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Investigating attitudes to cycling and cycle infrastructure in  
London

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Being a dissertation submitted to the faculty of The Built Environment as part of the requirements for the award of the MSc Transport and City Planning at University College London:

I declare that this dissertation is entirely my own work and that ideas, data and images, as well as direct quotations, drawn from elsewhere are identified and referenced.

A handwritten signature in black ink, appearing to read "Peter Biczok".

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## **Abstract**

This thesis critically reviews the attitude of motor users in London, and in particular the behaviour that intimidates cyclists. The provision of road traffic regulation and infrastructure are discussed with particular emphasis on the social and physical environment that is accountable for motorists' attitude to vulnerable road users. A critical analysis of a set of quantitative and qualitative research then aims to discover whether social attitude assists improving the modal share of cycling. The thesis concludes that cyclists are considered a disturbing factor on London roads and given less courtesy and attention than pedestrians. The study also reveals that the offence of inconsiderate driving has become standard practice in London and significantly accountable for the need of segregated cycle lanes despite of the preferred alternative solution to improve safety: legal protection and slower speeds. Given authorities' failure to remove the ambiguity around the Vehicle Excise Duty, which is validating motorists' road entitlement, debating the discourse on road sharing and vulnerable road user priority at state level seems remote.

## **Contents**

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<b>ABSTRACT</b>	<b>2</b>
<b>1. INTRODUCTION</b>	<b>4</b>
<b>2. CRITICAL REVIEW</b>	<b>5</b>
Legal framework	5
Infrastructure: assisting or hindering the law?	7
London's "cycling revolution"	8
Conclusions	9
<b>3. RESEARCH DESIGN</b>	<b>10</b>
Research design	10
Data sources	10
Survey	11
Conclusions	12
<b>4. ANALYSIS</b>	<b>14</b>
Respondents	14
Describing cycling experience – equal liability?	14
Inconsiderate driving	14
Two distinctively different Londons	15
Incidents	16
Approving the norm	16
Cyclist respected as Pedestrian?	18
Conclusions	19
Policy approval?	20
Conclusions	21
Infrastructure	22
Sharing is caring	22
Minors	25
City of London – an example to follow?	25
Conclusions	26
<b>5. CONCLUSIONS</b>	<b>28</b>
Discussion	28
Conclusions	29
<b>6. REFERENCES AND APPENDICES</b>	<b>30</b>

## 1. Introduction

Traffic congestion has been an increasing problem in urban environments, with air pollution and road safety being particular concerns (Jones & Hervik, 1992). In order to tackle these issues consecutive strategies have been announced covering the UK and London focusing on sustainable transport modes (HM Government, 1997; House of Commons, 2012). In 2010 the Mayor of London announced a ‘Cycling revolution’ (Transport for London, 2010) to promote cycling as an appealing mode of transport. While the number of journeys made by bicycle and the safety figures are slowly improving in the British capital (Transport for London, 2010; Transport for London, 2012), they are far from European urban averages (Buehler & Pucher, 2012; Pucher, de Lanversin, Suzuki, & Whitelegg, 2012). The general discourse, confirmed by the policy to improve cycling numbers, argues for further “hard infrastructure”, such as cycle lane provision, with “soft infrastructure”, which they limit to voluntary cycle awareness training targeted at cyclists and HGV (heavy goods vehicle) drivers (House of Commons, 2012; Transport for London, 2010).

The mass of trucks, lorries and buses certainly have a higher risk factor than private vehicles; however, as long as 79 per cent of traffic comprises of cars and taxis (Transport for London, 2012), the frequent encounters with this segment of traffic will have a significant impact on the uptake of cycling (Transport for London, 2011). The purpose of this research is to analyse these encounters, and to compare the attitudes of drivers with cyclists’ perception of drivers’ behaviour. This paper is also concerned to measure whether attention given to cyclists is equal to pedestrians, as the two major vulnerable user modes. Given that the segregation of pedestrians from motor traffic is no longer questioned, will cycle segregation lead to similar cultural approval? Is it possible to fully segregate cycle infrastructure, and is it desired at all by the cycling public? Is it desired by the currently non-cycling public in order for them to pick up cycling? Do drivers encourage cycling with their behaviour?

These are the hypothetical questions raised by this study, which hopes to close a gap in current local policy, whose focus on cycling persuasion fails to tackle the single most critical element of transport choice (or aversion): the exposure to risks related to motor vehicles.

### Research questions:

Does the social environment support the uptake of cycling in London?

- Are attitudes to all vulnerable road users consistent?
- Does the legal framework incentivise cycling in London?
- Is public space allocated efficiently, accommodating all modes of transport?
- How do professional drivers relate to cycling in London?

## 2. Critical review

This chapter looks at the legal frameworks and physical environment relating to the sharing of public thoroughfare in the UK. Of particular interest is the conflict between egalitarian concepts of sharing responsibility and space among road users with hierarchical concepts of entitlement and a 'survival of the fittest' mentality, and how this conflict is tackled within London.

### Legal framework

One of the most important factors discouraging cycle use is the danger created by other road users (Joshi, Senior, & Smith, 2001; Davies, Halliday, Mayes, & Pocock, 1997; Horton, 2010). John Pucher and Ralph Buehler provided valuable insight on best practises from Dutch, Danish and German towns to make cycling 'irresistible' (Pucher & Buehler, 2008). The concise work provides analysis and solutions for a varied range of physical environments to accommodate cyclists. Beyond confirming the attractiveness of dedicated cycle lanes particularly to vulnerable road users (such as children and the elderly), they also emphasised the importance of the legal measures and awareness campaigns targeted at motorcar users. The authors highlight that these countries' Highway Codes expect motorists to give special consideration and attention to vulnerable road users even if they act contrary to road regulation. Alongside stringent traffic rules, the police and courts of these countries take enforcement very seriously in order to protect pedestrians and cyclists from the dangers of car users.

Meanwhile, in the UK, despite the government's recent pro-cycling policy change (House of Commons, 2012) and the Mayor of London announcing a "Cycling revolution" (Transport for London, 2010) there is a growing concern as to whether the British legal system, spearheaded with the Highway Code, is capable of protecting cyclists (and pedestrians) from the dangers they may be exposed to (The Guardian, 2010).

The Highway Code is not in itself a legal document, but a collection of road traffic acts translated to everyday use for the public's wider understanding. Beside rules representing legal requirements, the Highway Code also collects suggestions to improve road safety (Department for Transport, 2014). These rules however do not constitute laws and bear no statutory requirement on their own; they are recommendations at best. Beside the generic offence of "inconsiderate" driving (Great Britain, 1991), interactions with vulnerable road users are all suggestions unless there is specific rule referring to implemented infrastructure, e.g. pelican crossings. The lesser status of these rules is also visibly represented by juries being asked to ignore HC Code 146 - adapting driving to appropriate conditions - for example, when low sun and glare is found liable for fatal collision with vulnerable road users (Stevenson, 2014).

The bias of the legal system was extensively researched by Jake Voelcker who, among other findings, concluded that the maximum detention sentence available for dangerous drivers is half of that of other criminals causing death without intent. Furthermore, while a typical sentence for unintentional manslaughter caused by not complying with health and safety standards for example might be 3 years imprisonment, the typical reckless driver gets away with a suspended jail sentence and monetary fine (Voelcker, 2007).

There have been calls in the UK to follow the continental practise of implementing presumed liability. Under such system a presumption of liability is established that

favours the more vulnerable road user (BBC, 2013). Lack of presumption means that courts must rely on witness descriptions or, in their absence, description from involved parties, provided they survived the incident. Proponents of the presumed liability scheme reveal that only half of cycling fatalities result in court cases. Moreover if driver was found guilty, only 44 per cent of sentences resulted in imprisonment, i.e. 17 per cent of fatalities (Kent, 2014; Barth, 2014; The Guardian, 2010; Voelcker, 2007). Critics denounce the scheme, asserting the importance of “equal responsibility” and criticising the “arrogance” of cyclists (BBC, 2013) for demanding such a law. But how does such “equal” responsibility work in practice? And how does it impact road safety?

The concept of “equality” resulted in a ‘one size fits all’ infrastructure provision approach ignoring the different needs of different road users, and strongly relates to cyclists’ inadequate respect to Highway Code (Pauen-Hoeppner, 1991). Pauen-Hoeppner suggested that cyclists’ attitude to regulation is strongly related to the fact that traffic planners overlook their needs, in effect encouraging poor observance. While such behaviour gave fertile ground for stigmatising cycling (Aldred, 2012), some cycling groups imply that breaking the law sometimes necessary to reduce risk imposed by motorists (Schwartz, 2013; Burgess, 2012). But rather than look into the reasons for lawlessness, the authorities instead attempt to crackdown on illegal cycling behaviour, like the announced Operation Safeway in London (BBC, 2014). How do the authorities’ actions support road safety and what message do they give to the public?

Today the broader public concurs that roads are spaces for cars and consider road user safety from a driver’s perspective, regardless of whether they are drivers themselves (Department for Transport, 2010). A suspicion exists that such quasi “ownership” derives from motorists’ contribution of “Road Tax”. The “Road Tax” was introduced as a contribution to road infrastructure investment from motorists in 1909 and abolished in 1937 (Harrabin, 2013). The current financing structure is based on general taxation. The authorities levy some drivers however a tax on environment pollution, which remained to be known as “Road Tax” among the general public and motoring groups, too. Members of the public who cycle are often criticized for 'free riding' the public utility of road networks and paying no contribution towards road use (Harrabin, 2013). There is certainly a conflict in comprehension of the Vehicle Excise Duty’s purpose, which derives from the act and its execution as well: According to the act Vehicle duty applies to all mechanically propelled vehicle using public road, however charging is based on engine size and CO<sub>2</sub> polluting level (Driver and Vehicle Licensing Agency, 2014):

*“A duty of excise (“vehicle excise duty”) shall be charged in respect of every mechanically propelled vehicle that—*

*(a)is registered under this Act (see section 21), or*

*(b)is not so registered but is used, or kept, on a public road in the United Kingdom.”*

(Great Britain, 1994)

There is already an inconsistency in terminology by authorities; while the act refers to “vehicle excise duty” (Great Britain, 1994) the government documents call it “vehicle tax” (Driver and Vehicle Licensing Agency, 2014; Harrabin, 2013). How does such legal confusion impact the safety of everyday interaction between “tax contributor” and “free rider”?

With regards to the aforementioned beliefs regarding road ‘ownership’, cyclists reported overt aggression for challenging the ‘road status quo’, although no evidence of it emerged from official studies by Department for Transport (Basford, Reid, Lester,

Thomson, & Tolmie, 2002). The Basford et al. report does however confirm that motorists feel disturbed by cyclists and execute their manoeuvres without room for negotiation during procedures such as overtaking. The sense of overt aggression might stem from the number of near-misses cyclists report as opposed to the ones motorists do. Road users tend to recall near misses from less vulnerable road users, hence the more vulnerable the user is the more near misses will register, while less vulnerable users may overlook the misses they cause (Joshi, Senior, & Smith, 2001).

Such behaviour confirms that road users fail to consider other (more vulnerable) road users in spite of the Highway Code acting instead on a ‘survival of the fittest’ principle, creating a strong case for segregation (Department for Transport, 2010).

### Infrastructure: assisting or hindering the law?

Given the above finding, recent cycling strategies prioritise infrastructural solutions to enhance cycling experience (House of Commons, 2012) reminiscent of the 1960’s strategy of improving road safety with segregating modes of transport (Buchanan & Crowther, 1963).

But more segregation only reinforces existing road ownership beliefs, creating a vicious circle, unless we consider the alternative route of increased responsibility and risk awareness. J. S. Dean, chairman of the Pedestrians’ Association, suggested full responsibility for controlling a vehicle and substitution of the term ‘accident’ for ‘murder’ as early as 1947 (Dean, 1947).

Similarly, John Adams argues that the more transport related risk handled through regulation the more dangerous our roads will be (Adams, 1985). Adams points out that segregation has led to car traffic dominated roads and drivers, anticipating no vulnerable road users, driving fast and seek further thrills to compensate for eliminated risk. His assessment of compulsory seat belt regulation revealed decreased driver fatalities, but at the same time increased pedestrian and cyclist fatalities, claiming that the more safety we perceive the more dangerous our actions will be (Adams, 1985; Adams, 1989). Similar findings were presented with regards to helmet use and higher risk taking (Adams & Hillman, 2001), which was also recognised by the Royal Society for the Prevention of Accidents (Horton, 2010).

### Shared space

John Adams’ findings reflect the recent renaissance of a shared space concept which, given an adequately slow speed limit is enforced, allows road users to negotiate among themselves, regardless of what mode they use (Hamilton-Baillie, 2008a). Research suggests that accident numbers decline when a shared space approach is implemented (Hamilton-Baillie, 2008a), arguing that the reduced clarity actually increases awareness (Adams, 1995) and reduces risk. However, Moody observed that among nearly three quarters of the pedestrian/vehicle encounters in a shared space scenario pedestrians were the ones who waited and gave way to vehicular traffic (Hammond & Musselwhite, 2013; Moody). Although such behaviour might be culturally embedded, it might also point to a key criticism of the shared model, which is the skewed pattern of risk evaluation: an individual’s perception of risk will greatly depend if he/she is the imposer or sufferer of risk (Hammond & Musselwhite, 2013; Department for Transport, 2010). Drivers in a closed metal frame will perceive less environmental stimuli, and consequently be aware of fewer risks.

## Segregation

Comparing the effectiveness of segregated cycle lanes, Parkin & Meyers found that motorised traffic passes cyclists on mandatory or voluntary non-segregated cycle lanes closer than without any road painting (Parkin & Meyers, 2010). Besides presenting the same findings to Parkin and Meyer's, Ian Walker's research also reflects Professor Adams' findings that motorists pass closer if their perceived risk of cyclist (helmet wearing capable male in cycling gear) is lower (Walker, 2007).

Reflective of finding on segregation, the damaging aspect of poor infrastructure provision has already been recorded in the 1980's (McClintock, Post-war traffic planning and special provision for the bicycle, 1992). McClintock concludes that cycle provision in inner towns have dubious effect and must offer distinct advantage, in terms of safety, directedness, comfort in order to justify investment.

