EXPLORATION OF THE MOTIVATIONS AND EXISTING BEHAVIOUR OF BIKE RAIL INTEGRATORS TO INFORM FUTURE PROMOTIONAL INTERVENTIONS

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Abstract

Bike-rail integration (BRI) extends the catchment area of a station for those without access to a car or bus, whilst also enabling the substitution of more car journeys and allowing people to build exercise into their day. More cycle access to the rail network has particular benefits in a congested urban environment like Bristol, which has few opportunities to increase car access to or parking near stations. An increase in BRI could bring environmental, economic and health benefits but there are practical, social and psychological barriers.

This paper reports on the results of a face-face survey of 135 bike rail integrators (BRIs) at two Bristol stations alongside semi-structured interviews and observation to explore their motivations, cycling history and existing behaviour. Two thirds of the BRIs were found to be male, 40% were in their thirties, nearly all were employed and living in households with incomes of between £17,000 and £50,000 and 62% owned a car. Their main motivations were saving time and getting exercise and they cycled on average 3.7 kilometres to or from the station. It appears that the majority are substituting a walking journey to the station. BRIs had experimented with different methods of bike rail integration, moved in and out of cycling at different times in their lives and the data builds a picture of the many different factors that influence the decision to cycle and integrate with rail.

These findings are discussed in the context of behaviour change theory and the design of social marketing interventions to promote bike-rail integration. The research will contribute to informing effective investment to make the connection between cycling and rail more seamless which will be a part of the station travel plan agenda set out in the Government's White Paper "Towards a Sustainable Railway".

1. Introduction

Observation on a commute between Bath and Bristol was the catalyst for this research, it showed that the limited space and facilities for bicycles at stations and on trains was not only causing difficulties for those trying to bike rail integrate but also for other passengers and the rail industry itself. This state of affairs exists in a transport policy context that aims to reduce reliance on the car and promote more sustainable mobility

through public transport, walking and cycling. The everyday reality appears far from conducive to encouraging more people to consider combining cycling with rail.

This paper reports on the results of a survey and semi-structured interviews at two stations in Bristol to ascertain the demographics of existing bike rail integrators (BRIs), their behaviour and to what extent they have experimented with the different methods and their reasons for engaging in this behaviour[1]. This information and the literature around behaviour change discussed in Section 3 of this paper can be used to form the basis of community social marketing interventions to promote bike rail integration which would include station travel plans as proposed in the government's white paper "Delivering a Sustainable Railway"(DfT 2007c)

Previous work (Sherwin 2007) addressed some of the more practical elements in promoting bike-rail integration and has resulted in the development of a trial bike hire scheme – Hourbike – at three Bristol railway stations with the idea that it will offer an egress mode for less frequent rail users, occasional visitors, and allow the possibility of rail passengers 'trying' cycle access without first investing in a bike.

This paper focuses on the social and psychological barriers and though this research has taken place in the Bristol area within the context of the South West and is funded jointly by First Great Western Trains and Great Western Research as part of a PHD, the broad findings are likely to be relevant elsewhere. The collaboration with First Great Western has allowed good access to existing bike rail integrators and insight into the rail industry's perspective.
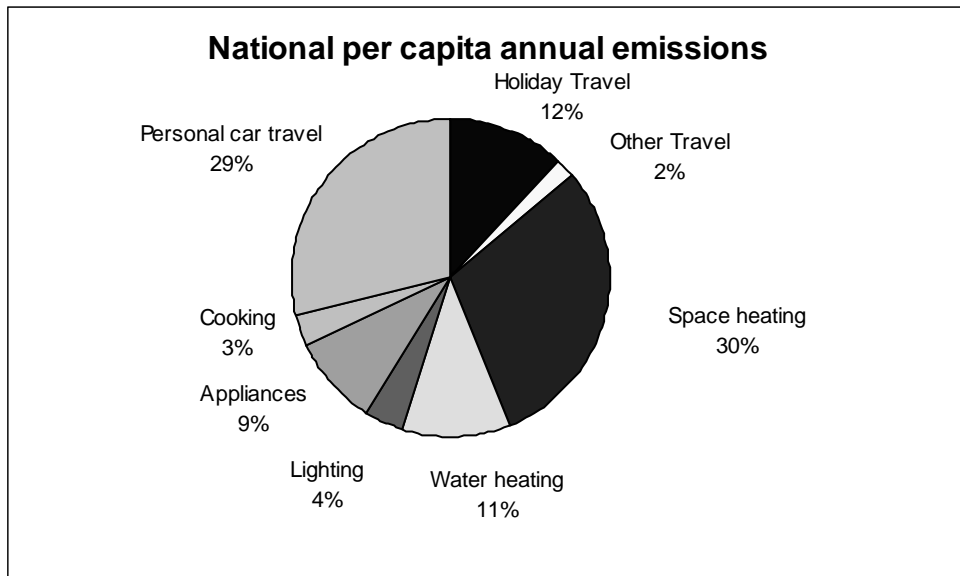

