Great Britain Adults' opinions on cycling: implications for policy

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Abstract
In its neglect of cycling, the transport policy history of Great Britain is typical of many car-dependent societies. Policy inertia with respect to sustainable travel may be driven by the assumptions that, firstly, most households have access to the use of a car and are keen to preserve the mobility advantages the current system offers them, and secondly that environmental and health considerations should be subjugated to economic priorities. Thus, in spite of warm words about cycling, pro-car policies tend to dominate.

Set against this policy backdrop, and taking the stance that public opinion can influence policy change, this paper reports the results of two large scale surveys of opinions regarding the practice of cycling and its role within society, carried out amongst samples of adults representative of Great Britain, in 2010 and 2013. Results indicated broadly positive opinions relating to cycling as part of society, albeit with these measures dropping slightly between 2010 and 2013. Opinions of cycling were found to be significantly linked to voting intention with, broadly speaking, a gradient of decreasing positivity when moving from the political left to right. These results imply a possible link of 'surface' opinions of cycling being influenced by underlying 'deep-seated' beliefs and values. These results are discussed in terms of policy options for pro-cycling groups wishing to influence the debate. Options include decoupling cycling from underlying belief systems and presenting simply as a form of everyday transport; promoting cycling as a solution to multi-social issues across health, the environment and economic considerations such as lower congestion; the pros and cons of de-marketing car usage; and finally, changing underlying belief systems. It is concluded that pro-cycling advocates may be pleased with the broad support of cycling's contribution to society, but they may need to seek alliances with other environmental or health groups in order to turn these good intentions into genuine policy change.

Introduction
There is increasing evidence that cycling is beneficial for health and environmental sustainability (Jarret et al 2012; Woodcock et al 2009; de-Hartog et al 2010; Rojas-Rueda 2011). However, in its neglect of cycling, the transport policy history of Great Britain is typical of many car-dependent societies. Decades of more or less unquestioning (from successive British governments) promotion of car cultures have been subjected to criticism (Aldred 2012 has an in depth discussion) from minority parties (in particular the UK Green Party), pressure groups (such as the Campaign for Better Transport, Cyclists' Touring Club and Sustrans), and prominent academics (such as Goodwin (e.g. 1990, 1995, 2013); also see Davis and Parkin *in press*), though as yet with little collective success in achieving policy change. This policy landscape – car dominance but with fringe pressures for change – is echoed, though in different ways, across similar car dependent societies, for example Australia, the U.S., Canada, Italy and France. Meanwhile developing countries such as Brazil, or China, who had hitherto embraced automobiles as central to their economic growth are also possibly beginning to question their current policies. The alarming rise in environmental and health costs, with motor transport a major driver of these costs, has more recently placed narratives in favour of active travel modes somewhat more in vogue, although these narratives have yet to be accompanied by

significant funding. A more accurate picture of the reality of political priorities emerges from the recent round of spending announcements (see e.g. Department for Transport 2014) which has little funding of cycling amongst a capital spend devoted to road building. Meanwhile, since the 1990s, cycling policies have been largely devolved to local authorities and, again, given little funding (Gaffron 2003, Aldred 2012).

The problem does not lie with a lack of knowledge or understanding of what to do. There is increasing agreement about the policies needed to encourage cycling in car dominant countries (Lazendorf and Busch-Geertsema 2014, Pooley et al 2013, Horton and Parkin 2012; NICE 2012, Jones 2012, Pucher and Buehler 2008). For instance Pooley et al (2013) offer an agenda that responds to the calls for safer and more pleasant conditions to cycle: fully segregated cycle routes; **r**estrictions on traffic speeds; changes in legal liability from collisions; changes to the built environment; cycling training provision; partnership marketing with employers, schools and so on, and finally changes made to the image of cycling, for example campaigns to promote cycling as normal for everyday travel rather than for a sporty minority. However, with the exception of the roll out of urban 20mph limits and small scale localised promotional work, recent cycling policy in Britain has tended to consist largely of warm expressions of support but little of substance, with funding for growth being of so small in scale as to be only noticeable within a few small 'trial towns' (and one larger city, Bristol). The rhetoric of governmental support has tended to lean heavily on the language of 'choice', ostensibly branded as mode-neutral, but in reality heavily favouring the car dominant status quo (Aldred 2012, Horton and Parkin 2012, Pooley et al 2013).

What are the underlying causes of this political inertia? Sloman's (2006, ch.8) work suggests that political inertia with respect to sustainable travel is driven by a series of assumptions made by policy makers – about economic priorities and about the public's view of alternatives to the car. Two such assumptions are relevant here. Assumption one is that most households have access to the use of a car and are keen to preserve the mobility advantages the current system offers them. Assumption two is that environmental and health considerations should be subjugated to economic priorities, and that therefore the key transport issue is not better public health, or pollution control but in fact congestion relief. These civil service and political assumptions, combined with an unsympathetic media and long established corporate road lobbying that has been entrenched for decades (Hamer 1986), have led policy makers to draw their inevitable conclusions about the public's attitude to cycling. These may be unspoken but privately regarded as: the public are fairly indifferent to cycling or regard it as quirky, and that a minority may be actively hostile to it; that car ownership and travel are the norm and that there is more demand; that there is little mainstream public pressure to fund a growth in cycling; and that losing car related 'freedoms' is politically unacceptable.