In order to determine local need for segregation one could consult a study analysing 80 towns in Europe. Authors revealed that accident frequency in a specific district depends on width of carriageway, extent of road network and percentage of main roads; but also that, beside the type, size and development state of roads, and the percentage of motor traffic in relation to overall traffic volume is a key factor of accidents (Apel & al., 1988). They also concluded that cyclists are relatively safer in towns where the proportion of cyclists to motorists is higher, proving that cycle safety improves with number of cyclists.

Unless we challenge the fundamental need for heavy traffic motorised roads in urban areas, cycle provision is certainly justified on these roads in order to decrease accidents. Given, however, the above findings on non-segregated cycle lanes from Parkin and Meyer, one must question how to allocate more space to accommodate segregated, raised cycle lanes. One proposed solution is the removal of parking provision. Indeed, studies show that private vehicles are being parked over 90 per cent of their lifetime (Barter, 2013; Bates & Leibling, 2012), making them a burden to individual and society alike. Thomson surveyed 5 per cent of the 125,000 parking spaces available in 1968 and concluded that 78 per cent of motorists would find other means of transport if the parking space were not available (Thomson, 1968). While the validity of these findings may require considerable caveats when applied to present provision versus the environment in which the survey was conducted in 1966, its methodology remains helpful to measure driver behaviour. Based on a recent National Travel Survey statistic, Bates and Leibling reiterate that for 94 per cent of all destination parking acts nationally there is no parking charge and, excluding residential parking charges, the average annual parking charge is less than £50. Even if we considered the cost of residential on street parking at prime boroughs such as the Royal Borough of Kensington and Chelsea, the average parking costs is trivial (£133 RBKC, 2014) compared to the national average spent on fuel (£1600, Bates & Leibling, 2012). The question should be raised therefore why the council values public property so little, that it charges less than £2 per square foot annually, where the private market charges £2,000 per square foot for a residential property (with 78 sq ft car space; Bloomfield, 2013).

## London's “cycling revolution”

Despite the well-documented benefits of cycling to individuals and society, such as efficient energy usage (Lowe, 1990), health benefits (Garrard, Rissel, & Bauman, 2012), speed (McClintock, The Significance of the Bicycle in Urban Transport, 1992; Tranter,

2012), and relieved demand for space (Newman & Kenworthy, 1999) just to mention a few, cycling is the least attractive mode of transport in London (Transport for London, 2011). In the same time however between 80 to 90 per cent of all Londoners do actually consider cycling an interesting, enjoyable and fast way of travel (Transport for London, 2011) so reasons for the low attractiveness level could be justified by the inability to mitigate risk from other road users (McClintock, 1992).

The sense of safety is a very peculiar one due to its subjectivity, and yet its influence on our choice of transport mode is substantial (Transport for London, 2011). Much of our perception of safety or lack of it stems from official statistics and our personal experience. Unfortunately official statistics reinforce concerns surrounding cycling as a mode of transport since the accident record involving cyclists is higher compared to other modes (McClintock, The right balance in cycling policy, 1992).

Critics of official safety statistics presentation like Hillman, argue that analysis of mode safety should include the risk exposed to other road users, so that transport mode would represent the number of fatalities overall related to that mode, not only the ones suffered, i.e. figures would take into account the dangers inflicted *by* different modes as well as *on* them (Hillman, 1991).

We may conclude that campaigns to increase cycling (Transport for London, 2009) are relatively successful from their intrinsic perspective, i.e. the public understands the benefit and would potentially pick up cycling (Transport for London, 2009), however exposure to uncontrollable risks imposed by other road users outweigh the benefits for the majority.

Indeed, cycling numbers have nearly doubled between 2001 and 2011 in London, however this still means only four per cent of trips in Inner London (Transport for London, 2010; Pucher & Buehler, 2008). To emphasise the potential of cycling growth, the not particularly cycle friendly Munich, accommodates 13 per cent of all trips on bicycles on the size of Inner London (123 sq mi vs. 120 sq mi; Pucher & Buehler, 2008).

## Conclusions

This chapter outlined the legal framework and physical environment that shapes road users' interactions. It is understood that in the absence of presumed liability each incident requires the Crown Prosecution Service to prove liability based on available evidence, which consumes public resources and oftentimes results in deficient execution. It has also been shown that road safety is considered from a driver's perspective, based on the assumption that there is a presumed entitlement for road usage provided by the "road tax" paid by some motorists. Should such pre-supposed privilege exist? Do contributors compensate non-drivers for space taken? What attitudes does such assumed privilege encourage with regards to the recent cycling uptake in London? The following chapters will present the empirical evidence in the attempt to answer some of these questions.

### 3. Research design

The purpose of the next chapters is to collect empirical evidence to understand how the current legal frameworks and physical environment influence cycling and cycling safety in London.

#### Research design

Because of the diverse nature of the questions – i.e. establishing if there is an issue and how it impacts interactions if so – neither qualitative nor quantitative research offered a perfect solution on their own. A multi-method approach was therefore employed to portray whether the concerns raised are valid through a quantitative survey and an attempt to explain the underlying reasons with a qualitative research.

It is understood that behavioural attitude has an impact on driver's behaviour (Department for Transport, 2010); however, in a calm environment, such as in front of their computer, filling out a survey, their logic and moral judgement will prevail over instinct and will try to reply according to social expectation (Oppenheim, 1992).

In order to provide room for such “social compliance”, as opposed to immediate rejection, the Likert scale was applied to several questions with variations as to the level of agreement or likelihood of specific actions (Oppenheim, 1992). Additionally, some questions were focussed on respondent's potential action in given situation, while others were concerned with their opinion. Due to the subtlety of measuring attitude and the necessity of explaining the exact situation, video clips of road interactions were chosen as the basis by which attitudes were measured. The video clips conveyed a huge quantity of information concisely, facilitating quick but meaningful data collection.

The qualitative research consisted of three oral and one email interviews, allowing the interviewee to discuss the topics in detail in a discursive manner. Besides the one email interview, where the subject responded openly regarding the views and stance of their agencies' policy, the rest of the interviews entailed an informal unstructured conversation with interviewee. The leading questions were informed by the quantitative research and attempted to seek answers for received responses from survey. The qualitative research was therefore conceptualised on the results of the quantitative data, which also provided the framework of analysis.

#### Data sources

Due to the nature of survey kernel - i.e. video clips - respondents were asked to fill out the survey online at the purpose-built website at [www.TheRoadIsYours.co.uk](http://www.TheRoadIsYours.co.uk).

Although the address might create the need for caveats, the name was chosen so that potential participants would find the survey online easily. A small incentive, the chance of winning a dinner on author's private boat was used to increase response rate.

The interview participants were chosen to reflect different perspectives to assess how urban planners tackle those. There were in total four interviews conducted:

- Paul Watters, head of policy at The Automotive Association, TheAA – Subject A;
- Michael, black cab driver for 40 years in London, first randomly chosen approach (registration number: LT07 KYO) – Subject B;
- Craig Stansfield, Transport Strategy Team Leader, City of London Corporation – Subject C;
- Donnachadh McCharthy, cycle campaigner, former deputy chair of the Liberal Democratic Party – Subject D.

## **Survey**

The introductory section of the survey gathered background information on respondents in order to confirm the sample. This included verifying where the respondent heard about the survey, the areas they frequent in London, their gender, and their age. Age groups were presented according to TfL's study on potential of cycling in demographic segments (Transport for London, 2010).

The survey then included three short videos (Martinims, 2011), which were recorded on moving vehicles in London, and which the respondent could therefore imagine themselves being the driver of. Related questions asked respondents to judge the driver's actions and the likelihood of their acting in specific ways in the same situation. The medium was specifically chosen in order to measure behaviour approval that would have been very biased if explained in words (e.g. inconsiderate driving).

The middle section of the survey was divided according to the respondent's choice of transport mode. Motorcar users were questioned about their attitude to pedestrians and cyclists, while similar questions were raised from cyclists' perspective as two-wheelers. Motorcar users then were channelled to the questions that pedestrians received: that is, the reasons for their not cycling and their willingness to cycle if e-bikes were made more accessible.

The final part of the survey connected the three branches again and asked travellers about their views on cycle infrastructure development and their attitude to cycling. Analysing the success of future cycle infrastructure development, respondents were asked about the likelihood of cycling more on current roads with segregation or using current infrastructure with implementing soft infrastructure, i.e. creating overall shared space in London.

In order to avoid biased segmentation of opinion, the following data collection methods were used:

### **Social media:**

Multiple messages were sent to London's cycling community through *Twitter* and *Facebook*. Some bias is naturally expected, as users with some agenda are more willing to fill out survey than others. Around 50 users were also individually addressed who tweeted about #London #traffic<sup>1</sup>.

Students of UCL were addressed via *Facebook* groups, meaning respondents were likely to come from planning faculty and friends of author, again introducing the possibility of bias.

Less bias was expected from the *Facebook* group for London boaters, which includes a mix of users, including professional drivers. Similarly, *Meetup.com* members who have an interest in behavioural psychology and/or technology, or who are simply London residents, were also approached on- and off-line.

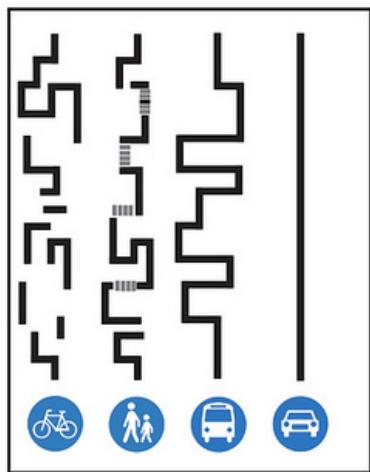


Figure 1 - Traffic planning for liveable cities (Copenhagenize.eu, 2013)

#### Leaflet/personal approach

The physical leaflet showing the link to online survey (Appendix 3) was usually handed out with a few words regarding the aim of the survey, i.e. that it was part of a research project for a degree dissertation. The card shows a transport critical diagram (Figure 1) and includes the twitter account name, which hoped to raise participants' interest to visit the survey online. In order to work with a representative proportion of motorcar users, most often these cards were handed out to drivers at traffic lights and petrol stations.

Attempting to maintain a geographic balance, cards were handed out at:

- Euston Road, Borough of Camden,
- New Cavendish Street, Borough of Westminster,
- Wandsworth Road, Borough of Wandsworth,
- Old Kent Road Tesco petrol station, Borough of Southwark,
- Westfield Shopping Centre, Borough of Hammersmith,
- Angel, Borough of Islington,
- Canal Walk, Borough of Hackney.

Approximately 120 cards were also handed out at King's Cross station to black cab drivers and 30 cards left at 'Minicab' operator booths in Central London.

#### Conclusions

A multi-method approach was used to describe the current road environment facing cyclists in London and explain the reasons that are behind the development of such environment. Vital help was found in the usage of modern research tools, such as online survey websites and video clips available in the public domain.

Since the survey sample is not representative of the ratio of motorists to cyclists and pedestrians in London, responses should not be considered as a clear indication of mode

users' attitude. Moreover due to sampling method, and respondents' willingness to participate, a cycle friendly bias must be acknowledged. All the same the tendency for overall agreement to some questions suggests the number of replies obtained do represent the accepted behaviour in London, regardless of the transport mode or bias.

Once the quantitative data was formulated and analysed, the qualitative research explored the validity of and confirmed the reasons for specific results from the perspective of multiple stakeholders. Since the qualitative data comprised of only a small sample and unstructured interviews, the data was only used to triangulate data from the survey.

## 4. Analysis

### Respondents

154 responses were collected, which was reduced to 135 due to some questions being misleading during the early pilot stage of research. A further 17 had to be filtered having been received from respondents not frequenting or commuting in the Greater London area, hence the total population of the survey was 118.

62 of the respondents said they considered their main transport mode was the bicycle, whereas 36 of them walked with or without the use of public transport, and 21 respondents mostly used motor vehicles, 5 of them professionally.

Around 20 per cent of "pedestrians" and 30 per cent of "motorists" also used bicycles occasionally. A significantly smaller proportion of "cyclists" and "pedestrians" said they also drive (5 and 13 per cent respectively), hence a pro-cycling response is anticipated.

It is understood that cyclists, as vulnerable road users will point out the injustice suffered



Video 1 - (Martinims, 2012)

on the roads (Joshi, Senior, & Smith, 2001). However, although twice as many cyclists filled the survey as motorists, the results do paint a rather grim picture even if we consider all caveats.

### Describing cycling experience – equal liability?

### Inconsiderate driving

Although inconsiderate driving is an offence according to the Road Traffic Act (Great Britain, 1991) it is difficult to assess and includes a degree of subjectivity. The author of this paper is convinced though that imposing others to avoidable danger should be deemed inconsiderate. Forcing vulnerable road users not to overtake stationary vehicles (Video 1) or overtaking cyclists when there are obvious obstacles ahead (Video 2) are

good examples and therefore featured in the first two short videos. Although in both instances responses were concentrated around the legally desired answers, there were a number of responses (Figure 10, Figure 11, Figure 12) from drivers, including professionals, suggesting that they would rather “accelerate and overtake cyclists before conflict” instead of “slowing down, keeping well behind [them]”.



Video 2 - (Martinims, 2012)

Similarly remarkable, is that nearly half of motorists, including professionals would rather drive into the zone sided by cyclists on both side (Video 2) and reduce speed just as they approach the obstacle (a white van) than hold back behind the cyclists (Figure 13).

### Two distinctively different Londons

The following section is a summary of conflicting responses, gathered by road users. The survey attempted not to generalise the transport mode, hence introduced the questions and statements with a title of:

- “When you drive...“  
or  
• “When you cycle...”

The answers show a distinctive gap between drivers' perceptions of their actions and how cyclists perceive them, for example nearly three quarters of drivers said they “always” or “mostly” give cyclists right (Figure 14) when the Highway Code requires, whereas only a quarter of cyclists felt that they are given right of way “mostly” (Figure 15), the rest replied “sometimes” or “never”. A similar pattern was observed with overtaking manoeuvres where motorists felt they overtake safely (Figure 16), whereas only 22 per cent of cyclists felt they are overtaken safely most of the time (Figure 17). Equally over 60 per cent of drivers claim never to overtake before a left turn (Figure 20), whereas 67 per cent of cyclists claim they experience such behaviour (Figure 21).

