competence and general mobility. According to the review, "[t]heir survey found that declining health and increasing age was associated with decreasing mileage travelled by car. Older people had positive attitudes towards car-ownership: 92 per cent of older people felt that driving enhanced independence, and 82 per cent agreed that a car was vitally important. Older people believed that giving up driving would restrict their ability to travel (93 per cent), restrict their independence (92 per cent), and result in them having difficulties with public transport (82 per cent). However, there were some positive aspects to giving up driving: 14 per cent felt that giving up driving would relieve them of responsibility, and 57 per cent felt that it would save money."

The Review reported that the study by Gilhooly et al., (2005) "found that older current drivers had negative perceptions of giving up driving and, particularly, were anxious about missing the freedom of driving and having to rely on other people. However, older people who had given up driving were generally less negative, being more likely to feel positive about being relieved of the responsibility of driving and car-ownership, and to feel that giving up driving had simplified their life. Older people who had given up driving

were likely to say that they had experienced problems with public transport, but this was to a lesser extent than anticipated by current drivers."

Living environments

Accessibility - There are three main quantitative surveys addressing the ease and difficulty of access to local services and destinations: [028, 2001, Quantitative]; [169, 1992-2006, Quantitative]; and [223, 2005/6, Quantitative]. Of these the first is a DfT publication which took a broad definition accounting for a wide range of different difficulties including traffic conditions, and we summarise its conclusions here; the other two were more tightly defined to concentrate on difficulties relevant to the assessment of deprivation and are discussed in chapter 11.

The DfT 2001 [028, 2001, Quantitative] examination of ONS Omnibus survey results found that that overall, about a third of respondents reported difficulty in getting access to one or more of a list of everyday facilities. The list was defined in the question, and consisted of the following destinations (in order of the proportion of people reporting difficulties of access):

- Hospital (15%); friends and family (11%); workplace (9%); bank (7%);
- Supermarket, doctor's surgery, leisure centre (all at 6%); Dentist (5%); and
- post office, library, college, chemist, school, childcare (3% or less).

But within that, there were some groups for whom a larger proportion reported such difficulties, notably respondents aged 16-24 of whom 52% reported some accessibility difficulties, more than other groups. Places they particularly mentioned were friends and family (23%), hospital (21%) and college (15%). (It is likely that this group includes many who are in an awkward position 'between parents and their own car').

Because of the way in which the question was asked, a wide range of different types of 'difficulty' were included, some of which (such as roadworks) would be expected to be temporary and not have a fundamental effect on quality of life, and others (such as 'too far') would include unlike cases such as local hospitals being too far away, and family living in another part of the country.

With these caveats, of those who did report difficulties of access, "[t]he transport problem most frequently mentioned was inadequate public transport. This was mentioned by 45% of the third of respondents who said they had difficulty, equivalent to 15% of the whole population". It was followed by:

- not being able to drive (25% of those reporting difficulties);
- congestion/road works (25%);
- not having access to a car (23%);
- lack of parking facilities (22%)
- too far (16%);
- cost of public transport (16%).

Some other reasons, including cost of petrol, personal security and road safety concerns were mentioned least often.

There were few variations by age or gender, although inadequate public transport was mentioned by more women than men, and congestion was mentioned by slightly more men than women. It is interesting that 25% of the 33% reporting difficulties, i.e. less than 10% of the whole sample, felt that congestion and roadworks (listed together in the source) were serious enough to constitute difficulties of access to any of these destinations, which bears on the discussion of adapting to congestion in chapter 7.

All respondents of working age were asked whether they had decided not to apply for a particular job in the last twelve months because of transport problems. Overall, 13% said this was the case, ranging from 25% of 16-24 year olds, down to 5% of those aged 55-64. It was not clear whether this would have included rather obvious decisions not to apply for jobs that were simply too far away to be realistic options.

Chapter 11 discusses the importance of accessibility to a range of essential services from the point of view of equality of opportunity.

Quality of the local community

In a 2004 ONS Omnibus survey [023, 2004, Quantitative] over half of people thought that traffic in the area they live is dangerous to pedestrians and other road users. However, a complexity exists here: even though a majority of people perceive that the traffic where they live is dangerous, and a quarter felt that traffic had a serious impact on their quality of life (over half of those living on a main road in a town or city), a majority also reported that the sense of community in the area was good, and the street was a pleasant place to be. Thus at the same time people are indicating their appreciation and approval of the living conditions in their area, and their dissatisfaction with some aspects of them.

A slightly different list is produced when asked about the attributes most people look for in a street when choosing a place to live. The three most popular were: feeling safe when walking around, a good general environment, and a well maintained street [023, 2004, Quantitative]. Nevertheless, accessibility is a factor when choosing where to live. According to 2005 ONS Omnibus survey results [021, 2005, Quantitative], of people who had moved in the last year, 31% said access to good transport links (public and road) were a very important consideration in deciding where to live. (And referral herein is also made to NTS 2004 results in which 27% of respondents who had moved in the last three years said availability of public transport was a very important consideration.)

Travel experience and wellbeing

Research involving Surrey University staff [247, 2000, Quantitative] considered 'affective' experience of different travel modes on the basis that this can influence their attitudes towards travel experience and may influence future behavioural intentions (see the Appendix). Considering people's journey to/from work, the research found that "people who find their journey relaxing are more likely to be walkers or cyclists, whereas people who perceive their journey to be stressful are more likely to be car users". The analysis distinguishes "people who find their journey depressing and boring from people who find their journey exciting; the first are more likely to be users of public transport, the latter are more likely to be walkers, drivers, and especially, cyclists". Analysis considered how sources of (dis)pleasure varied between transport modes. This showed that "danger was especially a worry for cyclists and pedestrians. Fewer car users worried about safety and no public transport users. Delays were particularly salient issues for public transport users and drivers, whereas inconvenience was an issue for pedestrians and cyclists".

Thus the approach taken in that study may be summarised on two dimensions: whether travel is pleasant or unpleasant, and whether it is arousing or not arousing. The results suggested that the four main modes fitted into the four different possible combinations,

namely “[g]enerally, the data propose that each travel mode used to get to work elicits a different affective response: Driving is relatively unpleasant and arousing; public transport is unpleasant and not arousing, cycling is pleasant and arousing, and walking is pleasant and not arousing”.

(A caveat must be made in this case that the classification reflects average or typical responses for each mode. Clearly within each mode not all users will treat it in the same way.)

In qualitative research commissioned by the DfT to examine perceptions of congestion on motorways [256, 2005, Qualitative] it was found that nervous drivers “felt that one of the advantages of the car was that it offered them ‘time alone’, ‘independence’ or ‘space’ on the occasions they were able to travel alone, and this was seen as a key benefit when compared with public transport. This was also seen as the main benefit by a number of other drivers who described themselves as reluctant motorway drivers who would prefer to use public transport, and most of these felt that time alone in the car was a key benefit compared with public transport. It was seen by some as often their only escape from busy working and/or family lives.”

There is an interesting contrast in attitudes towards the experience of the journey itself revealed in the study by Hine and Scott [098, 2000, Qualitative]. On the one hand, there is the view expressed by one older participant “I enjoy the journey. I want to be away from my surroundings. It gives me pleasure when I am out travelling seeing things and meeting people...Going on the bus is like a day out. You see things and forget your troubles. I always meet somebody for a bit of a chat. It’s a great feeling to be out and about.” In this case, the extra experiences, or distractions, were seen as enhancing the journey.

On the other hand, for some journeys to work, distractions and extra chores to worry about such as interchange were avoided: “I try and avoid doing it anyway. I think I would drive instead...because of the waiting times in between...it’s standing around as well and being on the buses for ages.”

Attitudes towards policies to mitigate adverse traffic impacts

About half the respondents in a 2001 ONS Omnibus survey [029, 2001, Quantitative] with no children wanted more traffic calming to solve traffic problems, but for respondents with two or more children the figure was two thirds. There were large majorities in favour of giving pedestrians and cyclists priority in towns and cities, *‘even if this makes things difficult for other road users’*. A speed limit of 20 mph was favoured by 76% of people; 60% supported use of speed humps; 52% closing streets to through traffic; but only 35% for a convention for cars to stop for pedestrians in residential streets even if not at a crossing. Similar support for such measures are to be found in the British Social Attitudes Survey (BSAS) results [169, 1992-2006, Quantitative] with just over 75% in favour of a 20 mph speed limit in residential streets in 2006 (down from 79% in 2000), but only 37% in favour of closing residential streets to through traffic (down from 52% in 2000). This 37% figure represents a 10% drop from the 2001 to 2005 levels which were around 47%. Also, the 47% in favour of speed humps in 2006 was down from 60% in 2000. This may reflect a similar move in professional opinion where increasingly the simple ‘old’ form of speed humps are being seen as rather crude instruments of traffic calming, with more subtle methods being preferred.

Figure 10.1. Levels of support for traffic calming measures in residential areas (2000 to 2006)



Source: 2000 to 2006 British Social Attitudes Survey - self-completion. Base numbers (00-06): 972; 912; 872; 913; 973.

A majority of people want their local streets to be used for a range of activities other than traffic flows - but only a small majority of people with two or more cars (compared to 65% of people with no cars). The three activities that respondents thought should have most priority were parking for residents, children playing, and walking. The order of priority will be influenced by whether people have cars, and whether they have children. (An interesting question we do not yet know the answer to is the priorities of car owners with children.)

In DfT deliberative research into the public acceptability of road pricing [242, 2006-2007, Qualitative] it was found that "[p]articipants who usually walked into the town centre thought that the town centre environment [with road pricing] would be more pleasant with less traffic, noise and pollution".

TfL monitoring of the impacts of the London Congestion Charge [249, 2003, Quantitative] found that "Over 40 percent of residents living within the charging zone say their area as a place to live has improved since the scheme was introduced... At least 30 percent say that crossing roads, pollution, noise, reliability of public transport, availability of public transport and congestion are now better in their local area."

Service transformation

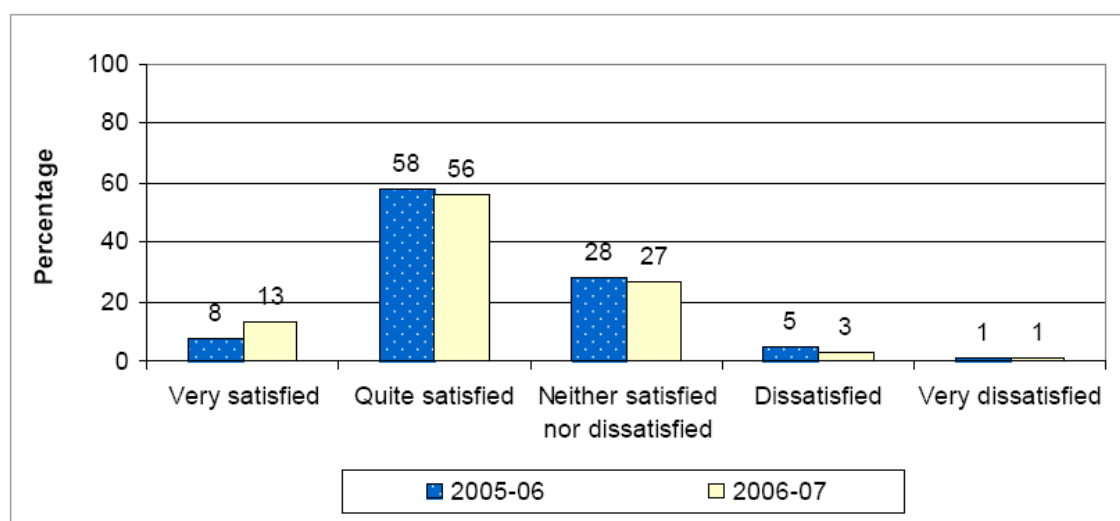
This chapter now moves to consider a rather different topic - termed 'service transformation' which is concerned with public attitudes towards transport service delivery and delivery agencies. We give information here on three areas: an overview of the DfT agencies as a whole; the Highways Agency (responsible for the motorway and principal road network); and the Directgov website.

The DfT Agencies - The DVO private motorists survey [031a, 2005, Quantitative] collated monitoring information on satisfaction levels among private motorists with four DfT Agencies (DVLA, DSA, VOSA and VCA). Bearing in mind the general caveat that we have made several times about the difficulty of interpreting 'satisfaction', the results were reported as indicating a "significant increase in overall satisfaction with the quality of service received from the Department for Transport Agencies" from 2003 to 2005. It was noted that that this increase may be 'in part' due to a change in the wording of the question, in omitting reference to the word 'government' from the question. In particular:

- Of those motorists who had had occasion to contact DVLA about road tax, driving license, or logbook, from 86% to 92% said they were satisfied with the service received, a substantial increase from the previous year.
- 92% of motorists who had taken their vehicle for an MOT test in the last 12 months, said they were satisfied, also a substantial increase.
- However, the proportions saying they were satisfied with efforts made by the DfT Agencies on broader policy issues were much smaller: 44% satisfied with efforts to reduce harm to the environment (increased); 39% with efforts to reduce driver and vehicle related crime (increased); 52% with efforts to improve road safety (slightly down); 41% with ensuring that illegal drivers are identified and penalised (trend not stated).