2. The context

This research stems from the normative perspective that an increase in bike-rail integration whether for utility, leisure or tourism purposes has an important part to play in the sustainable mobility. There is scope to decarbonise road transport, particularly cars and the King Review (Treasury 2007) has explored the different options of cleaner fuels, more efficient vehicles and smart driver choices and suggests that "existing technologies can reduce new car emissions by around 30% are already close to market". Even with more fuel-efficient cars the trends of higher car ownership and increased mileage could cancel out the savings and this research assumes that it would be prudent to anticipate that some behaviour change towards less travel and more sustainable modes is necessary.

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[1] Cycling and parking at the home station; bike parked at both ends; parking at the destination station and cycling to leave the rail network; cycling to the station and taking the bike on the train, whether fixed frame or folding bike; cycling one way and returning with the bike on the train.

Figure 1 below taken from the Energy White Paper shows how 43% of an individual's total emissions are accounted for by travel, for which 29% is for car travel (BERR 2007). In terms of an individual's ability to influence their own emissions changing their decisions about car use and travel are significant.

National per capita annual emissions

- Holiday Travel 12%
- Other Travel 2%
- Space heating 30%
- Water heating 11%
- Lighting 4%
- Appliances 9%
- Cooking 3%
- Personal car travel 29%

Figure 1 NATIONAL PER CAPITA ANNUAL EMISSIONS

Source Energy White Paper 2007 using DEFRA data

Individual annual carbon emissions, average per capita carbon emissions in 2005: 1.16 tonnes of carbon per year.

Cycling, apart from walking is the most sustainable mode of transport and in combination with rail it can extend the range of the bicycle to enable longer journeys without a car. For many short journeys, cycling alone may offer a better alternative to the car than public transport as it offers flexibility and is door-to-door (Hillman 1997). It has a beneficial impact that cuts across policy areas and is a form of exercise that can be incorporated into everyday life (DOH 2004). However, the potential benefits of cycling have not been fully realized with on average 1% of all trips are cycled across the UK and 2% of all trips of less than 2 miles (DfT 2007b) nor for integration with rail with currently only 2% of rail passengers in Britain accessing by bicycle (Strategic Rail Authority 2004).

Any improvements in the cycling environment are likely to be low cost relative to other transport infrastructure investment, with better cost-benefit ratios and benefits for both the resident and visitor population with less damage to the environment (Sustrans 2006). This is also likely to be true of any investment to make the connection between rail and cycle easier, but in the past it has not been seen as important as the journey on the rail network itself (Rietveld 2000). The rail industry has paid little attention to access

to and from the station yet access can act as a barrier to rail travel itself (Passenger Focus 2007).

The low average levels of cycling do mask pockets of considerable success particularly where there has been particular commitment to cycling, for example, an 80% increase in London over five years (Transport for London 2007) and a 79% increase in two years in Darlington (DfT 2007d). First Great Eastern Railways achieved a doubling in passengers arriving by bike from 1.5% to 3% through a programme of installing cycling parking at stations across the network (Cyclists Touring Club 2003).

In the baseline data for the Sustainable Travel Demonstration Towns, cycling was a viable alternative for 31% of car trips within the towns, a greater potential than for walking and public transport (Cycling England 2007). If as has been found, the level of cycle access to stations is comparable to the share of bicycle trips for all purposes in a number of countries (Martens 2007) thus any increase in cycling generally in the UK may also have an impact on the levels of bike rail integration. Access by bicycle to a rail network is highest in the Netherlands, with a cycling culture, where 35% of rail travellers access by bike (Rietveld 2000).

The decision of whether or not to cycle or bike rail integrate is multi-layered with attitudes, personal capabilities, perceptions, personal history, fashion, peer pressure, habit, morals and emotions. The next section looks at how behaviour change theory provides a good starting point for the design of a social marketing exercise to promote bike-rail integration by attempting to influence travel decisions at a number of different levels.

3. Behaviour Change and Social Marketing

Social marketing is '*the systematic application of marketing concepts and techniques, to achieve specific behavioural goals, for the social and public good' (*NSMC 2006).It has been applied for over 30 years in health behaviour change but is relatively new to travel behaviour change. It can be applied at the individual level, as in personal travel planning (DfT 2007f) or at the community level as in the Nottingham Cycle Friendly Employers' project (Cleary, McClintock 2000) or the promotion of public transport use by King County's Metro Transit (KTMC) in Washington State (Cooper 2006).