## Incidents

The study revealed that around third of cyclists encounter daily incidents and equally a third reported weekly and less frequent incidents. Even if we take into account the report on subjectivity of registering near misses (Joshi, Senior, & Smith, 2001), these findings still suggest that no cyclists entirely avoid the feeling of danger en route.

Confirming these findings, subject B, describing an incident with a counter-flowing cyclist in a one-way street, said: "*I have no compassion for cyclists.*" The details of the incidents were unclear but when asked about paying extra attention to cyclists, B replied:

*"I do pay attention to them but I don't particularly go out of my way to pay more attention to them because if they break the law it's not my problem."* – revealing the general attitude. Lack of presumed liability, as discussed earlier, means that around 70 per cent of all cyclists and over 40 per cent of those who encounter incidents on the road on a daily or weekly basis consider it a 'waste of time' to report such behaviour to the police. Such driver attitude also reflects the DfT's finding that motorists are disturbed by cycling and unwilling to negotiate during their manoeuvres (Basford, Reid, Lester, Thomson, & Tolmie, 2002). In such light of perspective, we may agree with Subject B that "*cyclists should be insured*" hoping that will result in more respectful behaviour from cyclists and more considerate behaviour from motorists, causing fewer scratches to cabs and fewer cycling fatalities.

The above responses seem to strongly support our survey data that not only are cyclists paid no additional attention, there is a strong disapproval of cyclists already, even before any interaction is had with them.

Subject D believed a change in legal framework could initiate rapid improvement in this matter, but also advocated introducing a 20mph speed limit to entire Greater London Area to improve objective safety, too.

## Approving the norm



Video 3 - (Martinims, 2012)

Despite the significant contrast in self-assessment, when participants had to evaluate an arbitrary driver's actions (Martinims, 2012), most respondents were satisfied with his/her

overall actions. Figure 2 shows the results according to the respondents' typical mode of transport, depicting the proportion of respondents from each mode that chose each specific answer. We may conclude that there is a tendency towards dissatisfaction; however, there are more users who answered "O.K." or even "Satisfied" or "Totally satisfied" with the driver's behaviour than the "Dissatisfied" group. Furthermore, there were proportionally more cyclists and pedestrians who approved behaviour. It was not intention of the study to measure legal compliance with Highway Code but travellers' attitude towards behaviour.

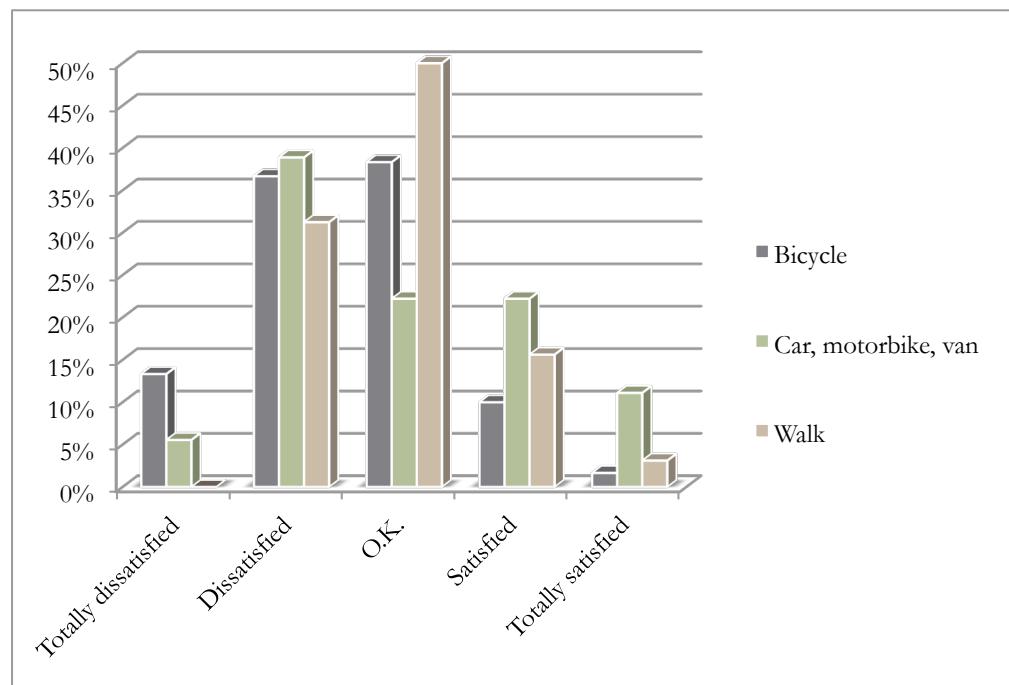


Figure 2 - Overall

Similar approval patterns were recorded in response to the drivers' overtake-maneuvres (Figure 24), stationary positioning (Figure 25), driving positioning (Figure 26) and choice of speed (Figure 27). Clearly the video represents 'the norm' of driving in London: fast acceleration from one red light to the next one with little distancing from cyclists while overtaking. Despite driving through the busy Borough of Camden, the motorist rushes to the next red light and keeps close to the bus in front, giving little consideration to the cyclist that could potentially swerve any moment. The respondents were deliberately shown the conditions of two red light sequences to understand the context that accelerated speeds do not result in the motorist's being faster than cyclist, who reaches our observed vehicle when stationary. During the observed one minute, the driver failed in giving adequate overtaking distance to cyclists twice (Highway Code 162, 163, 212, 213), adapting driving to appropriate type of road (HC 146), being considerate to fellow road user (HC 147; Great Britain, 1991) and in signalling (HC 103) just to mention a few (none of the above HC rules represent Road Traffic Act on their own – see section Legal framework). The gap between registering multiple legal issues and yet accepting them as "O.K." clearly reflects the cultural 'norm' of inadequate road safety enforcement and motorist dominance.

## Cyclist respected as pedestrian?

This study also attempted to assess if vulnerable road users receive the same consideration from motor users. The results show a strong approval for pedestrians to cross traffic lights despite the presence of a red light, but similarly strong *disapproval* for cyclists to do so, even when they show consideration to other users (Figure 3).

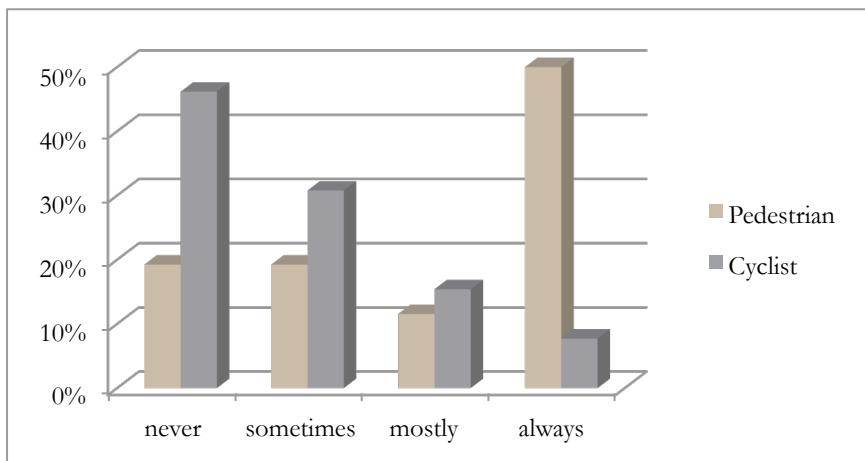


Figure 3 - It's fine if they cross red light if don't disturb anyone.

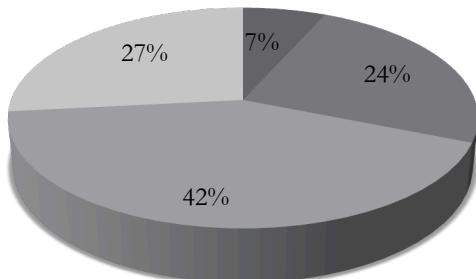
Motorists also admitted being more considerate of pedestrians than cyclists in situations, whether legally required to do so or simply out of courtesy. The responses clearly demonstrate that there is stronger approval of pedestrian presence on the road than cyclist: over 90 per cent of responses claim giving way to pedestrians when the Highway Code demands it, versus 70 per cent in the case of cyclists (Figure 28).

These comparative questions were posed on the same landing page. The answers are not meant to represent an accurate percentage for the UK population, but do highlight a difference in attitude that motorists admit even when away from the steering wheel. Despite cyclists sharing the road continuously with motorists, they are not given the same attention as pedestrians who are provided designated areas for most of their journeys.

Although subject B did not approve pedestrian illegal behaviour, he furiously condemned comparable actions by cyclists. He certainly confirmed Rachel Aldred's findings on cyclists' stigmatisation (Aldred, 2012), strongly suggesting that 90 per cent of cyclists break the Highway Code. "*Kamikazes*", as he referred to the cycling public, disobey rules and are danger to general public and themselves. However, when further scrutinised, subject B did agree that cyclists must obey regulation not for reducing the dangers they impose to other road users, but in order that motorists could anticipate their movements and reduce the risk they are exposed to. In other words, society imposes regulation on cyclists (and pedestrians) in order to reduce the responsibility of motorists and the dangers inflicted by motorists, just as described by John Adams (Adams, 1985) and others (Dean, 1947; Box, 1983).

The same hypotheses were tested from the cyclists' point of view, among whom only a quarter agreed that they are given as much consideration as pedestrians.

## Do you think you are treated as equal partner to a motorist on the road?



- Yes, motorists respect me and give me right of way where the Highway Code dictates.
- I'm given as much right of way as pedestrian (most of the time it's fine)
- No, motorists rarely 'nice' to me, I need to fight my way.
- No, I'm often pushed over and find myself in dangerous situation caused by motorists.

Figure 4 - Cyclists' perception

### Conclusions

This chapter discovered the general lack of motorist consideration on London's roads that reportedly affects three quarters of cyclists. Besides revealing that these traffic offences are rarely penalised, the research also confirms the widely understood caveat of statistical hard data of bicycle accident figures, which might miss as much as 74 per cent of accidents that are not reported (Mills, 1989). There is no available statistical data on the near misses or incidents, which, however, have a significant deterrent effect from taking up cycling (Horton, 2010) and yet these appear, strengthened by the findings, to be a daily occurrence on London's roads. Inconsiderate driving has become standard behaviour discouraged by a law that is problematic and impractical to apply.

It was also revealed that while there is strong acceptance for pedestrian presence, cyclists, who do not enjoy comparable legal and infrastructural protection, are rejected by default.

## Policy approval?

A short section on cycling potential confirmed that the main obstacle to start cycling is the fear of motorists (according to 45 per cent of pedestrians) and distance (53 per cent of motorists, of whom 38 per cent would consider an e-bike if it was affordable), which reflects the literature.

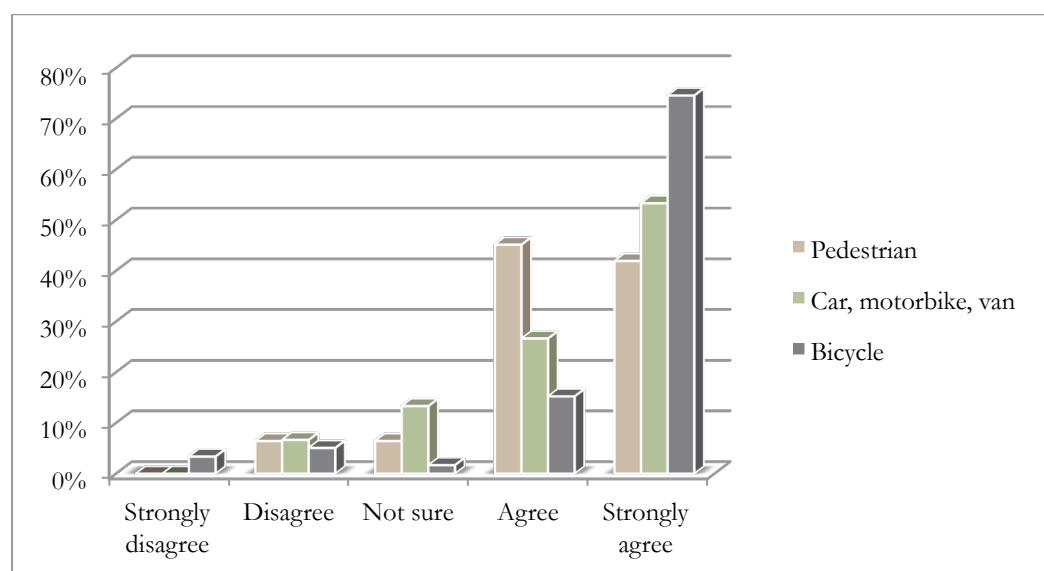


Figure 5 - Authorities building cycle infrastructure

Over 80 per cent of users of all transport modes agree or strongly agree with cycle infrastructure provision investment (Figure 5). However the approval drops when it was suggested that public investment is financed from respondents' own contributions (Figure 29). It would be advisable to conduct a further study on public approval of overall infrastructure development, measuring support for each transport mode, however this research could not accommodate this aspect. It is more important to this research to understand whether the survey participants expressed and are perpetuating the road entitlement misperception.