These tensions between pro-car 'business as usual' policies being challenged at the fringes by advocates of 'active travel' form the backdrop to this paper. Our central purpose is to report upon recent large scale surveys of representative samples of the Great Britain (hereafter reported as GB) adult population in order to shed light on the actual rather than assumed opinions of the GB adult public on cycling, and thence to link this data to current policies. Whilst the literature on cycling is quite rich and diverse ranging from growth strategies, already mentioned, to policy discussions domestically (Goodwin 1999, Aldred 2012) and internationally (Pucher and Buehler 2006), health, climate change and active travel (Thornton et al 2011) and addressing car cultures (Kingham et al 2001), very few of these contributions to cycling policy literature have utilised population level

survey data. Davies et al (1997) and Daley and Rissel (2011) undertook qualitative studies that explored general attitudes and images of cycling amongst both non-cyclists and cyclists in car dependent countries. Quantitative studies of attitudes to cycling (e.g. Gatersleben and Appleton 2007) have tended either to focus on cyclists only or on a limited region (such as in the case of Transport for London (e.g. 2012) that collects annual data on Londoners). In contrast, the survey reported here enables a representative view of how cycling is generally regarded across the population. Thus, noting the lessons of Castillo-Manzano and Sánchez-Braza (2013) of the importance of taking account of public opinion in creating cycling policies, this, then, is the intended contribution of this paper: within the Great Britain context at least – what do the public think?

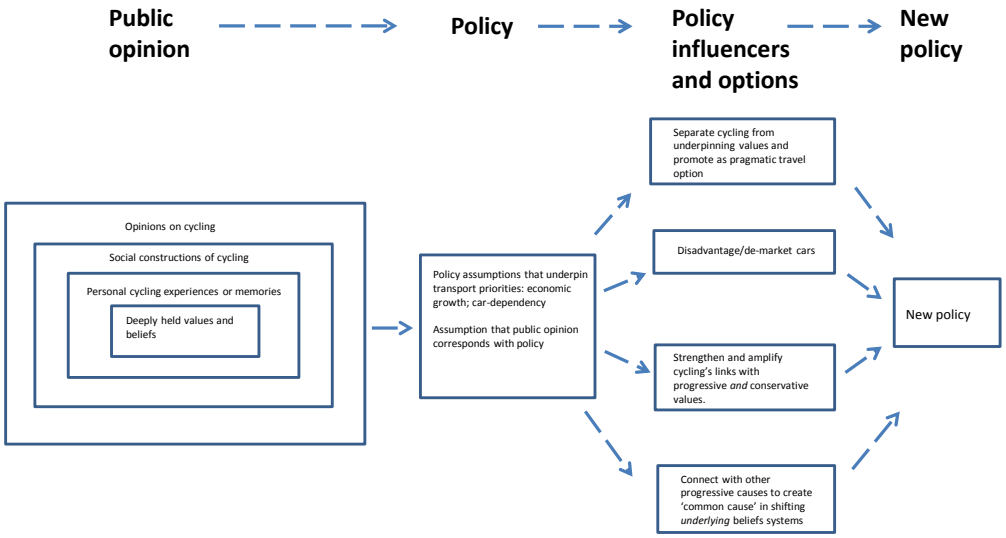
The authors undertook two large-scale surveys of opinions and claimed behaviours with respect to cycling in Great Britain in 2010 and 2013. There have been many studies of personal disposition to cycling, respondents' barriers to taking up cycling, and so on, and while we do examine disposition here, the primary focus was to survey general opinions relating to cycling within British society – how is it regarded? A series of questions were asked about the public's opinions of cycling, the role of the car in their lives, motor travel in terms of its convenience and expediency, cycling and health, wider environmental issues, respondents' cultural readiness for possible increases in cycling, and so on. In answering these questions about Great Britain, it is hoped that the conclusions drawn from this paper may have international relevance in shedding light on the gaps that can form between, on the one hand, government, media, and sector professionals (the establishment), and on the other hand the public when dealing with pro-cycling policies in car-dominant contexts.

The analysis will be informed by two theoretical frameworks shown in Diagram 1 (the effect of public opinion on policy) and Diagram 2 (opinions relating to personal disposition to cycling). Opinions are verbalised judgements – expressions of attitudes, beliefs and values (Simons 2001 p28). In turn Simons (also p28) defined beliefs as judgements of what respondents believe to be true, attitudes as judgements about liking or disliking something, and values as judgements of what people regard as important. So, whilst opinions may reflect deeply held beliefs or values, they may also reflect snap judgements made using superficial levels of knowledge or thought. For example adult non-cyclists or very occasional cyclists, who between them make up the majority of British adults, may only have, at best, flimsy personal experience and perhaps more importantly a limited interest in cycling to make their judgements. Thus, instead of personal experience, opinions may originate from 'social' sources. For this reason the concept of social constructions is used in the framework to explain this social creation and sharing of opinions (Potter and Wetherell 1987). Social construction theory proposes that some aspects of reality are socially created between people and do not exist independently and objectively 'outside' of the lived reality of society (Burr 1995). Social constructs are complex and contested, and there is not the space for extensive discussion of these here, however the utility of this theory here lies in the proposition that many opinions expressed by respondents may be subconsciously 'acquired' from social sources, often repeated and re-expressed in everyday conversation, or reported in the media, and so on. Popular narratives – 'cyclists behave badly on the roads', etc – become embedded over time, and hence repeated as 'opinions'.