The Highways Agency - The Highways Agency's Road Users Satisfaction Survey [030a, 2006-2007, Quantitative]³⁸ has much information on this, broken down by different functions and activities. The headline result is that 69% of respondents were satisfied with the Agency (see Figure 10.2). The general pattern of results seems rather stable when comparing the two years, with the large majority of people not having strong views on the performance of the Agency. There is some indication of an increase in the proportion of people saying 'very satisfied' and fall in 'dissatisfied' and 'very dissatisfied', though all these groups are quite small, and one would need a longer period before judging whether this was a definite trend or not.

Figure 10.2. Satisfaction with the Highways Agency



Base: 2005-06=2455; 2006-07=2531

³⁸ NB from 2007/08 the methodology of the RUSS changed to a random probability design.

Source: [030, 2006, Quantitative] reproduced from Fig. 12.3

However, it is of interest to compare this result with the observations in chapter 2 and 7 showing that a substantial majority of the population do not consider that congestion on motorways is a serious problem for themselves, and the evidence that this may partly be due to adaptation of behaviour and attitudes to cope with or damp down responses to such problems as exist. We note also a general caveat about interpretation of 'satisfaction' which is likely to be based on an implicit norm or standard of what is expected: if expectations are lower, satisfaction can be higher even without an improvement. In the absence of direct evidence of whether or not this has happened, we treat the changes in expressed satisfaction with some caution.

A breakdown of this satisfaction rating shows that women are slightly more satisfied with the Agency than men (71% to 67%) and those in the AB social group were less likely to be satisfied than those in other social groups (61% compared with 71%). Those more likely to be dissatisfied with the Agency are business users (7% of them compared with 3% of those who do not drive as part of their job), those who drive over 30,000 miles per year (18% compared to 4% of those who drive less), and people who travel on the Agency's network five or more days a week (8% compared with 2% of people who travel less frequently).

The Agency's monitoring defines five different groups of user: "

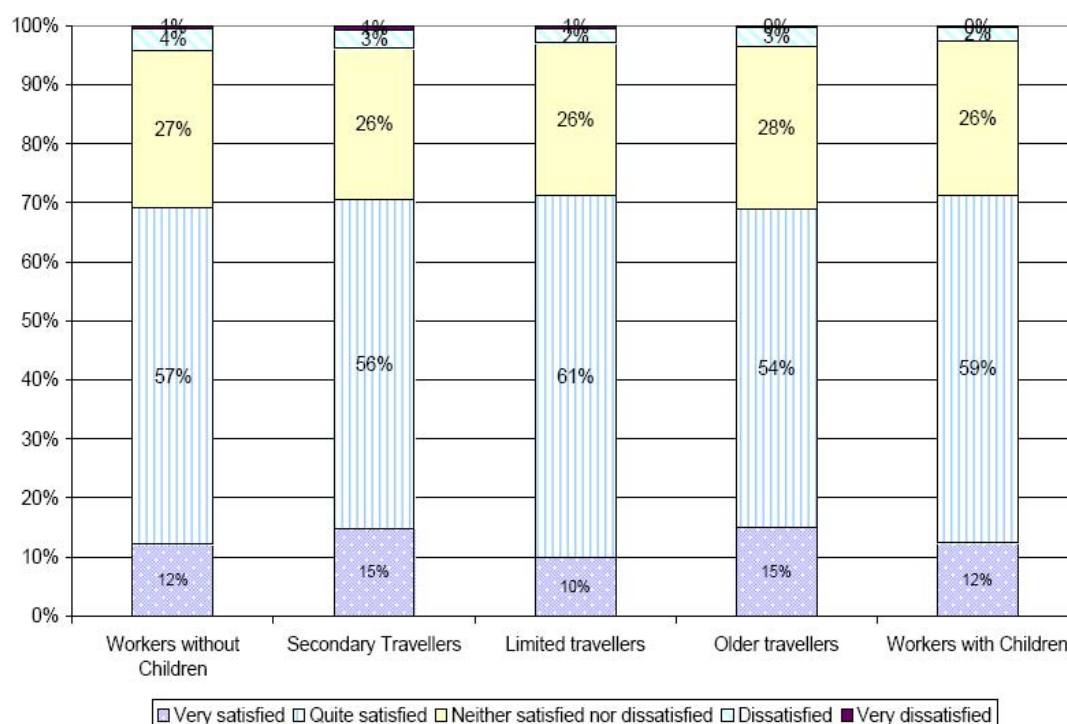
- **Workers with children:** people who generally use the network a great deal, mainly for work-related purposes, almost all of whom are in families with children;
- **Workers without children:** people who generally use the network a great deal, mainly for work-related purposes, most of whom are not in families with children;
- **Secondary travellers:** mainly women with young children, two-thirds of whom rarely use motorways and many of whom travel as a car passenger rather than as a driver;
- **Older limited travellers:** people who are mainly aged over 55 and make limited use of the network; and
- **Public transport and vulnerable users:** people who are more likely than other groups to use the network as a public transport passenger or as a vulnerable user."

There is little difference between these customer groups in terms of their overall satisfaction with the Agency (see Figure 10.3). For each group type, at least one in seven respondents are very or quite satisfied with the Agency overall. 1% of workers without children, secondary travellers and limited travellers said they were very dissatisfied with the Agency. It is of interest that for all groups - even those who rarely used motorways - the largest category was the 'quite satisfied' answer, which suggests that this mild expression of support may not be very different from the 'neither satisfied nor dissatisfied' answer.

Directgov - Research was done among a representative sample of driving licence holders in Great Britain in April 2006 for the Driver Vehicle Operator Group to investigate and monitor the level of awareness and use of, and satisfaction with the Directgov Motoring website [291, 2006, Quantitative]. This section of the government's flagship web service Directgov was launched in 2004. It provides services to private motorists in order to both improve the speed and convenience of transactions made and to combine the services

from its constituent motoring agencies: the Driver and Vehicle Licensing Agency (DVLA), the Driving Standards Agency (DSA) and the Vehicle and Operators Services Agency (VOSA).

Figure 10.3. Satisfaction with the Highways Agency by customer group



Base: Workers without children=651; Secondary travellers=366; Limited travellers=375; Older travellers=687; Workers with children=452.

Source: [030, 2006, Quantitative] reproduced from Fig. 12.4

Of those canvassed, 40% were aware of the Directgov website and a smaller proportion, 12% were aware of the Directgov Motoring website. Most of those who were aware of the Directgov Motoring website had actually visited it (12% of licence holders were aware of the website and 10% of licence holders had visited it. In contrast, 21% of users had visited other parts of the Directgov website.) The most common reasons for visiting the Directgov Motoring website were: a) to buy road tax (42%); b) to book a theory or practical driving test (29%); and c) to obtain motoring related information (25%).

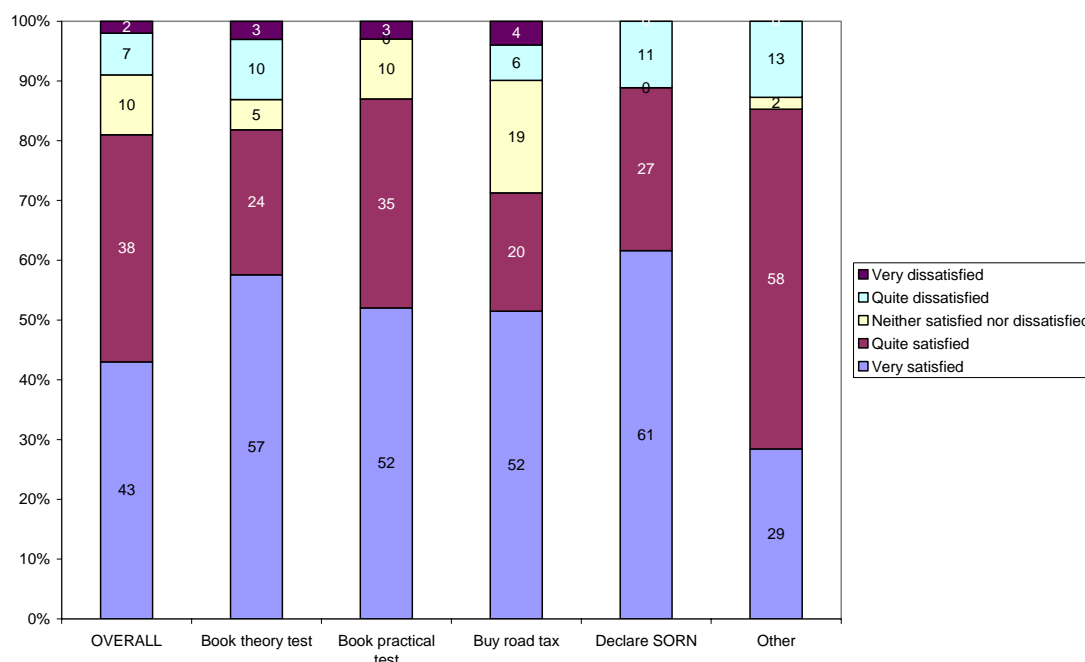
Users were more likely to be of higher social grade and young (28% of respondents aged 44 years and under, 21% of those aged 45-64, and 3% of those aged 65 and over). Those who used the internet in the last month were 6 times more likely to have visited the site than those who had not used the internet in the last month (30% and 5 % respectively).

43% of Directgov Motoring users were 'very satisfied' (81% satisfied overall) and 77% of users would recommend the website to another person. 76% of previous users would be likely to use the website again in the future and 32% of people who were unaware of the website, or had not used it previously, were likely to use it in the future.

Figure 10.4 shows satisfaction with the Directgov Motoring site by service. However, satisfaction levels by service used when visiting Directgov Motoring must be interpreted with caution due to the low base sizes of those performing each transaction. In any case, satisfaction was found to be high (at least 52% 'very satisfied') for each of the core

transaction services available on Directgov at the time of the wave one fieldwork. Non-core services, such as general provision of information were viewed slightly less favourably. However, 87% of people using the website for such purposes were either 'very' or 'quite' satisfied.

Figure 10.4. Satisfaction with the Directgov Motoring Website



Base: All who have visited Directgov Motoring (n=126); Booked theory test (n=20); Booked practical test (n=19); Buy road tax (n=58); Declare Statutory Off Road Notification ORN (n=13); Other (n=48)
Source: [291, 2006, Quantitative] reproduced from Fi6. 6.a. [Directgov Motoring Awareness Tracking: Wave 1 results, Final Report, June 2006, BMRB for DVO]

Separate further observations - Disabled Persons Transport Advisory Committee (DPTAC) research [183, 2001-2002, Mixed] concluded that "disabled people feel that local and central government, planners and mainstream transport operators are not properly considering their needs. Some disabled people would like the opportunity to work alongside these decision-makers and become more involved in future transport issues, as DPTAC does on national transport policy."

We also note that (as reported in chapter 9), from [031a, 2007, Quantitative], 26% of motorists were dissatisfied with efforts made by the DfT Agencies to reduce driver and vehicle related crime.

11 Promoting greater equality of transport opportunity for all citizens, with the desired outcome of achieving a fairer society

Key findings

A minority of the population overall has difficulties of getting access to important local facilities or services, with around 10% of the population reporting difficulties of access to each of a list of important destination types, and around 30% reporting difficulties to at least one of these activities (concurring with findings in chapter 10). This varies for different groups. The largest reported problem was among non-car owners, of whom 40% reported difficulties of access to local hospitals. Those having difficulties most frequently cite inadequate public transport, and distance, as the main problem.

One study reported that some groups of the population are disadvantaged in both urban and rural areas: older people (living alone or with 65+ only); disabled/frail people; lone parents; carers; young car-less; low income people; people in a deprived area; ethnic minorities; and migrant workers. However there are differences in the nature of the disadvantage (e.g. fear of crime in urban areas, lack of services in rural areas) and the transport solutions sought are also different, with more use of buses in urban areas and more reliance on lifts in rural areas. Access to post offices has a particular importance in rural areas.

Cost is a specific issue for people with low incomes, which tends to result in attitudes of sensitivity to price as a policy instrument in relation to road pricing, fuel tax, road tax, public transport fares, and to air transport where frequency of use tends to be particularly strongly related to income.

Disabled people say that their biggest problem is road and pavement maintenance. More cite public transport frequency than design features like low floors and wheelchair access which are important to particular kinds of disability. The nature of information provided is a particular barrier to (ease of independent travel) for dyslexics.