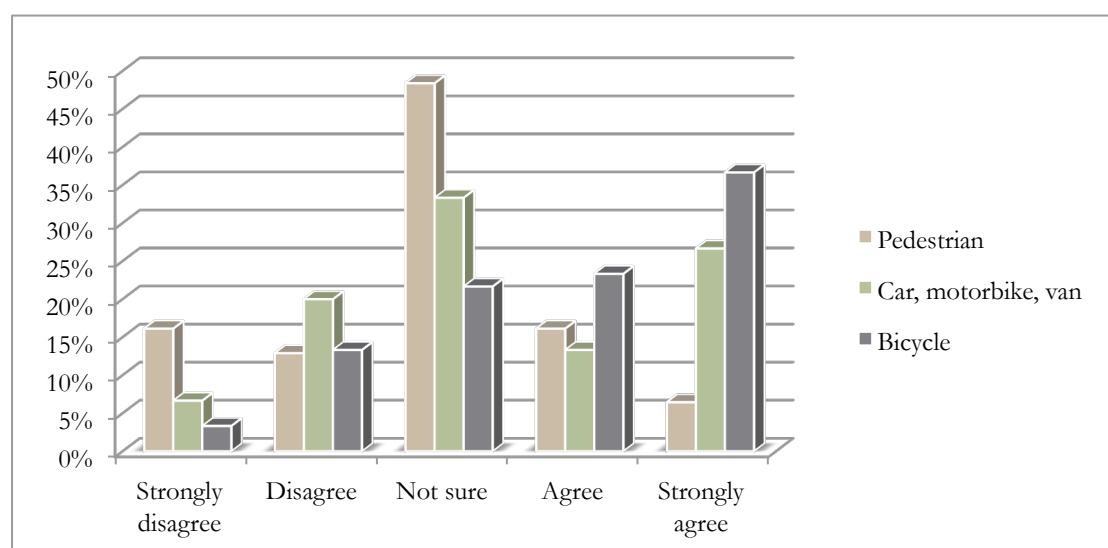


Figure 6 - cyclist are currently contributing to road building

Although survey participants confirmed only the opaque conditions of road financing, the qualitative research strengthened the suspicion that motorists justify their behaviour with entitlement to road usage through their contribution of ‘Road tax’. While survey participants’ responses suggest that there is an uncertainty as to who finances road infrastructure (Figure 6), Subject B states that “[authorities] should pay a little more attention to motorists because motorists pay for the road, cyclists don’t pay for the road”.

Subject A acknowledges that it is a huge debate, but adds that “*there are some external costs but motoring pays it’s [sic] way and probably subsidises general spending*”. This view reflects other motorist groups’ perspectives, like the Road User’s Alliance who argue that the central government allocated only £7.7 billion on budget for roads when collected £58 billion in taxes in 2011-2012 (Road Users’ Alliance, 2012). Although the scope of this study leaves no room to analyse the true cost of motoring, to be accounted for the economic loss from damage to lives, health, environment and property, understanding that motoring groups also find the cost of motoring unjust, opening the debate and clarifying expenditure would benefit all transport mode users in the country.

This “Road Tax” confusion could also account for the disagreement as to where cycling should occur: not on pavement (Figure 31), but not distinctively on road either (Figure 30) according to respondents. The only remaining option is on cycle lanes, which, as we have seen above, enjoys wide approval. Without affecting space allocation for other modes, the research was keen to measure public approval of parking pricing as a way of allocating cycle lanes. Indeed the idea is widely supported by cycle campaigners (Subject D) and having seen the inefficient public space pricing at prime locations from the literature, one would have no doubt about the logic, however the public opinion is less homogenous (Figure 33). While the initial beneficiaries of such provision would be current cyclists, less than 50 per cent agree confidently with increasing parking fees.

## Conclusions

This section of the chapter highlighted the broad misunderstanding predominating around the Vehicle Excise Duty. While the majority of the community approves of cycle infrastructure delivery, there seem to be an underlying confusion as to who actually subsidises infrastructure development. Having shown in the previous section that there is a latent sense of road entitlement favouring motorists, coupled with arguments justified by professional drivers and motoring groups, one can conclude that such misunderstanding leads to domineering attitude from drivers. Relying on DfT’s finding that attitude has an impact on driver behaviour (Basford, Reid, Lester, Thomson, & Tolmie, 2002), we may conclude that the DfT failing to clarify purpose of tax collection shall be deemed partially liable for road accidents involving vulnerable road users.

## Infrastructure

This chapter discusses the potential progress that could be achieved by implementing either a segregated or a shared environment, with a quick look into a case in the City of London.

### Sharing is caring

The final section of the research focused on comparing likelihood of cycling uptake in segregated environments compared to shared ones. In order to help respondents imagine the situation, they were presented with a picture of these types of road in London (Picture 1 - Traffic).



Picture 1 – Traffic

Once questions were answered regarding preferences on segregated roads, respondents were asked to imagine the entire area of London as a shared space area with the following attributes:

- 20 mph default speed limit
- 10 mph in residential zones
- cycle priority signs (Picture 2)
- all roads are shrunk to single carriageway (plus bus lane where space allows)
- no traffic lights (slow moving traffic negotiates right of way)
- cycle only through roads (middle of carriageway bollards ensure no access by wider vehicles)
- speed limits enforced (all vehicles carry trackers or average speed measures)
- legal priority for vulnerable users.



Picture 2 - Cycle-street signs (Trobken, 2011)

The reception was very mixed. Understandably, drivers, particularly professional drivers, were the most sceptical of this scheme, whereas the non-driving public, i.e. the majority of London residents (Transport for London, 2011), were optimistic (Figure 7). Such scepticism was also articulated by Subject B, who simply called it: “*chaos*”. While pedestrians and cyclists could negotiate their way, motorists would cause a “*gridlock*” feared by Subject B, because “*everyone wants to get there first*” and in general, “*people don’t respect each other*”.

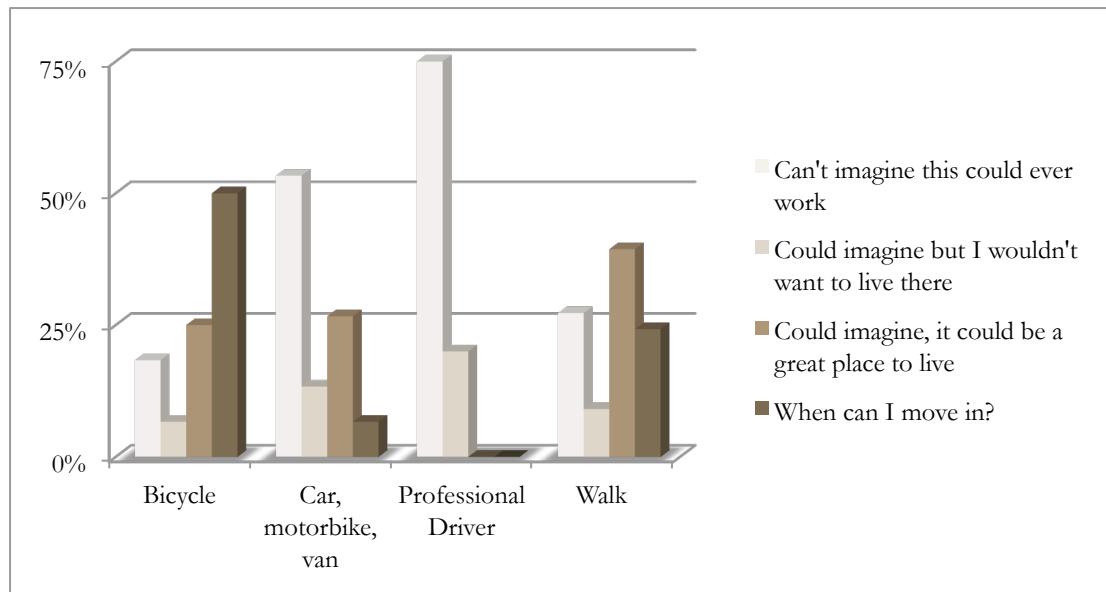


Figure 7 - How would you feel about London as described above?

The results from the comparison clearly suggest that segregated cycle lanes are not necessary in low motorised traffic environment (34 vs. Figure 35) as cycling attractiveness highly increases with lower speeds, confirming McClintock’s review (McClintock, The right balance in cycling policy, 1992). Even in medium motorised traffic roads slow moving traffic attracted more cyclists to reply “Very likely” than to the segregated scenario (Figure 36 vs. Figure 37). Even in the heavy traffic scenario, the

“Very likely” and “Likely” responses dropped only by 7 per cent among cyclists and pedestrians (90 to 83 and 70 to 63 per cent respectively; Figure 38 and Figure 39).

Clearly the most sceptical segment of the scheme are motorists, who systematically rejected the idea of shared space and increased the number of “Still would not cycle” responses relative to segregation. Undoubtedly, the current cycling respondents would have a more experienced view on relative cycle safety compared to drivers,. It certainly confirms that drivers have little trust in fellow drivers’ skills (Department for Transport, 2010) and in general see traffic more dangerously than the non-driving public. Such scepticism could also be explained by the general social fragmentation of drivers that has been broadly covered previously by John Adams (Adams, 2000), Peter Newman, Jeffrey Kenworthy (Newman & Kenworthy, 1999) and others (Mosey, 2000; Holtz Kay, 1997). Consequently, one might note that attractiveness of segregated cycle infrastructure is highest among current motorists whose alternative to cycling would be to use an already available vehicle.

Another explanation was received from Subject D who suggests that majority of current cyclists are young capable males who navigate confidently among traffic (Transport for London, 2012). Indeed, over 60 per cent of respondents fell into this age group, however there was no gender bias within it. Although the remaining population is statistically not significant it might be interesting to compare the willingness to cycle on medium traffic road with segregation to a road with soft infrastructure in a shared environment (Figure 8 vs. Figure 9). If we can trust the tendency on such small population then we may conclude that there is no substantial change in the pattern i.e. that current cyclists distinctively and pedestrians moderately prefer sharing space, while current drivers believe only segregation will encourage them to cycle.

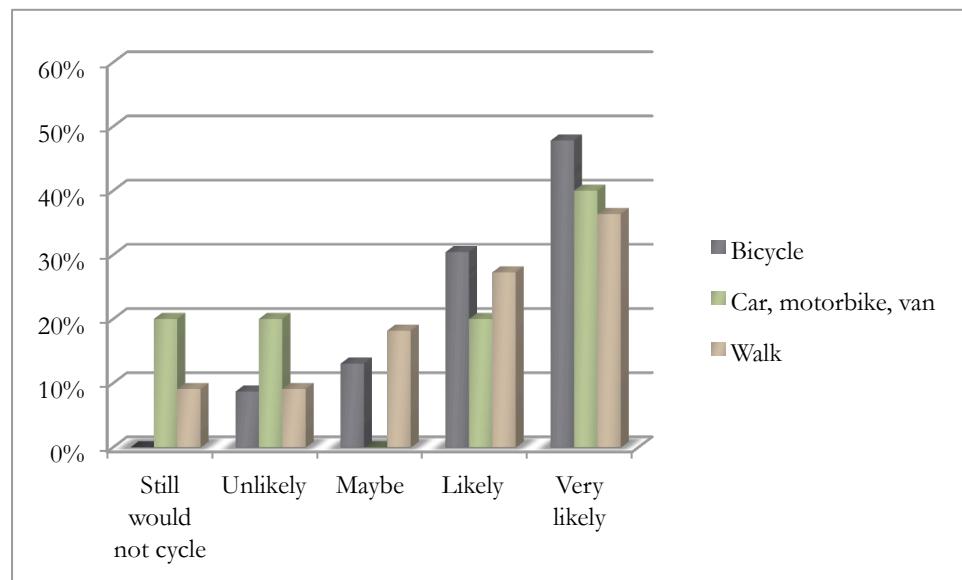


Figure 8 - Medium traffic road segregated excluding age group 25-44

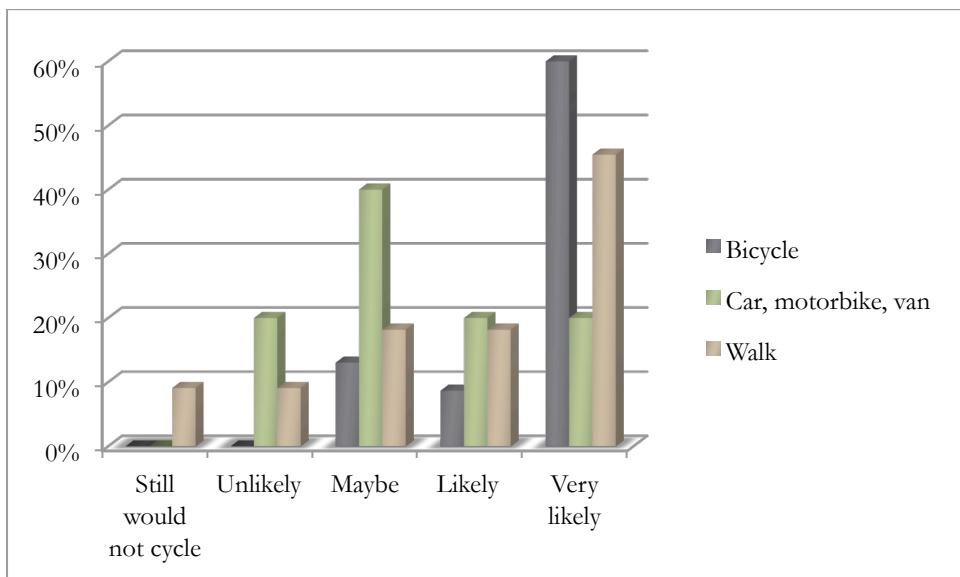


Figure 9 - Medium traffic road - shared space – excluding age group 25-44

The demographic preference and policy focus will certainly need more research, with regards to targeting potential cycling groups, however given that 40 per cent of London residents walk in their commute, it might be easier to first convince public transport users to switch before reluctant drivers.

Nevertheless, segregation certainly has a place in London to accommodate minors and elderly users, as emphasised by Subject D and derived from the survey, too.

### Minors

Understandably willingness to expose minors to the dangers of traffic significantly drops with increased volume of vehicles. While around 80 per cent of cycling parents might feel comfortable on medium motor traffic shared roads (Figure 42 and Figure 43), it drops to around 40 per cent at heavy traffic volume (Figure 44 and Figure 45). The practice is comparable with pedestrians and drivers as well, however the drop is more significant and from a lower level (60/30 and 40/20 per cent). Although the confidence level shows a significant change in the likelihood of cycling using segregated versus shared space in medium and heavy motor traffic roads, the overall attitude towards these infrastructure solutions shows little change. While the number of “Very likely” responses decreased, the aggregate number of “Likely” and “Very likely” marginally increased. Similarly, the share of rejecting answers, i.e. “Unlikely” and “Very unlikely” answers also slightly decreased for the hypothetical shared space London.

The implementation of the shared scheme is of course, rather challenging. Even despite the benefits revealed above, respondents admitted that there are (extreme) scenarios for example driving at 3 am, when they would not comply with the a 10 mph scheme (Figure 46).