Diagram 1 also hypothesises the idea that in a representative democracy there will be a connection between public opinion and government policy. Hobolt and Klemmemsen (2005) did find evidence of such policy responsiveness to public opinion in Denmark and the UK, however the perils of assuming this is the norm were remarked upon by Lewis (2001 p168) who remarked upon often

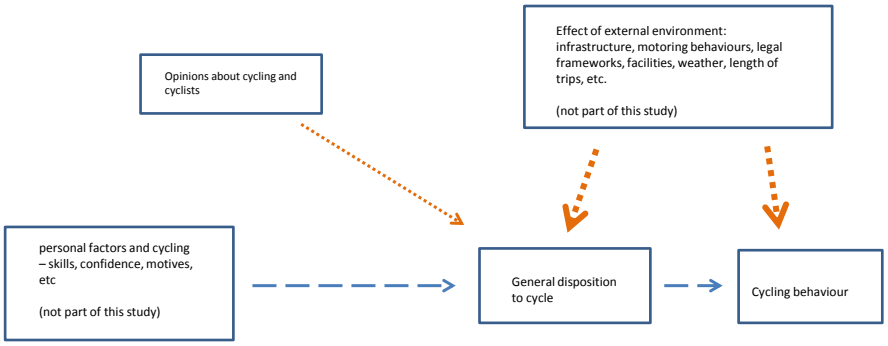
contradictory relationships between opinion polls and policies in the U.S. during the Reagan and Bush presidencies – a different way of making the same point as Sloman earlier. For the purposes of this paper the assumption is made that a positively held public opinion of cycling may be helpful in influencing cycling policy, but will likely require further measures (shown in Diagram 1 as 'policy influencers and options', and discussed more later) before changes may ensue.

Diagram 1: Theoretical framework of public opinion and influences on policy



Personal disposition to cycling is a secondary consideration of this paper. Cycling behaviour has many precursors, of which opinions on cycling as a part of society may form a small part (Diagram 2). As discussed above, disposition to cycling in motor dominant contexts are typically driven by perceptions of safety (e.g. segregated cycling paths), the quality and ease of the cycling trip (good weather, flat terrain), facilities for cyclists (e.g. secure bike storage, etc), and trip lengths suitable for cycling. These factors are increasingly well understood as key drivers of cycling. Here, however, our focus is on public perceptions, media impacts and social norms relating to cycling generally. Social factors relating to cycling were reviewed by Willis et al (2015) who found these factors clearly affect the decision to cycle commute, and they recommended that policy makers take these factors into account alongside physical and infrastructure considerations.

Diagram 2: Personal opinions and disposition to cycle oneself



The next section explains what data was collected and the methods used.

Method

We sought opinions relating to the following cycling themes:

a) GB adults' opinions regarding cycling in terms of societal and personal contributions.
b) The degree to which cycling is viewed as 'normal' in Great Britain.
c) Influencers of cycling such as role models, media and opinion leaders
d) Attitudes to the possible future growth of cycling

We measured the incidence of opinions amongst different groups within the overall population, in particular examining any differences in response according to political persuasion (measured through voting intention), hence enabling an analysis of possible ideological factors that may provide an underlying explanation of these differences. We also measured responses split by levels of involvement in cycling (non-cyclists (including lapsed), occasional, regular and frequent cyclists).

The structure of the opinion questions were informed by a number of qualitative research projects conducted in Bristol by one of the authors (Tapp) between 2008 and 2010 in which adult non-cyclists were interviewed about their opinions of cycling and cyclists. These focus group respondents had little contact with cycling/cyclists in their everyday lives, and we found that their opinions often lacked in-depth consideration, instead reflecting 'surface' level, very broadly based attitudes to cycling. Examples might include whether cycling is generally seen as a 'good thing' for society. Other topics, such as whether cycling to work is 'normal', generated more specific responses. Based on these pilot studies, we designed our survey to measure agreement with a mix of superficial and more in-depth opinion from respondents, hence the use of questions such as 'Britain would be a better place if more people cycled', and 'it's quite normal to cycle to work these days'. The use of opinion statements in the survey permitted us to gather a sense of how cycling is generally

regarded, in particular by non-cycling majorities, and to evaluate whether cycling is thought to be on balance a positive or negative force in society.

Fieldwork and sample

Two large scale surveys of Great Britain (GB) adults were undertaken in 2010 and 2013. We also comment upon sample data collected specifically for the city of Bristol. Bristol is of interest for two reasons: firstly, this was the city awarded 'Cycling City' status by the then Cycling England in 2008, and received extra funding to promote cycling; secondly, Bristol has a population somewhat more liberal/progressive in its overall attitudes than the equivalent for GB, affording a comparison with respect to views on cycling.

Fieldwork was contracted to a large UK provider of social and market research[1]. Fieldwork was undertaken between May 24th and 5th June 2013 and between 27th April and 9th May 2010. 4022 people (3855 in 2010) in GB aged 16-64 were interviewed by means of an online questionnaire and were nationally representative in terms of gender, age, socio-economic grade (SEG), working status, standard regions and urban-rural status. To reduce random errors, respondents were targeted using stratified random sampling from the available panel of over 400,000 adults. Additionally, 507 people in Bristol aged 16-64 (representative in terms of gender and age) were interviewed for more detailed local analysis. Quotas and weighting were designed to make the samples representative on key demographics based on the latest available Office of National Statistics (for quota sizes by region and urban-rural split) and Great Britain Census data (for interlocking quotas by age, sex and SEG). An email was sent to panellists selected at random from the base sample according to the sample definition, inviting them to take part in the survey and providing a link to the survey.