There is research on the specific barriers where transport opportunities are not matched to the needs of women, parents with young children, children, young adults, the elderly, disabled people, low income groups, and others. Research has not generally asked about the importance people attach to the policy goal in itself, but it is noticeable that questions of fairness are often raised spontaneously in qualitative research, especially in relation to affordability and applied to responses to specific transport initiatives.

In the 2008 DfT Citizens Panel, discussions identified priorities to enhance access as: cheaper public transport; more accessible public transport (especially for such groups as those with a disability, the elderly and young mothers with pushchairs); better public transport links and integration of public transport; and better public transport infrastructure for rural areas.

Introduction

We note that 'access' has several different meanings in transport contexts:

- Generally, it relates to the ability by all members of the population to reach destinations and activities of interest to them, as determined by the locations of origins and destinations and the quality and cost of transport between them.
- Secondly, within this, there is a specific meaning of physical access to transport vehicles, especially focusing on barriers that are experienced by people with disabilities. The phrase 'accessible buses', for example, almost entirely is used with this meaning.
- Thirdly, the word is often used in relation to some rather crude measures of the level of public transport service provision, such as the distance to the nearest bus stop, although it should be said that these often say little about the usefulness, usability or affordability of services.

All have been used in discussion of equality of opportunity, but in different ways. Professionals concerned with different aspects do not always distinguish them. More recent interpretation of accessible (public) transport makes distinctions between (physical) accessibility, availability (being available, going where it is needed and people being aware of it), affordability and acceptability (e.g. in relation to personal security). In recent years there has also been more attention given to ways of participating in activities which do not depend on travel (such as internet shopping), and also on influences on access which are derived from changes in land-use and the tendency to replace a dense provision of local services by more sparse provision of larger facilities.

Accessing services

According to the British Social Attitudes Survey [169, 1992-2006, Quantitative], up to 10% of adults report experiencing difficulties accessing key services such as the GP, the nearest NHS hospital and food shopping. Those who reported difficulties cited inadequate public transport or the service being located too far away as the main reasons while the proportion mentioning the cost of transport as a barrier is lower.

Somewhat higher figures are reported in the 2005-2006 Survey of English Housing [223, 2005-2006, Quantitative] - see Table 11.1. While the majority of households with or without a car find it very or fairly easy to access these local amenities, significantly higher proportions of households without a car have difficulty in doing so than households with a car, with the largest numbers of people reporting difficulties for access to their local hospital, described as fairly or very difficult by a quarter of those in households with a car, and over 40% of those in households without a car. The study reports that "[s]evere difficulties accessing these amenities tended to increase with age, most notably among those aged 75 and over."

Work for the Joseph Rowntree Foundation has examined a number of case studies of improved provision of public transport services in deprived and disadvantaged communities (227, 2006-07, Mixed). The study found that users were highly dependent upon the services as a result of most not having regular access to a car and highly dependent on their regular use.

Local professionals gave primary emphasis to the importance of such services overcoming barriers to employment. However local residents gave emphasis to the social amenity value: "[a] major benefit of all the services has been that people can simply get out and

about more. This allows them more choices and opportunities for social networking (which is widely recognised in helping to build social capital). In addition, it was felt that the projects were helping to improve people's confidence and their expand travel horizons". The study has also highlighted engagement in new activities brought about by transport service provision with suggestion that many such activities had previously been suppressed through lack of adequate provision.

Table 11.1. Households with and without (shown in brackets) a car or van: by ease of access to amenities (%)

Ease of access	Very easy	Fairly easy	Fairly difficult	Very difficult	Does not apply	Totals
Corner shop	76 (66)	16 (18)	4 (7)	3 (7)	2 (3)	100
Medium to large supermarket	57 (41)	33 (35)	6 (13)	3 (8)	1 (2)	100
Post Office	63 (52)	26 (28)	7 (10)	3 (7)	1 (2)	100
Doctor	58 (44)	32 (33)	7 (13)	3 (7)	1 (2)	100
Local Hospital	26 (19)	46 (37)	19 (24)	8 (18)	1 (2)	100

Source: Survey of English Housing [223, 2005-2006, Quantitative] - data from Tables 7.4 and 7.5

A DfT review of mobility [014, 2000-2005, Review] points to DfT research in 2002 and notes that "levels of satisfaction with bus services tended to rise as deprivation increased, and suggests that this is due to increased use - as users were more satisfied with buses than non-users - and possibly higher service provision in deprived areas". The review points also to 2002 ONS data and the finding that "13 per cent of respondents of working-age said they had decided not to apply for a particular job in the last 12 months because of transport problems".

Concerns in rural areas

People living in rural areas are further away from services and public transport because of the dispersed nature of rural areas; as a result, car ownership amongst low income households is higher than in other types of area. However, there is still a significant minority without a car, who are likely then to have greater difficulties of access than non-car owners in urban areas. The consequence is that poor access to services and opportunities can be more severe in rural areas with wide consequences such as limited job opportunities for those with low skills.

A study by Defra [224, 2006, Qualitative] has considered the perspectives of disadvantaged residents in rural England concerning the accessibility and quality of six key services: public transport, primary and secondary health care, food retailing, obtaining cash, training and further education, and information provision. The sample of 1700 people in this mainly quantitative survey included 900 living in rural England (including 100 clearly 'non-disadvantaged') and 800 in urban England (with similar characteristics).

Disadvantaged groups included were: older people (living alone or with 65+ only); disabled/frail people; lone parents; carers; young car-less; low income people; people in a deprived area; ethnic minorities; and migrant workers. 25% of the rural disadvantaged use rural bus services on a weekly basis while among nearly half (49%) who never use such services, "disabled adults, lone parents and remotely located people figure prominently".

The report notes that "a considerable variety of experience is apparent as between the various groups of people considered. The situation of migrant workers particularly stands out. They do seem to emerge as poorly served in several respects, with very low car ownership and a limited appreciation of the services on offer, they seem generally to be much less adept than other disadvantaged people at accessing the services that are available".

When faced with considering the trade-off between accessibility and quality of services, in general “older people, disabled people, ethnic minorities and migrant workers are more likely than the disadvantaged rural population at large to opt for the ‘near even if quite poor’ option – while younger people, even if car-less, and part-time workers tend to opt for the ‘distant but good option’”. This study finds that “the rural and urban populations of disadvantaged people that we surveyed are remarkably similar in their behaviour and opinions as far as access to services are concerned”. However we note that this does not imply that the nature and intensity of the problems, and the solutions found, are the same.

The study itself found that four differences particularly stood out between urban and rural disadvantaged:

- the much greater use made of bus services by urban disadvantaged people;
- the much greater reliance on ‘getting a lift’ apparent amongst rural disadvantaged people;
- the generally shorter duration of the trips to hospital and main shopping venues of urban disadvantaged people; and
- the much greater importance to rural disadvantaged people of the post office, for accessing cash.

A study by DfT into the travel aspirations, needs and behaviour of young adults [012, 2006, Qualitative] found that young people living in rural areas or in small towns described having limited transport choice though this did not appear to be a main factor in determining where to study. In terms of employment, in contrast to people living in inner city areas who considered they had easy access to many of the best jobs available, young people in rural areas and on the outskirts of towns had to travel longer distances to access the best employment opportunities. Young parents described how difficulties with travel and transport could reduce the amount they could travel to see friends and family which could create feelings of social isolation.

A DfT review on mobility [014, 2000-2005, Review] points to 2004 work by Titheridge which found that “young women in rural areas, with low levels of educational attainment and who relied solely on buses for transport, had extremely disadvantaged job opportunities”.

Affordable mobility

According to DfT research into public attitudes to road pricing [238, 2004, Qualitative], “[r]espondents believed that there would be certain groups of people who would be unfairly affected by road pricing and who ought to be considered for exemptions and discounts. Groups mentioned were: people on low incomes; people who have to use their cars, for example those living in rural areas; people with health problems or disabilities; those on fixed incomes, like pensioners; small businesses; and residents living in or close to a congestion charge area”.

Later DfT research into acceptability of road pricing [242, 2006-2007, Qualitative] found that “[f]airness was seen to be an important defence against social exclusion, and it was felt to be unfair if rich people were able to use roads that poorer people could not afford to use. It was also considered unfair that workers on lower salaries were likely to find it harder to work flexible hours, and so would have to pay road pricing charges, whereas

those in higher paid positions tended to be able to work flexible hours and so could avoid charges more easily."

DfT research into consumer behaviour and pricing structures [237, 2005, Qualitative] found that while respondents generally felt that a system of reduced road tax with more on fuel - such that the average driver was no worse off - was fair because it was based upon usage. However, "[o]thers thought that increasing fuel tax would be unfair because it would impact more on poorer people, causing only the less well-off to change their behaviour and because it would penalise people living in rural areas with limited alternatives to their cars".

Research for the DVO [233, 2004, Qualitative] engaged with UK drivers who evade motoring payments or who drive without a valid licence. Those who do not pay road tax were found to fall into three categories: those who say they cannot pay; those who say they will not pay (as a matter of principle); and those from either of these two categories but who drift into non compliance. The first category was found to be most common. "They are often uncomfortable with not paying but feel that their own cash-flow problems excuse their situation....The cost of running a car is universally seen as high. Insurance, fuel, the MOT and general 'wear and tear' are viewed by all motorists as significant expenses. ... road tax is seen as easier to evade and as carrying a smaller penalty for non-payment than both insurance and MOT." There is resentment at paying road tax because little is seen 'in return' for this payment. "Resentment is also based around a widespread belief that the level of road tax is unfair for people who use their vehicles less frequently."

Affordability is not related only to financial means. Nature of employment and work practice can affect how flexible an individual is able to or can afford to be (as noted earlier). In qualitative research commissioned by the DfT to examine perceptions of congestion on motorways [256, 2005, Qualitative] it was found that "many respondents from lower socio-economic groups worked in jobs with inflexible start/finish times normally set in peak hours (e.g. 9am start, 5pm finish), whereas those in higher socio-economic groups generally had more flexible working times. Often those in lower socio-economic groups said they would arrive 'too early' for work in order to adjust for congestion, and this meant they had a 'boring' wait before starting work."

Affordable air travel

Affordability is also relevant in relation to air travel. British Social Attitudes Survey (BSAS) [169, 1992-2006, Quantitative] respondents were asked how many air trips they had made in the last year, and 45% reported none. Air travel is still primarily undertaken by richer sections of society as the majority of air travellers come from middle and higher income bands. Data from the Civil Aviation Authority's 2004 survey³⁹ also showed that, of 62,849 leisure passengers terminating at Gatwick, Heathrow, Luton, Manchester and Stansted, 76% were from socio-economic groups A, B and C1, and only 24% were from groups C2, D and E. In contrast, according to the CAA, in 2003, only 54% of the UK population were in social groups A, B and C1. (NB CAA say the proportion of the UK adult population classed as A, B or C1 has increased from 49% of the population to 54% of the population). Most of the growth that is occurring appears to be due to existing air travellers flying more.

A survey of households in local authorities in the East midlands used neighbourhood statistics and overall levels of deprivation indicators [254, 2008, Quantitative]. Overall it revealed that 23% had not flown in the past year. However, for the least mobile group,

³⁹ CAA (2004) <http://www.caa.co.uk/docs/81/2004CAAPaxSurveyReport.pdf>

containing the highest proportion of non flyers (consisting of those employed in low paid jobs who live in areas of high multiple deprivation) 39% had not flown. For those who had flown in the previous year - these less mobile, low earners' are most sensitive to change; higher proportions of this population segment say they would probably fly less often as a result (11% would fly less frequently with a £10 increase, 24% and 61% with increases of £20 and £50 respectively). 'Less mobile, low earners' express greater preference for package holidays; they are more inclined to adapt their flight choice to benefit from low cost flights, irrespective of arrival and departure times.

Disability barriers

An overview of literature on disability and transport for the Disability Rights Commission [101, 2003, Review] found that with regard to public transport, 94% of respondents in a recent DRC survey agreed that disabled people should have the same opportunities to use public transport vehicles as non-disabled people. A recent study (highlighted in the review) into social exclusion and public transport use identified four generic barriers: affordability; acceptability; availability; and accessibility. It is argued that designing accessible transport systems should also be about 'universal design' or 'access to all'. However, this survey preceded the Disability Discrimination Act 2005 that placed a requirement upon train and bus operators and authorities to make reasonable provision for disabled access, and to make bus and rail stations accessible for people with disabilities. Attitudes may therefore have substantially changed since this survey was undertaken. Indeed, the Confederation of Passenger Transport report "On the Move" [110, 2008, Review] states, "Accessibility of buses continues to improve, with 58 per cent of the county's fleet now running low-floor vehicles".

In a study of attitudes of disabled people to public transport for DPTAC [183, 2002, Mixed], unprompted responses to questioning revealed which things "should have the highest priority for being addressed over the next few years". The results are shown in Table 11.2.