A travel plan is essentially a community based social marketing campaign and is defined in the recent government guidance as*:*

"A strategy for managing the travel generated by your organization, with the aim of reducing its environmental impact. Travel plans typically combine measures to support walking, cycling, public transport and car sharing. These are reinforced with promotion

and incentives and by the management of workplace parking. Travel plans also include action to reduce the need to travel, such as telecommuting. They can focus on both commute and business travel." (DfT 2007g)

Railway stations are traffic generators and have similar issues to workplaces around car parking. The increasing demand for rail travel has led to an increase in demand for parking at stations (Passenger Focus 2007) and this lack of parking is considered a barrier to rail travel itself. Through encouraging more cycle access, the rail industry has the opportunity to attract more passengers and re-shuffle existing access to enable off peak travel when there is spare capacity on the network. Eight bikes can be parked in one car parking space (Countryside Agency 2004). There are a number of different options to manage car access to stations (Sherwin 2007) but sticks will be an important part of ensuring the benefits of promoting more cycle access. Table 1 is adapted from a generic table for personal travel planning (DfTf 2007 p10) to give an idea of the types of interventions that could be used as part of a social marketing exercise to promote cycle access within a station travel plan.

Table 1 Potential Levers for Behaviour Change towards bike access

How behaviour can be influenced	What are the levers?
Deliberation of Behaviour	Visible bike event at the station Availability of bike hire Personal contact and conversations with bike rail integrators Travel conversations with bike rail integrators Reduce available parking – increase charge Priority parking for car sharing Offer of free materials
Changing Perceptions	Marketing messages - information about the benefits of cycle access-speed, convenience, flexibility, exercise,no need for a second car
Increasing Behavioural Control	Personal advice and support, training and route-finding
Changing Social Norms	Working with media/community organisations Use of role models Encouraging word-of-mouth communication Involving all rail passengers and rail staff
Making behavioural plan	Personal journey plan
Setting behavioural goal	Personal commitment – cycle to the station twice a week
Experimenting with behaviour	Incentive (e.g. free rail ticket, bike discount, reduced bike-hire membership)
Reinforcing behaviour	Gifts Positive Feedback Loyalty Club

Table 1 draws on a number of socio-psychological theories that go beyond the idea that individuals make decision on purely rational grounds. It would be almost impossible to incorporate all the influences in one theory or model because an individual's decision to cycle or bike rail integrate depends on so many things, their social and cultural context (Do their friends cycle? Is cycling considered a normal activity within the society?); their situational context – the physical terrain and transport alternatives (Do they have a car available? Do they live in a congested environment that might push them to cycle?); their cycling history, physical capabilities, life stage and the particular journey (Do they need to carry things or wear a suit?). A person may just make a transport choice from habit, automatically without certain cognitive processes and will not be influenced by rational arguments (Gärling and Axhausen 2003) (Verplanken 1997). Equally a person may not perceive information promoting bicycling as relevant to them as was the case with marketing material for buses (Beale and Bonsall 2006). There may be times when individuals are more susceptible to change, for example when they move house (Stanbridge 2007).

There is much debate as to what extent travel decisions are reasoned, controlled and planned as in Ajzen's Theory of Planned Behaviour TPB (Ajzen 1991) and this theory highlights the importance of intention as well as attitudes. "Regardless of theoretical framework applied, information and attitudes are consistently shown to rarely lead directly to behaviour" was the conclusion of a review of public attitudes to climate change and transport conducted for the Department for Transport (Anable, Lane et al. 2006). Another review looked at the evidence on consumer behaviour and behavioural change which found that some behaviours are not mediated by either attitude or intention (as proposed by the TPB) and suggests that the relationship is the other way around; actually changing behaviour changes attitudes (Jackson 2005). This suggests that trying to change attitudes might not be the most effective way of changing behaviour and that actually trying cycling could change attitudes towards cycling. This was supported by Gatersleben's work (Gatersleben, Appleton 2007) showing pre-cycling perceptions of the cycling experience differed markedly from the actual experience of cycling.

There are considerable subtleties in transport decision-making. The perception of cycling (Haddad 2005)(Joffe 2003), the image of cycling (Finch and Morgan 1985) (Fincham 2007) (Skinner and Rosen 2007) and the discourse around cycling (Dickinson and Dickinson 2006) all have an influence on the decision to cycle. A person's perception of cycling affects whether they feel they want to identified as a

cyclist (Tajfel 1981). It is a decision that goes beyond the purely rational and is firmly socially and culturally situated.