### City of London – an example to follow?

The City of London’s strategy reflects a mixed approach. The ‘Corporation’, as explained by Subject C has already limited the amount of parking available, accounted for mainly by the non-residential character of the borough. Lack of underutilised space allows little

room to implement cycle infrastructure, hence the focus is on pedestrian access and traffic calming.

Subject C explains that the streetscape engineered in the 1960s often invites drivers to speed at 40mph instead of what safety would suggest in dense urban environments, hence cycle segregation certainly has an appeal on wider roads in the City of London.

However he admits that there is a strong drawback in designing them, as they often limit capacity and cause congestion in rush hour, such as the case on Tavistock Road in the Borough of Camden, he remarks. Consequently, the City is trying to change streetscapes that would slow down traffic and adapt to needs throughout the day, and that could therefore also accommodate increased cycling and pedestrian demand in the future.

For the last decade or so, the City saw a rapidly increasing number of commuter cyclists but little cycling during the day. The majority of these commuters rush in on road bikes and change at work into their formal clothing that discourages them from cycling during the day. The Barclay's Bike scheme offers a solution for these potential cyclists during the day but much of these trips are still made by taxis.

Although taxis and chauffeured travel account only for 5 per cent of daily commutes, they make up a significant volume of rest of the day's trips. Beyond safety and congestion concerns, taxis are also the highest single polluters per passenger due to its heavy build and practice of cruising around for business and contribute to 50 per cent of all emission particulates in the City of London. While the borough is keen on implementing a local low emission zone that would apply to taxis, too, there are political challenges involved. Taxis are seen as lubricants of business in the City: the convenience of hailing a cab just outside the entrance of the office appeals to business personnel so much that the City would not risk losing support from the financial services industry who depend too much on taxis.

Instead the focus is set on streetscape design: shrinking thoroughfare and widening pavements. Moreover, on 20 July 2014, the Corporation introduced an overall 20 mph speed limit to the entire area of the borough, pioneering a revolution in London. Although some boroughs have already implemented such schemes, the City is the first to implement one instantly across the entire borough, with the exception of just one road, on its Southern boundary, which is managed by TfL.

Scepticism of the scheme prevails however, as confirmed by Subject B, who claims, the City of London's scheme will not work as no one respects the 20 mph limit because "*20 is too slow*". Lack of enforcement and little respect of the law therefore seem to triumph further, proving that local boroughs' isolated actions' have little impact on general behaviour.

## Conclusions

Inconsiderate driving is an everyday occurrence, with the cycling public proving to be its greatest victims. Furthermore, it is so often practised that majority of travellers confirm it being 'the norm'. This chapter highlighted that cyclists are given less attention and respect than pedestrians who enjoy strong legal and infrastructural protection. Much of this inconsiderate behaviour can directly be linked to drivers' presupposed entitlement to road usage that is promoted by motorist groups and believed by professional drivers.

It was also emphasised that a broad segment of travellers, particularly non-drivers would take up cycling if legal protection and enforcement supported their choice of mode. Unfortunately, the attempts to provide legal support at local level, as seen in the case of the City of London, provide little reason for enthusiasm; however, these are at a very early stage to judge. Although the initiative is positive, fragmented application of the lower speed limit results in inconsistency and bears no real power to change the predominant attitude toward vulnerable road users.

## 5. Conclusions

### Discussion

This research started by asking if the social environment assists the current upsurge in cycling in London. It is clear now that the opposite is the case: motorists hinder cycle use. Emerging from the study is the belief that cycling is an unpleasant experience in London with constant fears of danger. The study found that inconsiderate driving is the norm in London; with cyclists considered rather a nuisance than fellow travellers. They are exposed to needless dangers from overtaking manoeuvres even when there are obvious obstacles ahead. Such behaviour certainly suggests that motorists have no consciousness of their behaviour, they simply “*want to get there first*”, as my cab driver interviewee put it, even if ‘there’ only means to the next red light. Interestingly, not only did motorists confirm such behaviour, but cyclists and pedestrians also tended to approve avoidable risk exposure as “O.K.”. Although the legal framework should prevent these instances, it seems to be so deeply embedded to the culture that most do not even notice it, and, if they do, that it is widely accepted.

A question regarding differential identities for pedestrians and cyclists was also posed. It was remarkable to find that pedestrians enjoy a much higher level of respect than cyclists. While walkers enjoy an allocated space and only a rare exposure to risk from motorists, there is a strong approval of their “illegal” behaviour, such as “jumping a red light”, as compared to cyclists’. It was more likely for motorists to reply that they watch out more for pedestrians than for cyclists, despite more exposure to cyclists during their route. Beyond watching out, motorists are also more likely to give way to pedestrians than cyclists, so overall we may conclude that there is a rational reason why around 70 per cent of cyclists report that they ‘*need to fight their way*’ or ‘*find [themselves] in dangerous situations caused by motorists*’.

Research focusing on professional drivers attitudes and behaviours aligned with cyclists’ reports of their experience of it. Cab drivers even justified dangerous conduct with the belief that paying “*road tax*” gave them priority on the road. Motoring groups might encourage drivers to exercise courtesy and attention to cyclists; but instead argue likewise: that taxes levied to motorists cover more than what road maintenance expense would suggest. There was no evidence recovered that would suggest that motorists’ believe their contribution is allocated for repercussions of air pollution, that the charging scheme would imply.

The final research question regarded the concept of shared space versus segregation. Despite cycle campaigners’ focus on segregated cycle lanes, the survey shows that cyclists have stronger support for a shared space with no traffic lights and even limited Highway Code if the fundamental approach entails slow speeds and responsibility for vulnerable road users. The concept sounds simple: the more vulnerable the road user the higher it is on the road priority pyramid. The scheme showed a more confident support from cyclists than pedestrians and motorists. We may infer that the current cycling public already has lower risk averse behaviour than rest of the public, that the rest of travellers might demonise cycling, or both. Either way, there is also strong approval for cycle infrastructure development particularly on heavy traffic roads, which seems pivotal to making cycling appeal to the currently not cycling public.

## Conclusions

If the Mayor of London is truly determined to improve cycling experience, he will need to achieve more than painting a few lines on roads. Introducing a default 20 mph speed limit overall London would be a highly desirable first step. The second step, probably more easily achievable by DfT and other government organisations, is to clarify road expenditure and hypothecate tax collection to specific needs. It is also desirable to find appropriate terminology for “vehicle excise duty”, which currently acts as a hotbed for transport political debates generated by inconsistency in legal wording and basis of charge calculation.

A vital shift in the Road Traffic Act must also be delivered to introduce presumed liability. As discussed in literature, not only would the regulation raise responsibility and awareness, resulting in fewer “accidents”, but also shift the cost of prosecution from state to less vulnerable road user.

However, until all traffic speeds are reduced and vulnerable road users enjoy legal priority, the Mayor of London and the boroughs will need to provide cycle infrastructure and literally make people cycle if they are to attract more cyclists. Removing parked cars from public roads and allocating cycle lanes cannot be considered as “sticks”, but “carrots”. There is both an individual and social benefit in not wasting public space with parking, which is effectively an act of underutilising private assets on public property. Policy should encourage either reducing the waste or having the individual compensate for lost public space, as the example of Royal Borough of Kensington and Chelsea highlights above, where private to public space pricing is thousand fold (£2000 vs. £2 p.a. per square foot).

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## Appendix 1

### Survey content

#### **Do you live in London? \*Required**

- Yes, mostly frequent Inner London
- Yes, mostly frequent Outer London
- Covering usually both
- Other:

#### **Where did you hear about this survey? optional**

- Social media
- Email
- Leaflet
- Friend
- Personal approach
- Other:

#### **Your gender? optional**

- Male
- Female

#### **Your age group? optional**

- 24 or below
- 25-34
- 35-44
- 45-54
- 55-

#### **Video 1**

11 second video. How would you act driving this car?



**How likely is it that you would make the following choices?**

**\*Required**

Imagine you are driving the car that has the mounted camera.

Very  
unlikely      Unlikely      Maybe      Likely      Very  
likely

Keep pace

Accelerate, overtake cyclist  
before conflict

Slow down, keep well behind  
cyclist

## Video 2

Watch the next 7 second video, please, and answer the questions.



**How likely is it that you would make the following choices?**

**\*Required**

Imagine you are driving the car that has the mounted camera.

Very unlikely      Unlikely      Maybe      Likely      Very likely

Keep pace, reduce speed  
just before reaching van  
(drive beside cyclists)

Slow down, keep well  
behind cyclist

## **Mode**

**What mode(s) of transport do you use in your everyday commute? \*Required**

- Walk (i.e. walk by choice, where alternative modes also available but conscious decision taken to rather walk for any reason)
- Cycle
- Public transport
- Private motor vehicle (car, motorbike)
- Taxi
- Other:

**If you had to choose one mode of transport according to your reply above, would you say your primary mode of transport is:**

**\*Required**

- Walk (Pedestrian, also passenger in public transport, taxi or private car)
- Bicycle
- Car, motorbike, van
- Professional Driver

Questions specific to respondents, whose primary transport mode is cycling

### **When you cycle...**

#### **Do you think you are treated as equal partner to a motorist on the road?**

##### **\*Required**

- Yes, motorists respect me and give me right of way where the Highway Code dictates.
- I'm given as much right of way as pedestrian (most of the time it's fine)
- No, motorists rarely 'nice' to me, I need to fight my way.
- No, I'm often pushed over and find myself in dangerous situation caused by motorists.

#### **How do you see drivers' behaviour to you? \*Required**

never      sometimes      mostly      always

I'm given right of way

I'm overtaken with safe distance

I'm overtaken even if there's obstruction ahead

I'm overtaken by vehicles turning left (left-hook)

I feel looked out for

#### **Do you encounter incidents on your route? \*Required**

Do you get abuse or any issues while cycling from other road users?

- Daily
- Weekly
- Once in a while
- Never

**If you experienced abuse or any incident, did you report to the Police?**

**\*Required**

- Yes, frequently
- Yes, happened few times
- No, it's a waste of time
- Not applicable

Questions specific to respondents, who primarily drive

**When you drive...**

**How do you feel about pedestrians on the road? \*Required**

Remember, it is not a DVLA survey, feel free to be honest.

never      sometimes      mostly      always

I give them right at pelican crossing

I look out for them when turning

I slow down if I see them crossing ahead of me

It's fine if they cross red light if don't disturb anyone.

I observe foot paths for potential jaywalkers.

**How do you feel about cyclists on the road? \*Required**

Strongly disagree      Disagree      Not sure      Agree      Strongly agree

They should cycle somewhere else.

Strongly  
disagree      Disagree      Not  
sure      Agree      Strongly agree

---

I don't mind sharing  
the road with them.

---

**How do you see your behaviour to cyclists? \*Required**

never      sometimes      mostly      always

I give cyclists right of  
way when they are  
entitled to as per the  
Highway Code

I overtake with safe  
distance

I overtake cyclists even  
if there's obstruction  
ahead

I overtake cyclists if I'm  
turning left ahead (left-  
hook)

I look out for them  
when turning left

I slow down if I see  
them crossing ahead of  
me

---

never

sometimes

mostly

always

It's fine if they cross red light if don't disturb anyone.

I encourage cycling with generally being nice to them

**In the last 1 week, how often have you...\*Required**

No  
comparable  
occasion

Never

Seldom

Sometimes

Often

slowed  
down/stopped for  
pedestrian to cross  
where you had  
priority

slowed  
down/stopped for  
cyclist where you had  
priority

overtook cyclists just  
to see him/her pass  
at traffic  
light/congestion.

considered leaving  
more space for cyclist  
on the kerbside when  
stuck in traffic

No comparable occasion      Never      Seldom      Sometimes      Often

left space front of vehicle so that cyclists could safely come out from kerbside.

checked mirror after overtaking cyclists to verify distance

held behind cyclist taking primary (central) position on road

considered not overtaking cyclists because obstacles ahead

had an argument with road user

had an argument with cyclist

been held back by cyclist for more than 30 seconds

## Questions for all respondents

### **What would encourage you to cycle (more)?**

#### **How long is your daily longest journey? Required**

Supposing an A-B-A, A-C-A, or A-B-C-A pattern

- Around 5 miles or less
- Around 10 miles or less
- Over 10 miles
- Not Applicable - Professional Driver



#### **What is your primary reason for NOT cycling (more)? \*Required**

- Fear of motorists
- Distance/Topography
- Health
- Weather
- Carrying goods
- Comfort
- N/A Professional Driver
- Other:



Additional question for respondents whose main reason for not cycling is distance/topography

### e-Bike

**Do you think your distance/topography issue would be solved by an e-bike?**  
**\*Required**

- Yes, I am considering investing in an e-bike
- I would purchase an e-bike if it was affordable/subsidised
- No, I would still not cycle, still too far / too hilly

## Questions for all respondents

### General I

#### Do you agree with following?\*Required

Strongly  
disagree      Disagree      Not  
sure      Agree      Strongly  
agree

authorities building more cycle  
infrastructure?

your taxes used for cycle  
infrastructure

cyclist are currently contributing to  
road building

Cyclists should primarily ride on  
road

Cyclists should primarily ride on  
pavement

Cyclists slow down traffic

Cyclists should seek other mode of  
transport

There is efficient allocation of  
public space in London with  
regards to space for traffic (either  
mode) and vehicle (either mode)  
parking.

Strongly  
disagree      Disagree      Not  
sure      Agree      Strongly  
agree

I would encourage higher parking charges to compensate for lost public space.

### Last video

This video is a bit longer (32 seconds) but you're getting there, you're nearly in the finish!



**On a scale of 1-5 how satisfied are you with the driver's actions? \*Required**

Totally dissatisfied      Dissatisfied      O.K.      Satisfied      Totally satisfied

Overtake maneuvers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stationary positioning	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Driving positioning	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Choice of speed	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Overall	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

**Extra care?**

**Do you think pedestrians and cyclists should be treated with extra care?**

Strongly  
disagree      Disagree      Not  
sure      Agree      Strongly  
agree

If pedestrian crosses red light, drivers are still responsible for his safety.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
--	----------------------------------	-----------------------	-----------------------	-----------------------	----------------------------------

If cyclist rides in one way street against traffic flow, drivers are still responsible for his safety.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
--	----------------------------------	-----------------------	-----------------------	-----------------------	----------------------------------

## Segregated cycle infrastructure

Previous research suggests that the main obstacle for NOT cycling more regularly and sending minors to school by bicycle is the reasonable fear from motor traffic. \*Required

Disregarding exceptional snow storms, very long distances, etc, in general, would you agree with this statement?