Qualitative findings in the study showed that "disabled people are angered by the increasing distance of parking from amenities, the lack of provision of parking spaces for disabled vehicles and the illegitimate use of disabled parking spaces. Other research has found that of all disabled people who are able to walk, approximately 30% were unable to walk more than 50 metres without stopping or severe discomfort and a further 20 per cent could only walk between 50 and 200 metres".

The DPTAC research [183, 2001-2002, Mixed] found in summary the following. "[t]ransport issues are important to disabled peoples' lives - being the single most prominent concern at the local level. Pavement and road maintenance generate the most dissatisfaction, along with access for disabled people to transport vehicles and the frequency of public transport. Disabled people travel a third less often than the general public. Disabled people drive cars a lot less and are less likely to have one in the household. Despite this, cars are central to disabled people's mobility in England and Wales, with the most common mode of transport being a car driven by someone else. Disabled people use buses, taxis and minicabs more often than the general public. There are also encouraging signs that disabled people will use public transport even more if improvements are made." The research stresses, alongside such headline findings, that disabled people are not a homogenous group and thus nor are their transport needs and priorities. The research found that "[s]ixty per cent of disabled people have no car in the household, compared with just 27% of the general population". When asked whether they had to plan their journeys well in advance, the following percentages responded 'yes': wheelchair users - 79%; visually impaired - 68%; ambulant disability - 61%; learning disability - 56%; hearing

impairment - 47%. These figures are likely to be substantially greater than those for the public at large when considering travel in general (planning in advance would increase in likelihood across the public for unfamiliar journeys).

Table 11.2. Responses to the question '*Thinking specifically about transport, which two or three things should have the highest priority for being addressed over the next few years? Include any public transport and road issues that you think are important*' (Questioner instructions: 'DO NOT PROMPT. PROBE FULLY What else?')

Top mentions	%
Frequency of public transport	19
Disabled access on public transport	9
Free/cheaper transport for disabled	8
Improve/repair roads/pavements	8
Lower floor transport to meet pavement	5
Staff/drivers to be more friendly/helpful/understanding	5
Traffic congestion	5
Wheelchair access on public transport	5
Punctuality of public transport	5
More car parking spaces	4
Improve public transport in general	4
Improved disabled access	26
Nothing	8
Don't know	15
No answer	2

Source: Copy of table in DPTAC study of attitudes of disabled people to public transport [183, 2002, Mixed]

When asked to rate consideration made for disabled people in designing various elements of the transport system, the results shown in Table 11.3 were obtained.

In terms of transport staff, bus drivers were rated as the most unhelpful with 20% of disabled people saying they are unhelpful, compared with 13% for train station staff, 6% for on train staff and taxi drivers, and just 2% for airline stewards. According to a DfT review of mobility [014, 2000-2005, Review] "[d]isabled people felt strongly that mandatory disability training for front-line staff, and improved staff and passenger attitudes, would lead to better experiences of using public transport, would help overcome some common problems such as buses failing to stop for blind and partially sighted people, and would help enable disabled people to use public transport".

A DfT review of mobility [014, 2000-2005, Review] reported that "many disabled people are on low income, and are concerned about the cost of transport". Alongside this it was noted that "concessionary bus travel may actually act as a disincentive to disabled people's travel due to an increase in passenger numbers and the potential for overcrowding on buses". 2003 research cited in the review found that about half of disabled survey respondents "had turned down a job offer or job interview due to lack of

accessible transport, and about half said that lack of transport had restricted their choice of job".

Table 11.3. Responses to the question '*Overall, how good or poor would you rate the considerations made for disabled people in the designing of the following?*'

Considerations	% rating very or fairly good	% rating very or fairly poor
Black cabs	48	9
Airports	31	5
Planes	25	7
Ferries	19	6
Coaches	23	25
Buses	36	42
Bus stations	25	31
Train stations	18	29
Trains	16	29
Streets and pavements	23	57

Source: Data drawn from table in DPTAC study of attitudes of disabled people to public transport [183, 2002, Mixed]

Community Transport - The DPTAC survey [231, 2002, Mixed] examined attitudes to community transport. The results indicate a general finding that disabled people are more positive about community transport than about public transport services. Noting the issue of lack of awareness, a quarter of disabled people say there is no form of community transport available in their areas. Obtaining information is difficult with regard to community transport and is seen as harder than for public transport. The services are rated positively by those who use them: they are found easier to use than conventional public transport and views are more positive concerning staff. "When asked to choose a word/words which describe their image of community transport staff, the most commonly selected are 'friendly' and 'helpful' (64% and 62% respectively). The same adjectives are top for bus drivers although they are chosen by significantly fewer respondents (48% 'helpful' and 44% 'friendly'). Bus drivers however, also have a negative image among disabled people with 24% saying they are 'unhelpful', and 16% 'unfriendly' against virtually no mention of these words for community transport staff."

Dyslexia - Qualitative research in England with individuals with dyslexia [248, 2004, Qualitative] highlights the frustration that individuals face "trying to function in a predominantly non-dyslexic environment created by non-dyslexics." According to the British Dyslexia Association it is estimated that 4-6% of the population have this Specific Learning Disability in the UK. They "often experience confusion and uncertainty, nervousness and a lack of confidence, inferiority, insecurity and frustration, which are all exacerbated by the physical symptoms of dyslexia". Travelling represents a situation in which heavy demands can be placed on working memory - this creates difficulty for those with dyslexia.

Dyslexia also encompasses dyscalcula - difficulty with numerical information. This is pertinent to dealing with public transport timetables and departure boards. Dyslexics tend to prefer human assistance - the spoken word is more accessible and efficient and offers

more sense of trust and reassurance - and often mistrust the information they obtain themselves.

The study concludes that lack of accessible information poses a major barrier to public transport use with the car being seen as an easier and less stressful alternative to public transport. This said, car travel poses its own problems and those with dyslexia have a preference for travelling with a non-dyslexic co-pilot or having a non-dyslexic person drive them. This represents issues for independence. For people with dyslexia, information is important for the journey end-to-end - the final stage of any journey is likely to be the most challenging and put pressure on their cognitive abilities.

Distributional transport impacts

ONS Omnibus Survey results [017, 2007, Quantitative] recorded that groups who were more concerned about congestion were: those in managerial or professional occupations, with the highest levels of income, living in the least deprived areas and living in the South East. Compared with the national picture, concern was lower among young people aged 16 to 24 and those living in the North East. (See chapters 1 and 7.)

Gender - The DfT evidence base review on mobility [014, 2000-2005, Review] found that "despite having lower levels of access to cars, women preferred to travel by car. Many saw a car as essential in coordinating employment, childcare and domestic responsibilities. Women often used their cars for short trips in order to manage these journeys. The time cost and complexity of travelling by public transport was a deterrent for many women." Alongside this (based on DfT 2004 work referred to in the review) "[w]omen often had safety concerns about using public transport, especially at night, and were more likely to feel consistently insecure than men when travelling after dark". An ONS Omnibus survey of attitudes to car use for the DfT [021, 2005, Quantitative] also recorded that women were more likely to say that concerns about crime or safety affected their travel choices, especially affecting the time of day at which they would make journeys.

The DfT review [014, 2000-2005, Review] also pointed to work in 2001 which notes that "parents found travelling with children by public transport arduous and stressful, particularly when also carrying luggage or shopping, and many develop strategies to avoid using public transport, such as waiting for a lift or access to a family member's car". Work in the North East by Dobbs in 2005 cited in the review found that women's access to private transport is constrained by men's control over car use in the household which then limits their access to employment: it seems this is described as a 'vicious circle' in which "being unable to afford a car meant that they could not access employment or better jobs". Alongside this, work by Skinner in 2005 (cited in the review [014, 2000-2005, Review]) is pointed to in which it is suggested that "women come under attack for using their cars for the school run, with these journeys being seen as 'non-essential', in contrast to the 'more important' employment journeys, and transport of commercial goods, being carried out predominantly by men".

Age - As discussed in chapter 10, there are important links between the travel of older people and their inclusion in social life. (This applies more broadly to other groups also.) DfT research into people in later life [011, 2006, Qualitative] found there to be significant diversity in the kinds of journeys made by respondents in later life due to their differing personal circumstances and preferences. Meanwhile DfT focus groups and depth interviews with young adults [012, 2006, Qualitative] found that young people's

recommendations regarding transport centred around issues including improving access for diverse groups.

DfT research into public acceptability of road pricing [242, 2006-2007, Qualitative] found that amongst the retired participants there was the feeling that road pricing would not impact on their lives directly, as they tended not to travel at times when charges would apply. However, it was felt that road pricing would affect them indirectly, as the cost of consumer goods and services was expected to rise.

A study by DfT into the travel aspirations, needs and behaviour of young adults [012, 2006, Qualitative] found that in considering young people and transitions in their lives relating to education, employment and social context, three groups of young people were mostly constrained by transport in the choices they made: young people living in rural areas - reliance on lifts from others and constrained by availability of public transport; young parents - practical constraints and potentially limited car access affecting transitions in education and work; and young people out of work - financial constraints.

Policies to improve transport opportunity

In the recent CfIT survey of adults (16+) on attitudes to aviation and climate change [003b, 2006, Mixed], a system where everyone would be able to fly once a year free of environmental taxes and then be taxed for further flights according to their environmental impact was seen as equitable.

The DfT Citizens' Panel [225, 2008, Qualitative] found that on the question of enhancing access to health education and other services, and helping people get out and about to see friends and family and visit the shops, the most frequently raised themes of the 200 panellists questioned included: cheaper public transport; more accessible public transport (especially for such groups as those with a disability, the elderly and young mothers with pushchairs); better public transport links and integration of public transport; and better public transport infrastructure for rural areas.

PART FOUR -

KEY OBSERVATIONS AND IMPLICATIONS

12 Key Insights and Evidence Gaps

Key findings

The material reviewed as a whole reinforces a general understanding that just as transport and travel choices are rooted in the structure of activities undertaken by individuals and families, so attitudes to transport are also rooted in deeper values and aspirations of how people want to lead their lives. Economic motivations (cost, allocation of time, participation in employment) are important, but so are a much wider set of influences including stress, tranquillity, feelings of control and independence, social obligations, and desires for both excitement and calm.

There are differences in the way qualitative and quantitative methods elicit the sources of variation and commonality in attitudes. They underline our view that description of 'the public attitude' should be avoided; some apparent conflicts of evidence about the importance of some attributes of transport in influencing attitudes, notably cost or price which variously appears as unimportant or highly important in different studies. It seems valid to conclude that cost is seen by travellers as part of a wider package of features sometimes called 'value for money', but further work is necessary to understand how this operates. Measures of declared 'satisfaction' must also be treated with caution as they are often influenced by changing levels of expectation which may not be explicit.

While it is well established that the precise wording of questionnaires can influence the results, we have come across some cases where this effect seems very large. This includes the reliability of evidence suggesting a change in attitudes to congestion in the early 2000s, and the relative impact of economic and environmental considerations on attitudes to air travel. Therefore conclusions on these questions must be treated with particular caution.

There are recurrent queries about the connection between behavioural intention expressed in attitude studies, and actual behaviour observed in traffic and passenger counts, household travel diaries, etc., and the analytical models (both orthodox and new) which are used to forecast choices. These are not always consistent, especially when considering intentions or willingness to change behaviour. A review of evidence which compared both types of sources would be most worthwhile.

Finally we note the almost complete lack of evidence on how attitudes change over time, at the individual level. Time-series only deal with aggregate analyses of the sort that can be done with repeated cross-section surveys, and hardly at all enabling longitudinal analysis. It seems to be the most important evidence gap, both for understanding and for practical application of policy development.

Introduction

The material reviewed in this project as a whole reinforces a general understanding that just as transport and travel choices are rooted in the structure of activities undertaken by individuals and families, so attitudes to transport are also rooted in deeper values and aspirations of how people want to lead their lives. Economic motivations (cost, allocation of time, participation in employment) are important, but so too are a much wider set of influences including stress, tranquillity, feelings of control and independence, social obligations, and desires for both excitement and calm.

That understanding is not new in principle, though it is often forgotten in practice and it is helpful to underline its importance.

The question is, 'what follows?', especially in terms of limits to understanding and important evidence gaps. By 'gaps' we do not mean the excluded evidence, outside the scope of the project, listed in Chapter 1. There is a substantial amount of such evidence, including most local studies of attitudes in specific places, and studies by transport companies with a mainly business orientation. Rather it relates to issues of understanding that as far as we can judge are lacking in the field as a whole.

Differences between qualitative and quantitative results

In general, the qualitative and quantitative results have informed each other well, the combination of the two adding layers of understanding that would be impossible to have achieved from either on their own. However, there have been some recurrent issues.