The Transtheoretical Model of Behaviour Change (Prochaska & Velicer 1997) was developed in health psychology recognising that change is a process with individuals moving through different stages from pre-contemplation, contemplation, preparation, action and maintenance. It is not so easy to apply as Gatersleben discovered when she identified a group of people through a survey who were 'prepared to cycle' (Gatersleben, Appleton 2007). When they were offered a bicycle for a two week trial, most withdrew, an indication that what people say they will do in reply to a survey may not translate into what they will actually do (La Pierre 1934).

Perhaps rather than try to surmise an individual's likelihood of changing behaviour, just getting a few more individuals to try cycling through social marketing could start a social process to diffuse the idea to more people. An innovation is anything 'new' to the individual in the Diffusions of Innovations Model (Rogers 2003), so it could apply to cycling or bike rail integration. Rogers argues that information through the mass media or a leaflet is not enough to persuade someone to take up a new innovation. The deciding factor is a face-to-face exchange, most effectively with peers. "A crucial concept in understanding the social nature of the diffusion process is the 'critical mass' the point after which further diffusion becomes self sustaining" (Rogers 2003 p343). At a certain point the descriptive norm will move towards cycling; the more cyclists you see, the more normal it becomes and therefore less of a decision to take up cycling.

"If a behaviour is highly conspicuous, it can be learned from public displays by people who are unacquainted with one another" (Bandura 1977p 51). So as cyclists at railways stations are a small but visible group it could mean that a small increase will be noticeable. Cycling and bike-rail integration still does offer the opportunity of re-invention (Rogers 2003 p 17), it is flexible and people who adopt may 'customize' their method of use to fit their situation. Cycling, as a relatively 'cheap' transport option means that trialability is feasible, which reduces the uncertainty and it is also observable.

In order to design a social marketing intervention to promote bike rail integration that has the optimum balance of measures that reinforce each other and address the barriers at an individual and community level, it is important to understand the behaviour of existing BRIs. A survey was designed to find out the basic characteristics and existing behaviour of bike BRIs in the Bristol area.

4. Methodology

Thirty percent of rail journeys in the South West take place within the greater Bristol Area (DfTa 2007 p26) with the busiest stations as Bristol Temple Meads and Bristol Parkway servicing 7,668,450 journeys in 2005/06. As cyclists are relatively rare at stations it was decided that Bristol Temple Meads and Bristol Parkway would offer the best chance of a sufficient sample size for a face-to-face survey which was conducted with 135 bike rail integrators (135 amounts to about a third of the daily population of bike rail integrators at Bristol Temple Meads[2]). The majority (71%) were surveyed face to face using opportunistic sampling at different times of day during a three-week period Tuesday 2nd – Monday 22nd in October 2007 across weekdays and weekends. The first cyclist sighted was approached and on completion of that survey the next sighted cyclist was approached. The time constraints of the interviewees were taken into account; the researcher was able to follow people onto trains if they were in a hurry in order to complete the survey. Those in too much of a hurry were asked if they would be willing to fill in a questionnaire at home and return it in a pre-paid envelope. 29% of the surveys were returned by post or email.

To maximize the respondent's opportunity to articulate their response in their own way, questions that were not purely factual were left open. So for example, in the question "What do you consider are the advantages or disadvantages of cycling to the station?" no direction was given; the interviewee's immediate response was noted, using his/her own words. After completing the questionnaire if there was time, the researcher conducted a semi-structured interview using a series of prompts. Forty two percent of the sample responded to one or more prompts. These were designed to understand more about the respondent's cycling history, social context, image of cycling, what words they might use to categorise themselves as cyclists and whether their attachment to the bicycle went beyond the functional. This data was analysed by grouping the responses and identifying patterns.

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[2] This assumes the 2% figure of rail passengers practising bike rail integration is accurate and uses a figure of 21,725 through Bristol Temple Meads on an average weekday using Lennon data (ticket sales) though the automatic barrier counts show an average of 13,973 – the discrepancy is partly accounted for by people going through the manual barriers.

5. Results and Discussion

5.1 Demographics and behaviour

Table 2 shows the form of bike rail integration that those Bristol BRIs in the sample were adopting.

Table 2 Form of Bike Rail Integration

FORM OF BIKE RAIL INTEGRATION	No.	%
Bike parked at origin only	55	41%
Bike parked at both ends	7	5%
Full size bike carried on train	51	38%
Folding bike carried on train	11	8%
Bike parked at Egress end only	10	7%
Total N=134		100%
Missing Data (N=135)	1	

The 135 BRIs were found to be predominantly male, with over 40% in their 30s, the majority were employed (89%) and half lived in households with an income of between £17,000 and £50,000. The average distance to access or leave the rail network, was 3.7 km but with a range of less than a kilometre to over 20 kilometres. The gender split of BRIs was 28.8% female to 71.2% male, similar to the ratio found amongst cyclists generally[3] but there were more BRIs in their thirties compared to cyclists generally.