Table 1 Here

The survey was carried out online. On-line surveys have various advantages, not least favourable costs and rapid fieldwork time that enabled a large sample to be obtained to permit examination of key sub-groups, in particular frequent cyclists. Importantly, respondents could answer questions in their own time without being pressured, and there is also evidence that on-line surveys reduce socially desirable responding effects – a potential issue given the topic (see Nancarrow and Tapp (2014) and the references therein for an in-depth evaluation of on-line panels). Where appropriate, the order of scale statements and response options in lists were randomised in terms of the order presented to respondents to balance for any order effects.

Results

Presenting the data

As explained, the intention of this paper is primarily to examine the aggregated opinion of the public of Great Britain and secondly to examine how these opinions may differ according to levels of cycling. The opinion and behaviour tables to follow therefore contain the following columns:

- Great Britain totals from the 2010 and 2013 surveys, with shading to indicate statistical significance.

[1] YouGov

- GB totals split by 'cyclists' (who cycle frequently or quite often), occasional cyclists (whose cycling may be very infrequent, in many cases a small handful of occasions annually), and non-cyclists (probably have not cycled as adults in any meaningful way). We indicate in the tables on opinions where differences between cycling levels are statistically significant.
- Bristol data for 2013

In the tables we show the un-weighted sample sizes. In the commentary, any discussion of the Great Britain data of 2010 and 2013 will only highlight differences if they are statistically significant at the 95% level of confidence, based on the *effective* sample sizes. Effective sample sizes may legitimately be used for statistical inference and tests because they have been adjusted to take into account the effects of weighting. Measures of opinions and behaviours were undertaken mostly through agreement or disagreement with scale items. In the presentation of data below, the phrase 'net agree' is the sum of those who 'strongly agree' plus 'tend to agree'. Likewise 'net disagree' is the sum of 'strongly disagree' plus 'tend to disagree'[2].

Cycling behaviour

Examination of behaviours is not the primary focus of this paper, but tables 2 and 3 provide useful data to illustrate the low levels of everyday cycling in Great Britain (only 6% of adults cycled once a week or more in both 2010 and 2013), and hence how the cycling status of the majority remains as 'non' or 'occasional' cyclists (with a slight erosion over time of those defined as 'occasional').

Both 2010 and 2013 levels of regular and frequent cycling were found to be similar; in turn, these levels corresponded reasonably well to those found using different methods and taking into account sampling error. For instance, in the National Travel Survey, 4.8% of the UK population complete an average of 6 cycle trips per week at 3.2 miles per trip (2012 data) and in the Sport England Active for Life survey 5% of the England population (2m out of approx. 40m total) cycle at least once a week for fitness/sport (2012-13).

Table 2 here: Levels of cycling[3]

Table 3 here: Plans to take up cycling

In policy terms the data in Table 3 is very interesting. Focusing on the 2010 sample enables us to examine the extent that claimed plans to cycle (in 2010) translated into behaviour in 2013. In 2010,

[2] We group opinion statements within major themes that we identified from past qualitative research. We did not aggregate into "factors" as we wished readers to note important nuances within a theme that help to better inform policy-makers of public opinion and importantly may generate further hypotheses. We touch on these important nuances in the results.

[3] The intention of the paper is to examine the aggregated opinion of the public of Great Britain rather than examine demographic subgroups. A detailed analysis of statements by demographics would distract from the core theme of the paper. Nonetheless it is worth noting that disposition to cycling did differ in the following ways:

i) Just not seeing oneself as a cyclist

Females (53%) compared to men (40%) and older respondents (55-64) were statistically significant more likely not to see themselves as cyclists. The age differences were only 2%- to 5%) There was no difference between rural and town dwellers.

ii) Involvement in cycling

As one might expect more men and adults under 55 were found to cycle. Upper socio-economic adults also were more likely to cycle. Interestingly, there were also a higher proportion of cyclists amongst rural dwellers. This may be because of the perceived relative safety of rural roads, or reflect other demographic characteristics.

38% of the Great Britain (GB) sub-sample (excludes those *unable to cycle because of a disability* and those who were *unable to cycle and not interested in learning*) agreed they were *contemplating cycling for short journeys*, and 21% agreed they'd *actually made plans to take up cycling*. However as we have just seen, 2013 cycling behaviour remained at 2010 levels, suggesting these 2010 contemplations/plans did not in fact lead to any significant take up. Interestingly, there is a slight fall away of interest in taking up cycling over the three years, possibly due to poor weather in the months before the 2013 survey. It is assumed that the barriers to cycling that exist in Britain prevent good intentions being translated into action. Overall however this data adds weight to the hypothesis that there may be a large amount of suppressed demand for cycling in GB that might be thwarted in particular by the perceived lack of safe cycling opportunities.

GB adults' opinions regarding cycling

In this section we discuss the opinion data with the help of Tables 4 to 7. For each table we discuss the sample representing the Great Britain total, with the splits by levels of cycling covered later with Table 8. Finally we examine opinion gradients by voting intention (Table 9).

Contribution of cycling to society

Table 4 shows GB adults' opinions regarding cycling in terms of societal and personal contributions. The table reveals a supportive view of the idea of cycling as a 'good thing' for society: large majorities of GB adults agreed that cycling creates positive benefits in *improving the environment* and *reducing congestion*. There is somewhat lower agreement in *associating cycling with greater mental well-being* but still a large number agree (46% in 2013). These positive responses even extend to arguably more 'rhetorical' claims – *Britain would be a better place if more people cycled* has 54% agreement, with only 13% disagreeing, and even *cycling is a great way of solving some of the world's problems*, quite a claim to make, has 30% net agreement, balanced with 31% net disagreement.