Notably, in the unstructured or semi-structured formats typical of qualitative research, a wide range of different behaviours, responses and motivations are recorded, of which typically only a subset are included in the structured questionnaires typical of quantitative studies. This can mean that aspects are identified from qualitative research about whose practical importance we still have little idea, because of a lack of quantitative evidence, or because the framing of questions in surveys does not correspond closely enough to the mindset of respondent to ensure we are getting accurate results.

Examples of this are the relative importance of different attributes outside the traditional economic ones, such as status and independence; and the effect of social interactions as influences on behaviour.

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"The public attitude"

There have been frequent differences of emphasis in the two traditions in reporting results, especially when using rather general expressions like 'the public view is...' or 'people do not like...'. These are important when trying to detect attitudes which are the typical or dominant viewpoint representative of the population as a whole, or of the collective view of a particular group.

In quantitative surveys conventions vary, some analysts using expressions of a dominant view only when there is a very large majority, and others just meaning a majority or in some cases even just the largest single (minority) group. This is probably not good practice, as it confuses the analyst's judgement with that of the respondent's, but it is not really a problem for synthesis: such surveys nearly always present the actual statistics, so it is relatively easy to replace the generality by specific figures - 40% or 60% or 90%, etc.

We note that it is virtually *never* the case that unanimity is found, and anything greater than about 80% is very rare indeed. Strictly, quantitative surveys nearly always find that there is no such thing as a single unambiguous 'public view' on anything. We have found that it is much more rewarding to consider different groups of attitudes in broad classes like 'nearly unanimous' 'strong support', 'split down the middle', etc.: this was especially the case in the analysis of attitudes to policies on road traffic in Chapter 7: there is manifestly a difference between those policies which seem to represent a convergence of view among very large numbers of the population (notably the case for improving public transport) and those for which - at present - views seem strongly divided and there is no obvious sign of a move towards consensus (notably road pricing and road building).

In the qualitative research, however, especially that based on in-depth discussions, there is properly a tradition among some researchers of scrupulously avoiding indications of size, so that even phrases like 'a minority' or 'a majority' are avoided, though sometimes 'all' and 'none' are acceptable. The intention of such research is to provide depth, range and understanding, not measurement. However, even where measurement is not the objective, sample size can still be important, because the identification of views or even the existence of minority issues cannot be greater than the probability that such minorities are selected as respondents. Good practice recognises this, and is careful to make the right caveats. What we have found however is that in avoiding implications of measurement, research reports often use phrases like 'respondents said...' 'people think...', 'the main problems are...' and such phrases are then embodied in research reviews as 'the public thinks...' or 'the public view is...' - implying a dominance or universality of view which runs counter to the whole objective of the method. We can assert with confidence that such unanimity cannot be supported by this kind of evidence: the range of views in qualitative research cannot be less than the range in quantitative research⁴⁰, and because of its richness it may well be greater.

The same must, logically, apply to the views of subgroups of interest. It is often the case that the most interesting aspects of group discussions have been the appearance of a difference in view or orientation of the discussion between groups of elderly people, young people, non-motorists, cyclists, etc. These appear to be genuine differences, often with evident illumination of understanding. On the other hand, we are very cautious about any statement implying that all elderly people think alike, or all male teenagers, etc. Such a single mind is manifestly absurd when stated in this form, but easy to give that impression in general discussion.

Our own convention has been to use phrases like 'some' or 'many' or 'a view' rather than implying unanimity, and reporting actual percentages or phrases like 'big majority' for quantitative surveys. In doing so, our summaries are sometimes more cautious than the original sources, except of course when quoting directly. (On the other hand we have found a few cases where inspection of source data directly has given a stronger support for some viewpoints than the authors' portrayal in executive summaries).

Questionnaire design, framing and context of questions

There is very strong evidence that differences in the wording of questions has a material effect on the apparent resulting distribution of attitudes: this result has been long known in principle, though it has surprised us in some cases how big the effect is. The strongest example of this was in comparing the results of different investigations into attitudes on airport expansion and the growth of flying it provides for. There seem to be rather clear

⁴⁰ Notwithstanding very small sample sizes or specifically selected, homogeneous groups of participants.

effects of the impact of questions which use statements of general principle as preambles, especially involving words of principle like 'freedom', 'safety' 'protection' 'privacy' and 'efficiency'. A similar effect occurs when framing a question with the presumption that there will be economic impacts or environmental impacts, from which starting point the respondent has to answer.

The consequence seems to be to produce an exaggerated response in favour of the desirable outcome, but conflicts of opinion with other questions. In the case of airports, big but inconsistent majorities are asserted for what in fact seem to be sharply divided attitudes.

Controlling for the effects of other variables: the problem of 'satisfaction'

There is a special problem that has emerged most strongly in the case of those surveys related to declared 'satisfaction' with various services. Satisfaction is not an absolute condition, but is generally thought to be influenced by a comparison between the world as experienced, and an expectation (explicit or implied) on the part of the respondent. That expectation may be in part based on previous experiences - e.g. congestion experienced in the period shortly preceding the survey, compared with what has been remembered over a lengthier period in the past. Or it may be based on some sort of norm, natural justice, reports of conditions that other people normally receive, media reports, etc. Thus experiencing 10 minute train delays when you are expecting 30 will cause a different satisfaction than experiencing 10 minute delays when you are expecting precise punctuality.

The problem occurs when comparing the declared satisfaction levels of people who have different expectations. This has been a problem of interpretation of the difference in satisfaction of frequent and infrequent bus-users, for example, in chapter 3.

Attitudes towards general and specific policy propositions

This study has reviewed results on public attitudes that are expected to be broadly applicable to the UK population and groups within the UK population. We have been asked to look out for regional differences but not look, as a rule, at specific results in detail for particular locations. This has meant that the research we have examined involves attitude responses towards general transport propositions (whether they are modes, behaviours or policies). For example, in Table 7.1, time trend results are reported for public attitudes of British public towards the overall proposition of road pricing.

It is known that attitudes towards a particular behaviour more closely correspond to behaviour when attitudes are measured at the same level of specificity as behaviour⁴¹, and it can therefore be suggested that to obtain a more compelling indication of attitudes towards policy propositions it is better that they are measured with some specificity to an actual policy proposition. In chapter 7, results are reported for support of London congestion charge shortly before and after its introduction when most of the public would have been well informed about the policy. Such results may be more indicative of what may be expected elsewhere when specific road pricing propositions are put forward than general attitude results on road pricing.

Differences between attitudinal and behavioural studies

We have observed that there have been a number of recurrent findings which challenge - or appear to challenge - prevailing understandings from a very large and long standing

⁴¹ Gärling, T., Loukopoulos, P. and Lee-Gosselin, M. (2002) Public attitudes. In: K. Button and D. Hensher (Eds.), *Handbook of Transportation. Volume 4: Transportation and the environment*.

research literature based on the revealed behaviour and observed choices of travellers, either from cross section studies, or longitudinal studies, and including the formal models of travel demand forecasting.

The most notable example of this is the effects and importance of prices. Some (but not all) qualitative studies give a strong indication that price is not a decisive influence on travel choice, either not being considered at all, or being considered (under the idea of 'value for money') only in the context of a wider package of service quality, convenience and life-style choices. On the other hand, some (but not all) quantitative studies place price very highly among a list of considerations.

Interpretation of this contrast can often be resolved by consideration of detailed issues of question wording and context, but such discussion takes place against a background of some thousands of quantitative studies based not on attitudes at all (either qualitative or quantitative) but on observations of long term trends in demand, and elaborate models for analysing it. While these studies themselves show a range of results, it is fair to say that there are some results which are very generally accepted among the researchers and practitioners in this field, which is that price does have demonstrably important effects on demand, including fuel prices, vehicle prices, and public transport fares. The effects are rarely the biggest of all measured impacts, but they are sometimes large (e.g. for leisure services for which there is a choice of mode, destination or frequency). Where data is available, they are mostly bigger in the long run than in the short run.

The brief for this study did not include a direct examination of this separate literature, nor an interpretation of any differences with it, but the authors have been active in this field for many years and are well aware of its features. We do not wish to challenge its legitimacy in the present context: our interpretation is that the attitudinal research gives clear warnings that the widespread understandings of demand elasticities may be based on an oversimplified view of the way in which economic motivations interact with social and psychological aspects of human behaviour. If so, then demand elasticities are themselves likely to be subject to alteration or evolution due intervention or social change. This is a potentially rich area of research, capable of helping to answer some big outstanding policy issues such as how to include vitally important initiatives such as smarter choices, better information, public transport quality, environmental interventions in car use, etc., in the formal business of project appraisal.

Differences between 'snapshot' and 'longitudinal' studies

In many respects, the richness of understanding and range of data available is greater among attitudinal studies, especially the qualitative ones, than measured observation of behaviour. But there is one respect in particular where it is much weaker, and we have found this extremely important. This is in the difference between attitudes measured at a point in time, and the dynamics of how those attitudes may change over time.

We do have some important observations of aggregate trends over periods of up to about ten years, showing how the appreciation of congestion or environmental impacts as a problem, or percentage support for specific policies, for example, have waxed and waned over the years.

What we are almost completely missing, however, is the even more important understanding of how transport attitudes may change and evolve at the level of the individual, over time:

- How big is the 'churn' in attitudes compared with the trend in aggregate views? For example, when there is a 2% shift in the appreciation of congestion as a problem, does this reflect a more or less uniform shift in the population as a whole, or the

difference between 20% of the population shifting in one direction and 22% shifting in the opposite direction? These two cases have enormous significance for understanding volatility, the scope for change and the potential impact of different types of intervention affecting the two groups differently. The size of such churn in all the studies of revealed behaviour which have examined it is so large that it gives cause for thinking that attitudinal churn will be as well.

- A recurrent finding in the examination of long term trends in behaviour has been that the effects of specific influences are larger in the long run than in the short run, usually taking long run to be in the range 5-10 years and 'larger' can mean twice as great. The question therefore arises: is it possible that a similar effect would be true for attitudes? This would transform our understanding: at the moment we have some very good results for the differences between different groups of the population at a point in time. We know nearly nothing about what happens when a person changes from one group to another, or is confronted with a difference in the conditions facing them.
- A particular aspect of this is the common use (notably in bus and cycling analyses) of the difference in expressed attitudes between 'users' and 'non-users' of the mode. This distinction is widely used, and rarely challenged, but as soon as we start to think about changes over time it becomes very difficult to define: although there is a hard core of complete non-users of any particular mode, the number is usually small compared with the number of infrequent users (which depends on the time period of defining 'infrequent'). More generally, what causes non-users to become users, and vice versa? Do people swap and evolve between the population segments described in chapter 8, or are there fixed groups with stable values and attitudes? This issue seems pivotal to all the discussion of 'willingness to change behaviour' which has been such a frequent preoccupation of attitude studies in recent years, and it is a fundamental weakness that so little work has been done on it.
- Another dimension of the same problem is seen when we have observed quite a strong differentiation in attitudes or intentions among different age groups. This is often expressed in the form 'as people get older, they...'. But a full understanding of the effect of aging cannot be made without distinguishing two quite different effects - the distinction between older and younger people at a point in time, and the development of an individual as they get older. It would be quite unwarranted to assume that today's young will in future become just like today's old.

If there is one single research recommendation that we would make from our review, it is to initiate longitudinal research which will enable the attitudes of individuals to be tracked over time, as their circumstances and lifestyles change. This suggestion is part of a bigger movement to adopt such methods more widely: for example, there is currently the UK Household Longitudinal Survey under development, which has a proposed sample size of 40,000 households across the UK. There have also been a number of different transport-related panels, at local or national level. Whether a specific focus on transport attitudes can be made as part of one of these broader initiatives, or needs a special instrument of its own, needs further consideration.

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In the bibliography below, the numbering system is the same as that in the separate Annex, which gives more details and summaries. The numbers are used in citations in the text. Readers of this report in electronic form in Word can opt for alphabetical order by sorting on the second column, and readers on-line can click directly to the web addresses given as sources. Missing numbers are those references in the full list which were then not found to be useful due mostly to repetition of material contained more conveniently or fully in other sources.

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Appendix: Issues of Theory and Interpretation

Introduction

The purpose of this Appendix is to introduce relevant conceptual and theoretical issues relating to public attitudes that can assist in understanding and interpreting the findings of this report.

To do so, three main considerations are addressed in turn:

1. *Matters of interpretation*: understanding what is meant by 'attitude' and by a number of other concepts covered by the evidence base;
2. *Matters of application*: acknowledging the important but complex relationship between attitudes and behaviour; and
3. *Matters of measurement*: appreciating that different methods can be used to measure attitudes (and other concepts such as satisfaction) and choice of these has implications.

Taken together, the issues covered are valuable in interpreting the results of attitude surveys and telling us about the potential for and difficulties associated with responses to different transport policies.