The surveys were conducted across days and weekdays and 61% were journeys to work (including education), 15% were journeys for work and the rest a mixture of social, shopping and leisure. There was a lower number travelling for leisure (21%) in the Bristol BRI sample compared with 29% of all rail passengers in the South West found by National Rail Travel Survey (NRTS). This higher level of commuting could result from the fact that bike rail integration is more common for commuting as a regular journey pattern or as a result of the choice of sample site, *i.e.* a large urban area. The balance might be different at another station further west.

BRI's at Bristol were 15% points less likely to travel every weekday than rail travellers generally despite 61% of the journeys being to work and education. 37% of the overall Bristol sample were making journeys for the first time or another irregular pattern of

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[3] 2006 NTS survey with a sample of 1,109 cyclists defined as someone who made a least one bicycle trip during their travel week found 69% males and 31% females

less than two or three times a week. This is supported by the bike parking stand counts (Sherwin 2007) which suggest that rather than the bike parking stands being filled with the same individual's bikes every weekday, there is a sizeable group who use them infrequently. This could mean that the pool of people who do bike rail integrate is larger than would be expected if it was the same people using the stands every day.

The BRIs were asked for what other journey purposes they used a bicycle other than the one on the day of the survey. 79% of the sample said they used a bicycle to travel to work while only 53% were bike rail integrating to work (not including journeys to education) on the day of the survey. In other words some were biking the whole way to their place of work and the survey captured them on another journey. If you exclude those who answered that they cycled for days out, short breaks and cycling holidays, 16% said they made no other cycle journeys. Their only utility cycling journey was to the station.

In the semi-structured interviews for this research, respondents were asked what words they would use to categorize themselves as cyclists. Fair weather, utility, leisure and sport cyclist were suggested. A spectrum emerged ranging from those who would cycle in any weather and firmly categorized themselves as utility cyclists only, those who cycle for leisure as well as utility and those who predominantly cycle for leisure. This research supports the idea that within the group 'bike rail integrators' there are many sub groups as found by Davies amongst cyclists (Davies et al. 1997).

The survey also asked BRIs their views on the different methods of bike rail integration, the results show that the same individual may use more than one of these methods at different times and for different journeys depending on their situational context and personal characteristics. Their decision is influenced by:-

- the security of bike parking, and this has to be at both ends for people to feel comfortable with having a bike at both ends.
- the ease or difficulty of taking a bike on the train which depends on the route, the carrier, the time of day and the flexibility of the staff.
- the distance at either end of the rail journey.
- The journey frequency - it would not be worth investing in a second bike parked at the destination station if the journey is infrequent.

- Safe or perceived to be safe routes to stations

Only 20% of the BRI sample had never taken a bike on a train. Individuals have to make trade offs between the risk of uncertainty and the convenience of a seamless journey by taking a bike on the train. Respondents had considered other options and experimented to find a method that suited their needs. So for example, they may have changed their travel time to guarantee a space for their bike on the train; tried different routes or train providers where different amounts of bike space exists; bought a folding bike or a second bike for the destination station. This shows that to master bike rail integration to obtain the most seamless journey requires considerable investment of trial and error which supports Flamm's argument for motility capital (Flamm 2004).