There was a slight drop in cycling's positive ratings between 2010 and 2013, a pattern repeated through other data discussed below. There seems no obvious reason for such a drop, but should it continue it would be of concern for campaigners wanting a positive public attitude to cycling. Lastly, we would note how the position in Bristol remains positive compared to Great Britain, perhaps due to factors such as the 'Cycling City' campaigning, the political demographic of the city and its reputation as an environmentally friendly city.

Table 4 here: Cycling's place in society

The degree to which cycling is viewed as 'normal' in Great Britain.

Table 5 illustrates the degree to which cycling is viewed as 'normal' in Great Britain. A slight majority view cycling (to work) as 'normal' (65% agree, 10% disagree) and nearly half of adults agree cycling is 'cool' nowadays (46% agree, 13% disagree**).** The sizeable numbers disagreeing or staying neutral that cycling is normal may be explained by Pooley et al's (2013) research that clearly found attitudes *not* in keeping with continental-style expectations that aspiring managers would cycle to work. This notion that a sizeable minority see cycling as contrary to a cultural norm within Great Britain is afforded further credence when examining levels of agreement with '*Most normal people see cyclists as a bit odd*' (16% agree, 50% disagree). The results for the 'Cycling City' of Bristol are rather more encouraging, particularly with very high agreement (82%) with the normality of cycling to work, with only 4% disagreeing, perhaps illustrating the more positive predisposition to cycling we

found above, leading to a lower cultural resistance to commuter cycling in Bristol than average across the country**.**

Somewhat reinforcing its image as a niche activity, 46% of GB adults agreed in 2013 that *cycling is cool nowadays* with only 14% disagreeing. This result may be attributed to factors such as media coverage of the glamorous (as opposed to 'everyday') side of cycling: sport successes, Sky Rides, fashion and lifestyle columns about cycling in the media, attendant consumerism (cycling products), and perhaps a 'cool' cosmopolitan effect as well. This association with 'cool' has increased since the 2010 survey; this may be regarded as a double edged sword: being regarded as cool may not help in marketing cycling as a mainstream, 'everyday' activity.

Table 5 here – Cycling as a norm in society

Influencers of cycling such as role models, media and opinion leaders

Table 6 reports how influencers of cycling such as role models, media and opinion leaders are regarded. There is considerable agreement (37% agree, 18% disagree) that *TV motoring programmes are too negative about cycling*, and split views (25% agree, 25% disagree) that *the media are generally anti-cycling in this country*. It may be encouraging for cycling campaigners that the apparent anti-cycling stance of some of the media is regarded as such by many of the public, suggesting that calls for more balanced coverage may have some success. This finding could be placed alongside the generally positive views of cycling within society, and the widespread support for more governmental funding of cycling (see next section) in suggesting that any media antipathy to cycling does *not* reflect the majority public mood. The lowered agreement compared to 2010 suggests that either the media has shifted to more positive coverage of cycling, or (of more concern) that the public are more tolerant of negative coverage.

Cycling sports figures and celebrity sports people were seen as influential, with 20% agreement that *the success of British cyclists has encouraged me to think about cycling more myself,* in particular amongst those who already cycle. Perhaps surprisingly, the government itself is seen by 40% in 2013 (albeit a small drop on the 2010 figure) as providing a 'new push' towards cycling (note that our 2013 fieldwork was completed in early June 2013 before subsequent announcements of low government spend on cycling led to disappointment for many active travel professionals). Lastly, there's evidence of a significant apparent word of mouth effect in terms of *personal* influence on family/friends, with cyclists themselves not surprisingly often cited as the source of this possible word of mouth. However as can be seen from Table 3's cycling behaviour figures there is no sign of these word of mouth effects creating any rise in uptake between 2010 and 2013. Indeed, the slight decline in positive opinions suggest a lack of image transfer from the world of sport/celebrity, or from existing cyclists, into the everyday image of cycling amongst the public as a whole.

Table 6 here - Influencers of opinions: role models, media and opinion leaders

Attitudes to the possible future growth of cycling

Attitudes to the possible future growth of cycling are reported in Tables 7a and 7b. Perhaps the most important of these results is that relating to the 49% who in 2013 agreed (23% disagree) they would '*not* *support any measure that penalises car use*', indicating a broad lack of willingness to be personally inconvenienced in the cause of growing cycling. Clearly, this result places earlier positive views of cycling within society (Table 4) into a more sober context, albeit with 2013's figures a

welcome decline in agreement versus the 2010 survey. We would also regard the result for *Roads are for cars not bikes* (28% agreement) as possibly concerning for cyclists[4], with just over 1 in 4 of GB adults regarding roads as a questionable place for bikes.