Matters of interpretation

Attitude concepts

'Attitude' is often used as a catch-all term

In this study the phrase 'public attitudes' has a broad interpretation which goes beyond the specific concept of **attitude** used by psychologists and other social scientists and embraces a variety of concepts such as **beliefs, perceptions, satisfaction, expectations, acceptability, values and norms**. In Box A.1 definitions and examples are given of concepts. In Figure A.1 a simplified conceptualisation of the relationship between some of the concepts is illustrated. To start with the attitude concept will be considered.

Box A.1. Public Attitude Concepts

Attitude concepts

Attitude - evaluative response (liking or disliking) to an attitude object (e.g. I like cycling to work)

Attitudes arise out of **beliefs** (assumptions or convictions that are held true about the entity) about an attitude object (e.g. I believe that cycling is safe means of getting to work) and **evaluations** of these (e.g. it is important to me that my means of getting to work is safe) (*cognitive view of attitudes*)

Attitudes arise from **feelings** evoked (e.g. I feel good about cycling to work) (*affective view of attitudes*)

Satisfaction - feeling of pleasure or disappointment resulting from comparing **perceived performance** in relation to **expectation** (e.g. I am dissatisfied that it took five minutes to find somewhere to leave my bicycle at my workplace)

Acceptance - prospective judgement of proposal to be introduced in the future (e.g. I support the provision of covered bicycle storage facilities at workplace)

Related concepts

Values - life goals or standards that serve as guiding principles in life (e.g. security, benevolence). Considered to provide the basis for the formation of attitudes to specific attitude objects

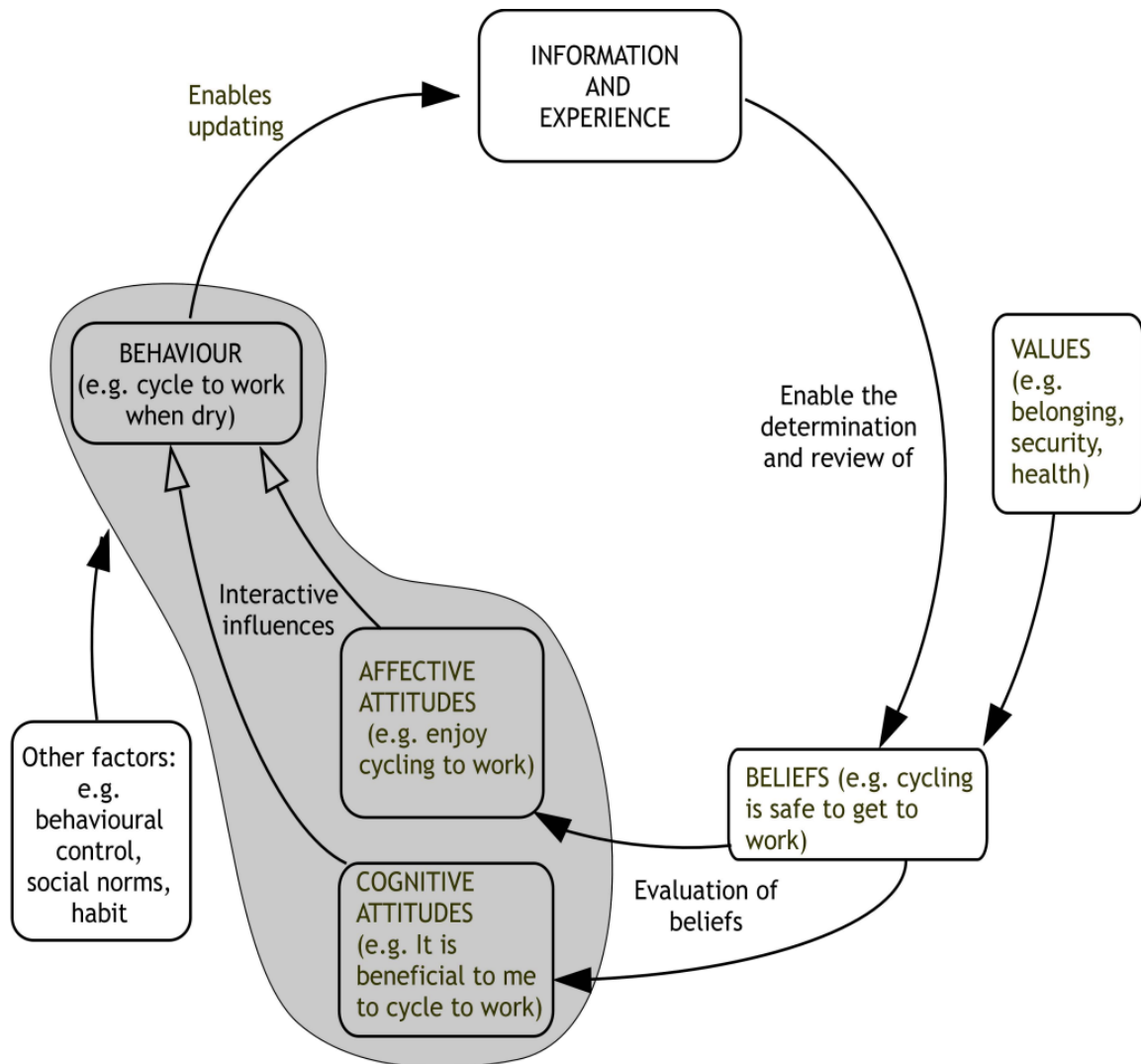
Environmental concern, awareness and responsibility - examples: concern (e.g. steps need to be taken to protect the environment at the present time); awareness (e.g. I am aware that using my car has undesirable consequences on the environment); and responsibility (e.g. I recognise that it is up to people like me to cut their car use)

Moral norms - self-expectations that manifest themselves in feelings of obligation to engage in behaviour (e.g. I feel it is my duty to cycle whenever possible)

Social norms - what we think others important to us expect (e.g. my family do not like me cycling as they are concerned about my safety)

Perceived behavioural control - belief about ability to perform behaviour (e.g. I do not think I am fit enough to be able to cycle to and from work)

Figure A.1. Simplified conceptualisation of the relationship between Values, Beliefs, Attitudes and Behaviour



A recognised definition of attitude

Although there is no one single, universally accepted definition, psychologists and social scientists recognise that the term **attitude** is a *hypothetical construct that represents an individual's like or dislike for an item* and refers to a *relatively stable evaluative response* (Eagly and Chaiken, 1993). Attitudes are positive, negative or neutral and people can also be 'ambivalent' towards an entity, meaning that they simultaneously possess a positive and a negative bias towards the entity in question.

The 'entity' here means the object of an attitude, and can include individuals, inanimate objects, outcomes, concepts, social groups, nations, policies, activities and behaviours. For the sake of clarity, the term '**attitude object**' is used to refer to this large class of people and things towards which attitudes can be held. In the context of this review, the attitude objects include transport system components (e.g. modes, facilities, staff), transport policies (e.g. taxes, regulations, schemes), and transport outcomes (congestion, safety, fairness).

Attitudes can be affective or cognitive

Evaluative responses to an attitude object take two main forms⁴². An **affective** evaluative response to an attitude object is based on the positive or negative **feelings** it induces (e.g. stress, excitement, pleasure, boredom, control). A **cognitive** evaluative response is based on **beliefs** about the attitude object (e.g. it is costly, convenient). Cognitive attitudes have most often been studied, but there is increasing recognition of the importance of affective attitudes. In any situation they are likely to be related and formed as a result of an ongoing evaluative process. Some attitudes are formed on the basis of direct personal experience, while others formed indirectly on the basis of word-of-mouth or mass-media information (Fazio, 1990).

Attitudes determined by feelings

According to one view (Zajonc, 1984, cited in Gärling et al., 2002), attitudes are formed because the attitude object, whether directly or indirectly experienced, evokes immediate positive or negative feelings. Affective attitudes have been found to relate strongly to journey experience (Anable and Gatersleben, 2005; Mann and Abraham 2006). Mann and Abraham (2006) have identified four types of affect relevant to travel decisions: journey based affect (comfort and stress free journey), autonomy, personal space, self-identity. What constitutes affect is disputed in the literature i.e. are 'privacy' and 'control' emotions or do they cause emotions? There is even less consensus on what causes affective responses, including the degree to which they are based on beliefs. There is also no consensus on how these constructs can best be measured. Nevertheless, there is increasing agreement that affective motives are best treated separately from more cognitive attitudes in being a significant determinant of travel mode choice.

Attitudes determined by beliefs

The cognitive view of attitudes usually is based on the **expectancy-value model** which assumes that attitudes to an entity are a result of **beliefs** (or **opinions**) about the entity's characteristics (expectations) and **evaluations** of the importance of the beliefs (values). According to this model, if studying cycling a survey may ask people to express their beliefs about characteristics of cycling such as whether it is time consuming, enjoyable and safe (for example, on a scale ranging from 'not at all safe' to 'very safe') and their

⁴² A third evaluative response to an attitude object (that is less often studied) is a behavioural response (for example, a physical reaction).

evaluation of these characteristics (for example, on a scale ranging from 'not at all important' to 'very important'). In the expectancy-value model, it is assumed that the overall attitude towards an entity is the sum of the beliefs about its characteristics weighted by the evaluations of those characteristics.

Beliefs are assumptions or convictions that are held true about the entity. Akin to **perceptions**, these are the underlying cognitive foundation of attitudes and are descriptive and cognitive (based on knowledge – facts or things believed to be factual). They can range from the very deep seated beliefs held concerning such things as religion, to recent experiences which have affected someone's **perception** about a particular person, concept, or behaviour. **Evaluations** are judgements of the importance of the beliefs⁴³

It is implied in the **expectancy-value model** that attitudes might change for three different reasons:

- A change in the characteristics of the attitude object that are held in mind (for cycling a person may become conscious of physical fitness benefits);
- A change in beliefs about an attitude object (for cycling a person may change their belief from considering cycling 'safe' to 'unsafe' after hearing about a friend being involved in cycling accident)
- A change in the evaluation of beliefs (for example, new time pressures in someone's life may increase the importance attached to travel time)

Beliefs are underpinned by knowledge

Since beliefs represent the information that people have about their world, be it right or wrong, it has been purported that factual **knowledge** about issues is a necessary precondition to attitude (Kaiser et al, 1999). Knowledge may also determine which beliefs are salient and establish the relative importance of the beliefs. Environmental awareness research has established that knowledge about the right action is a necessary but not sufficient prerequisite for conservation conscious behaviour (see Anable et al., 2006 for a review). In psychological terms a distinction must be made between whether a person feels well or badly informed and whether he actually is well or badly informed. Hence a difference is made between so called objective knowledge and the subjective assessment of own knowledge.

Satisfaction is an application of the attitude concept

One of the most common manifestations of attitude research in travel studies takes the form of satisfaction surveys (e.g. Road User Satisfaction Survey). **Satisfaction** is defined in the marketing literature as *a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations* (Kotler, 1997). As such, it is a particular application of the concept of attitude and one which relates to performance. Satisfaction surveys can measure overall satisfaction with a product, but they are usually also applied to measuring satisfaction with different aspects of a product's performance. Hence satisfaction is a concept which is related to both attitudes and beliefs.

To interpret the implications of a satisfaction survey it is helpful to obtain information on **performance** (how the product is perceived to have performed) and **expectations** (what

⁴³ It can be seen that seeking to measure evaluations of beliefs in attitude studies is similar to measuring the value of attributes (e.g. value of travel time, value of having a seat on a train) in travel choice modelling.

expectation does the consumer have of performance). Low satisfaction ratings may equally arise from high expectation levels as low performance levels. Expectations will vary across individuals (e.g. disabled versus non-disabled) and over time (expectations can increase following performance improvements). To understand the significance of satisfaction results it is valuable to measure **importance** (how important is it to a consumer that an aspect is performing well). If a satisfaction survey is to be informative about consumer decision making it is necessary to ensure that all relevant aspects of performance are investigated.

In professional marketing a distinction is made between two approaches for studying consumer perceptions: 'make and sell' (which addresses the needs of the seller) and 'sense and respond' (which addresses the needs of the buyer) (Kotler, 2000). Satisfaction surveys can be seen as part of the first approach where product development is based on investigating which of a specified set of product attributes are priorities for improvement. There are examples of the 'sense and respond' approach being employed in transport. Studies by bus operators have looked to understand terms associated with their service (negative examples of this would be 'peaked cap', 'string vest') and ask people what top-of-mind benefits they are looking for from bus use (convenience, value for money, stress-free travel). Studies by academics include open examination of people's feelings about, e.g. bus versus car, which challenge perceptions of utilitarian terms such as time and reliability being overarching determinants of experience - factors such as comfortable and stress-free, autonomy and self-identity emerge.