5.2 Why bike rail integrate?

In terms of reaching potential BRIs the formulation of marketing messages requires a good understanding of why people bike rail integrate and BRIs were asked an open question "What do you consider are the advantages or disadvantages of cycling to the station?" The responses have been categorised in Figure 2 showing the number of respondents who mentioned each category.
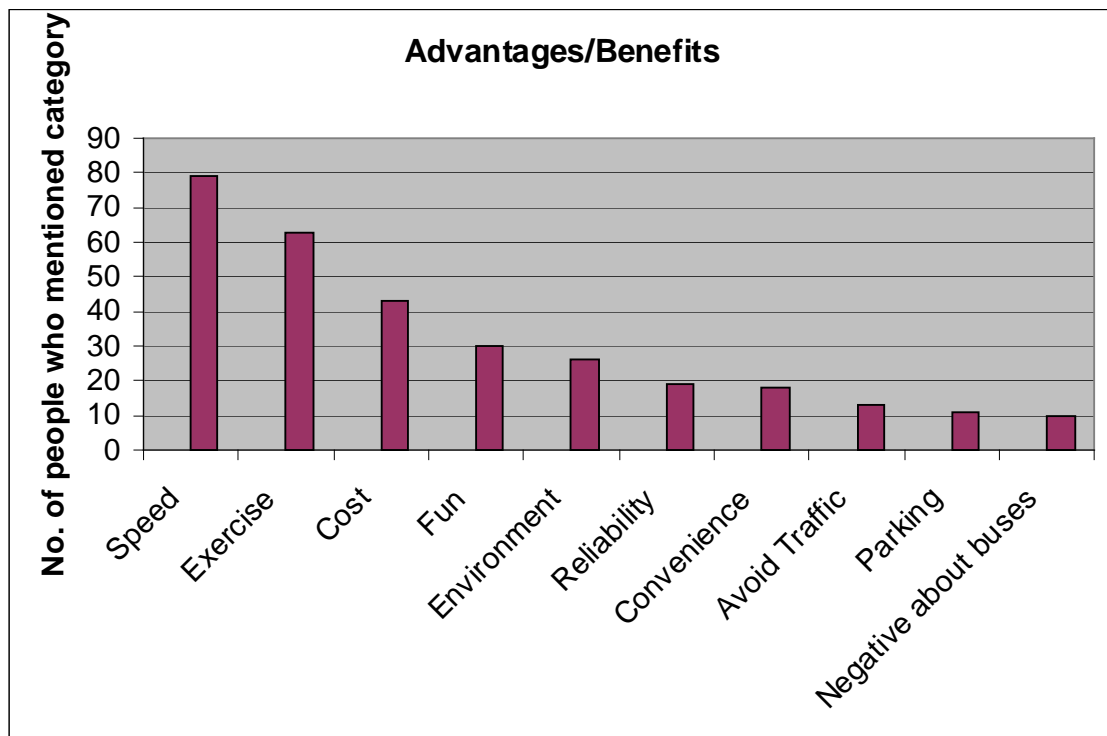

Figure 2 Advantages/benefits of cycling to the station

While categorizing the data it became clear that respondents may be motivated to cycle for quite similar reasons, but they articulate it rather differently. Someone who gets very impatient waiting in traffic, or waiting at a bus stop might respond by saying that cycling is a way of "beating the traffic" rather than just saying it is quicker. In the chart above the "avoid traffic" category could be interpreted as speed. The clear demarcation was that some individuals made a very precise calculation of time savings and practicality while for others the advantage was seen as the act of cycling itself as it brought a sense of mental and physical well being.   Figure 3 shows the positive attributes – speed, exercise, cost, fun, environment and reliability alongside what might be termed 'push' factors – lack of car parking, congestion, unreliability or lack of a bus service. In terms of selling the idea of cycling to the station "beating the traffic" might, for example, be an easier message to convey than speed.

5.3 What are the alternatives?

Respondents were asked "What alternatives do you use to get to or from the station if you don't cycle?" and Figure 3 below shows their responses where cycling appears to be mainly substituting for walking[4].
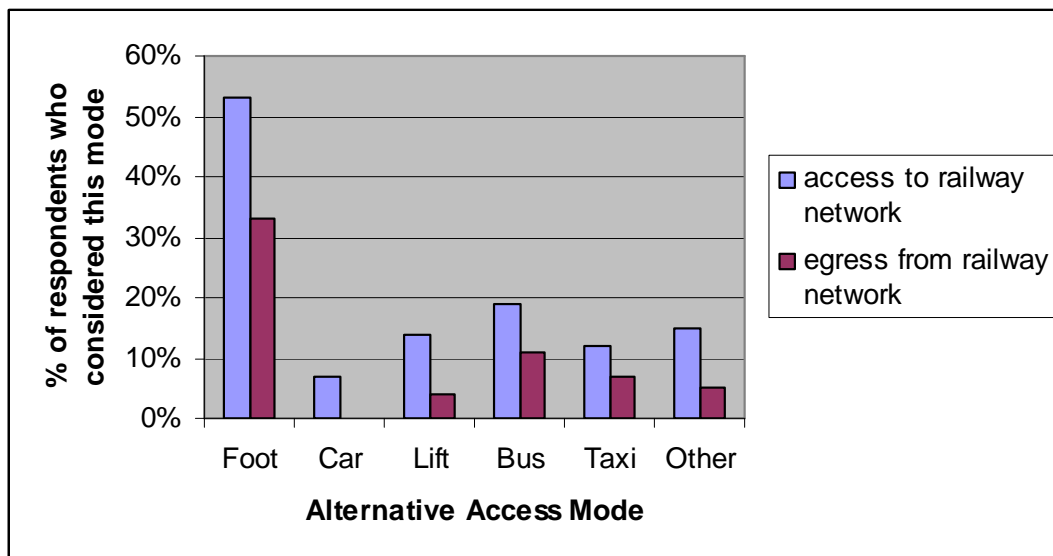
Figure 3 Alternative Access Mode

Forty four percent of the sample had a car available to them for the journey they were making but chose not to drive to the station or use their car for the whole journey (62% of the sample owned a car). Some gave positive reasons why they cycled, others negative reasons and in some cases both. The push factors away from driving were a dislike of traffic, the hassle, the cost and lack of availability of parking.