- Yes
- No
- Other:

How likely that you would cycle (more) if there was segregated cycle lane on the following type of roads?\*Required

Still would not cycle      Very unlikely      Unlikely      Maybe      Likely      Very likely

Low traffic roads	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-------------------	-----------------------	----------------------------------	-----------------------	-----------------------	-----------------------	-----------------------

Medium traffic roads	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
----------------------	-----------------------	----------------------------------	-----------------------	-----------------------	-----------------------	-----------------------

Heavy traffic roads	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
---------------------	-----------------------	----------------------------------	-----------------------	-----------------------	-----------------------	-----------------------



Low traffic

Medium traffic

Heavy traffic

How likely is it that you would cycle with children if there was a segregated cycle lane on the following types of road? \*Required



### Soft infrastructure - shared space

Imagine London differently:

- 20 mph default speed limit \*
- 10 mph in residential zones \*
- signs, (as below) declaring cyclist priority
- all roads are shrunk to single carriageway (plus bus lane where space allows)
- no traffic lights! (slow moving traffic negotiates right of way)
- cycle only through roads (middle of carriageway bollards ensure no access by wider vehicles)
- speed limits enforced (all vehicles carry trackers or average speed measures)
- legal priority for vulnerable users \* current average traffic speed in London 20 mph (10mph in Central London)



**How would you feel about London as described above? \*Required**

- Can't imagine this could ever work
- Could imagine but I wouldn't want to live there
- Could imagine, it could be a great place to live
- When can I move in?

**How likely is it that you would be comfortable cycling on the roads in this hypothetical London? \*Required**(slower traffic, more responsible drivers)

Still would not cycle      Very unlikely      Unlikely      Maybe      Likely      Very likely

Low traffic roads	<input type="radio"/>					
-------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Medium traffic roads	<input checked="" type="radio"/>	<input type="radio"/>				
----------------------	----------------------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Heavy traffic roads	<input type="radio"/>					
---------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------



Low traffic

Medium traffic

Heavy traffic

**How likely is it that you would be comfortable cycling as above with children? \*Required**(slower traffic, more responsible drivers)

Still would not cycle      Very unlikely      Unlikely      Maybe      Likely      Very likely

Low traffic roads	<input type="radio"/>					
-------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Medium traffic roads	<input type="radio"/>					
----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

Heavy traffic roads	<input type="radio"/>					
---------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

### **Would you agree with such traffic calming measure?**

If more of us cycle, more space will be left for those who have no alternative modes of transport.

Strongly disagree      Disagree      Not sure      Agree      Strongly agree

I would comply with the 10 mph speed limit even if in a rush at 3 am.	<input type="radio"/>				
---	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I would not overtake cyclist unless safe and reasonable (e.g. no traffic light in sight) to do so.	<input type="radio"/>				
--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I would give right and be considerate to vulnerable road users even if the Highway Code would suggest else.	<input type="radio"/>				
---	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

I would pay extra attention to minors.	<input type="radio"/>				
--	-----------------------	-----------------------	-----------------------	-----------------------	-----------------------

## Appendix 2

### Survey responses

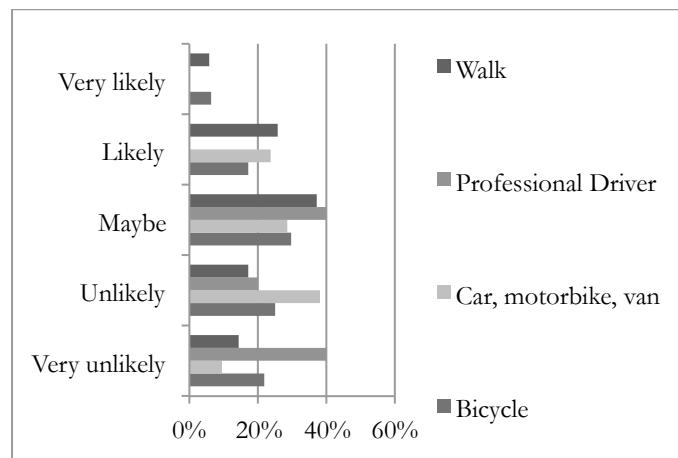


Figure 10 – Video 1- Keep pace

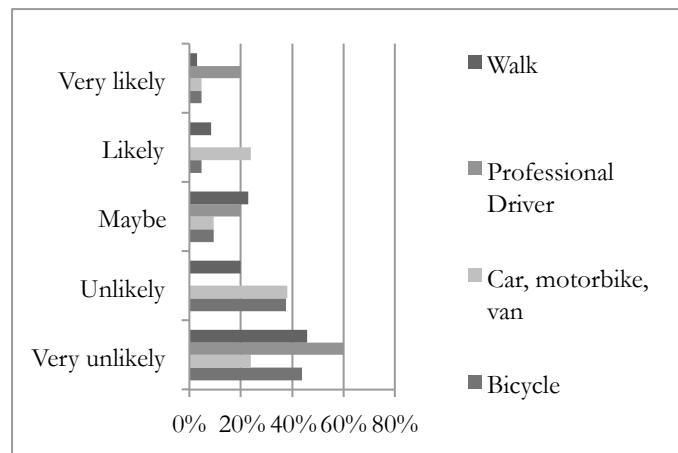


Figure 11 – Video 1- Accelerate, overtake cyclists before conflict

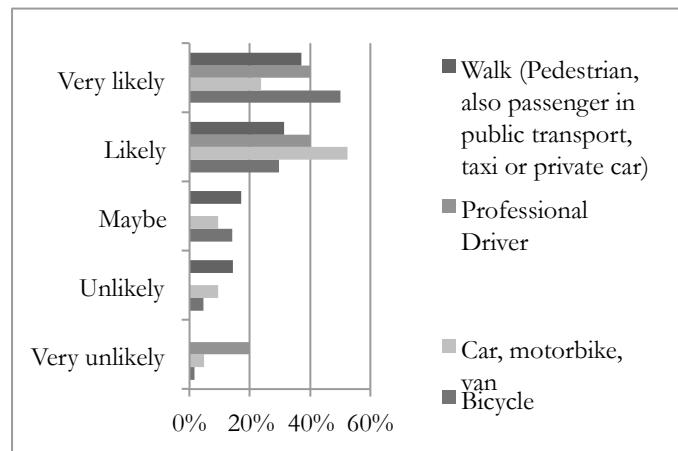


Figure 12 – Video 1 - Slow down, keep well behind cyclists

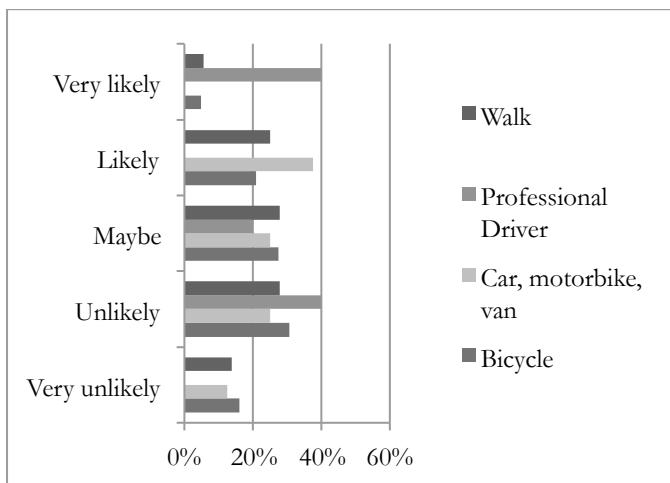


Figure 13 - Video 2 - Keep pace, reduce speed just before reaching van (drive beside cyclists)

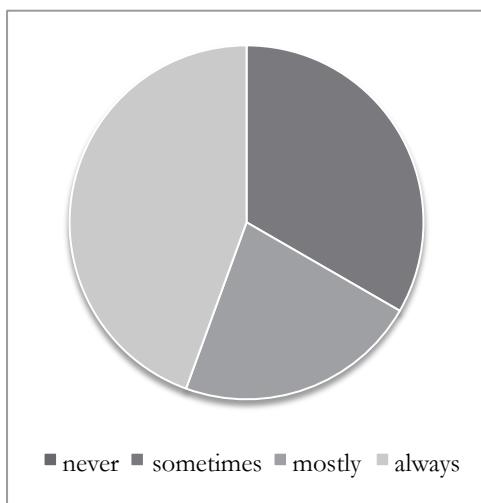


Figure 14 - I give cyclists right of way when they are entitled to as per the Highway Code

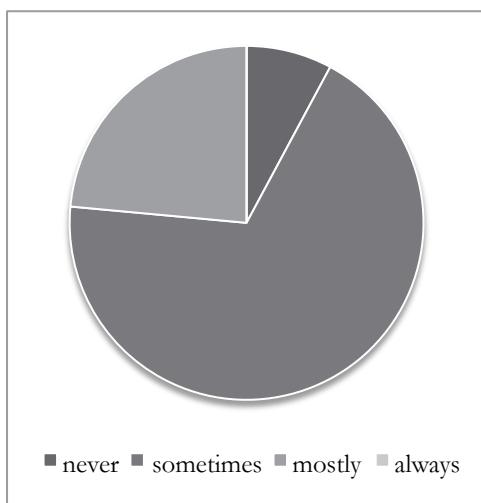


Figure 15 - I'm given right of way

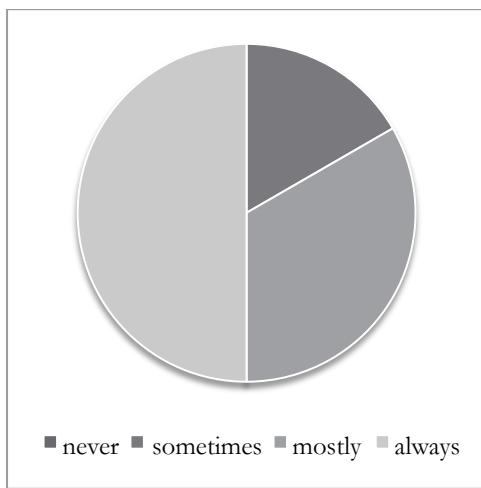


Figure 16 - I overtake with safe distance

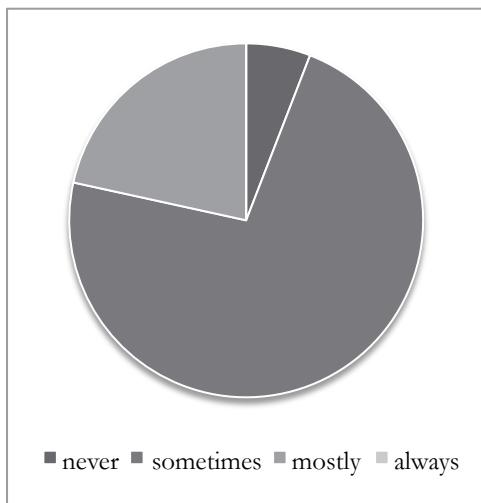


Figure 17 – I'm overtaken with safe distance

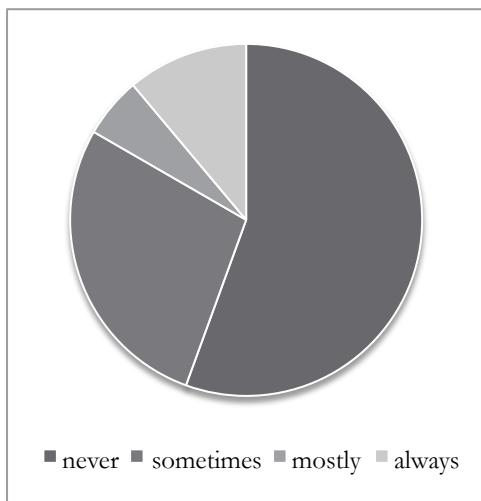


Figure 18 - I overtake cyclists even if there's obstruction ahead

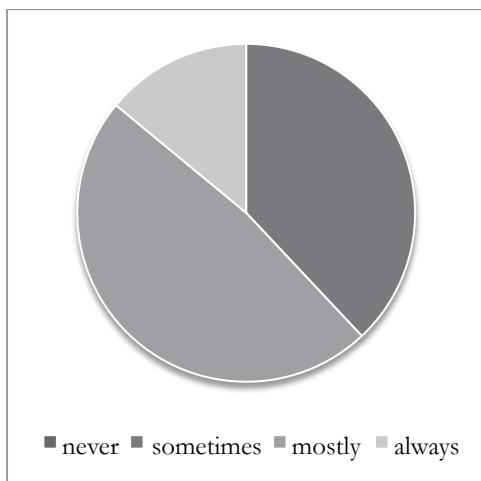


Figure 19 - I'm overtaken even if there's obstruction ahead

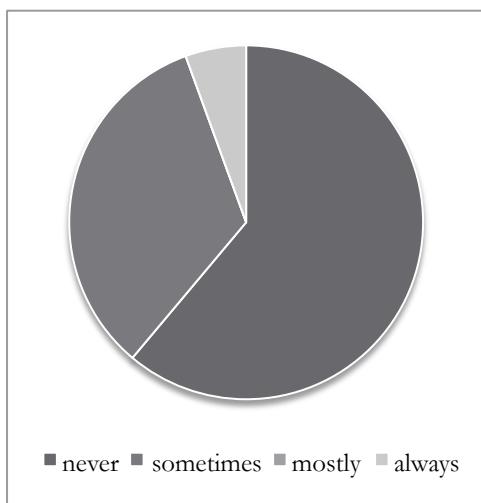


Figure 20 - I overtake cyclists if I'm turning left ahead (left-hook)