Acceptability is another application of the attitude concept

There are very few attempts to define policy **acceptance**, yet measurements of the acceptability of specific transport interventions are a common component of attitude surveys in this area. These are based on the premise that public acceptability is an important precondition for the successful implementation of these interventions. The notion of acceptability/acceptance expresses a variety of concepts such as support, agreement, feasibility, voting intention, favourable reaction, etc. (Schade and Schlag, 2003). Likewise, the term public acceptability is conceptually rather fuzzy as it is unclear what is exactly meant by the public. Some authors focus on motorists, others on voters, consumers, citizens or inhabitants.

These constructs tend to describe the prospective judgement of measures to be introduced in the future. Questions about policy can readily present respondents with some of the possible costs and consequences of a certain course of action, unlike questions eliciting general attitudes. Acceptance defines respondents' attitudes, including their behavioural reactions after the introduction of a measure.

As with the discussion of attitudes above, however, it appears that understanding acceptance requires a two tier level of understanding - in this case that of **problem perception**. It is assumed that high problem awareness will lead to increased willingness to accept solutions for the perceived problems. However, empirical findings on the influence of problem perception on acceptability are inconsistent. Schade and Schlag, (2003) show that the groups perceiving traffic congestion as one of the biggest problems are those who reject road pricing more strongly in contrast to those in groups perceiving mainly environmental problems.

Related concepts

Attitudes are guided by values

Values are typically conceptualized as important life goals or standards (e.g. freedom, happiness, security) that serve as guiding principles in life and are responsible for shaping

much of our intrinsic motivation (Rokeach, 1973). Values differ from attitudes because they are not tied to specific situations or objects. They provide a basis for the formation of more specific attitudes, for example, by influencing which characteristics are held in mind about an attitude object, what information is obtained about an attitude object and what importance is attached to beliefs about the attitude object.

Despite their generalisability, values have empirically been shown to play an important role in explaining behaviour in a variety of situational contexts. In addition, the total number of values that people may consider is relatively small. Therefore, relative to other antecedents of behaviour (e.g. specific beliefs, attitudes), values provide an efficient instrument for describing and explaining similarities and differences between persons, groups, nations, and cultures (Rokeach, 1973).

Value orientations have been examined in interdisciplinary research on environmental attitudes and pro-environmental behaviour (Fransson and Gärling, 1999; Stern and Dietz, 1994). The basic tenet in this research is that people differ in their deeper sentiments for the environment. Extensive cross-cultural studies of the structure of human values (e.g., Schwartz, 1992) have identified universal value types ordered along two orthogonal dimensions labelled: self-transcendence vs. self-focusing; and openness vs. closedness to change.

Is 'environmental concern' an attitude?

The environment is a broad concept that has different meanings to different people and it is not very useful to seek an evaluative response to the environment as an attitude object. It has been more common to study public levels of concern for damage to the environment. Kaiser et al's (1999) review of the literature concludes that the relationship between environmental concern and behaviour is usually found to be weak. This has led to studies investigating not only environmental concern but also values environmental awareness and moral norms (Stern et al, 1999).

Environmental awareness and moral norms

Moral norms (often referred to as personal norms) are distinct from attitudes, as '*[w]hereas other attitudinal concepts refer to evaluations based on material, social, and or psychological pay-offs, personal norms focus exclusively on the evaluation of acts in terms of their moral worth to the self.*' (Schwartz and Howard 1984, p245, cited in Harland et al 1999). They are self-expectations that are based on internalised values that manifest themselves in feelings of obligation to engage in behaviour.

In the Value-Belief-Norm theory (Stern et al, 1999) moral norms to conduct pro-environmental behaviour are hypothesised to arise when a person has pro-environmental and pro-social values which lead to an **awareness of the consequence of one's actions** and an **acceptance of personal responsibility** for these consequences.

Beliefs about other people's expectations

What people think and do is influenced by what others say and do. **Social norms** (also known as subjective norms) relate to people's perceptions of what they think other people important to them (family, friends, community) expect of them. It is proposed in the Theory of Planned Behaviour (TPB) (Ajzen, 1991) that subjective norms along with people's own attitudes towards behaviour and their perceived behavioural control combine to influence behavioural intention. This implies that when researching a particular travel behaviour it is important to investigate not only respondent's own beliefs and attitudes about the behaviour but also their beliefs about other people's expectations for the behaviour.

Perceived ability to perform behaviour

It may not always be fully under a person's control to be able to perform a behaviour, even if they wish to and they believe others would support them doing so. In the TPB, it is hypothesised that attitudes determine intentions, mediated by subjective norms and **perceived behaviour control**. Although taken to be a proxy for **actual control**, an individual's beliefs in what they can do are seen as important determinants of what they will do.

Efficacy is an aspect of perceived control in that it incorporates a notion of efficacy or perceived belief about what can be achieved, for example, with respect to ecological behaviour. To influence behaviour, it is important that other beliefs are combined with a low level of perceived behavioural barriers. In other words, it is possible to have favourable beliefs and attitudes, but these will not be translated into behaviour if there is low confidence in being able to carry out that behaviour. It is therefore useful in researching travel attitudes and behaviour to investigate people's beliefs about how easy or difficult it is to carry out behaviour.

Matters of application

In travel studies, there are two principle purposes of examining attitudes towards a set of modes, policies or outcomes of policies. One is to identify ways in which those transport modes can be made more or less attractive and efficient, and one is to form an understanding of how predisposed people are towards certain behavioural choices or towards supporting certain policies.

The premise is that attitudes are linked to behaviour. The fact that attitudes in turn are based on beliefs leads to the conclusion that making improvements to attitude objects or providing information about attitude objects are ways to change attitudes and thus behaviour. However, as the discussion has already highlighted, the concept of attitude is not straightforward and nor is its relationship to behaviour. In this section we look at what theories say about the relationship between attitudes and behaviour, before turning attention specifically to behavioural change and what factors may be important for this.

Attitudes and behaviour

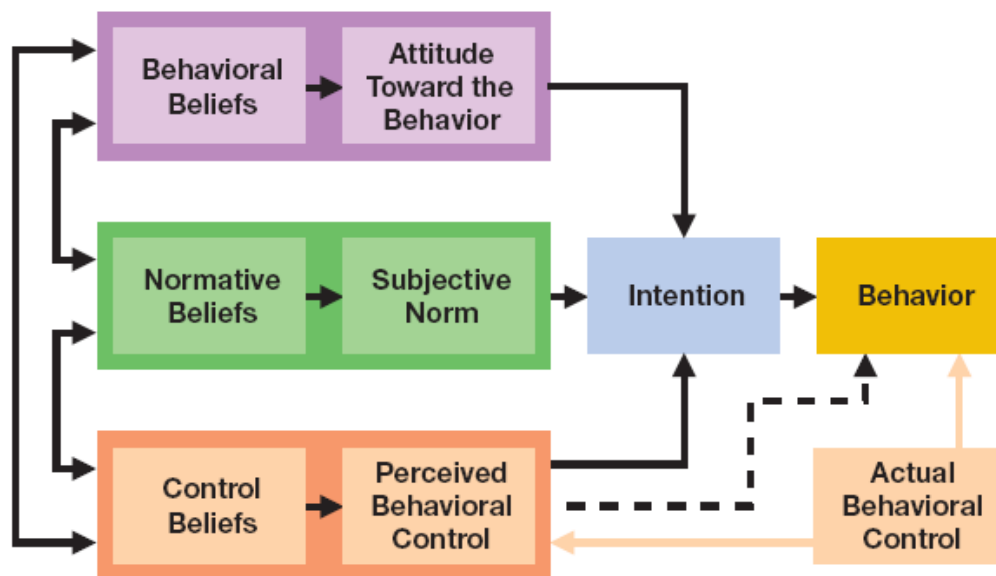
Theoretical frameworks help illuminate the link between attitudes and behaviours

Understanding this relationship can be enhanced by the use of theoretical frameworks emanating largely from socio-psychological theory but also the fields of marketing. The literature is vast and thorough reviews have been undertaken elsewhere (Jackson, 2005; Anable et al., 2006, Gärling and Fujii, 2006).

Theory of Planned Behaviour

By far the most common and influential is the Theory of Planned Behaviour (TPB) cited in the previous section. This theory proposes that (i) attitude towards behaviour does not determine behaviour directly, (ii) attitudes are combined with social norm and perceived behavioural control as key antecedents of behavioural intention which in turn influences behaviour, mediated by actual control, (iii) attitudes and social norms are determined by salient beliefs and the evaluation of each belief. With respect to travel behaviour, the TPB provides an explanation as to why attitudes do not always correspond closely to behaviour.

Figure A.2. Theory of Planned Behaviour⁴⁴



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Gärling et al. (2002) report that in empirical studies attitude has not normally been found to explain more than 16% of variance in behaviour, although this increases to 25% of variation in stated intention. It has been found that the correspondence between attitude and behaviour is stronger where attitude is measured at the same level of specificity as behaviour. Attitude towards the environment may not closely correspond to whether people cycle to work. Attitude towards cycling in general is more likely to correspond closely and attitude towards cycling for the journey to work is likely to correspond most closely.

One example where the TPB has been tested in transport has been Bamberg, Ajzen and Schmidt (2003) who studied the impact of a prepaid bus ticket on bus use of 580 students at the University of Giessen, Germany. Analysis of bus intention and use before (two months) the intervention and after (eight months) the intervention showed that the intervention influenced attitudes, subjective norm, perceived behavioural control, intentions and behaviour towards bus use and supported the TPB as a model for explaining behaviour both before and after intervention.

Value-Belief-Norm theory

The Value-Belief-Norm (VBN) theory, cited previously, has been put forward to explain why behaviour may be altruistic and not based on self-interest. In this theory, moral norms are considered to be the only direct determinant of pro-social behaviour with beliefs and attitudes about the consequences of the behaviour for the individual not identified to be important. (Moral norms are themselves assumed to depend on pro-social and pro-environmental values and awareness and responsibility for environmental consequences.) One empirical testing of the theory showed it to explain 35% of variance in behaviour (Stern et al, 1999). This suggests that there are other factors that are

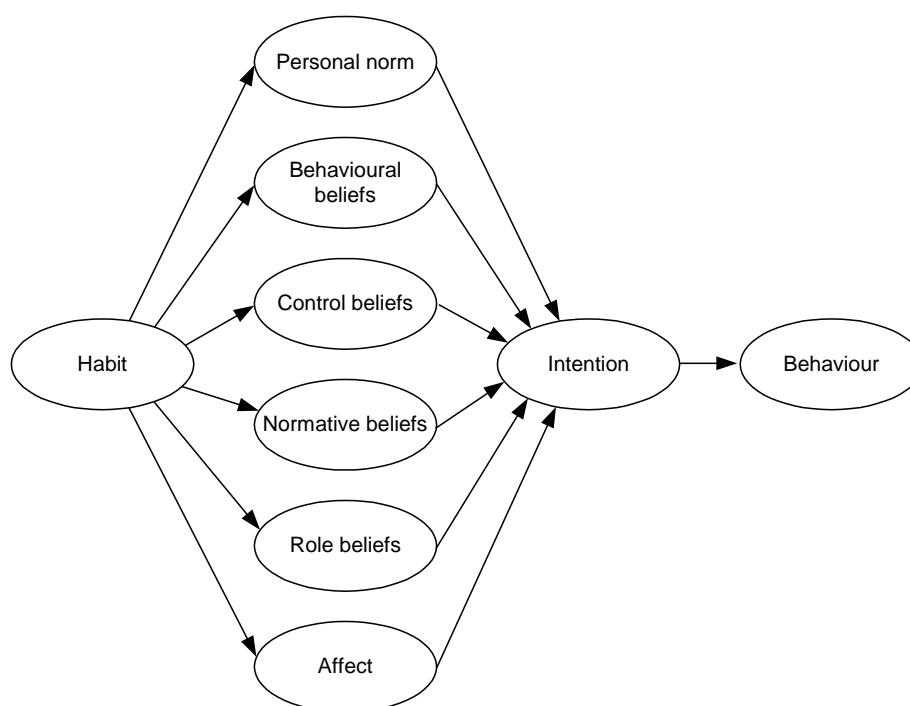
⁴⁴ Copy of Figure A.1 in DfT (2007). Making Personal Travel Planning Work: Research Report.

important, but that moral norms are likely to be an important determinant of behaviour that is characterised as being environmental.

Habit and integrated theories

The theories outlined so far assume behaviour is a result of conscious deliberation. It has been suggested that repeated behaviour is habitual and involves no conscious deliberation (Aarts and Dijksterhuis, 2000). Triandis' Theory of Interpersonal Behaviour (TIB) (Triandis, 1977) is an integrated theory that recognises the factors identified in TPB and VBN theory, as well as recognising habit and more broadly recognising the social context in which decisions are made. In the latter respect, it implies that behaviour is influenced by actual and perceived social and institutional conditions (through norms (personal and social), role belief and self-identity). It also implies that behaviour is influenced by affect - emotional feelings towards the behaviour.