Other responses were more heartening for pro-cyclists. For example *an increase in cycling will result in the motorist losing out* generated more *disagreement* than agreement. It may be that (motorist) respondents have simply not appreciated what an increase in cycling might mean in practice (!), for example that it may mean the cycling mode dominating some urban roads, or the introduction of 20mph speed limits. Alternatively, these effects may have been noted, but not regarded as problematic. We found the strong agreement (48% agree, 11% disagree) with *there is a cycling boom in the UK at the moment* very interesting: as our and others' cycling data have clearly shown, there are no figures that remotely indicate a 'cycling boom in the UK' in terms of public participation but clearly many people think there is such a boom. Presumably this is an example of media hype and sporting successes getting in the way of judgements about the on the road realities. Frequent cyclists seemed particularly prone to this false assumption. The growth in popularity of highly visible 'sportives' (organised long rides with entry fees etc) may also afford the mistaken impression of a significant rise in cycling levels. Importantly from a policy perspective, 65% of British adults *supported funding more cycling for everyday journeys*, with only 28% in opposition. Caution is required: competing priorities for funding were not offered to respondents; had they been, support levels are likely to have dropped. Nevertheless, this may be a useful benchmark of campaigning for increased support – especially encouraging given that this level of support must include occasional or non-cyclists, who are supporting something that they do not, at present, believe that they receive any personal benefit from.

Table 7a here: Attitudes to the possible future growth of cycling

When examining the balance between use of the car versus bicycle, and hence possible barriers to *personal take-up* of cycling we see in Table 7b that agreement with *I've always relied on motor transport for everyday short trips* remains at one third (33% agree, 46% disagree) of the GB sample. Cycling advocates will be disappointed to note that 39% of the GB sample still disagree that *I'd be willing to drive/be in a car/ bus/coach that drives more slowly to accommodate an increase in cycling* and, no doubt linked to this result, that 34% of GB agree that *I'm not confident enough to consider cycling* (40% disagree). These 'lack of confidence' figures are high for such a simple physical activity and seem to reflect the perceived road danger. That said, just under one third of GB adults found effort was also a key barrier to cycling with 27% agreeing (46% disagree) that *If I'm honest I don't cycle because it's too much like hard work.* And, lastly, appearance issues are a barrier for 11% of the population (62% disagree).

Table 7b: The possible future growth of cycling: personal disposition

Opinions split by levels of cycling

Tables 4 to 7b illustrate how the views of respondents differ according to their claimed level of cycling (see columns for lapsed, occasional, regular and frequent cyclists). Unsurprisingly there is a consistent pattern of increasingly positive expressions of opinion about cycling as levels of personal

[4]This statement can be interpreted by respondents in various ways: as something that they note as 'true', something that they note of with approval, something they note with dismay, or a statement that is regarded as a slogan that they accept or reject. We note the data that *non-cyclists are much more likely to agree than cyclists* suggests that respondents regard this item as a pro-motoring statement

cycling increase. Perhaps the most interesting results emerge from Table 7a, for example the difference of opinion between non-cyclists and those who 'cycle very often' with the latter more likely to disagree that *an increase in cycling will result in the motorist losing out.* Cyclists in general are also more likely to think that *there is a boom in cycling in the UK at the moment,* and unsurprisingly those who cycle quite or very often are more likely to say they will adjust their driving to accommodate cyclists.

The pattern of increasing positivity of opinions with increasing levels of personal cycling is consistent with the self-interests of these cyclists. However, referring back to the framework of Diagram 1, such responses may also be explained by the lived experience of those who cycle that give them a different perspective on cycling to non-cyclists, in particular in how they see the relationship between cyclists and motorists. Non-cyclists (the majority of the sample) are more likely to rely on their observations of cycling and cyclists from their perspective as citizens or as motorists, or on social sources from others or the media.

As can be seen, a minority of regular and frequent cyclists gave seemingly contradictory opinions with between 5 and 12% agreeing that *I'm not confident enough to consider cycling*, *If I'm honest I don't cycle because it's too much like hard work* and *I don't cycle as often because it affects my appearance*. Our qualitative work prior to surveying revealed that some cyclists cycle out of necessity rather than choice – perhaps cycling is the only practical means of transport. Hence, even some regular cyclists may not be at ease cycling, and may be concerned how they look to others when they get to their destination. The 'not confident enough to consider cycling' response by some *current* cyclists suggests that even a small percentage of cyclists do harbour concerns or second thoughts, and they used the statement to signal this.

Table 8 examines demographic differences between lapsed, occasional, regular and frequent cyclists versus the overall Great Britain (GB) figures. Frequent cyclists are more likely to be male, younger, of a higher socio-economic status and more likely than other groups to vote green. The findings that frequent cyclists are disproportionately male or (slightly) younger than average are not a surprise. The skew towards higher social class is of interest, as is the political skew towards Green values – we discuss this in more detail next.

Table 8 here.

Political orientation and opinions of cycling

Table 9 summarises the relationship between voting intention and opinions of cycling. The consistency of the pattern of responses across pro and anti-cycling statements with voting intention is certainly remarkable. We take a cautionary approach at this early stage of analysis[5] but nevertheless given the strength of the patterns it is difficult to avoid the conclusion that opinions of

[5] Although the stability of the data patterns are compelling, voting intention is a proxy variable for age as well as beliefs. For instance we note that 71% of those claiming they would vote UKIP are aged 40+ compared to 55% of Tory voters, 49% of Labour voters, 45% of LD voters and 43% of Green voters. Perhaps voting intention in part reflects the opinions of older generations towards cycling. Younger people are also more likely be fitter and to live in urban centres where the car is not regarded as a 'life essential', as is perhaps the case in suburban areas. Voting intention is also related to socio-economic grade (SEG) although not in ways that suggest SEG can replace voting intention as an underlying variable for opinions of cycling. For instance, Conservative voters and UKIP voters have relatively negative opinions of cycling, but the former are heavily found in higher SEGs, while the latter group come from lower SEGs. In sum, age and SEG are also associated with these statements and there is some consistency with age. But the consistency is not as great and steepness of gradients much less.

cycling appear to be linked to broader belief systems that are identified through voting intention. We do not focus this analysis on individual claimed differences between all the data points: in many instances these individual data points cannot be regarded with statistical confidence as different to each other. Instead, we focus on the consistency of the pattern of the data point gradients across the range of opinions. The gradient consistently moves from (right wing, nationalist party) UKIP voters exhibiting the most anti-cycling views, through Conservative (right wing), Labour and Liberal Democrat (centre, centre left), and finally Green Party (broadly left wing) voters being markedly pro-cycling. There is a break in the centre of this gradient, with Labour voters, although 'in the middle' in modal terms, being somewhat nearer to the Liberal Democrats in values related to cycling. Looking at the levels of each gradient, differences between UKIP voters on one hand and Green party voters on the other are as much as 40 percentage points.