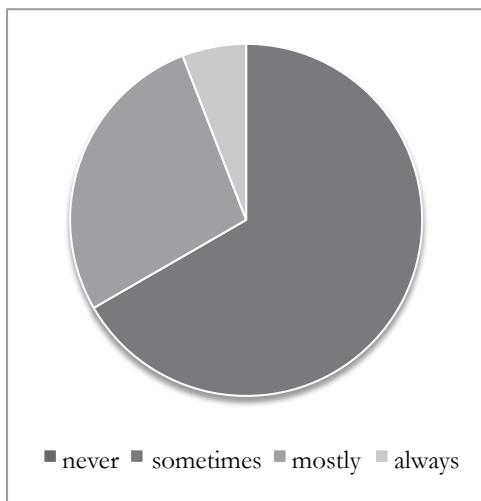


Figure 21 - I'm overtaken by vehicles turning left (left-hook)

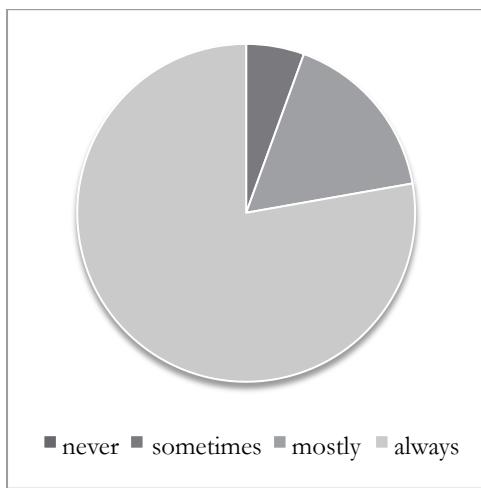


Figure 22 - I look out for them when turning left

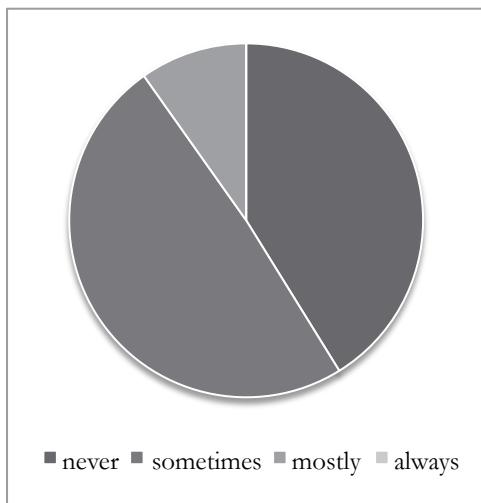


Figure 23 - I feel looked out for

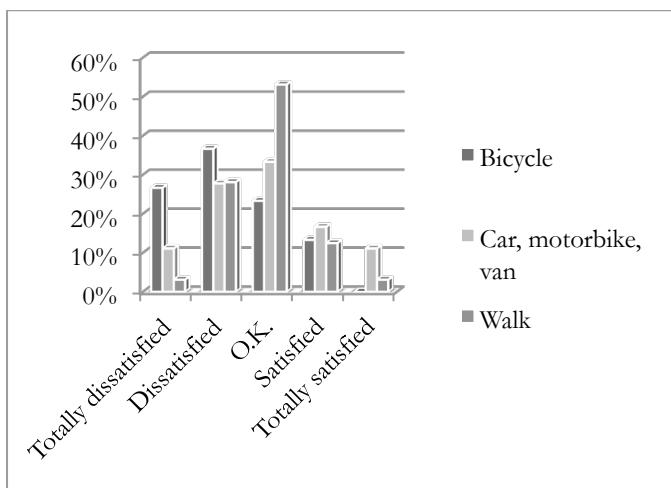


Figure 24 - Video3 - Overtake manoeuvres

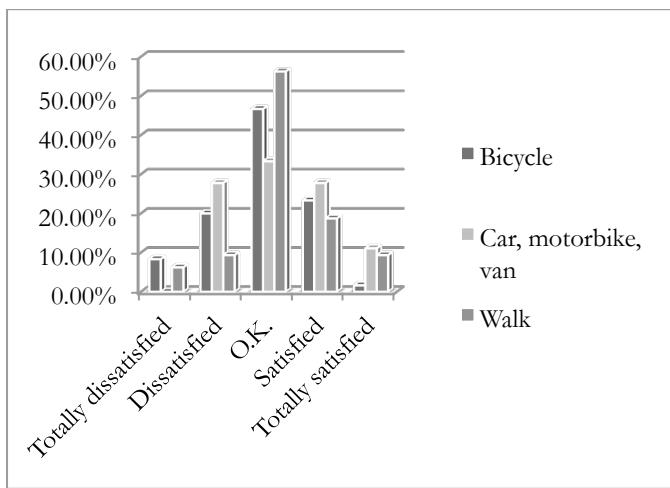


Figure 25 - Video3 - Stationary positioning

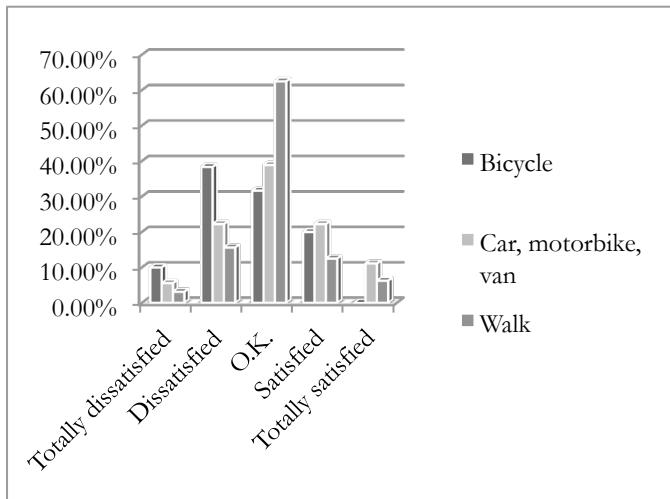


Figure 26 - Video3 - Driving positioning

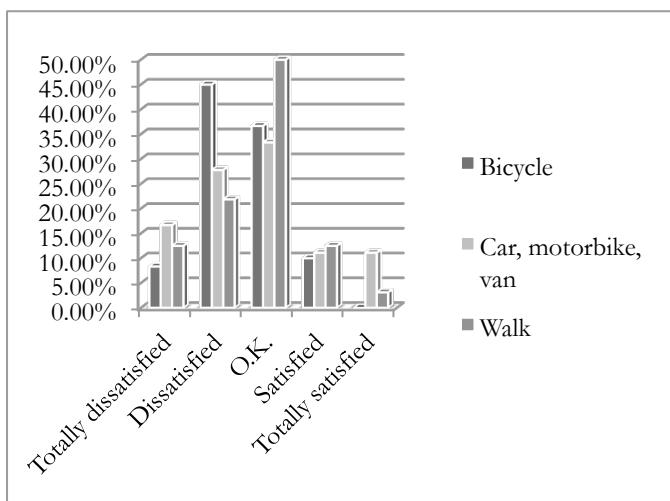


Figure 27 – Video3 - Choice of speed

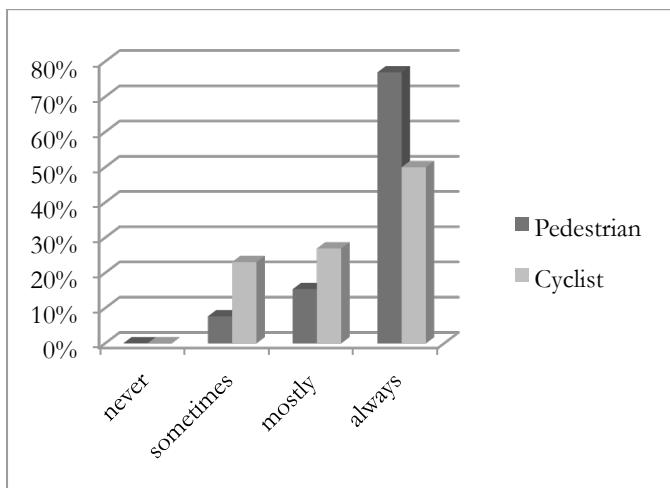


Figure 28 - I give them right when Highway Code requires me to do so.

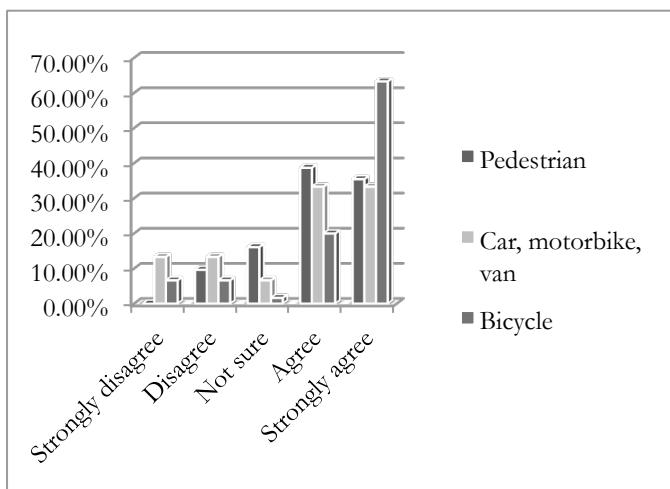


Figure 29 - Your taxes being used for cycle infrastructure development.

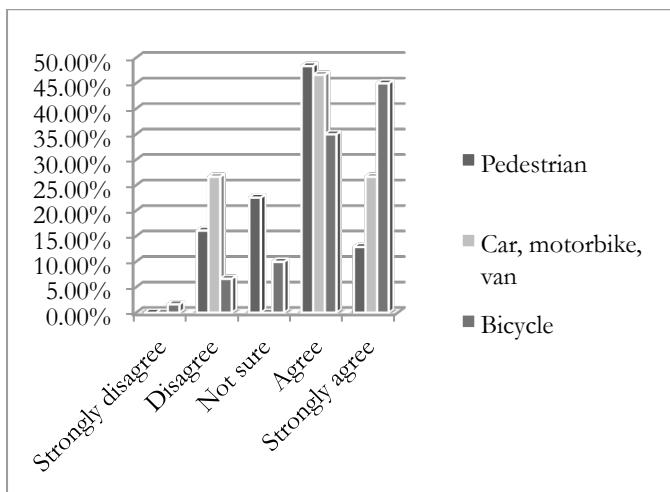


Figure 30 - Cyclists should primarily cycle on road

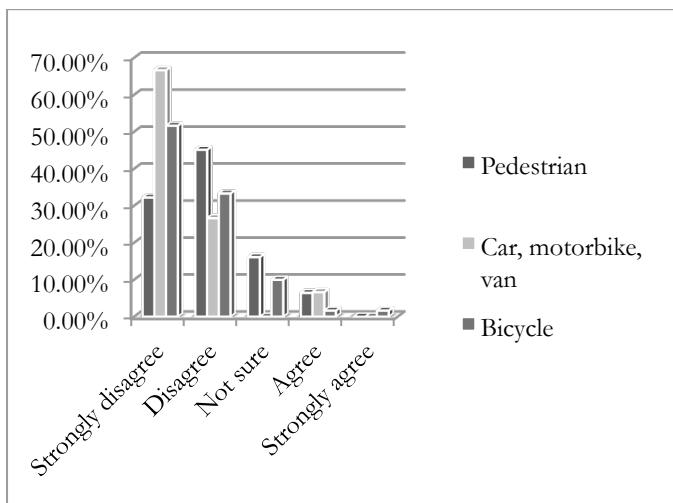


Figure 31 - Cyclists should primarily ride on pavement

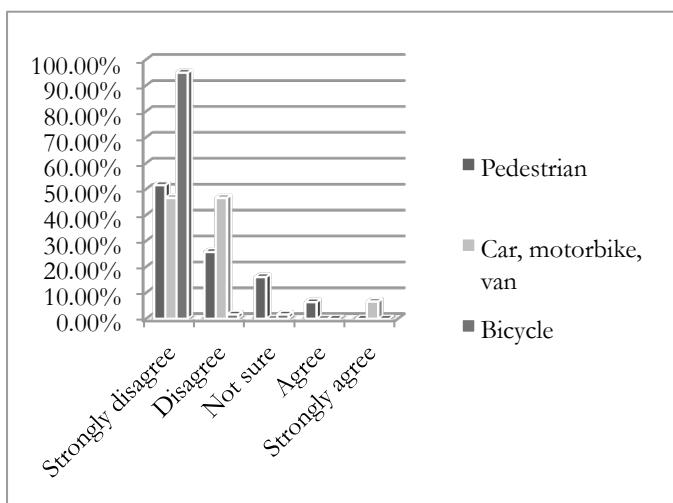


Figure 32 - Cyclists should find other mode of transport

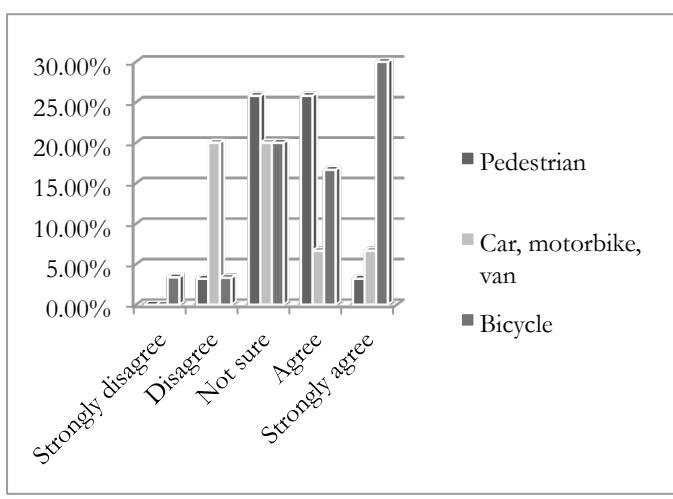


Figure 33 - I would encourage higher parking charges to compensate for lost public space