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[4] In the Bristol BRI sample only 10 did not access the rail network by bike but about a half left the network by another mode.

17% of the Bristol sample (N=135) answered that they would consider using the car for the whole journey but hadn't and some of their comments are shown in Box 1 below.

> *"M5 motorway commute is unpleasant"*   **BOX 1**
>
> *"M4 motorway and fatigue"*
>
> *"sometimes do it, nightmare traffic, train quicker"*
>
> *"I do twice a month, used to every day but got lethargic"*
>
> *"so much more pleasurable on the train, proper outing, exploring"*
>
> *"can work on the train, driving is more exhausting"*
>
> *"make a calculation, time of day, level of congestion, too much luggage, or a group"*
>
> *"used to drive, started to bike rail two years ago for fitness, pleasantly surprised"*
>
> *"need a second car, hate traffic jams, the cost and bad for the environment"*
>
> *"10 years ago maybe, but not now"*
>
> *"don't like driving and there is a viable alternative"*
>
> *"I like to read and relax"*

38% of the bike rail integrator sample said they did not own a car, though in some cases they added the information that their partner had a car. Others had responded that they owned a car but someone else in the household was using it. In other words, ownership doesn't necessarily imply availability or use.

Parkin's work using the 2001 census created an aggregate model of cycle use in the UK and it does suggest there is a relationship between car ownership and cycling. He found lower levels of cycling with higher levels of car ownership and showed that some treat the bike as a second car, so ownership of two cars makes cycling even less likely (Parkin 2007). An individual who has a car available may use it out of habit rather than seek alternatives. If a two car family reduces their car ownership to one car, then there is an impetus to experiment with alternatives and people may be more discerning about whether specific journeys are in fact necessary and reduce their mileage.

The quotes in Box 2 below from the semi-structured interviews give some texture to this relationship between car ownership and cycling and it does suggest that promoting bike-rail integration as a substitute for owning a second car could be productive.

> **BOX 2**
>
> "*I prefer to cycle and use the train, it is a conscious choice, having been a car owner, I've had several years without a car"* (6)
>
> *"I work in Weston-super-Mare, there isn't good public transport, we have two cars but do consider getting rid of one, I've always cycled, I don't enjoy driving, I avoid it"* (67)

"It was possibly a bike to work scheme from Halfords was the trigger for me, not enough parking at the workplace, choice and necessity, I sold 2nd car two months ago" (100)

 "I lived rurally then moved to Bristol, a friend was in the triathalon and too me along, I got hooked and sold my car" (126)

"It was a conscious choice to reduce the number of cars to one in the house. I enjoy the feeling of cycling and the increased fitness it give me" (135)

"For 25 years I didn't have a car, I didn't want a car, but my Mum gave me her car when she couldn't drive it, so I reluctantly took it. Other people use it and it is expensive, I don't get rid of it as it would hurt her feelings"(72)

6. Conclusion

The semi structured interviews were used to understand more about the BRIs cycling histories, their social contexts and how they feel the people that matter to them perceive them as cyclists and what prompted them to take up cycling.