It is possible that these differing views can in part be explained by the differences in the underlying value sets and beliefs as important explainers of the variation in opinions of cycling. UKIP/Conservative voters' relative antipathy to cycling may be attributed to factors such as: an innate conservatism (a dislike of change[6]); their regard for the car as a symbol of personal individuality and freedom and hence a dislike of any threat to that pro-car vision; associating cycling with rebellion/anti-authority, something that is unattractive to these respondents; an association with the needs of business and economic growth – with motor traffic linked to these needs; and, compared to more 'progressive' beliefs, a *relative* lack of interest in societal priorities such as health, the environment, or wellbeing. Of course, these respondents may also be sceptical about whether cycling achieves these outcomes, or may feel that there are other more environmentally friendly options that are safer and less expensive.

In contrast, Green Party, Liberal Democrat and to a slightly lesser extent Labour voters' comparative liking for cycling may be attributable to their relatively higher value on health and non-wealth sources of wellbeing and the natural environment; a lower value placed on economic growth; lower tolerance of car negatives such as congestion, pollution, and carbon footprint; perhaps a belief in the collective well being of society compared to private individual well being; less interest in status (cars); and perhaps more openness to change generally.

Table 9 Cycling and voting intention

Discussion

The low levels of everyday cycling in Great Britain make it somewhat surprising that these population surveys find generally positive opinions of cycling (albeit reduced somewhat for 2013 compared to 2010). The results for the city of Bristol (versus Great Britain) also serve to highlight how a virtuous circle of pro-environmental local politics (Bristol had four Green Party councillors at the time of writing and was designated European Green Capital 2015) and increased funding of cycling can also meet with broad approval, both in terms of strongly positive opinions and in increased cycling levels. These positives offer useful data to help pro-cycling organisations position any negativity towards cyclists as belonging only to a minority. However, more generally for Great Britain the picture of car dominance remains: there is a large gap between the warm predisposition

[6] Similarly, we should make clear that this notion of resistance to change can just as clearly be explained as a function of age, with older people typically being less physically able/fit and arguably demonstrating increased resistance to change.

to cycling as a pro-social practice *for others*, and the hard realities of persuading non-cyclists (or occasional cyclists) to cycle (more) themselves. Indeed, our comparative data on 'plans to cycle' in 2010 and 2013 suggests considerable suppressed demand for cycling, but no measurable (by us) shift in actual cycling behaviour between these years.

However our main consideration in this discussion is to examine the data in the light of the Sloman (2006) hypothesis that assumptions by politicians (firstly that the public enjoy their car dependency, and secondly that the public agree that economic considerations should take primacy over health / environment) should be challenged. The lack of improved cycling levels, and the slight drop in positivity in some opinion measures suggest that pro-cycling groups need new strategic options if they are to shift the inertia. Beyond the fringe parties of left and right (Green Party and UK Independence Party respectively), there is currently little *overt* politicisation of cycling in Great Britain. However, the data gradients of Table 8 strongly suggest that opinions of cycling vary according to the political affiliations of the respondents. This being the case, advocates of cycling could respond in various ways, summarised in Diagram 1 earlier.

Firstly, advocates could attempt to *de-couple* cycling from any set of underpinning values (environmental sustainability, health, freedom, equality, etc) and simply present cycling as a practical form of urban transport that can compete with the car in terms of convenience, speed, reliability and affordability. This may be an extension of how cycling is currently promoted, but with much stronger emphasis on calling for budgets to match the scale of the investment required to provide a (perceived) safer cycling experience. Notwithstanding this latter issue, this approach has its attractions for those worried about politicising cycling: removing the 'baggage' of associated ideologies would mean that Governments of both left and right could – in theory – support cycling's growth, with the 'headline' centring around the politically neutral message of *more efficient movement of people* in cities and towns.

A key debate within this strategy is whether to run promotion of cycling hand in hand with strategies that *disadvantage the car* in built up areas – congestion charges, lowered speed limits, reduced road space for cars, etc. It is highly unlikely that such concerted initiatives to reduce car freedoms would go unchallenged, and therefore the hope that 'headline politics' could be kept out of the debates might be dashed. However, there must be doubt whether car-addicted populations could be weaned out of their cars and onto bicycles without disadvantaging the car. For instance a recent study (Dalton et al 2013) identified the removal of car-parking privileges as a key factor in predicting increased cycling to work.

The Bristol data reported here offers a mixed analysis in this regard. Bristol's investment in cycling had mostly avoided any challenge to car freedoms, and the city's own data indicated a doubling of levels of cycling. However, levels remain modest (in absolute terms) when compared to car use, a reminder of the size of the task. Interestingly, activated by a centre-left Mayor, Bristol's more recent policies have begun to challenge the fringes of car hegemony, with further promotion of a city wide 20mph speed limit on residential roads, and 'car free Sundays' in the city centre and some residential areas. In turn, these initiatives have become politicised, with opposition coming from the political right within the city on the grounds of car freedoms being compromised.