Figure A.3. *Theory of Interpersonal Behaviour*



Bamberg and Schmidt (2003) studied the car use of students in Germany and compared the performance of TPB and TIB in explaining behaviour. It was found that habit as well as intention determine behaviour with attitude, behavioural control, subjective norm and role beliefs determining intention. Personal norm was not found in this study to be statistically significant in explaining intention after taking account of other factors.

Conclusions on attitude-behaviour relationship

Generally, researchers have concluded that although the relationship between attitudes and behaviour is complex (especially when considering general attitudes and specific behaviours), attitudes and beliefs have an important role in shaping intentions and can be informative in identifying where and how to apply strategies for changing behaviour. The theories and models outlined above indicate some of the other factors that may be important. Anable et al (2006) review a wider set of theories and models and summarise based on this a set of factors or barriers to environmental behaviours and organise these into a typology (see Table A.1).

Table A.1. A Typology of barriers to travel behaviour change from Anable et al (2006)

INDIVIDUAL SUBJECTIVE	INDIVIDUAL OBJECTIVE
Values	Knowledge / Awareness of consequences
Frames	Habit
Moral norms / sense of responsibility	Personal capabilities
Perceived behavioural control	Actual resource constraints
Self efficacy / agency / locus of control	
Denial	
Instrumental attitudes	
Affective attitudes	
Identity and status	
COLLECTIVE SUBJECTIVE	COLLECTIVE OBJECTIVE
Social dilemmas	Contextual / Situational factors
Group cultures / shared norms	Communication and the media
Trust in others and in government	The nature of the climate change problem

Behavioural change

The emphasis in the discussion so far has been on how closely attitudes correspond to behaviour at any time, without explicitly considering the role of attitudes in **behavioural change**. Put another way, how important is attitudinal change for behavioural change and what else is important for behaviour to change? There are mixed results on this. The study mentioned previously by Bamberg, Ajzen and Schmidt (2003) on the impact of a prepaid bus ticket on bus use of students found a more positive attitude towards use of buses after the intervention (as well as more positive subjective norm and perceived behavioural control) and this was associated with increased bus use.

Other studies though (admittedly with small samples) have shown a change in behaviour without change in attitudes. Garvill et al (2003) found that awareness raising information on alternatives to the car in Umeå, Sweden, led to decreased car use but no change in general attitudes towards transport modes. It is suggested that reduced car use may have been due to those with strong habits having been influenced by specific situational factors or specific situational attitudes, rather than any changes to general attitudes towards transport modes.

Life events

It has already been mentioned that habit prevents conscious deliberation of behaviour and can be an obstacle to behavioural change. Events in people's lives (e.g. change of job, birth of child) trigger a process that will lead to reconsidering current behaviour. As well as modifying journey requirements (naturally leading to new behaviour), **life events** can

lead to a cognitive process which results in changes in knowledge, beliefs and attitudes. The life course approach (conceptualised with respect to travel behaviour by Salomon (1983) and applied in recent years by Lanzendorf (2003) involves the study of mobility biographies and has shown how travel behaviour changes tend to coincide with life events.

The transition from attitudes to behaviour may take place in stages

An influential theory on behavioural change is the Transtheoretical Model or Stages of Change Model which suggests that change in behaviour occurs by moving through five **stages of readiness** from precontemplation through to contemplation, preparation, action and maintenance (Prochaska and Di Clemente, 1983). It has been widely applied in health promotion.

The Transtheoretical Model is not explicit about *how* to influence movement between the stages and there is a need to draw on other theories of behaviour for this. It is suggested that there is a decisional balance at each stage with pros and cons (motivators and constraints) for behavioural change. Positive beliefs and attitudes towards the new behaviour are likely to be important from the contemplation stage onwards (positive changes in these are likely to be especially important to move from contemplation stage to preparation stage).

In a study of cycling it was estimated that two-thirds of the UK population are at pre-contemplation stage or contemplation stage (Davies et al, 2001). One group within this category are referred to as 'the unconvinced' and are two-thirds females. They cycled as children, do not currently own a bicycle, have negative attitudes towards cycling, but would not feel self-conscious about cycling. The report suggests that first cycle ownership is promoted using female role models (to change social norm) and then cycling is used to promote the convenience and speed of cycling (to change beliefs and attitudes).

The importance of goal setting

Recent work examining behaviour change has identified the setting of a goal to change behaviour as being an important element in change occurring (e.g. Gärling and Fujii, 2006). It is believed that a strong commitment to a goal and the setting of a large goal increase the likelihood of the goal being attained. Setting of a goal can be self-imposed or forced on individual. It implies that beyond changing people's attitudes it may be important to directly motivate people to have intention to change behaviour and/or to form implementation intention (or plan) to change behaviour.

Behaviour change may precede attitude change

In the theories outlined so far, attitude is assumed to be a determinant of behaviour. However, behaviour may also influence attitudes. For example, a person may begin driving because it is popular (social norms) or because it is easy for them to use (perceived ability) and may subsequently infer that it is a good thing (an attitude). In the latter case, the behaviour preceded the attitude (Eagly and Chaiken, 1993). This implies promotional measures to encourage people to try out a behaviour may be able to induce positive attitudes subsequently.

Is it worth changing attitudes?

Nothing about the discussion so far indicates that attitudes are not an important precursor to behaviour change, especially where affective as well as cognitive dimensions of attitudes are considered. However, the issue is the extent to which factors *other than* attitudes also need to be considered. These include the underlying cognitive and affective processes, behavioural intention, objective factors and wider social processes which can

intervene in the attitude-behaviour relationship. In addition, the theoretical and empirical literature points to the fact that change may take place in incremental steps and in different directions and not only at the individual level. It has also highlighted that behaviour can precede attitude change, rather than vice versa.

Theories on persuasion

Attitudes can be changed through persuasion. Jackson (2005) notes that successful persuasion has been said to be a function of credibility of source, persuasiveness of arguments and responsiveness of the participant. The Elaboration Likelihood Model (ELM) is a theory of attitude change which highlights that there can be two routes to persuasion – the peripheral route (superficial, heuristic) and the central route (systematic) to information processing (Petty & Cacioppo, 1986). The former is based on simple inferences and can lead to sustained behaviour change as long as positive experience results. Nevertheless, the latter process relies on critical evaluation and is more likely to lead to enduring change as it produces a structure of beliefs supporting the changed attitude. Making persuasive messages personally relevant is one method. Others include presenting messages to the target audience in a context where there are few distractions and little time pressure, and using a source that is credible and trustworthy.

Persuasion can seek to take into account cognitive dissonance, a state of internal tension that results from an inconsistency between knowledge, belief, opinion, attitude and behaviour. It is psychologically uncomfortable and drawing attention to such inconsistency in an individual, e.g. through awareness campaigns, can lead to them changing their behaviour in line with their attitude.

Attitudes towards the transport system and people's beliefs and perceptions of the transport system are informed from a number of sources. Three key sources are the media, friends and family and personal experience, alongside specific information campaigns. These sources will differ for different people and across different modes. For example, indications are that for rail people acknowledge they are most influenced by the media (which may reflect the much lower frequency of direct experience for many people), while for local travel people tend to be informed by a mix of personal experience and media. In relation to personal experience two points stand out: people remember their poor experiences (which can also reflect sporadic use of a given travel options) and they also exhibit an 'I've seen better abroad' comparison which again draws upon less familiar routine experience. One piece of research suggests accordingly that transport providers should seek to reduce the incidence of worst experiences as a greater priority than trying to improve the average experience.

Matters of measurement

The complexity of the attitude construct and its relationship with behaviour points to the need for robustness in attitude measurement in order to have the best chances of collecting data capable of leading to valid, comparable and meaningful results. Here we discuss issues to be considered with respect firstly to data collection and secondly to data analysis.

Data collection

Survey design and question wording

A survey instrument is reliable if it yields consistent scores over repeated observations; and is valid if it measures what it claims to measure. As attitudes are not directly

observable, all survey evidence on attitudes needs to be treated with caution. Quite large differences in answers can result from minor differences in the wording of questions, or even the order in which questions are asked. This is increasingly problematic as attitude studies become more and more prevalent and researchers vary what kinds of attitudes and other constructs are considered.

Attitude definition

Whilst inconsistency in the use of individual constructs is unhelpful to allow comparison between surveys, it is desirable that the attitude construct is not used narrowly and is broadened out to appreciate affective as well as cognitive elements and underlying beliefs and evaluations of those beliefs. This process would be aided by the use of theoretical frameworks.

Attitude specificity

A long history of attitude research has concluded that general attitudes are poor predictors of specific behaviour so that correspondence is improved if attitude is measured at the same level of specificity as the behaviour. An example is that a positive attitude toward the environment may not closely correspond to use of public transport, whereas a positive attitude toward public transport may.

Attitude salience

It is widely accepted that the more important the attitudes are to an individual, the more predictive they are of corresponding patterns of behaviour. Although a person may hold many beliefs and attitudes about a given behaviour, only a subset of these is accessible or *salient* at any one time. The measurement of importance can be a proxy for salience, and the two part measurement of importance as well as expectation can avoid some of the pitfalls of the survey measuring only that which is important to the researcher, public transport operator or other agency.

Attitude scales

An attitude typically involves multiple evaluations. For example, an individual's attitude toward public transport may involve evaluations of social benefits, sensory experience (e.g., watching the world go by), risks (e.g., personal safety), and other problems (e.g., uncertainty over timings, cost). One strategy for measuring an attitude this complex is to sum the evaluations (favourable or not) for each of the beliefs contributing to the overall attitude. Thus, an attitude can be measured with questionnaire items that can be read as a scale. One measurement tradition, psychometrics, has its origins in mental and psychological testing and sets out to measure a series of items, each of which purports to assess a common underlying attribute the test is designed to measure (e.g. environmental concern). The more precise information accumulates as the number of items increases (Eagly and Chaiken, 1993).

Attitude context

In order to fully appreciate the link between attitudes and behaviour, both internal and external influences on change need to be taken into account as well as the context in which the questions are posed (Anable et al., 2006). This tendency to measure attitudes in isolation from other factors is exacerbated by a tendency, until recently, of researchers only to use insights from one discipline without recognition of the importance of social, psychological, economic and physiological interactions. However, this is beginning to change in transport studies. There is also recent appreciation of the need to investigate transport in relation to holistic and lifestyle issues establishing the context within which

people form their ideas. Less often recognised, however, is the need to move away from a treatment of attitudes at a point in time without consideration of the dynamic processes of how they change in response to changing circumstances. In particular, there is inadequate consideration of variability and churn in attitudes, invisible in cross-sectional/snapshot surveys, which is necessary to detect the sources of change in attitude.

Survey methodology

Mixed methodology approaches which blend together qualitative investigation with quantitative attitude measurement can alleviate some of the pitfalls identified above. Qualitative surveys are a main source of investigation of the most commonly held, or salient, beliefs in a population. They are also the only means of identifying previously undiscovered beliefs and attitudes (Imms and Ereaut, 2002).

Sampling

Another recurrent need for caution arises from statistical and sampling issues. Random probability samples' should be drawn to avoid sampling bias. This requires selecting potential respondents using a strict design based on probabilistic methods. Also high response rates are required to avoid non-response bias (from self-selection, for example). In practice both of these are difficult to achieve and caution should be applied in interpreting whether sample statistics are representative of the population. If a more precise result is required (e.g. lower level of uncertainty) then a larger sample size is required. Larger samples also allow for comparisons to be made between groups within the population with statistically significant differences able to be detected.

Data analysis and interpretation

Social response bias

Defra (2008) notes that in research 'some people's response are affected by their sense of what is socially acceptable, such as what they think they should do or most people do, leading for example, to over-claiming or agreement with a number of statements which can be contradictory'. This reinforces other well-established findings that people tend to provide answers to surveys which can be influenced by what they think the interviewer or their peer group expects of them, or which justify their own decisions perhaps originally made for other reasons. This, combined with potential self-selection biases, should be considered and where possible, statistically treated in the analysis of attitudinal data.

Segmentation

Crucially it is important to recognise that attitudes vary across the population. To better understand attitudes requires that one at least looks in a more disaggregated manner at 'consumer segments'. In so doing this serves to highlight two key issues. Firstly there are many different ways in which one can segment the population to examine their attitudes and secondly segmentation reinforces the fact that generalisations about public attitudes are hard to establish and risk misinterpretation where they are attempted. Segmentation can be along lines of journey purpose (commute, business, leisure) or sociodemographics (age, gender, ethnicity) or disability. It can also arise from a social marketing approach which groups people according to common characteristics associated with the point of interest such as pro-environmental behaviour or car purchasing behaviour. These common characteristics can be based on motivations or attitudes based on psychometric measurement. Importantly, segmentation has to have meaning and be 'fit for purpose'. Where segmentation arises from the data the intention is to form groupings of individuals such that individuals within a group have more in common with each other than commonality between groups.

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Note that this is a separate reference list for the Appendix.

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