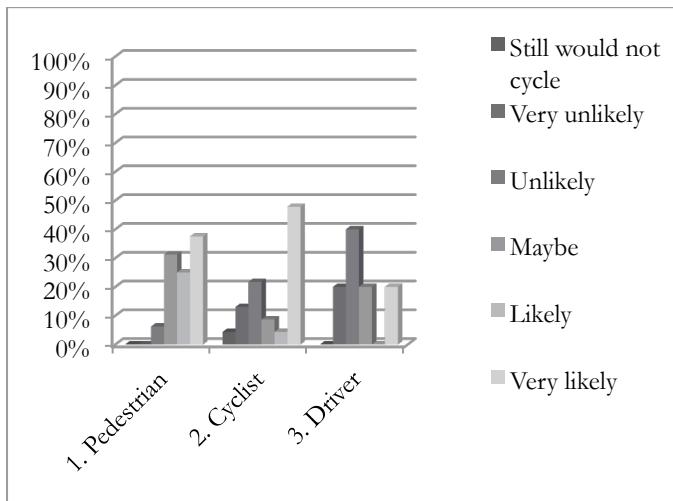


Figure 34 - Low traffic segregated

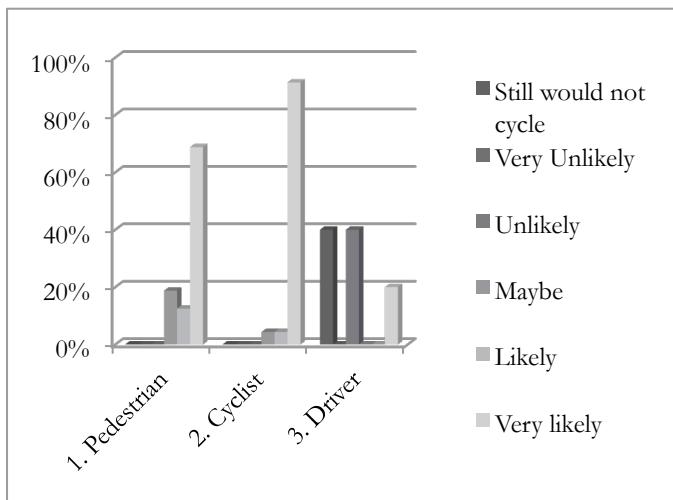


Figure 35 - Low traffic shared

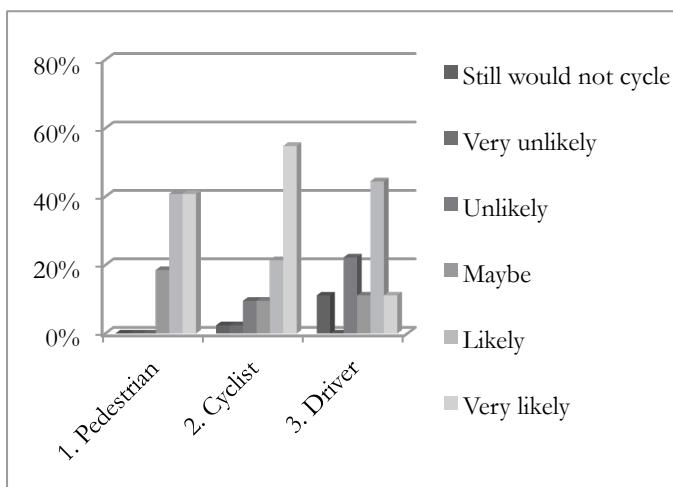


Figure 36 - Medium traffic segregated

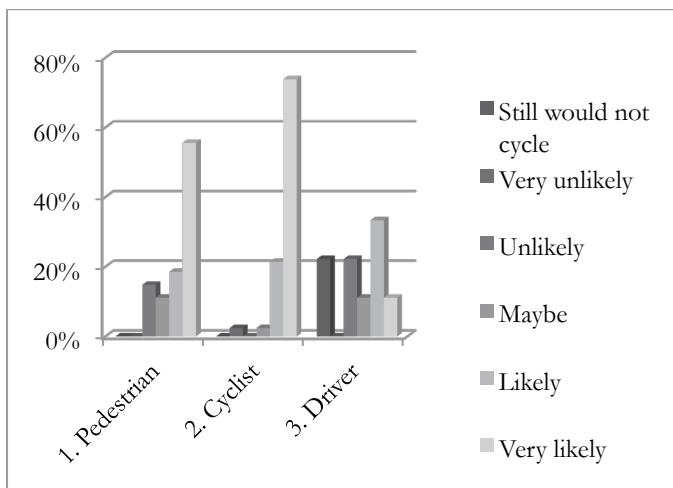


Figure 37 - Medium traffic shared

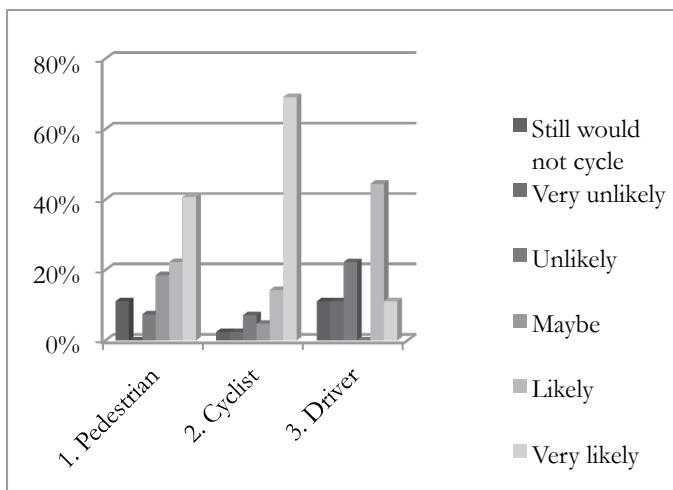


Figure 38 - Heavy traffic segregated

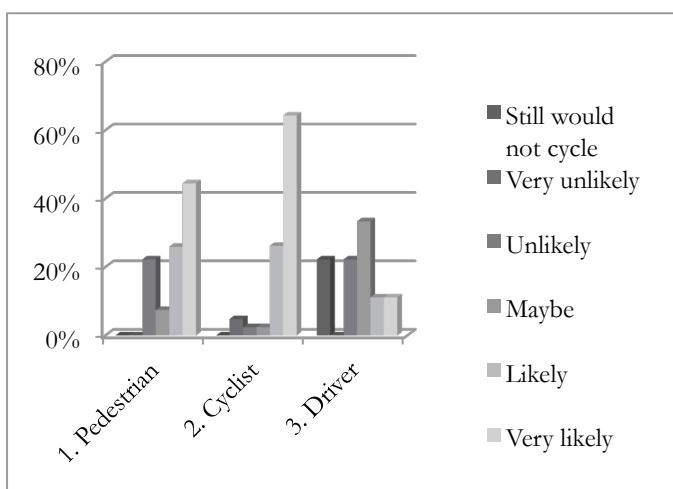


Figure 39 - Heavy traffic shared

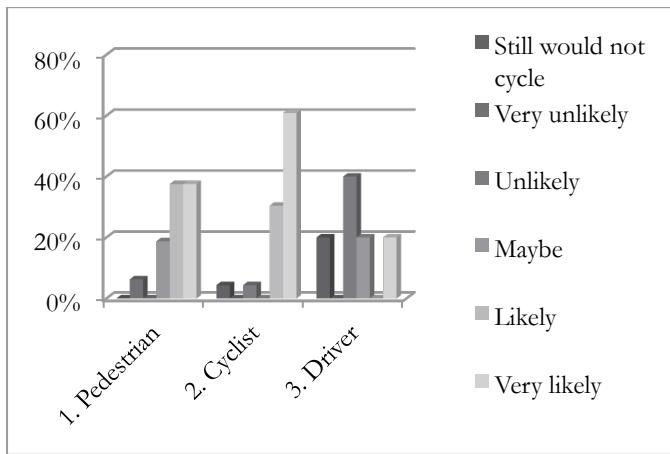


Figure 40 - Low traffic with minors segregated

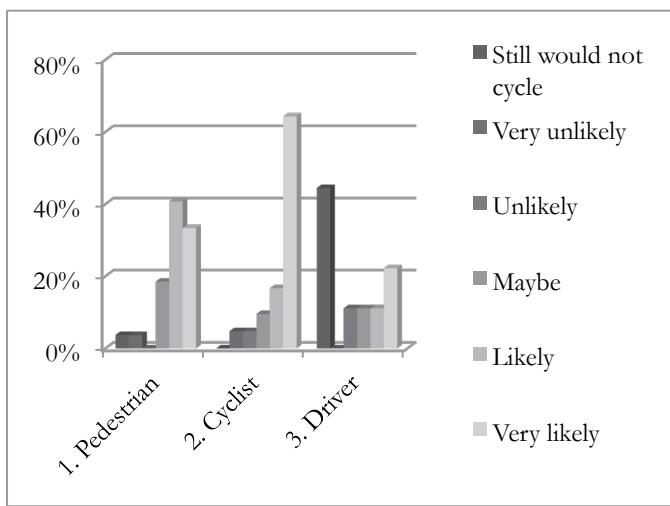


Figure 41 - Low traffic with minors shared

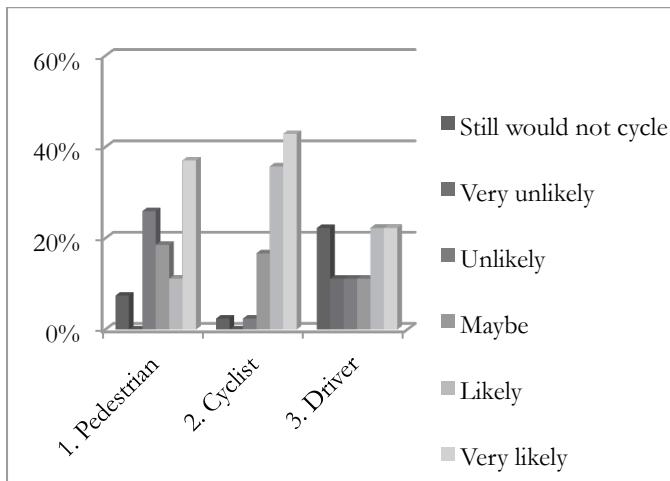


Figure 42 - Medium traffic with minors segregated

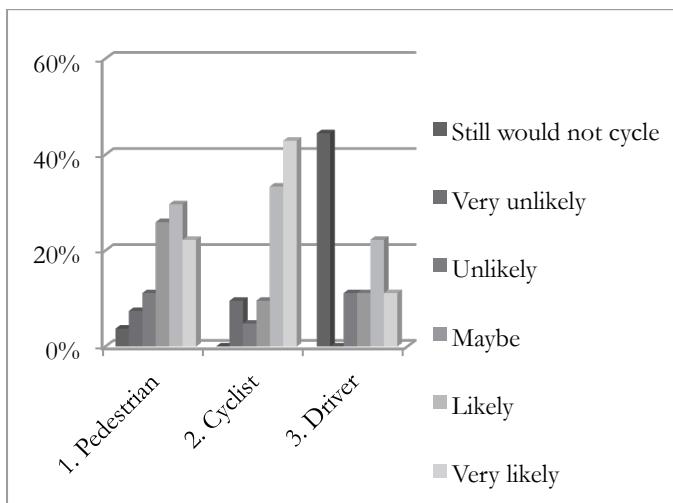


Figure 43 - Medium traffic with minors shared

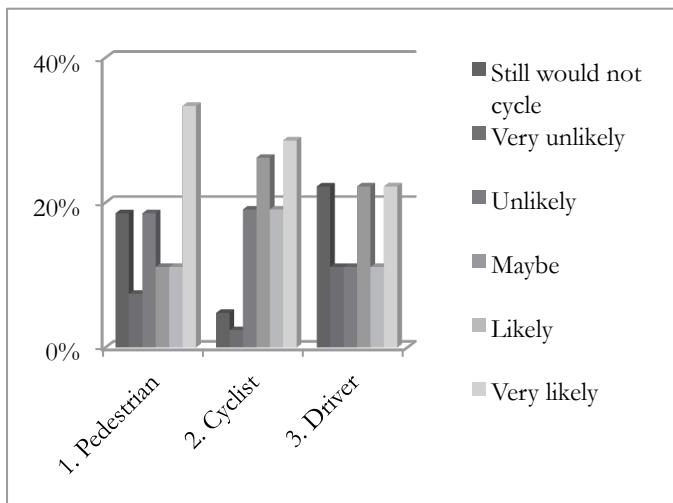


Figure 44 - Heavy traffic with minors segregated

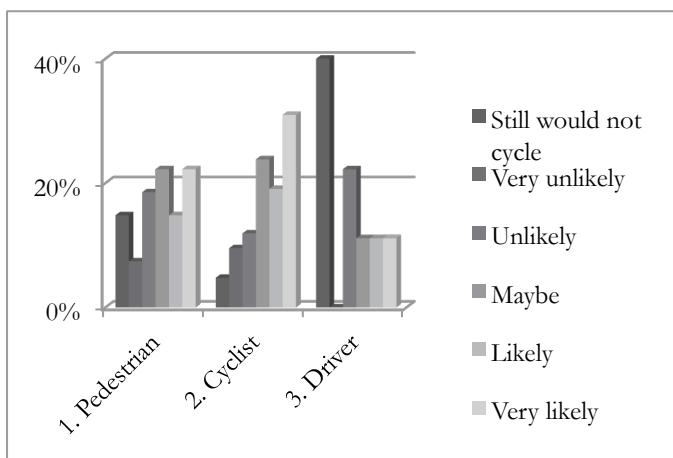


Figure 45 - Heavy traffic with minors shared

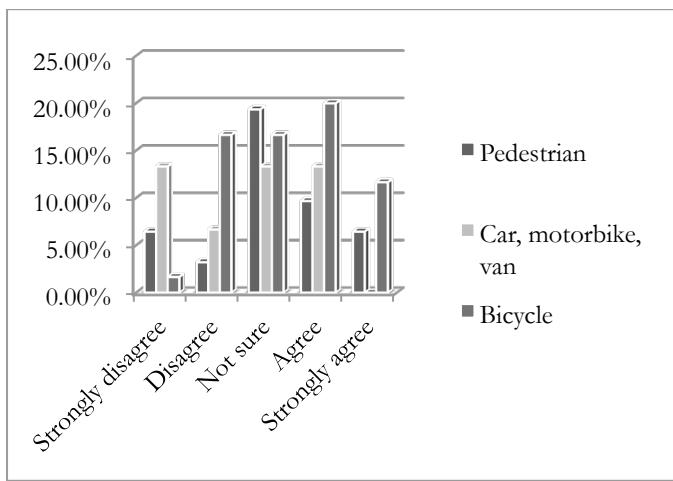


Figure 46 - "I would comply with the 10 mph speed limit even if in a rush at 3 am."

### Appendix 3

#### Leaflet