Asking people to give up a part of their lived experience – unrestricted driving privileges - in order to help grow an activity (cycling) - of no direct meaning to them will be far from easy. Wright and Egan

(2002) recommended the use of the 'de-marketing' concept (using marketing techniques to *reduce* demand) by reducing car usage rather than car ownership. However, combating the marketing spend of the automobile industry would raise considerable challenges.

The alternative is that the links between cycling and its underlying values are directly addressed: *both* progressive and conservative values may be targeted, with conservatives attracted by the 'economic growth' and 'congestion relief' attributes of urban everyday cycling, and its economic potential for reducing costly health bills. The data within Table 4 above demonstrated a large majority of the public agreeing that increased cycling would help reduce congestion. This strategy also seems sensible when noting Aldred's (2012) point of how cycling policy has been 'double devolved' away from both the state and from transport arenas, and relegated to underfunded health and environment , and the lack of effectiveness of this devolvement given the 'neo-liberal' tendency for economic arguments to hold sway over health or environmental priorities. The idea of concurrently addressing *multiple* ideologies was discussed by Castillo-Manzano and Sánchez-Braza (2013) in their discussion of the politics of cycling within Seville.

Finally, more speculatively, it may be possible to focus away from cycling altogether and concentrate on changing the underlying belief systems. The premise of this strategy is the belief by some cognitive scientists (e.g. Lakoff 2009 in the field of politics) that deep-lying mental schema pre-set the conditions for 'surface level' beliefs about everyday phenomena such as cycling. (This idea of deeply held values and beliefs affecting the acceptance or rejection of 'everyday' opinions has also been discussed by Sandel (2000)). Hence, the idea would be to influence the balance of the *underlying* values of the population away from economic concerns and towards health/environment and wellbeing – with the presumption being that there would be a concomitant rebalance of priority between, for example, motor travel and sustainable modes of travel. However, this remains speculative: for instance, while we note within some Nordic populations the association of progressive values and active travel, claims of causality would at this stage be foolhardy. Putting aside such evidential debates for a moment, it remains the case that shifting deeply held schema across large sections of the populace would be very hard to achieve and would arouse considerable political opposition.

In practice, expecting politicians to address car-dominance on their own may be unrealistic. Similarly, expecting pro-cycling campaigners to try and change population-level values on their own also seems unrealistic. Instead, they may be better advised to seek partnerships with other campaigns from different causes that have a common interest in changing the same set of societal values. An example may be how cycling advocates and say, the international Slow Food movement may share an interest in promoting planet/environmental values. Such value building approaches (Crompton 2010) also have the advantage of being positively framed (dreams, visions) rather than negatively (policies to prevent car use).

In the longer term, political considerations may be overtaken by shifting trends that mitigate against expanded car use and in favour of active travel modes. Whilst cycling levels in GB appear static, the phenomenon of 'peak car' suggests car use is reducing, especially amongst young people – placing further doubt on the sensibility of road building policies. In addition, carbon (climate change) and health (obesity) pressures continue to build, increasing the pressure for active travel options. There is, admittedly, government resistance to these underlying pressures, aided by the lack of exposure of

the problems by an entrenched (and often conservative) media (one author noted recent media coverage of news that began with an obesity health scare, then a gloomy environmental forecast, but ended by reporting an increase in national car sales as a *good thing*). Thus, using evidence in arguing for a more balanced transport policy needs to remain a priority for pro-cycling groups.

Conclusion

If successive British Government's objectives have been to associate cycling with health and environmentally friendly living, the data here suggests they have succeeded. However, if their aim has been to grow cycling levels there is still much work to do. There is considerable demand for everyday cycling, but this is currently unrealised, not least by perceptions of road danger.

Our survey results indicate that in terms of broad public support for cycling, it is possible to argue that the 'job is nearly done' in GB. The image of cycling is in good health, and there is strong support for increased funding. More work needs to be done in convincing conservative voters of cycling's societal benefits – with congestion relief and consequent economic benefits being perhaps the best platforms to achieve this. However there is as yet no sign of government or policy makers redirecting road-building resources to cycling at the levels required to make a difference. The devolvement of cycling policy away from central government/transport to local authority/health has been detrimental to it being taken seriously as an option for everyday urban travel. The implicit assumptions of policy makers and transport engineers of the ongoing 'need' for road building (for motor transport) remain in place – in spite of the growing base of evidence for cycling as a healthy and environmentally sustainable activity. Shifting these assumptions is going to require continued hard work from cycling advocates, who can use surveys such as those presented here as a platform for their application of pressure. However, such are the levels of inertia, a political 'shock' to the system may be needed, perhaps akin to that experienced by the Dutch in the early 1970s (Goodman and Degnan 2008), forcing a questioning of 'normal' business. Historically, cycling has been a-political in the UK, at least in terms of major party politics. This may change: the high costs of poor health and the increased popularity of cycling as a sport and attendant increased media interest may generate pressures that could lead to increased politicisation of cycling. The recent formation in Australia of a political party dedicated to cycling could, in theory, be replicated in the British system, although their political effectiveness within Australia remains to be seen. In the meantime, our surveys suggest significant public support for future policy makers seeking to challenge establishment assumptions.

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