Figure 4 Influences on the decision to take up cycling and how that starts a social diffusion towards a cycling culture.
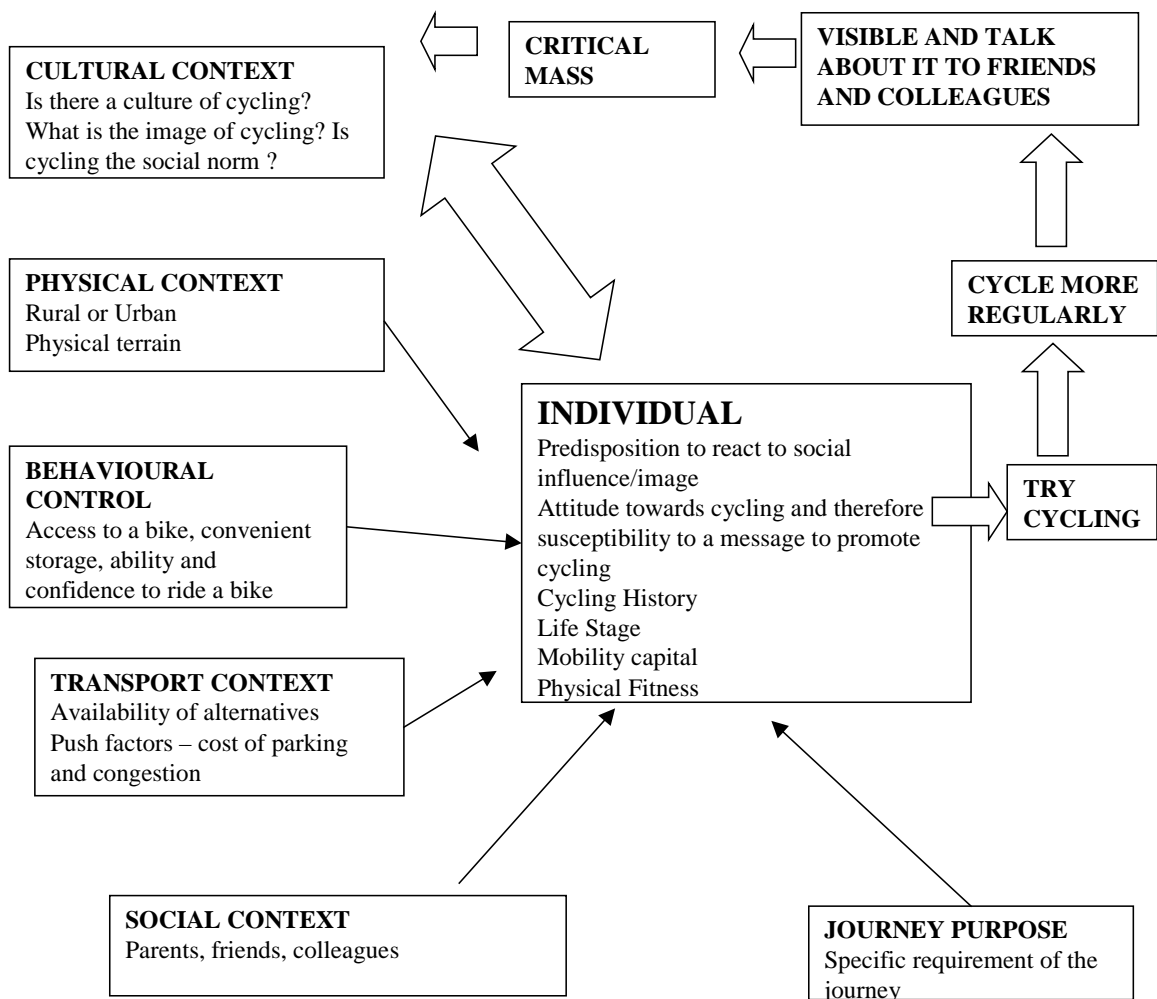
Figure 4 above is drawn from these interviews and the results will be reported in a future paper. The interviews support the idea that the decision to cycle or bike-rail integrate is influenced by many overlapping factors in a dynamic process. Figure 4 not only summarises the influences that might prompt someone to start cycling but also shows with the thick arrows how this act might itself start a social process of moving towards a cycling culture – one more person cycles and through their social networks they become visible and talk about it, their friends try it and gradually it diffuses through society to a point where the cultural context could change (Rogers 2003).

It is clear that making the decision to cycle is complicated so to expect an individual to take up two new modes simultaneously and bike rail integrate is optimistic. Therefore it is concluded that converting a person to one additional mode is likely to be easier, so cyclists who don't use rail[5] and rail users who don't access by bicycle would be prime targets for a social marketing exercise. The literature discussed and these findings support the case for a package of measures – a social marketing exercise – that addresses not only the practical barriers but also the psychological and social barriers. In addition, it would be a mistake to assume that the target group is homogeneous, there are likely to be sub groups who will respond to different marketing messages, some may respond to the idea of exercise, others the time savings or getting rid of a second car or the certainty of their journey time to the station. The findings suggest individuals in their 30s who are working and live or work between 2 km and 5 km distance band of a station would be a good target group. The alternative would be to target groups with different demographics who are under represented. However, decisions will have to be made about which method of bike rail integration it is practically feasible to promote and with this in mind the next phase of this research is to monitor the trial of bike hire – Hourbike – at three Bristol stations and measure to what extent it has successfully attracted more people to bike rail integration.

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[5] 66% of those who cycle 3 or more times a week, use rail once or twice a year or less (National Travel Survey Dft statistics unpublished information)

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